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SWIDDEN CULTIVATION AS A FORM OF CULTURAL IDENTITY: THE BADUY CASE

JOHAN ISKANDAR

A THESIS SUBMITTED FOR THE
DEGREE OF DOCTOR OF PHILOSOPHY
IN ENVIRONMENTAL ANTHROPOLOGY

THE DEPARTMENT OF ANTHROPOLOGY,
UNIVERSITY OF KENT AT CANTERBURY

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Preface

My interest in the Baduy originated in 1985 when I was studying Social Forestry in West Java, and chose a Baduy village for my field work. I was sponsored by the Ford Foundation and the Forest State Corporation (Perhutani) of the Republic of Indonesia. Between 1986 and 1993 I took every possible opportunity to visit the Baduy village. For example, I accompanied a student group from Padjadjaran University several times, and later conducted field research in this area. In addition, I visited the Baduy with a group of curators from the Bandung State Museum (Musium Negeri Bandung). This group sought to collect various items of equipment used in Baduy farming for a seminar and exhibition of Baduy culture.

In 1994 I received a scholarship from the Environmental Study Centres (ESC) Development Project, Directorate General of Higher Education (DGHE), Department of Education and Culture of the Republic of Indonesia, under a staff development scheme, to undertake post graduate study in Environmental Anthropology at the University of Kent, which introduced me to a more holistic approach to studying farming systems.

The preparation of this thesis has involved intensive field work among Baduy of Desa Kanekes, in the subdistrict of Leuwidamar, the district of Lebak, South Banten. This was undertaken between October 1995 and June 1996. Additionally, I spent one month at the Royal Institute for

Linguistics, Geography, and Ethnology (KITLV) in Leiden, and the Rijksarchif in the Hague, the Netherlands, to analyse archival data, including relevant historical material.

This study has been made possible by the support of many individuals and institutions. I am particularly grateful to my supervisor, Professor Roy F.Ellen for his invaluable knowledge and enthusiasm. He has introduced me to environmental anthropology and human ecology, assisted in designing a research proposal, and advised on its implementation. At the beginning of my field work he visited the study area. During my writing up, he carefully read my thesis and gave me constructive advice. During my study in the United Kingdom, he was always available and was a source of much encouragement, guidance, and assistance.

I would also like to thank Dr. C.W.Watson of the Anthropology Department at Kent, for providing assistance in studying archival data at the KITLV, and for his generosity in sharing his theoretical and practical experiences. Special thanks go to Ms. Jan Horn and Ms. Nicola Kerry, the Departmental Administrators, for their assistance and goodwill in dealing with the bureaucratic and institutional aspects of my post graduate studies.

I wish to express my appreciation and gratitude to the Head of the Department of Biology, the Dean of the Faculty of Mathematics and Natural sciences, and the Rector of Padjadjaran University, Bandung for granting me leave of

Linguistics, Geography, and Ethnology (KITLV) in Leiden, and the Rijksarchif in the Hague, the Netherlands, to analyse archival data, including relevant historical material.

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absence to undertake my postgraduate work and for their assistance in this study. I am indebted to the Director of the Institute of Ecology, Padjadjaran University, for his generous support. Appreciation goes also to my colleagues Ir. Dadi Rusendi M.Sc. and Ir. Sudaryanto Zain, M.P, who assisted me in analysing soil samples in the Soil Laboratory, the Faculty of Agriculture, Padjadjaran University.

A grant from the Environmental Study Centres (ESC) Development Project enabled me to pursue my post graduate studies at the University of Kent at Canterbury, as well as providing support during the fieldwork and writing phase of the thesis. I would especially like to thank Dr. Haryoto Kusnoputranto and Prof. Soeratno Partoatmodjo. Special thanks go to Ms. Roz Ernst and Dr. Joan Campbell from the ESDI Project, Dalhousie University, Canada for their help in the administration of this grant.

Undoubtedly my greatest debt is to the people of Baduy, especially **Jaro Pamarentah**, Jaro Pulung and the village secretary, Carik Ukang, and my informants in Kampung Kaduketug, Gajeboh, Cihulu, Cikeusik, Cibeo, Gunung Tunggal and Kopo II, who I visited frequently during my fieldwork. Not only did they cooperate willingly, but they also offered unlimited hospitality.

Of course, no acknowledgement would be complete without my deep appreciation to my wife Budiawati Supangkat Iskandar, who encouraged me, shared knowledge, and shared the work of looking after our sons during my study. I would

also like thank my parents and parents in-law, who supported me, particularly my father in-law who helped me with the translation of the Dutch articles.

ABSTRACT

The Baduy are a distinctive group of some 6000 people who live in an area of 5100 ha in the mountainous region of south Banten, West Java. They are recognised as being of Sundanese ethnic origin, though their social organisation, religion and agricultural system differ from that of the surrounding moslem Sundanese. Their culture contains many elements that have disappeared in other parts of Java. At the present time, the traditional Baduy way of live is under great pressure, due to increasing population pressure on land, market penetration, and government policy.

This thesis addresses the interrelationship between the Baduy community and their environment in maintaining their distinctive identity. It demonstrates that social and economic organisation of the local community and the physical environment are strongly interrelated. The Baduy have developed distinctive socio-economic strategies to maintain their identity and local environment. These include a system of spatial zoning, consisting of a sacred core area (Inner Baduy); a less sacred surrounding area (Outer Baduy), and a buffer zone between Baduy and non-Baduy (Dangka area). Thus, the influences of modern culture and the market economy do not all penetrate to the core area, but are protected and filtered by the presence of Outer Baduy and the Dangka. Baduy have also adapted and developed appropriate strategies to use the market to help maintain their traditional way of life, by relying on imported rice for daily consumption, purchased by selling non rice products (especially fruit and palm sugar). The sacred rice grown in swiddens is, therefore, reserved for rituals. Moreover, there have also been able to maintain a viable system of swiddening through the innovative and economically productive management of fallow. The result is a study which throws unique light on the concept of sustainable development.

CHAPTER I

INTRODUCTION

1. Objectives of the Study

This thesis addresses the relationship between people and their natural environment, focusing in particular on swidden cultivation as a deeply-embedded aspect of cultural identity amongst the Baduy of West Java. It seeks to relate this identity to rapid changes in ecology, society and economy. Similar problems are commonly found elsewhere in Indonesia, as well as in other developing countries. Therefore, I hope that what I have written will be of wider relevance, and I shall attempt to explain why this should be so.

Specifically, this study has four objectives:

1). To describe and account for Baduy swiddening practices in relation to the natural environment.

2). To assess the practice of Baduy swidden cultivation as a way of life and form of identity.

3). To assess the prospects for future cultural and political autonomy in a modern world dominated by government policies and market penetration.

4). To evaluate alternative policies to facilitate the appropriate development of the Baduy community.

2. A brief outline of Baduy culture

> Today, I see many taboos being disobeyed. For example, various luxury goods - radio, Levi jeans, red and green coloured clothes and wristwatches - are commonly owned by Outer Baduy. In addition, herbicides (**racun**) are applied in swidden cultivation (**huma**). Thus, our religion, **Sunda wiwitan** is being destroyed, which is now like an old rag (**baju rangsak**). Who will reform (**ngomean**) our religion; we can only do ourselves (**urang sorangan**)?, We do not want to benefit (**ulah untung**) by working less (**tina enteng**), such as by applying herbicides (**ngundang racun**) to reduce weeding.
>
> **(-An Informal Baduy Leader 1996)**

Swidden cultivation or long-term-fallow agriculture (see Ellen, 1982: 35 for definitions) has been practised by different people in different historical, environmental, and socio-economic situations throughout the tropical world. In Indonesia, swidden cultivation (ladang=in Indonesian or **huma**=in Sundanese) is nowadays mainly practised in 'outer Indonesia': Sumatra, Kalimantan, Sulawesi, Maluku, Nusa Tenggara, and Irian Jaya (Geertz, 1963: 12-46). In Java (which together with Bali constitutes 'inner Indonesia'), ladang or **huma** was predominantly practised in South Priangan and South Banten until the beginning of twentieth century (Haan, 1912: 31; Terra, 1953: 190; Terra, 1958: 160, Geertz, 1963: 14; Elson, 1994: 10; Hoadley, 1994: 28). Nowadays, however, due to intense

demographic pressure, rapid socio-economic and land use change, swidden cultivation remains only in south Sukabumi and south Banten. In south Sukabumi it is mainly practised by the **Kasepuhan** or **Kasatuan** community (Adimihardja, 1972), while in south Banten it is practised by the Baduy who reside in the **desa** of Kanekes, Lebak district[1] (Iskandar, 1992). However, unlike the **Kasepuhan**, who combine swidden with sawah (wet rice cultivation), and who have taken advantage of modern inputs, such as new high yielding varieties, chemical fertilizer, and pesticides, Baduy have maintained a traditional form of swidden cultivation alone. It is strongly prohibited (taboo or **bujut**) for the Baduy to cultivate sawah, and their way of life is bound by social obligations and restrictions enforced by informal leaders (**puun**). For example, Baduy are not allowed to dig soil; plant clove, coffee and rubber; raise buffalo; apply pesticides and chemical fertilizer; poison wildlife and fish; go to school; travel by motor vehicles; wear non traditional black, blue or white trousers; possess a radio, watches, or vacuum flasks.

For the Baduy community, the practice of swiddening or **ngahuma** is considered an obligation (**kawajiban**) and part of their religion, **Sunda Wiwitan** (Original Sundanese). As a result, the time, labour and capital of each Baduy

---

[1]). This district is well known in certain quarters became of its association with the famous novel 'Max Havelar' written by Multatuli (Eduard Douwes Dekker) based on the situation in Lebak during the 1850s (see Multatuli/Eduard Douwes Dekker, 1967. Max Havelaar; or The Coffee Auctions of the Dutch Trading Company, ed. and trans. Roy Edwards. London: Heinemann).

household is mainly spent on this traditional farming system.

Baduy swidden cultivation has, of course, been influenced by government policies and market penetration over a period of several hundred years. In general, government policies have been initially tolerant of the traditional way of life, in pre-colonial, colonial, and post colonial times. During the pre colonial period, for instance, the relationship between a **mandala**[2] community and the Sundanese King was seen as one of mutual dependence, the **mandala** group being a source of supernatural power needed by the king to maintain his political legitimacy. In turn, the Baduy benefited from the protection which they acquired from the king. The payment of tax was prohibited by the Sundanese king (Ekadjati, 1995: 66-67). Similarly, during the Sultanate of Banten (1520-1808), the Baduy community was allowed to reside in the Kanekes area, because the sultanate was more preoccupied with trade along the northern coast of Java as far as the Lampung in south Sumatra, than controlling the interior of southern Banten. However, some moslem officials sent by the Sultan to Baduy later permanently settled in Cicakal Girang, Outer Baduy, where they supervised marriage ceremonies (**panghulu**) in the Outer Baduy community (Ekadjati, 1995: 68).

During the Dutch colonial period the Baduy became

---

[2]). Recently it has been suggested that Baduy are descendants of ascetic groups called **mandala** or **kabuyutan** living in sacred parts of the forest in pre-islamic times, and established by the Sundanese King, Rakeyan Darmasiksa (1175-1297) [Ekadjati, 1995: 66].

directly incorporated into the administrative system. For instance, in 1850 formal village leaders (**jaro pamarentah** or **jaro governemen**) were introduced into Baduy (Bakels and Boving, 1988: 17). A consequence of this was that the role of informal leaders, particularly **dangka**, residing in the buffer zones (**dangka** areas) were reduced. Moreover, in 1868, one of the Dutch 'controleurs' (Dutch official below assistant resident level), A.J. Spaan, advised in a report (nota) that the swidden cultivation areas in south Banten should be converted to sawah because forests were being destroyed. Sawah was assumed to provide a more effective basis for the prosperity of the people of the Lebak district (afdeling), including Baduy (Spaan 1880: 20-27). By 1902, swidden cultivation in Lebak was prohibited for everyone except for the Baduy themselves. Because Baduy religion was embedded in the practice of swidden cultivation, tools such as hoe (cangkul) and spade (skop) were prohibited (Bakels and Boving, 1988: 19). A more detailed investigation of swidden practices in the Banten residency with a view to changing it was undertaken by Kools (1935). However, swidden cultivation in this area has still not been stopped by the government, particulary in Baduy.

Baduy territory was first accorded some degree of official protection by the Dutch at the beginning of the twentieth century. For instance in 1916 the Government issued a decree prohibiting non-Baduy from entering the Baduy area without permission. The boundaries of Baduy

territory, however, were not clearly marked, and in 1925 it was decided to create markers composed of 340 heaps of sand on top of which fast growing trees were to be planted (Persoon, 1989: 21).

After the colonial period, in 1968, this level of protection was confirmed by the governor of West Java when he declared the Baduy area to be protected forest (hutan lindung mutlak) in decree no. 203/B.V/Pem/SK/68 on 19 August 1968 (Pemerintah Kabupaten DATI II Lebak, 1985: 4). A year later the boundary was marked with wooden poles. Later there were plans for the erection of 540 red concrete markers along the border. These were initially rejected by Baduy religious leaders (**puun**) on the grounds that the colour red infringed Baduy taboos. The matter was drawn to the attention of President Suharto and it was decided to paint the poles white instead. A compromise had been found and poles were duly erected (Persoon, 1989: 21-22; Zanten, 1995: 518).

In order to protect their cultural identity, Baduy have repeatedly sought the assistance of outside political leaders: the sultan of Banten in the past, and nowadays, regional leaders; district, residency, provincial and national leaders, and even the Indonesian president (Zanten, 1995:517). They speak of Baduy religious leaders (**puun**) as 'the elder brothers' of non-Baduy political leaders. Nowadays, every year after the harvest a special ceremony called **seba** is performed when a delegation of Baduy led by **jaro warega** (coordinator of **jaro dangkas** or

dangka leaders) goes to the local 'camat' (sub-district leader), 'bupati'(district leader) in Rangkasbitung and to the 'resident' (residency leader) in Serang to make an offering of agricultural products and to ask for protection of their land and forest in return. This ceremony is discussed further in chapter 6 of this thesis.

In addition, various practical strategies are employed to maintain traditional farming methods. One is the combining of traditional subsistence swidden activities with a cash economy. Thus, paradoxically, Baduy appear to be able to maintain a traditional cultural orientation by using the market as an environmental and economic buffer, small-scale trade effectively subsidising traditional farming and its associated way of life. This is achieved partly through a conventional 'concentric' division of space. Baduy territory is divided into three areas: 'Baduy Dalam' or Inner Baduy (the core area, very sacred), 'Baduy Luar' or Outer Baduy (outer area, less sacred), and 'daerah dangka' or dangka area (buffer zone). There are no other groups living in Inner and Outer Baduy within desa Kanekes, except for a very small moslem group descended from the original moslem leaders sent by the Sultanate of Banten. **Dangka** areas, located adjacent to Kanekes contain resettled Baduy who live as an enclave within the moslem Sundanese community.

This territorial organisation has enabled the Inner Baduy or core region to protect itself from outside influences, while the Outer Baduy and **dangka** areas have

been allowed to accept limited outside influences (Koentjaraningrat, 1993: 346-347). Thus, prohibitions are more strictly followed by Inner Baduy than by Outer Baduy and the **dangka** community because they have been influenced intensively by the outside world. However, recent research shows that the **dangka** areas are now less effectively controlled by traditional leaders due to rapid population growth and strong socio-economic and political pressure from their non-Baduy neighbours. Some **dangka**, such as **dangka** Kamancing (**paku nagara**= 'country nail'), **dangka** Cihandam (**sirah dayeuh**= 'old city head') and **Jaro Dangka** Panyaweuyan (**inggung**='assistant') were taken over by non-Baduy people, in 1950, 1985, and 1987, respectively, and the remaining **dangka** areas have been settled only by **dangka** families. To take over the **dangka** area, the **dangka** leader (**jaro dangka**) was initially asked by the non-Baduy village leaders to move to Kanekes. Later, the **dangka** areas were registered and assigned as the private property of non-Baduy people. In general, since the introduction of the agrarian law in 1870, the village communal lands (**geblogan desa**) in areas adjacent the Baduy have been rapidly converted into private land through land registration by the government. Therefore, the **dangka** areas located in outside Kanekes have been maintained only with difficulty, because the **dangka** areas are considered as sacred lands by the Baduy. By contrast, according to non-Baduy people, such areas are considered village communal lands (**geblogan desa**) which are no different from other communal lands in non-

Baduy villages. In other words, Baduy customary law is not respected. As a result, some conflict between Baduy traditional leaders and non-Baduy village leaders continues to occur. Recently, for example, there was a problem with the **Dangka** Cihandam, which is considered a sacred place called **sirah dayeuh** ('old city head'). In 1994 a **dangka** area of 12 hectares was sold by the non-Baduy village leader to a non governmental organisation (NGO) named 'Yayasan Cinta Alam' (a pseudonym) with the purpose of protecting forest and for training young people in environmental values. According to 'Yayasan Cinta Alam', this area can also be used to protect Baduy culture (suaka adat Baduy), because tourists who want to visit the area can be confined in a specific zone and given information there. However, problems have arisen. Although the general idea of programmes for protecting Baduy culture (suaka adat) have been agreed by national authorities, such as the Forestry Department and the Ministry of the Environment (Kantor Lingkungan Hidup), they have been rejected by the local government authorities at sub-district and district level, and by young Banten moslem groups. They assume that if Baduy is established as a 'suaka adat', various village development programmes will not be introduced. As the young Banten Moslem groups put it, "if Baduy people are not allowed to be developed, meaning they are permitted to remain 'backward', we deny their rightful human potential (tidak manusiawi)". In addition, the project has been strongly criticized by traditional leaders (**puun**), because

it erodes Baduy religion. An example of this is reconstructions of sacred terraces in the Cihandam forest protected area to attract tourists, which are imitations of the true sacred terraces of Sasaka Buana or Arca Domas, or Sasaka Pada Ageung, on Mount Kendeng, Inner Baduy, which are visited annually by Puun Cikeusik for ascetic rituals (**ziarah**).

Because some **dangka** areas used by Outer Baduy have disappeared, and there has been increased population growth, a substantial number of Outer Baduy can no longer live inside the Baduy area. They are being pushed out of their home territory and forced to became share croppers on the land of Sundanese farmers. On the other hand, neighbouring areas have also rapidly changed through the introduction of perennial cash crops (rubber, coffee, and Albizzia[3]).

The rate of Baduy culture change caused by ecological and socio-economic factors has become so rapid in recent years, and its scale so vast, that it is becoming increasingly difficult for them to respond effectively to new problems. For example, until the 1970s, access to Baduy village was mainly by foot-paths, except in areas such as rubber plantations, where roads had been constructed by the Dutch government. Moreover, village markets (pasar desa) are limited to neighbouring non-Baduy areas. However,

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[3]). Although the scientific name of Albizzia falcataria (L) Fosberg has been replaced by Paraserianthes falcataria (L) Nielsen, I use Albizzia in this thesis to maintain consistency, and because it is also a term widely used by local people and found in the literature.

today, access to Baduy villages is possible by motor vehicles as a result of the building of village roads. Also, adjacent the north Baduy area, at Ciboleger, some small **warung** (stalls) and a car terminal have been built. These stalls are usually open daily and continuously. Public transport is available to carry passengers from Ciboleger to the district capital, Rangkasbitung. In addition, television is an increasingly popular form of village entertainment, and television sets are commonly found in **warung**. Almost every evening young Baduy boys and girls go to **warung** in order to watch television. They have more interest in watching television than learning the rituals of swidden cultivation. Traditionally, this knowledge has been transmitted by their parents or other old people in each household of an evening. Consequently, much local knowledge in relation to the practise of swidden cultivation can no longer be transferred properly from the older generation. The younger generation tend to follow a 'modern' Sundanese way of life which is disapproved of by their religion. For instance, they usually wear Levi jeans, red and green cloth, wristwatches and sandals or shoes, and speak using a polite (**basa lemes**) or moderate (**basa sedeng**) language, particularly when visiting non-Baduy areas (**nganjor**) for the cultivation of rice. In addition, although radios are prohibited, they are commonly owned by Outer Baduy, because they want to listen to music and Sundanese language programmes during their leisure time in their houses or farm houses, or even when working, such as

weeding, where radios are hung on branches of trees in the swidden fields.

But disrespect for tradition is not confined to the young or commoners, it is also found among official formal village leaders, **jaro pamarentah**[4]. As a result, some **jaro pamarentah** have been discharged by the traditional leaders (**puun**) because they disobeyed taboos, such as receiving government subsidies, introducing cash crops (particularly clove in the 1960s), and permanently moving to non-Baduy areas. For example, in 1977, 38 Outer Baduy households moved to the first Baduy government settlement (Baduy pemukiman) located on Gunung Tunggal, about 20 kilometres away from Kanekes, supported by Jaro Samin. He was a retired **jaro pamarentah** discharged by the **puun**, because he accepted a government subsidy and moved to 'Baduy pemukiman'.

Thus, today, Baduy culture is being eroded through both internal and external factors. As the Baduy themselves put it, their religion has become like 'an old rag' (**baju rangsak**).

3. Swiddening as an embedded system

The Baduy are ethnic Sundanese who reside in a special

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[4]). There are two leadership systems in Baduy: traditional and official. The traditional leaders are known as **puun**, and are selected on the basis of descent (keturunan). The official village leader is called **jaro pamarentah**, and has responsibility for village administration as well as Baduy religion. He is usually selected by the **puun** subject to the approval of the sub-district officer (camat).

isolated mountainous territory of south Banten. They have sought to maintain their culture as 'pure' as possible through the honouring of many prohibitions (**buyut** or taboos) superintended by their ancestors. Since they live in an isolated territory and have successfully maintained their traditional culture over a long period, it can be reasonably assumed that Baduy culture has closely co-evolved with the local environment.

My approach to the study of Baduy swidden cultivation is influenced by a large body of recent work by anthropologists investigating human ecological issues, including 'ethnoecological' approaches (Conklin, 1957, 1969; Ellen, 1978, 1979a; Ingold 1992; Milton, 1996). I hope to be able to demonstrate in this thesis that Baduy culture as it is presently constituted is to a considerable extent an outcome of having to manage effectively relations with outsiders who increasingly infringe and threaten their identity, autonomy and economic infrastructure; and of having to sustain a set of subsistence practices in the face of progressive environmental degradation. Therefore, we might expect Baduy culture to be particularly rich in fine ecological adjustments and to reflect an unusual degree of sensitivity to the importance of environmental sustainability, when compared with the people who surround them.

Baduy culture is different from that of surrounding ordinary moslem Sundanese. Their social organization and religious distinctiveness is strongly regulated by

ancestral tradition (**pikukuh**). **Pikukuh** is derived from **kukuh** ('kokoh' or 'teguh' in Indonesian) meaning 'conviction of viewpoint'. **Pikukuh** is more-or-less equivalent to what is understood elsewhere in Indonesia as 'adat'. Although 'adat' is often posed in opposition to religion (agama) [see Ellen, 1983: 69-78; Hefner, 1989: 37]. **Pikukuh** encompasses Baduy religion and provides an underlying morality for their way of life. According to Baduy belief, **pikukuh** has been 'deposited' (**dititipkeun**) by the forefathers and must be maintained, followed, and cannot be changed. It is controlled by traditional leaders (**puun**) and their staff. There is strong internal cohesion based on unwritten **pikukuh** belief and rules implemented through charismatic **puun**. Anything which is prohibited by **pikukuh** and **puun** has the force of taboo. For example, many luxuries, new economic opportunities, and government subsidies have been rejected by Baduy because they are believed to disturb their **pikukuh** or are incompatible with their identity. Therefore, in economic behaviour, individual choices are commonly influenced by the **pikukuh**. The main subsistence economy of Baduy is swidden cultivation or **huma**, but **huma** for Baduy is not just the physical practice of rice cultivation, it embodies their way of life and cultural identity. It contributes towards the self-conception of the Baduy person. In practising swidden, Baduy must follow **pikukuh**. Thus, applying hoes, spades, pesticides, chemical fertilizers, and selling rice are prohibited. Such prohibitions limit the potential and

motivation for over-extraction and exploitation.

The mutual embeddedness of religion and subsistence has been described for swidden cultivators elsewhere, and in some cases can be seen to play an important role in maintaining sustainable and productive environment relations, such that the 'tragedy of the common' has been thus far avoided (see Acheson, 1989: 375-378). The economic rationale of such systems differs from those where expansion and growth are expected. This has been discussed by many scholars, among them Visser and Granovetter. According to Visser (1989: 3), swidden economic activity is governed by the ideas of the participants about the world and their place in it. In other words, Baduy economic life is influenced less by formal institutional arrangements, than by morality and social relations (Gravonevetter, 1992: 61).

The Baduy practise of swidden cultivation has enhanced their cultural distinctiveness with respect to other, ordinary, Sundanese. Positively, they are recognised by their neighbours: as swiddening experts making use of various spiritual resources (**tekun ngahuma pake batin**); for their work ethic (**tukang gawe tekun**), and for their honesty (**jujur**). Negatively, they are regarded as primitive (**jelema primitif**), animist (**agama animis**), and destroyers of the environment (**ngarusak lingkungan**). However, most Baduy are not influenced or embarrassed by such negative images. A principle of egalitarianism is embedded in Baduy culture: they speak to members of their own community or with other

communities always using the same language level, with a strong and distinctive Baduy accent (**basa Baduy**). Strong internal cohesion arising from the force of **pikukuh** guided by **puun** also contributes to a sense of distinct identity. Of course, to a certain degree Baduy are involved in the market economy: selling non rice agricultural products and (among Outer Baduy) engaging in wage labour (**kuli**, to work as a coolie) and visiting 'their friends' in cities (**nyaba ka kawawuhan di kota**); but most never relinquish their identity and become ordinary Sundanese farmers (**urang Sunda biasa**).

Most Baduy cash income has been re-invested in the practise of swidden cultivation. In other words, their traditional farming identity has been maintained by use of the market system. This combination of the two systems, traditional swiddening and market-orientation, is quite common among swiddeners in South-east Asia, and under certain circumstances helps sustain rather than undermine swiddening (see Sutlive, 1978; Ellen, 1979b; Gomes, 1993; Dove, 1996: 44). For example, according to Gomes (1993: 20-26) orang Asli in Malaysia have been able to maintain traditional swidden cultivation because this has been subsidised by trading various non-timber products (rattan, bamboo, damar, gaharu, and fruits), and through involvement in wage labour (memburuh). Like Baduy, swidden cultivation among the Iban of Sarawak is not merely a technique for acquiring food but a total away of life that is supported by and which in turn reinforces Iban theology, cosmology,

and eschatology (Sutlive, 1978: 63). This position is elaborated in the work of Freeman (1970) and Jensen (1974). In addition, in order to maintain traditional swidden cultivation, Iban have relied on trading non-timber forest products, such as para rubber (Hevea brasiliensis) and rattan. A similar situation is described for the Kantu of West Kalimantan by Dove (1996:44). Swidden cultivation of rice is only maintained on a sustainable basis by cultivating various perennial cash crops on fallowed swidden land, such as rubber. Growing cash crops, such as rubber, tends to be used flexibly as a means of maintaining a swiddening way of life among the Kantu. For example, if swidden cultivators fail to get sufficiently high yields or when there is harvest failure, they compensate by intensive rubber tapping. However, if the rubber price on the world market decreases the rubber trees are abandoned. They can be tapped again if the rubber price increases. Thus, to maintain their tradition to farm dry rice, subsidies obtained by planting and trading cash crops are needed. According to Dove (1996: 44) this strategy is extremely flexible and resilient. The situation is similar amongst the Iban with respect to rattan extraction.

Farming rice, however, is different from planting cash crops. Rice is commonly considered a sacred crop and planting involves necessary rituals, which reflect the rich symbolic relationship between people and their environment, and which are performed at almost every stage in the swidden cycle (see e.g. Jensen, 1974; Sutlive, 1978;

Visser, 1989). Such rituals may serve to rearrange human relationships with the natural and supernatural words in the way suggested by Rappaport (1979: 34).

Among the Baduy, the swidden cultivation of rice, or **huma**, has a for long time been combined with the growing of fruit trees (Terra, 1958: 160-161). Today, tree fruits are commonly found in man-made hamlet forests (**dukuh lembur**) and **reuma** (fallowed secondary forest) and represent the main source of cash income. Swidden rice (unhusked rice =**pare huma** and husked rice=**beas huma**), by contrast, is considered sacred, never sold, and most home grown rice is stored in the rice barn (**leuit**) for between 10 and 90 years. This rice is consumed mainly on ritual occasions, while daily needs are met from rice bought from small shops using money obtained from selling fruit and other perennial crops, such as banana, pepper, petai, durian, and palm sugar (Outer Baduy only). This produce is sold to local Outer Baduy middlemen (**bandar**), and brought to local and district markets by renting a mini car or truck. In addition, commercial crops, such as clove (cengkeh=Syzigium aromaticum) [particularly when its price was high, before 1990s], coffee (kopi=Coffea arabica) and Albizzia (**kalabise** or **albasiah**) have been introduced, even though clove and coffee are prohibited (**buyut**) in Baduy. Consequently, such crops are often destroyed by the staff of traditional leaders during annual purification rituals (**pembersihan adat**).

Thus, Baduy swidden cultivation can only be properly

understood in relation to their culture, ecology and political economy at the local and regional levels.

4. A literature review of studies on the Baduy

The ethnographic study of the Baduy has a long history. Among the early students of Baduy culture were Jul Jacobs and J. J. Meijer (1891) who wrote a book called 'De Badoejs' (Baduy people). This book is divided into two parts; firstly, Baduy ethnography (Eene Ethnographische Schets) written by Jul Jacobs, and secondly, an analysis of Baduy language and literature (Taal-en letterkunde der Badoej's) written by J.J Meijer. In the first part, some aspects of Baduy ethnography, such as various original Baduy names, origin of the community, social organization, and religion are discussed. According to Jacobs and Meijer, Baduy religion was assumed to be the original religion of Java and similar to the original religion of Polynesia, though influenced by Buddhism, Hinduism, and Islam. They describe the Baduy belief in one god called the **Batara Tunggal**, and that the **Batara Tunggal** was thought to have lived as a human in the world, becoming a god after death. Baduy traditional leaders (**puun**) are considered to be descendants of the **Batara Tunggal**. Some taboos (**buyut**) known in Baduy society, such as receiving smallpox vaccinations, attending school, and raising cattle are said to exist because these were not done by the **Batara Tunggal**

when he lived in the World.

In the second part, regarding language and literature, Jacobs and Meijer tell us how Baduy language differs from Sundanese in the use of the same language level in speaking with every one in the community. Polite (**basa lemes** or 'kromo' in Javanese), moderate (**basa sedeng**), and non-polite language (**basa kasar** or 'ngoko' in Javanese) were not recognised. However, in some ritual verse (**carita pantun**), polite words are recognised, such as rama (**ayah**=father), ibu (**ambu**=mother), putra (**anak**=child), siram (**mandi**=take a bath), and rambut (**buuk**=hair).

C.M. Pleyte wrote a book called 'Artja Domas, het zieleland der Badoejs' in 1909. Like Jacobs and Meijer, Pleyte assumed that **Batara Tunggal** and traditional leaders (**puun**) including their assistants (**girang seurat**, **kokolot**, **jaro dangka** and aristocratic persons or **menak**) were considered as the God, and descendants of the God, respectively. He also pointed out that the **Artja Domas** was considered as place of mediation as well as the cemetery place of Baduy ancestors. In addition, the Artja Domas was considered as the place where the soul was looked after by the Batara Tunggal.

N.J.C. Geise, writing in 1952, based his work on field research conducted in adjacent Outer Baduy areas between 1939-1941. He points out that there are some similarities between the Baduy and surrounding Islamic Sundanese. For example, language, sacred place, head cloth, and swidden cultivation are commonly found in the both groups. The

Baduy community, however, became more different from the surrounding Islamic Sundanese since the late of sixteenth century, because they wanted to isolate themselves from influence of the modern world. Geise reports some conflict in the Baduy community such as that emanating from competition for agricultural land. For example, some agricultural land in the Baduy buffer zone (**dangka** areas) was allowed to be cultivated by moslems as irrigated rice fields (sawah), in contrast, these areas were prohibited by Baduy, converted to 'sawah'. In addition, these areas were not allowed to be privately owned. Because Baduy were assumed to have magic powers and due to the role of the **puun** and their staff, in many cases moslem groups failed to obtain 'sawah' in dangka areas.

A special study on swidden cultivation in south Banten was undertaken by Kools in 1935. His study was aimed at preventing swidden cultivation, in line with government policy. Swiddening was thought to destroy the environment, particulary forest areas. Various aspects of south Bantenese culture are discussed, covering the general characteristics of practising swidden cultivation, traditional local land use law, and the colonial regulations relating to swidden cultivation. According to Kools, the swiddening practised by the Baduy was strongly embedded in their culture. Their land belonged to the **maharatu** and if they wanted to cultivate it, special permission had to be obtained from traditional leaders (**puun**).

After Indonesia become independent, ethnographic study of the Baduy continued, for example the work of Judistira Garna (1987), J. Bakels and W. Boevink (1988), J. Iskandar (1985, 1991, 1992), and G. Persoon (1989, 1994). Judistira Garna (1987) outlines Baduy ethnic history, material culture, religion, cosmology, and political institutions. According to Garna, Baduy swidden cultivation has an important role in giving the community prosperity. The economic and religious aspects of their way of life are connected with this traditional farming. For example, various rituals involved in swidden cultivation express the core symbolism of body (**lahir**) and soul (**batin**).

Iskandar (1985, 1991, 1992) has investigated various aspects of Baduy interaction with their environment. He concludes that Baduy swidden cultivation is not static, but is dynamic over time. For example, Outer Baduy have managed to adapt through various ecological changes by selecting and introducing new crops, particularly economic crops, trading non rice crops, renting land and share-cropping, and through involvement in wage labour.

Research by Bakels and Boevink (1988) has been based on literature sources in an attempt to reconstruct Baduy history. Baduy culture is shown to change due to developments in the outside world, such as population growth and colonial policies towards land use. They conclude that although the Baduy live under considerable pressure with regard to their means of subsistence, their community is far from disintegrating.

More recently, research on Baduy cultural identity in relation to the Indonesian government development programme, has been conducted by Persoon (1989, 1994). He concludes that although Baduy have strongly maintained their traditional way of life, ecological, socio-economic and cultural change is inevitable. Due to rapid development in the West Java generally, Baduy **pikukuh** (adat) is being reassessed and reorganised in a way which 'filters' new opportunities available through the market and government development programmes. Compared with other traditional groups in Indonesia, Baduy have successfully maintained their distinctive culture. For Persoon, the Baduy can be considered a traditional group which has been able to avoid being a 'victim of progress', because they are able to successfully exploit what Scott calls the 'weapons of the weak'.

5. Framework and methods

The fieldwork reported here was carried out in the Baduy area of Kanekes village (desa) in the subdistrict (kecamatan) Leuwidamar, and in the neighbouring villages of the subdistricts of Leuwidamar, Bojongmanik, and Muncang, where swiddening has been intensively practised by Outer Baduy people (see Map 2.2, 2.3 and 2.4). Field observations were conducted between October 1995 and June 1996, and one month was spent (July-August 1996) examining various archival sources deposited in the Royal Institute for

Linguistics, Geography and Ethnology (KITLV) in Leiden and the Rijksarchif in the Hague, the Netherlands.

Baduy was chosen for various reasons. Firstly, this area is inhabited by traditional Sundanese people who otherwise practise swidden cultivation in an enclave within a majority of Moslem Sundanese who practise intensive wet rice (sawah) farming. Secondly, this community has maintained its traditional culture over a period of several hundred years and has actively resisted change. Therefore, the relationship between people and environment is deeply embedded in their culture. In addition, the community has a unique social and political organization with strong control exercised by traditional leaders. Thirdly, it is one of a few tiny ethnic groups which has explicitly rejected the national development programme, although it is located only 130 km from Jakarta. Fourthly, historically, Baduy identity in practising swidden farming as a means of subsistence has been continuously threatened by both internal and external factors, such as population pressure, land use change, market penetration, and government policy. Nevertheless, the community has developed various cultural adjustment strategies to maintain their identity, mainly linked to the practice of swidden cultivation.

I stayed in the houses or farm houses (**saung huma**) of both Inner and Outer Baduy informants. In general, the Baduy people accepted my presence in Kanekes village and were very co-operative and friendly. I had previously conducted intensive research on social forestry in this

area for the Ford Foundation and for the State Forestry Corporation (Perum Perhutani) for about one year in 1985-1986, and this previous research experience helped.

The first two weeks of my stay in Kanekes, during October 1995, were devoted to orientation. I visited the Inner (**Baduy Dalam**), Outer (**Baduy Luar**), Dangka (**daerah Dangka**), Baduy settlements constructed by the government (**Baduy pemukiman**), and Outer Baduy transient swiddening areas (**panganjoran Baduy luar**), to survey the physical environment, to observe people daily activities and to informally question official village leaders (**jaro pamarentah**) and their staff (a village secretary=**carik** and assistant=**pangiwa**), traditional leaders (**puun**) and their staff (**jaro tangtu**, **jaro dangka**, **jaro tanggungan 12**, and **kokolotan lembur**), and representative households: those of old people with knowledge of the historical background, people involved in planting new cash crops, in trading, making handicrafts, making palm sugar, off-farm jobs, travelling, and involved in the government settlement programme.

On the basis of these enquiries I selected key informants in Cibeo (Inner Baduy), Babakan Gajeboh/Marengo and Kaduketug (Outer Baduy), and Kopo (the Baduy's settlement project), who were regularly visited and interviewed during my field research. I observed their everyday activities and conducted informal interviews, often working closely with a few key informants (cf. Ellen, 1984; Bodley, 1994; Bernard, 1994). I lived in their

houses, ate their food, accompanied them to their swidden fields, fallow lands, forests, small shops or markets, and accepted invitations to their ceremonies.

I witnessed the main activities of key informants at every stage of the swidden cycle with their associated social and rituals events. For example, at the beginning of my field research in October 1995, the swidden fields were being planted with rice; as my research finished in June 1996, the swidden fields were being harvested and closed with the **kawalu**, **ngalaksa**, and **seba** rituals. Observation of even the most simple practical operations, however, was not without its difficulties. Unfortunately, I could not stay for more than one week for each visit to Inner Baduy, as according to Baduy custom, guests are not allowed to stay in Inner Baduy for more than three nights. Indeed, some foreigners and Chinese are only allowed to stay a few days, and only in certain hamlets of Outer Baduy, such as Kaduketug, Kadujangkung, and Gajeboh. In addition, during fasting time, **kawalu**, only limited guests are allowed to visit Baduy at all. Therefore, in order to conduct research in Inner Baduy, I frequently stayed in farm houses or stayed in neighbouring areas. Moreover, as rice is considered to have a spirit, similar to the human soul, I was not allowed to measure rice production directly. However, I was able to make calculations indirectly through interviews and use of standard equivalents.I was also unable to observe some ritual events directly, and for data on these relied on informal conversations.

Basic census data were collected more systematically, and in the same way I have gathered information on interactions between people; involved in, for example, borrowing rice seed, renting swidden land, and trading agricultural produce. I worked intensively with six older individual men in order to document their life histories in some detail, particularly changes in land use over time. By collecting such information, I have been able to analyse changing perceptions of swidden farming, religion, income, expenditure, food composition, settlement pattern, household structure, travel, the role of kinship, land tenure, labour organisation and conflict (both between Baduy and between Baduy and outsiders).

Key informants in the non-Baduy community, such as farmers who have become landlords to Outer Baduy, and administration sub-district (kecamatan) officials, field officers of the Social Welfare Department (petugas lapangan DEPSOS), and agricultural extension workers (petugas penyuluhan pertanian) were interviewed to obtain their perceptions of the Baduy way of life and farming. By asking both the tenants (Outer Baduy people) and landlords (non Baduy people), I was able to verify data about Baduy out-migration (**nganjor**) to adjacent areas.

Basic ecological data, such as average size of swidden fields (**huma**), crop diversity, characteristics of anthropogenic forests (**dukuh lembur**), mixed-gardens (**kebon**), secondary growth (**reuma**) and mature forest (**leuweung kolot**) were analysed using standard plant

ecological methods, including plot surveys. All plants and crop species in 20 plots of 20 m x 20 m of each land use type were recorded. In addition, crop production in swidden plots was also measured. Plant uses, including medical uses, were recorded, along with vernacular and scientific names. Plant identification was undertaken at the Research Centre for Biology (Herbarium) in Bogor. Data on wild animals were collected by direct observation using field guide manuals and by interviewing informants.

Land survey and soil analyses were undertaken using ethnoecological approaches, asking informants about local land and soil classifications. Some soil samples from what local people regarded as fertile and non-fertile soil were taken from various stages in the swidden fallow, such as after 1, 2, 3 and 4 years, respectively. These were analysed at the soil laboratory of the Agricultural Faculty, Padjadjaran University, Bandung.

The sources for secondary data were varied, including statistics, literature and archival materials. The archival materials used were 'the Memorie van Overgave' and the 'Adatrechtbundels'. The 'Memorie van Overgave' written by each Dutch colonial resident at the end of his term of office provided an invaluable source of information for the Banten region in the early nineteen hundreds. In addition, the old Sundanese manuscript, 'Sanghyang Siskanda ng Karesian' placed in the National Archives (Arsip Nasional), Jakarta, named 'kropak 630', and translated by Atja and Saleh Danasasmita (1981a) provided information concerning

old Sundanese traditions.

6. Arrangement of the thesis

In the present chapter I have set out the objectives of the study, provided some background, reviewed some relevant literature and discussed the framework and methods used. Chapter II describes the Baduy environment comprising the administrative context, physical access, geography, rainfall, soil, land use types, vegetation, wild animals, and population. Chapter III introduces Baduy social and political organisation including the name Baduy, theories of Baduy origins, religion and belief, pattern of settlement, leadership system, kinship and life-cycle, and the exchange economy.

Chapter IV provides a historical account of agricultural land use: in the pre-colonial (**zaman ratu**), colonial (**zaman penjajahan**), and post colonial periods (**zaman kemerdekaan**).

Chapter V concerns the social organization of land and labour: access to land (inheritance, loans, rent, share-cropping, and purchasing) and labour organization in swiddening [labour exchange (**liliuran**), cooperative work (**rereongan**), and wage labour (**kuli upah**)].

Chapter VI discusses swiddening as a ritual obligation, together with the swidden cycle and swidden production. Each stage of the cycle is analysed: the agricultural calendar, site selection, clearing, burning,

seed preparation, planting, weeding, harvesting, storage, consumption, and labour organization. The pattern of cropping (rice and annual crops) and cash income (sugar palm products and fruits) are also discussed.

Chapter VII discusses recent changes in Baduy swidden cultivation, including the introduction of cash crops (clove, coffee, Albizzia), off-farm jobs, trading cash crop products, trading traditional cloth and handicrafts, and involvement in wage labour, and the new Baduy settlement project: its location, history, ecological and socio-economic conditions, and adaptation and change in relationship to the development process.

Finally, in chapter VIII, I return to a discussion of Baduy swidden cultivation in relation to cultural identity, and the pressure on the traditional way of life. I relate this to recent socio-economic changes, market penetration and government policy.

CHAPTER 2

THE BADUY ENVIRONMENT

The Baduy have been living in a relatively isolated fashion in a reserve forest territory for several hundred years. They themselves claim that this isolation allows them to maintain a simple way of life, faithful to their ancestors wishes, and regulated by asceticism (**tapa**). This contrasts with the hectic life style of the modern world. However, the traditional Baduy way of life is increasingly vulnerable to internal and external pressures, and undoubtedly is now different from what it has been in the past. This chapter introduces the physical environment in which Baduy at the present time dwell.

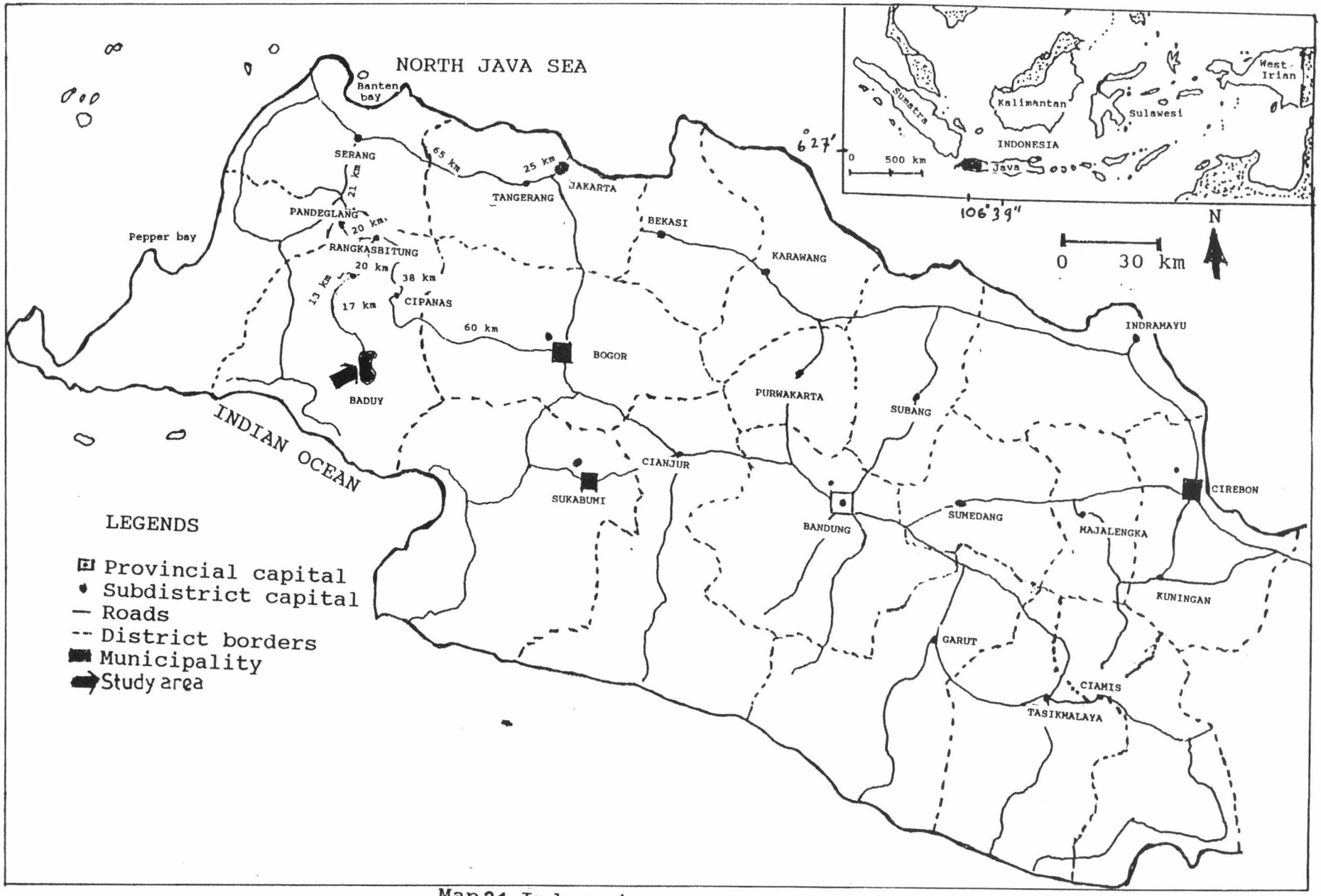
1. The administrative context viewed historically

Until the early sixteenth century the Banten region was controlled by the Sundanese Kingdom of Pajajaran (1333-1579). The last capital, known as Pakwan, was located in the northern area, near present day Bogor, a highly appropriate place for developing both agriculture and trade. Coastal trading towns such as Banten, Pontang, Cikande, Tangerang, Sunda Kelapa, Karawang and Cimanuk could be reached by boats from Pakwan along the Ciliwung river, a journey of approximately two days (Ekadjati, 1984: 85).

Our knowledge of the earliest trading activities in the old coastal towns of West Java comes from accounts of

Portuguese voyagers. For example, Duarte Barbosa reports in 1516 that the king of the Sundanese Kingdom was very active in trading with the Portuguese. The geography of the Kingdom is described by Joao de Baros (1511) as consisting of a lowland or coastal area and an interior or mountainous area. The coastal towns in the north were trading centres, while the interior mountainous area in the south was composed predominantly of highlands (Djajadiningrat, 1983 [1913]:83]. Bantam bay or 'Sunda Bantam' (see Map 2.1) had developed rapidly as a centre in the pepper (lada) trade, particularly after the capture of Malacca by Portuguese in 1511 (Kartodirdjo, 1966: 30; Djajadiningrat 1983 [1913]: 83).

In order to protect their areas of influence from infiltration from the neighbouring Islamic Kingdoms of Cirebon and Demak, the kingdom of Pajajaran and the Portuguese established in 1522 a trade and security pact. However, this strategy was not successful and in 1526 and 1527, respectively, Banten and Sunda Kelapa were conquered by Cirebon and Demak (Ekadjati, 1984: 86-87). Moreover, since the Sultanate of Banten had been founded by Javanese colonists from Demak in 1520, Hinduism was being gradually replaced by Islam. Under the Sultanate, the north Banten areas were developed for agriculture, particularly wet rice (sawah), and coastal towns for trade. Thus, as with the former Hindu Pajajaran Kingdom, the core was located in the lowland of the northern Banten region, while the mountainous area to the south was still considered as



Map 2.1. Indonesia and West Java

interior.

By the early nineteenth century Dutch trading activities, enforcement of the pepper trade monopoly in Java, and the power of the Banten Sultanate were gradually being eroded. In 1808 the Sultanate of Banten was formally abolished by Governor-General Daendels (Kartodirdjo, 1966: 36), and absorbed into Dutch colonial territory. Under Dutch government, since the early eighteenth century, Banten had been administered as a residency consisting of 3 regencies; in the north, Serang, in the west, Pandeglang and to the south Lebak, and 15 districts (Table 2.1).

Table 2.1. Administrative division of Banten in the early eighteenth century

Regency	Districts
Serang	Serang *)
	Cilegon
	Anyer
	Ciomas
	Pontang
	Ciruas
	Pamarayan
Pandeglang	Pandeglang *)
	Caringin
	Menes
	Cibaliung
Lebak	Rangkasbitung*)
	Parungkujang
	Lebak
	Cilangkahan

*) Regency capital
Source: Kartodirdjo (1966: 83)

The east regency was ruled over by a Sultan until 1813. The highest Dutch official was the resident, based in Serang

and supported by three assistants, based in three regency capitals: Serang, Pandeglang and Rangkasbitung. The assistant resident was supported by controllers in each sub-district and aided by a local, 'bupati' at the district level and a 'wedana' at the sub-district level (Table 2.2).

Table 2.2. The various administrative staff recognised in Java in the early nineteenth century

Administrative unit	Dutch Staff	Local Staff
Province (**propinsi**)	Governor	
Residency (**keresidenan**)	Resident	
District (**kabupaten**)	Assistant Resident	**Bupati**
Sub-district (**kawedanaan**)	Controller	**Wedana**
Sub-district (**kecamatan**)	Controller aspirant	**Camat**
Village (**desa**)		**Jaro**, supported by **Carik**, **Pangiwa** and **Kolot-kolot**

Source: After Hiroyoshi Kano (1984: 36).

In accordance with the objectives of the Dutch government to manage the rural areas, administrative villages (desa) were introduced, mainly to define more effectively administrative border units, corporate and autonomous rural areas (Van Neil, 1981: 25-28; Breman, 1987:189-240; Elson, 1994:29). Each village had its own headmen, locally called **jaro**, elected by the villagers themselves and confirmed by the district officer or **wedana** (Table 2.2). On a day-to-day basis, the Jaro was assisted

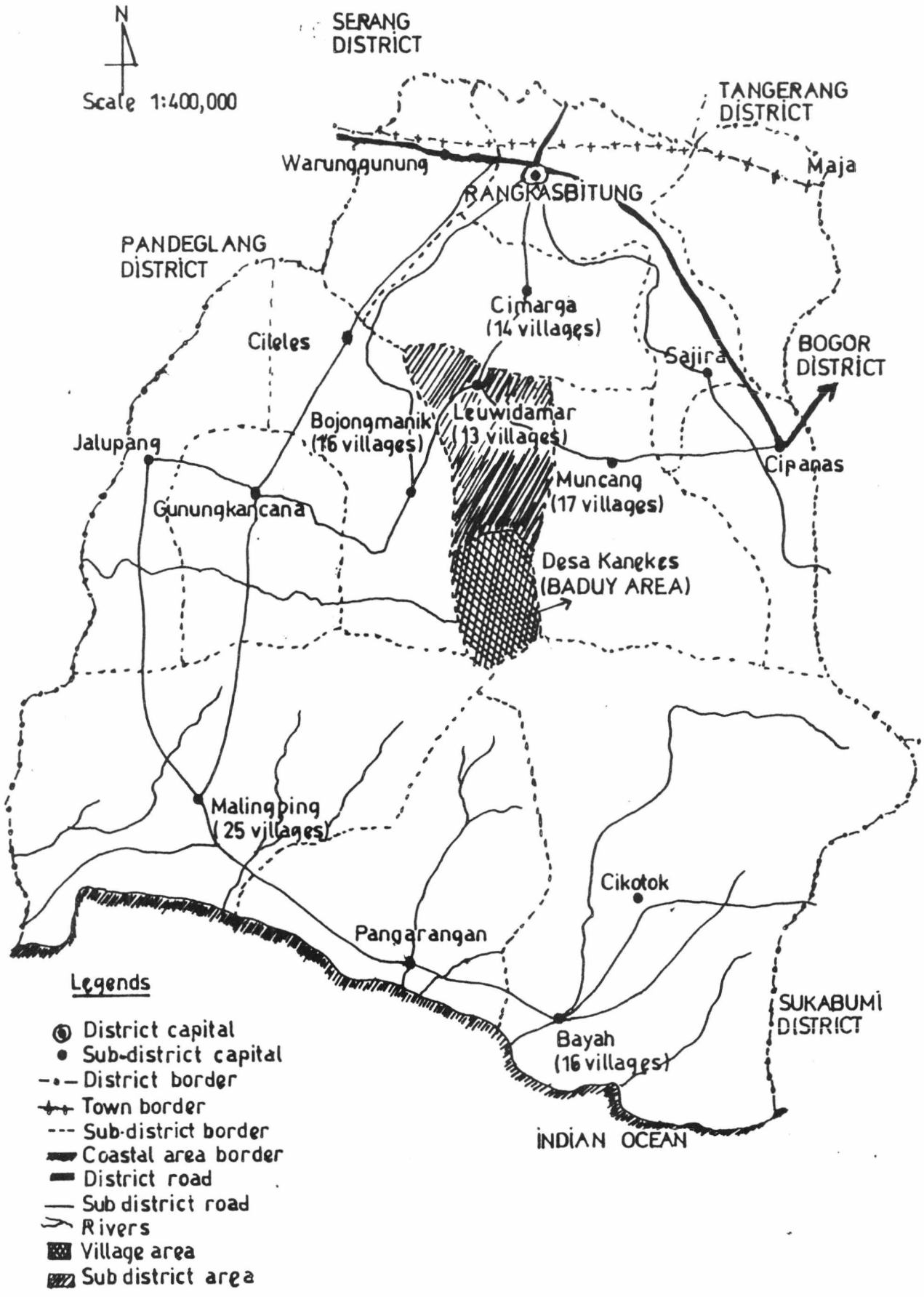
by a staff consisting of secretary (**carik**), in charge of issuing orders (**pangiwa** or **panglaku**), policeman (**jagareksa**), postman (**kapetengan** or **pancalang**), tax collector (**amil**) and village elders (**kolot-kolot** or **tuwa-tuwa**) [Kartodirdjo, 1966: 56).

With Indonesian independence, Banten was administratively established as a residency consisting of 3 districts (kabupaten): Serang, Pandeglang and Lebak. The Baduy area comprised 5101,85 ha, and more than 40 hamlets (kampung or **lembur**), but consisted of a single **desa**, **Desa Kanekes**, located in the isolated mountainous area of South Banten. Before the 1980s, this village, together with three other neighbouring villages in the north (desa Cibungur, desa Cisimeut, and desa Leuwidamar), constituted the sub-district (kecamatan) of Leuwidamar, in the district (kabupaten) of Lebak of the residency of Banten.

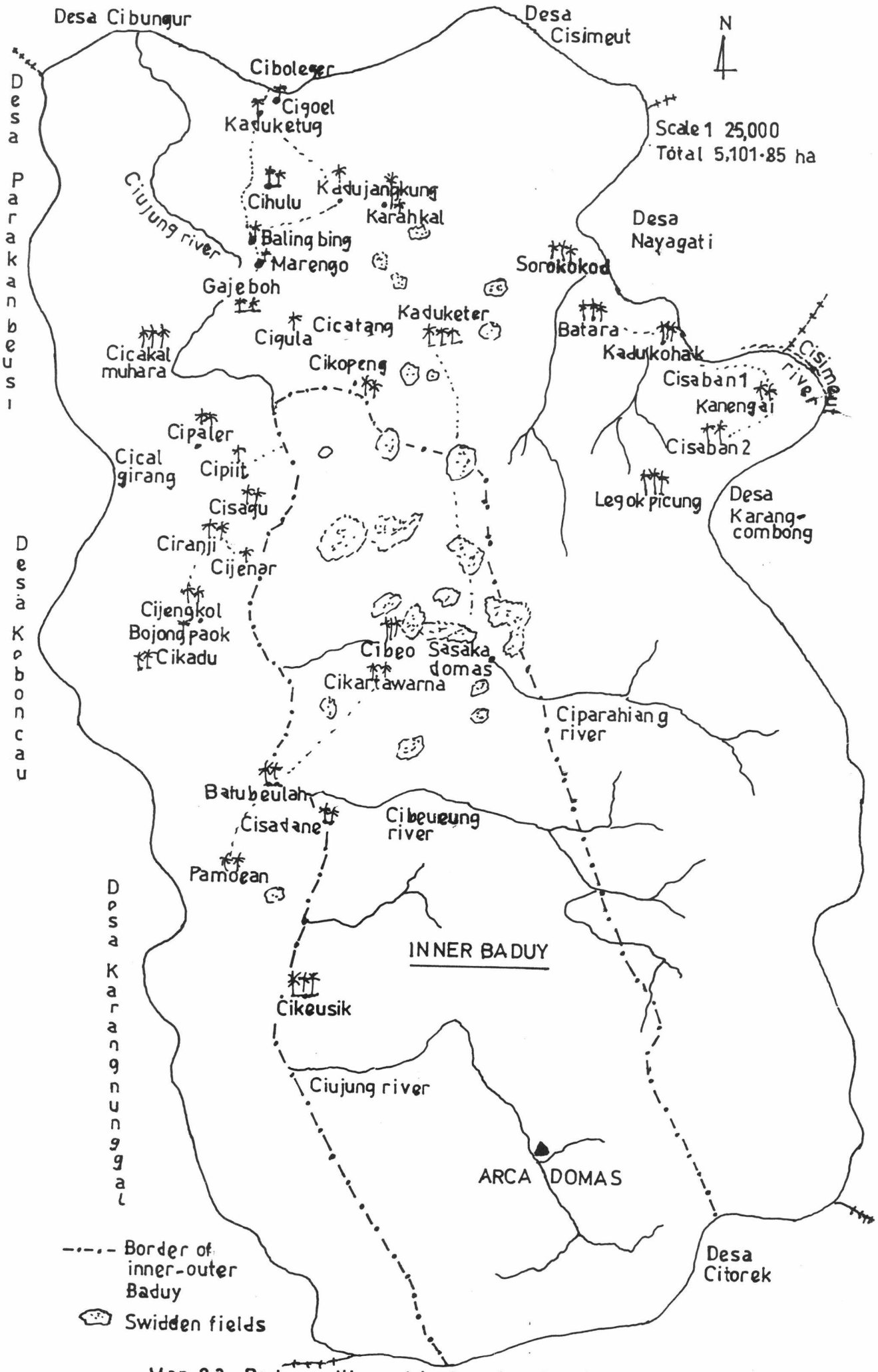
Because of increasing population density, during the 1980s three existing villages of kecamatan Leuwidamar were divided into several new administrative villages. Desa Cisimeut, desa Cibungur and desa Leuwidamar were divided into 2, 4 and 4 administrative villages, respectively. It was initially proposed by the district government that Kanekes be divided into three villages: desa Kanekes I (administrative centre in Kaduketug, Outer Baduy), Kanekes II (Cisaban, Outer Baduy), and Kanekes III (Cikartawarna, Inner Baduy). This proposal, however, was strongly rejected by the religious leaders (**puun**) of the Baduy community. The Baduy regard themselves as a cultural unity traditionally

composed of three territories: Inner Baduy (**Baduy dalam** or **daerah tangu**), Outer Baduy (**Baduy luar** or **daerah panamping**) and the Dangka area (**daerah dangka**). Baduy believe that the integrity of this arrangement should not be violated by cross-cutting administrative structures. As a result, the proposal to create new administrative villages was abolished by the Governor of West Java (PEMDA DATI II, Lebak, 1985: 49). Over a period of about 15 years, in the neighbourhood of desa Kanekes, only one new district was established with 9 new administrative villages. Similarly, some villages to the east (kecamatan Muncang), to the west (kecamatan Bojongmanik) and to the south (kecamatan Malingping and Bayah) of desa Kanekes were also divided into new village administrations. Thus, kecamatan Lewidamar, Muncang, Bojongmanik, Malingping and Bayah now consist of 13, 17, 16, 25 and 16 villages, respectively, totalling 87 villages (Map 2.2) [Kantor Statistik Lebak, 1993: 9].

Today, the Baduy area of Desa Kanekes is surrounded by 11 non-Baduy villages in 5 sub-districts. The nearest villages in the northern part are Desa Bojong Menteng, Desa Cibungur, Desa Cisimeut, and Desa Nayagati of kecamatan Leuwidamar. To the south it is bordered by Desa Cikate of Kecamatan Malingping and Desa Citorek of Kecamatan Bayah. To the west it is bordered by Desa Karang Nunggal, Desa Parakanbeusi and Desa Keboncau of Kecamatan Bojongmanik; and to the east by Desa Sobang, Desa Karangcombong and Desa Cilebang of Kecamatan Muncang (Map 2.3).



Map 2·2· Leuwidamar sub-district and neighbouring areas of Lebak district, Banten residency, West Java

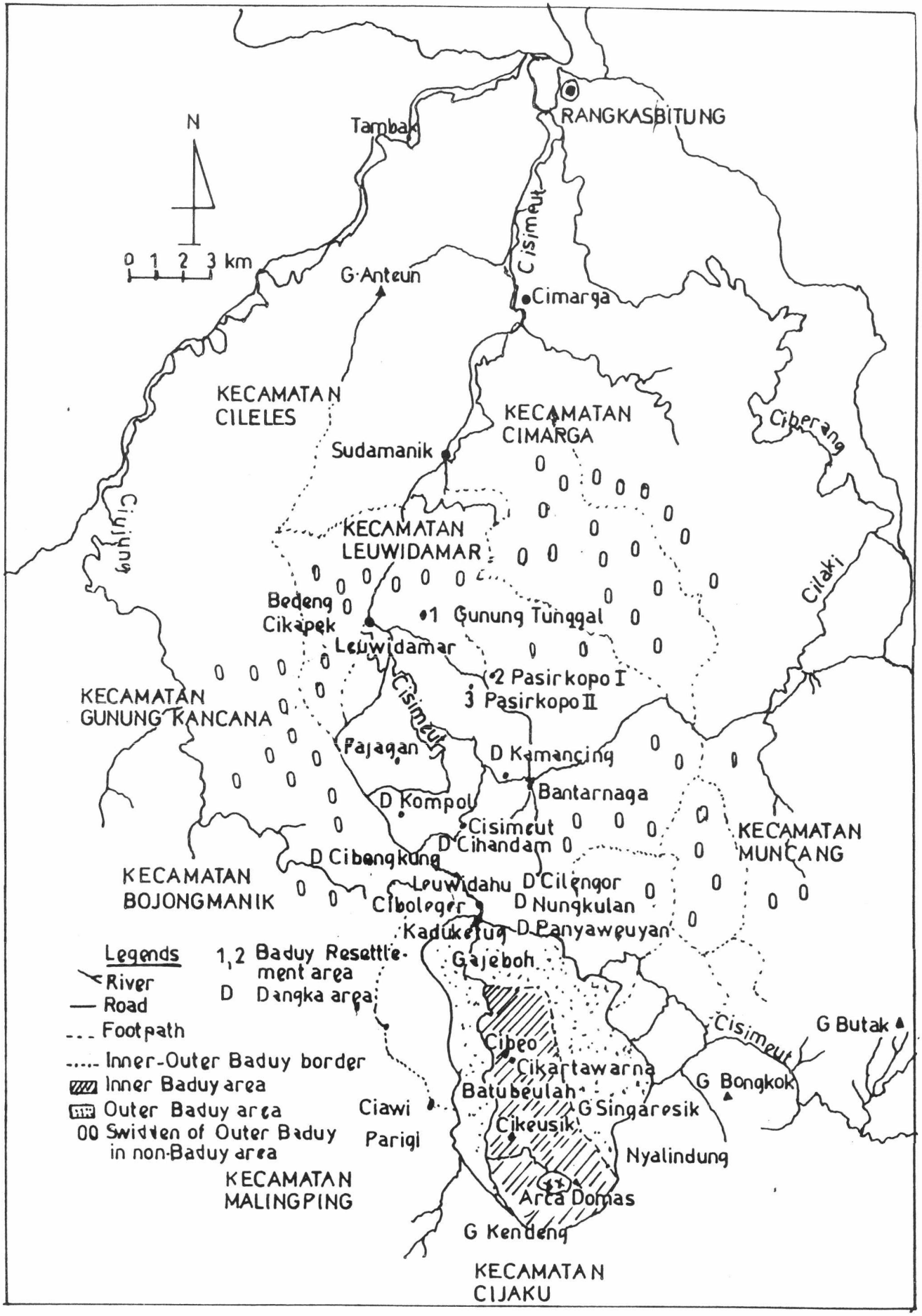


Map 2.3. Baduy settlement in Desa Kanekes, Kecamatan of Leuwidamar

2. Physical Access

Since the colonial period Lebak has been known as an isolated district of forest with a low population (Mohr, 1945: 257). Access from Batavia, now Jakarta, was only possible along a road that ran west via Tangerang, Serang and then on to Rangkasbitung. Another road into the region was built in 1925, running west from Buitenzorg, now Bogor, via Jasinga, Leuwiliang to Rangkasbitung (Williams, 1990: 1) [see map 2.1].

Before the 1950s, a village road existed from Leuwidamar to Muncang built by the Dutch to service rubber plantations in the area, such as at Perkebunan Bantarjaya, Cilisung, Cikapek, Gunung Tunggal and Kopo. However, access to Kaduketug hamlet in Desa Kanekes from the sub-district capital (Leuwidamar) was until the 1970s only by footpath (**jalan satapak**) through forest and across the Cisimeut river at desa Cisimeut, that is approximately 13 km (see Map 2.4). In 1975 the main footpath between Leuwidamar and Ciboleger (Kaduketug neighbour area) was widened and upgraded to a village road (**jalan desa**) by reinforcing it with river stones. This work was organised by a respected traditional leader (**jawara**) of desa Cisimeut, Jaro Karis. As a result, some vehicles now travel between the district capital, Rangkasbitung, and Cisimeut. However, these cannot continue to Ciboleger because the bridge over the Cisimeut river is only a wooden suspension bridge (**jembatan gantung**). The road between Bantarnaga hamlet in Cisimeut



Map 2·4 Baduy and adjacent area

desa and Ciboleger, approximately 5 km long, is only suitable for walking or motor bikes. Very occasionally, vehicles do cross the Cisimeut river, but usually only when the water level in the river is low.

Another main footpath, approximately 17 km long, between Leuwidamar and Ciboleger via Simpang, Cibengkung and Ciboleger has also been upgraded to the standard of a village road by the local government (Map 2.4). In the 1980s this road was asphalted, allowing vehicles belonging to villagers from Cibunut hamlet in desa Cisimeut to provide a transport service between Rangkasbitung and Ciboleger. In addition, in the west of Desa Kanekes, a main road between Simpang and Dungkuk was built by the government and extended from Parigi to Karoya in 1987. This road has provided much easier access for vehicles to the isolated Inner Baduy hamlets. More recently, at the end of 1995, the main road between Simpang and Ciboleger was also improved, where there already existed a car terminal and some food and handicraft stalls (**warung**). Consequently, travelling to the Baduy area today from Rangkasbitung is not difficult. This can be done by using two routes from Leuwidamar to Ciboleger, a shorter route via Cisimeut crossing the river, and a rather longer route via Simpang and Cibengkung (in Cibungur village) avoiding the river. However, public transport from Rangkasbitung is usually only available until about 6.00 p.m. Rangkasbitung itself is accessible by public transport from Jakarta, such as trains, buses, and colts (Japanese small buses). Trains

carry people and goods which normally stop at some small stations along a route between Tanah Abang, Jakarta and Rangkasbitung. The vehicles can use two main routes. The first route is by the northern coastal road from Jakarta west to Tangerang-Serang-Pandeglang and Rangkasbitung, a distance of 131 km (Map 2.1). Since the early 1990s there has also been a faster highway between Jakarta and Serang making transportation between the two towns much easier. The second route runs east from Jakarta to Bogor-Jasinga-Cipanas-Rangkasbitung, approximately 98 km. Travelling by this route to the Baduy area, via Gajrug (in Cipanas) makes it possible to go directly to Cisimeut instead of first to Rangkasbitung, though (as mentioned earlier) mainly in the dry season.

From Ciboleger, the Baduy area can be reached only by walking, the first main hamlet (**lembur** or kampung) on this route being Kampung Cigoel where the official village administration resides. Other hamlets can be reached from this hamlet by walking along hilly footpaths. In places, traditional bamboo bridges are found, particularly where the footpaths cross the Ciujung river.

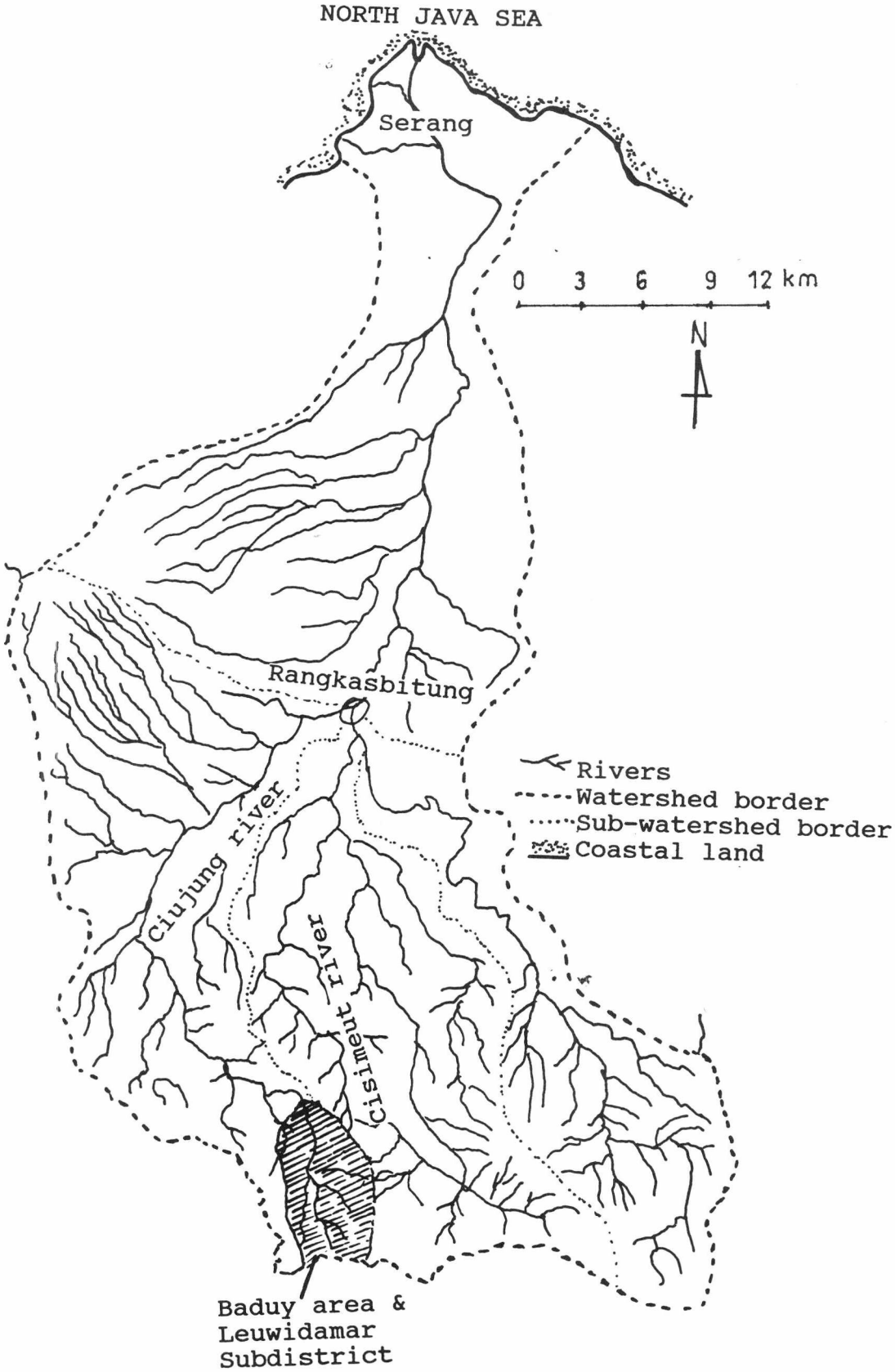
3. Geography

The Baduy area of Desa Kanekes is located at approximately latitude 6° 27′ 27"-6° 30′ North and longitude 106° 3′9"-106° 4′ 5" East. Geologically, the Baduy area is composed of young limestone, covered with thin humus. A

general feature of the geology of the Banten region is the lack of volcanoes to provide lime, magnesia, iron, potassium, and phosphoric acid. For this reason it poses particular problems in conducting effective agriculture (Mohr, 1945: 257).

The main river flowing through the area is the Ciujung. The upstream is located in the forest area of Gunung Kendeng, south Cikeusik hamlet in Inner Baduy, where a sacred place called Arca Domas is found. The river flows in a northerly direction from Cikeusik passing the Outer Baduy hamlets of Cisadane, Batubeulah and Gajeboh, downstream to Rangkasbitung, Serang and eventually into the north Java Sea (Map 2.5). 'Sungai Ciujung' has many cultural functions for the Baduy, such as bathing, washing and fishing, while downstream it has been used for irrigation, fishing, bathing, for sand, and as a navigable river using bamboo rafts.

There are a number of tributaries to the Ciujung in both Inner and Outer Baduy. In my own survey of the catchment area I found it convenient to identify 6 main zones: between Cikeusik and Cibeo; between Cibeo and Cikadu; between Cikadu and Kaduketer; between Leuwibuleud (Kaduketer) and Cicakal Hilir (Muhara); between Cicakal Hilir and Gajeboh; and between Gajeboh and Kaduketug. In these zones I recorded 6, 5, 10, 4, 3, and 9 tributaries, respectively, giving a total of 37 (see Table 2.3 and Map 2.3). Some of tributaries flow through hamlets, such as Sungai Cikeusik through Cikeusik, Sungai Ciparahiang



Source: Purnomohadi (1985: 43).

Map 2.5. Baduy area within the upstream of Ciujung watershed

Table 2.3. Some tributaries of the Ciujung river, desa Kanekes

Name of tributary	: Location of confluence with Ciujung river
(1) Between Cikeusik and Cibeo	
1. Sungai Cikeusik	: east side, near Cikeusik
2. Sungai Cibeueung	: east side, near Cikartawarna
3. Sungai Cipokol	: west side
4. Sungai Cibarani	: west side
5. Sungai Cipicung	: west side
6. Sungai Ciparahiang	: east side, near Cibeo
(II)Between Cibeo and Cikadu	
7. Sungai Cibogo	: west side
8. Sungai Cikarang	: west side
9. Sungai Citeureup	: east side
10.Sungai girang Cikadu	: west side
11.Sungai Cikadu	: west side
(III) Between Cikadu and Kaduketer	
12. Sungai hilir Cikadu	: west side
13. Sungai hilir Cikadu	: west side
14. Sungai Cijerenong	: east side
15. Sungai Cipicung	: east side
16. Sungai Cimandayeum	: east side
17. Sungai Cipiit	: west side
18. Sungai Cipaneureusan	: east side
19. Sungai Cipaneureusan1	: west side
20. Sungai Cipaneureusan2	: west side
21. Sungai Kaduketer	: east side
(IV) Between Kaduketer (Leuwi buleud) and Cicakal Hilir	
22. Sungai Cikanekes	: east side
23. S. Curug leuwi buleud	: west side, near Cicatang
24. Sungai Cikaduseupan	: west side
25. Sungai Cigantungan	: west side
(V) Between Cicakal Hilir and Gajeboh	
26. Sungai Cicakal Muhara	: west side
27. Sungai Cibepeng	: west side
28. Sungai Cigaru	: west side
(VI) Between Gajeboh-Kaduketug	
26. Sungai Cidangdang	: east side, near Marengo
27. Sungai Cimamiru	: east side
28. Sungai Cisamabar	: east side
29. Sungai Pasir Samodo	: west side
30. Sungai Cipinang	: east side
31. Sungai Cicangkrung	: west side
32. Sungai Ciseel	: west side
33. Sungai Cihulu	: east side
34. Sungai Cibaduy	: east side

Source: Field research (1996)

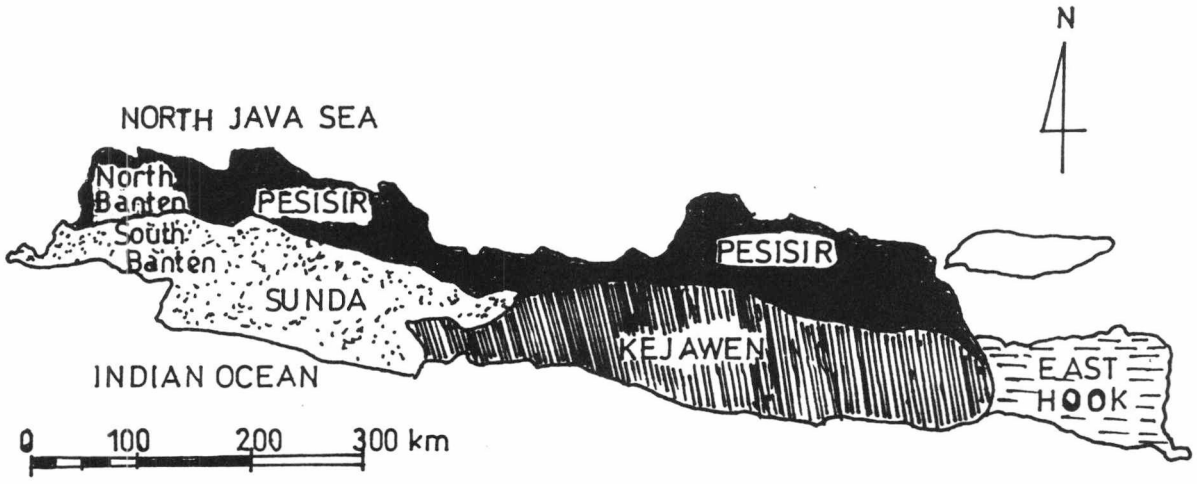
through Cibeo, Sungai Cibeueung through Cikartawarna, Sungai Cikadu through Cikadu, Sungai Kaduketer through

Kaduketer, Sungai Cihulu through Cihulu, and Sungai Cibaduy through Kaduketug.

Another river, 'Sungai Cisimeut' flows from the south, passing the eastern part of the border area between Outer Baduy and Desa Nayagati, downstream to Rangkasbitung where it unites with Sungai Ciujung in the north of Rangkasbitung, and eventually empties into the north Java sea (see Map 2.5).

Topographically, the Banten regency can be divided into two zones: a lowland coastal zone and a highland zone. In his discussion of Javanese topography, Geertz (1963: 42-43) describes these as the 'pesisir' and Sunda areas, respectively (see Map 2.6).

The lowland coastal zone is located in north Banten, the former core area of both the Pajajaran Kingdom and the Sultanate of Banten. In this area the elevation ranges between 0 to 200 m above sea level; the soil is rather poor compared with that of the plain between Cirebon and Japara or in the Solo and Brantas delta, due to lack volcanoes in the upstream of south Banten (Geertz, 1963: 42-43). In the lowland, wet rice fields (sawah) predominate. Irrigated rice cultivation was first introduced and established during the Banten Sultanate, and was of three kinds: sawah laid out at the command of the sultan or his appanage-holder or royal domain (**sawah negara**), sawah granted to officials, relatives, and personal favourites of the sultan (**sawah ganjaran**), and sawah opened up by employing compulsory service attached to 'pusaka land' (**sawa jasa**).



Source : After Geertz (1963)

Map 2.6. General topographical divisions of the island of Java

When the Sultanate of Banten was abolished by the Dutch, all sawah in the lowlands of Banten was taxed, land owners paying one-fifth of their total yield (Kartodirdjo, 1966: 34-35).

The highland zone or 'daerah pegunungan' (in the past, combined with the Priangan area, and called the Sunda area by Geertz), is located in southern Banten, including the region of Pandeglang and Lebak. Until relatively recently this area was predominantly forest and very thinly populated (Mohr, 1945: 257). The main form of agriculture was swidden cultivation (**huma**) [Kools, 1935]. It is in this area that the Baduy are located. Topographically, the area consists of moderately steep to very steep hill and mountain, and forms a ridge-and- valley complex. In the south-eastern part of Desa Kanekes (Inner Baduy), near kampung Cikeusik, there are some mountains still covered by dense forest, such as Gunung Kendeng, Gunung Singaresik, Gunung Hoe, Gunung Handarusa and Gunung Hunyur. Similar forest is also found near kampung Cibeo, such as on Gunung Manglid, Gunung Seel, Gunung Handarusa, Gunung Bukit Kancil, Gunung Seueur, Gunung Pagelaran, and Gunung Kaduketer. In the northern part (Outer Baduy), some slopes are also still covered by forest, particularly on the tops of mountains, such as Gunung Jatake (Kaduketer), Gunung Cikadu (Cikadu), Gunung Sorokokod (Sorokokod), and Gunung Baduy (Kaduketug). These areas are protected, have never been used for swidden cultivation in living memory and are called 'entrusted forest' (**leuweung titipan**). According to

the Baduy 'entrusted forest' is different from 'protected forest'. For example, it may be sometimes possible to cultivate in protected forest. Entrusted forest, however, cannot be opened. Because it is necessary to seek the permission of the people who first entrusted the area, it is considered to have ancestral protection. Thus, entrusted forest is reserved for ever through ancestral edict.

Hamlets (kampung or **lembur**) are scattered along valleys near the Ciujung river and its tributaries, or near other water sources, at an altitude of between 170 m and 410 m asl [Purnomohadi, 1985: 40-41]. In the northern area, the first hamlet approached from non-Baduy settlement is Cigoel (new satellite hamlet extended from Kaduketug), located at 250 m asl. From this place other hamlets to the south can be reached by footpath: kampung Gajeboh (170 m asl), located on the bank of the Ciujung river; and two satellites originating during the 1990s from Gajeboh, located to the north: Babakan Marengo (174 m asl) and Babakan Balingbing (175 m asl). Cicakal Hilir (210 m asl) in the southern area, can also be reached from Gajeboh, by crossing the Ciujung river by a bamboo suspension bridge. Other hamlets in the southern part between Cicakal Hilir and Inner Baduy include Cipaler (300 m asl), Cicakal Girang (410 m asl), Cipiit (340 m asl), Ciranji (310 m asl), and Cijahe (300 m asl). The Inner Baduy area consists of three hamlets. From north to south these are Cibeo (290 m asl), Cikartawarna (300 m asl), and Cikeusik (300 m asl)[see Map 2.3].

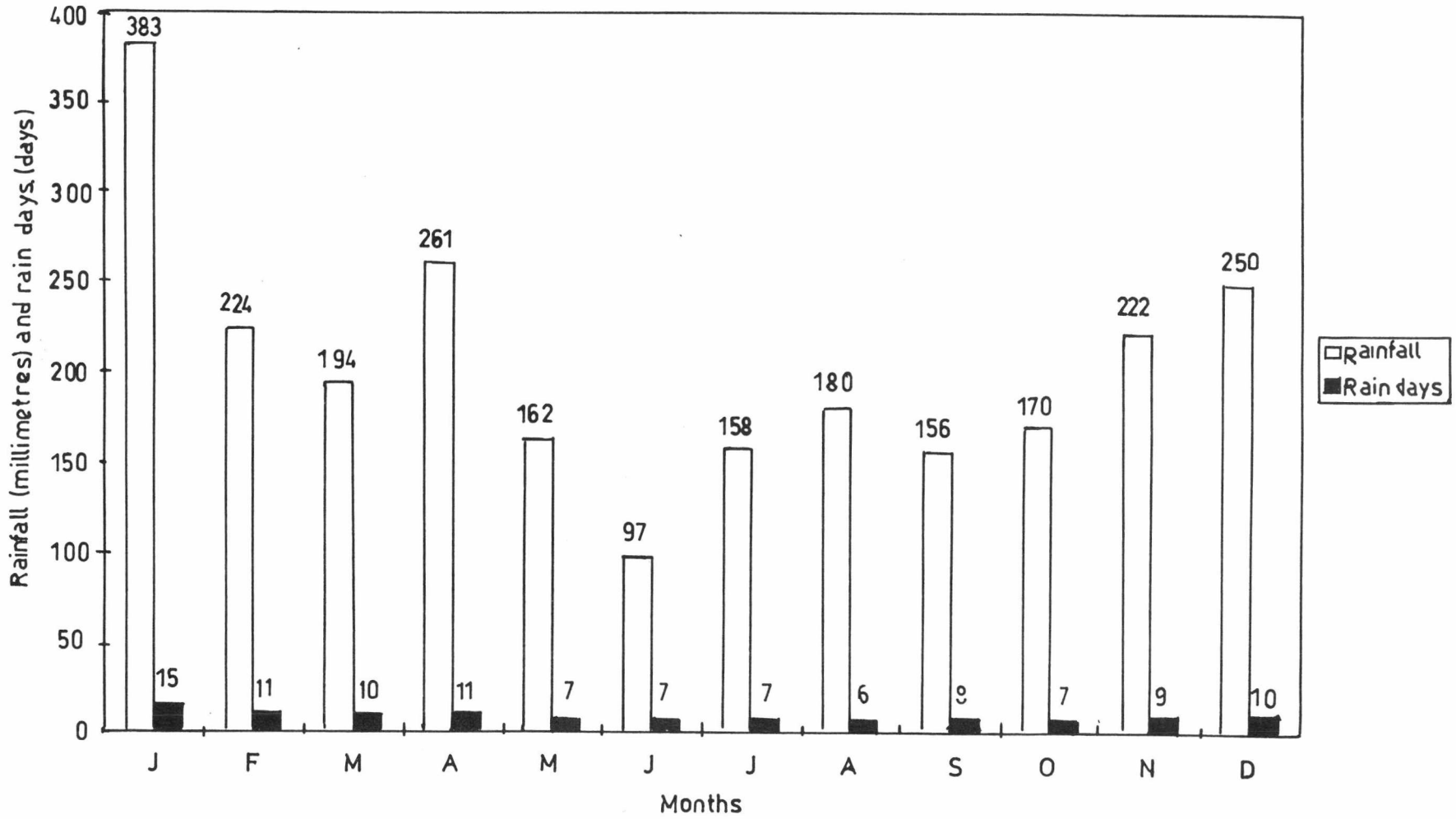
4. Rainfall

The Baduy area exhibits two main seasons: a dry season (musim kemarau or **usum halodo**) and a wet season (musim hujan or **usum hujan**). In general, from November to April, the south-west monsoon brings heavy rains, while from May to October the south-east monsoon brings drier weather.

Monthly rainfall figures, recorded by the Institute of Meteorology and Geophysics (Lembaga Meteorologi dan Geofisika) at Leuwidamar sub-district for the period 1975-1990 show that on average the wettest month is January with 383 mm/month, and the driest month June with 97 mm/month (Figure 2.1). The average daily air temperature is recorded as more than 20 degrees Celsius. Following Schmidt and Ferguson 1951 (Soemarwoto, 1992: 20-21), the Baduy area exhibits a rainfall 'A' pattern (Figure 2.2), that is heavy rainfall throughout the year. Average monthly rainfall is categorized 'wet'(bulan basah) if there is more than 100 millimetres/day. Average yearly rainfall was recorded as between 1707 mm/month and 3403 mm/month (Figure 2.3). According to Mohr (1945: 257), the Banten area has a poor soil, caused in part by climate. The soil in this region is from young rock which is predominantly volcanic, and easily leached by heavy persistent rainfall.

The main problem of soil fertility in the tropics is acknowledged to be leaching due to rainfall exceeding evaporation, which results in the downward movement of water in the soil (c.f. Sutlive, 1978: 15-16). Since the

Figure 2.1. Mean monthly rainfall (in millimetres) and number of rain days at Leuwidamar sub-district, 1975-1990 (Meteorological and Geophysical data)





Rainfall types	q Values *)
A	0 < q < 0.143
B	0,143 < q < 0.333
C	0,333 < q < 0.600
D	0.600 < q < 1.000
E	1.000 < q < 1.670
F	1.670 < q < 3.000
G	3.000 < q < 7.000
H	7.000 < q

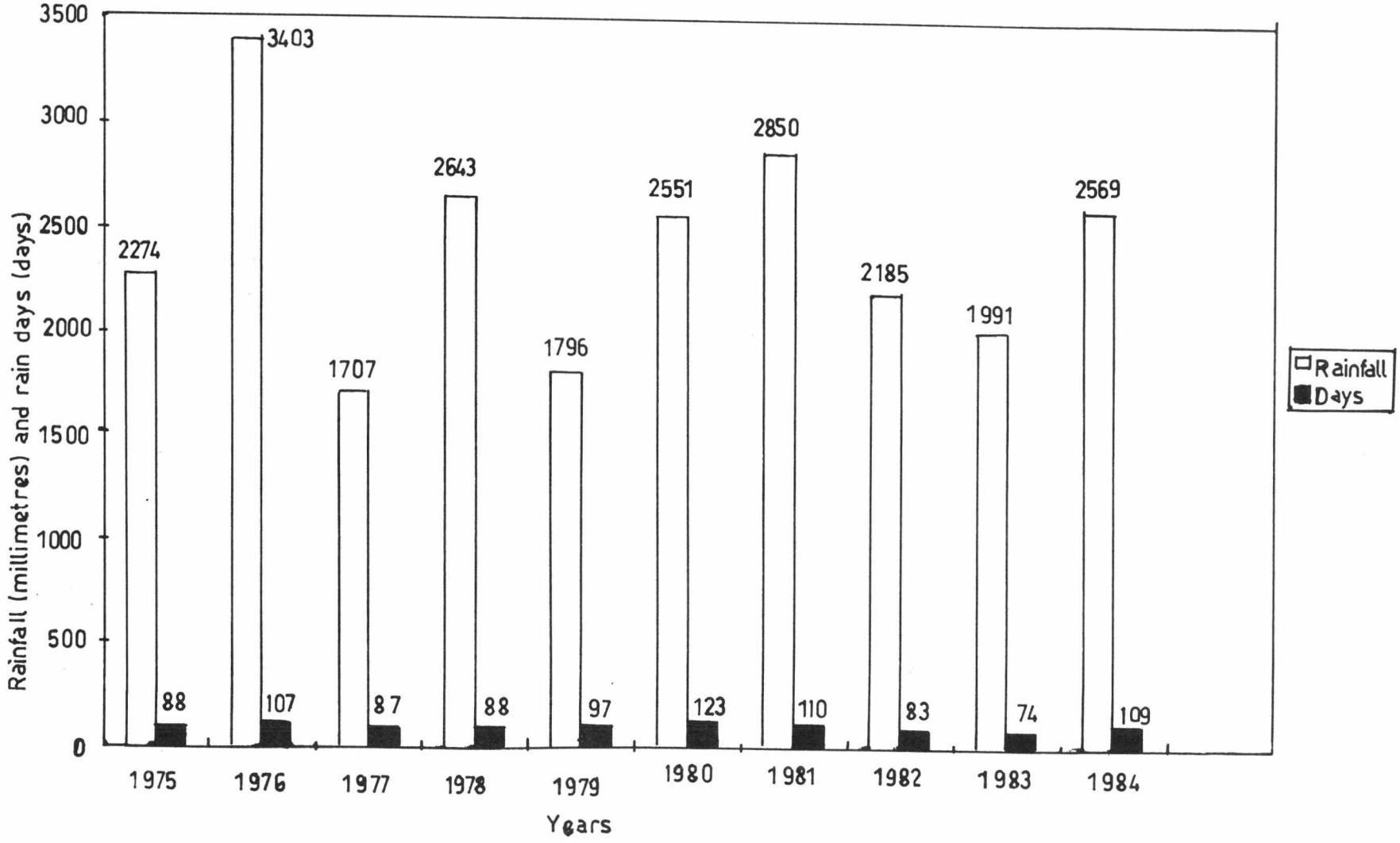
*) $q = \frac{\text{mean month number of dry months in a year}}{\text{mean month number of wet months in a year}}$

dry month = mean monthly rainfall less than 60 mm, and
wet month = mean monthly rainfall more than 100 mm

Source : Schmidt and Ferguson 1951 quoted by Soemarwoto (1992:20-22)

Figure : 2.2. Map of rainfall types in West Java

Figure 2.3. Average annual rainfall and number of rain days at Leuwidamar, 1975-1984 (Meteorological and Geophysical data)



Baduy area is characterised by steep slopes, young rock and heavy rainfall throughout year, erosion is a major problem, particularly during the wet season when swidden fields are being prepared for the planting of rice. Water samples taken between 25-26 April 1986 in an upstream area of the Ciujung river, near Cikeusik hamlet, before and after rain, indicate the extent of soil erosion in the Baduy area. This is illustrated, for example, by percentage changes in water discharge and suspended solids. Before rain, water discharge and suspended solids were recorded at 661 litres/second and 64.88 mg/litre, respectively (Table 2.4).

Table 2.4. Water discharge and Suspended solids in upstream Ciujung river, near Cikeusik hamlet, Inner Baduy*)

Sampling date(weather conditions) after	Sampling (hour)	Water discharge (Q) litre/second	Suspended Solid (CS) (mg/litre)	Percentage change raining day Q (%)	Percentage change raining day CS (%)
25 April '86: (non raining)	16.09	661	64.88	baseline data **)	
Raining day	19.45	3682	196.81	82	67
26 April '86: (non raining)	6.45	1582	61.10	58	6

*) Source: Field research (1985/1986).
**) As baseline data in calculating percentage change of water discharge and suspended solid after rain

After rain, the water discharge and suspended solids increased to 82 per cent and 67 per cent, respectively. These were considered to be due to run-off and soil

leaching entering the river, and particularly from land surfaces on steep slopes with little or no vegetation cover and humus from forest opened up for swidden cultivation. This can be seen, for example, by measuring water discharge the day after a rain day. Although water discharge is still higher than before the rain, at approximately 58 per cent suspended solids, it decreases by approximately 6 per cent, as run-off and soil leaching stops with cessation of rain.

5. Soil

The soil types in the Baduy area are predominantly 'brown latosol' (latosol coklat). Top soil is sandy loam or sandy clay with high erodibility.

Various types of soil (**taneuh**) are recognised and named by the Baduy, based on colour, water content, stoniness or rock parent material, and humus content (Table 2.5). According to informants, soil fertility in the Baduy area varies from place to place. In Outer Baduy, for example, some areas of Kaduketug and Kadujangkung are recognised as fertile (**taneuh subur**), while in the south between Cicakal Hilir and Cicakal Girang the soil is thought to be poor (**taneuh anggar**). Some parts of the neighbouring non-Baduy area, such as Kaduheulang, near Cihandam, are also recognised as being fertile. Fertile land (**taneuh subur**) is recognised as such by the Baduy when it displays some of the following characteristics:

Table 2.5. Baduy soil classification

Main criteria	Vernacular name	English gloss	Characters
Colour	**Taneuh beureum**	Red soil	Visual appearance red, considered poor
	Taneuh bodas	Clay soil	Visual appearance white, considered poor
	Taneuh hideung	Black soil	Visual appearance black, considered fertile
Water content/Stick -iness	**Taneuh liket**	Sticky soil	Poor aerial saturation, fertility is low
	Taneuh bear	Non sticky soil	Good aerial saturation, fertility is high
Stoniness/ Smoothness	**Taneuh karang**	Stony soil	Consists of many stones, considered fertile soil
	Taneuh euweuh karang	Non stony soil	No stones, fertility high
	Taneuh keusik	Sandy soil	High sand content, fertility moderate
Humus content	**Taneuh loba surubuk**	Rich humus soil	High humus soil content, fertility high
	Taneuh kurang surubuk	Poor humus	Lack of humus, fertility low

Source: Field research (1985/1986) and (1995/1996)

blackness (**hideung**), non stickiness (**henteu lengket**), non-rockiness (**henteu loba batu karang**), rich humus (**surubuk**) and location in a flat area (**daerah cepak**)[Table 2.5].

Soil samples labelled by informants as 'poor' (**taneuh anggar**) and 'fertile' (**taneuh subur**) were analysed in the soil laboratory of the Agriculture Faculty at Padjadjaran University, Bandung. Fertile soil (type A) was taken from the Cihulu area, while poor soil (type B) was taken from Cicakal Muhara. The following characteristics were analysed: soil reaction (pH), cation exchange capacity, base saturation, saturated aluminium, dry bulk density, water availability, permeability, organic components (N, P, K, and C) and exchangeable base (K, Na, Ca, and Mg).

In general, the quality of the 'fertile' soil (type A) tended to be better than that of 'poor' soil (type B). For example, the pH of type B is highly acid, particularly in land fallowed for 1 to 3 years. Soil type A, however, was only very acid when the sample was taken from land fallowed 1 and 2 years. Soil type B, however, was only very acid when the sample was taken from land fallowed 2 and 3 years (Table 2.6).

Table 2.6. pH of composite soil samples from Outer Baduy area at depth of 0-20 cm

Fallowing period (year)	Soil reaction (pH)	
	Type A	Type B
4	5.00 (acid)	4.46 (acid)
3	4.70 (acid)	4.39 (highly acid)
2	4.24 (highly acid)	4.21 (highly acid)
1	4.41 (highly acid)	4.30 (highly acid)

Type A= **taneuh subur**; and B= **taneuh anggar**
Source: Laboratory analysis (1996)

Cation exchange capacity of soil type A was higher than that of soil type B, which means that soil type A has a high capacity to maintain its fertility compared with soil type B (Table 2.7). Saturated aluminium content, which in excess can poison crops, was higher in soil type B. In type B samples a high percentage saturated aluminium was recorded for soil from land fallowed for 1 to 4 years, while in soil type A it was only found in land fallowed for 1 and 2 years (Table 2.8).

Table 2.7. Cation exchange capacity of composite soil samples from Outer Baduy area at depth of 0-30 cm

Fallowing period (year)	Cation exchange capacity (me/100 g)	
	Type A	Type B
4	25.58 (high)	14.29 (low)
3	37.52 (high)	14.77 (low)
2	21.38 (medium)	15.26 (low)
1	25.56 (high)	14.87 (low)

Type A=**taneuh subur**; and B=**taneuh anggar**
Source: Laboratory analysis (1996)

Table 2.8. Saturated aluminium of composite soil sample from Outer Baduy area at depth 0-30 cm.

Fallowing period (year)	Saturated aluminium (%)	
	Type A	Type B
4	12.91 (low)	41.75 (high)
3	18.03 (low)	52.92 (high)
2	45.87 (high)	49.92 (high)
1	80.95 (high)	50.51 (high)

Type A=**taneuh subur**; and B=**taneuh anggar**
Source: Laboratory analysis (1996)

Dry bulk density of top soil of type A is rather better than that of B. This is probably because decreasing bulk density has rapidly occurred in type A soils compared with type B, as the decomposition of organic material in type A is faster than in type B (Table 2.9). For another characteristic, water availability and permeability, soil type A also tended to be better than type B (Table 2.10 and Table 2.11).

Table 2.9. Dry bulk density of top soil of soil sample from Outer Baduy

Fallowing period (year)	Dry bulk density (g/cm^3)	
	Type A	Type B
4	0.78	0.81
3	0.83	0.82
2	0.91	0.82
1	1.08	1.04

Type A=**taneuh subur**; and B=**taneuh anggar**
Source: Laboratory analysis (1996)

Table 2.10. Water availability (wa) of composite soil samples from Outer Baduy

Fallowing period (year)	Wa (2.42 % of volume)		Wa (4.20 % of volume)	
	Type A	Type B	Type A	Type B
4	52.51	48.44	35.78	33.91
3	50.46	47.88	33.22	33.04
2	48.54	45.29	34.38	32.73
1	46.84	42.68	27.46	30.73

Type A=**taneuh subur**; and B=**taneuh anggar**
Source: Laboratory analysis (1996)

Table 2. 11. Permeability of composite soil samples from Outer Baduy area

Fallowing period (year)	Permeability (cm/hour)	
	Type A	Type B
4	2.44 (moderate)	1.07 (somewhat poorly)
3	2.40 (moderate)	1.88 (somewhat poorly)
2	2.43 (moderate)	0.84 (somewhat poorly)
1	2.33 (moderate)	0.71 (somewhat poorly)

Type A=**taneuh subur**; and B=**taneuh anggar**
Source: Laboratory analysis (1996)

However, quantities of some organic materials and exchange bases suggest that in some respects soil type B is better than soil type A (Table 12, Table 13 and Table 14).

Table 2.12. C-organic, N-organic, and C/N ratio of composite soil samples from Outer Baduy area at depth of 0-30 cm.

Fallowing period (year)	C-organic content (%)		N-organic content (%)		C/N ratio (%)	
	Type A	Type B	Type A	Type B	Type A	Type B
4	2.02 moderate	2.24 moderate	0.22 moderate	0.30 moderate	7 low	9 low
3	1.52 low	2.52 moderate	0.18 low	0.35 moderate	7 low	8 low
2	1.57 low	1.58 low	0.16 low	0.23 moderate	7 low	10 low
1	1.38 low	1.41 low	0.16 low	0.24 moderate	6 low	9 low

Table 2.13. Total and available phosphorus of composite soil samples from Outer Baduy area at depth of 0-30 cm.

Fallowing period (year)	Total phosphorus (mg/100 g)		Available phosphorus (ppm)	
	Type A	Type B	Type A	Type B
4	63.90 very high	184.02 very high	6.42 low	25.26 very high
3	86.30 very high	124.62 very high	6.42 low	28.61 very high
2	40.20 high	112.37 very high	7.05 low	7.68 low
1	63.90 very high	71.86 very high	7.68 medium	9.21 medium

Table 2. 14. Exchangeable bases of composite soil samples from Outer Baduy area at the depth of 0-30 cm.

Fallowing period (year)	Exchangeable base (me/100 g)							
	K		Na		Ca		Mg	
	A	B	A	B	A	B	A	B
4	0.29	0.57	1.09	1.19	1.41	11.82	1.27	6.05
	med.	med.	v.high	v.low	v.low	high	med.	high
3	0.25	0.60	0.99	1.99	0.94	15.01	1.22	6.84
	low	high	high	high	v.low	high	med.	high
2	0.18	0.59	0.99	0.99	0.94	3.99	0.95	3.15
	low	med.	high	high	v.low	v.low	low	high
1	0.25	1.28	0.99	1.19	0.94	1.92	1.03	2.89
	med.	v.high	high	v.high	v.low	v.low	med.	high

Type A=**taneuh subur**; and B =**taneuh anggar**
Source: Laboratory analysis (1996)

Overall, Outer Baduy soil fertility can be said to be poor to moderate, except for total phosphorus (P), which is high to very high. The overall picture is caused by intensive swidden cultivation and soil erosion due to heavy rainfall throughout the year. Soil fertility, however, has been improved through effective fallowing, as illustrated in the various analysed soil characteristics which increase in land fallowed for 4 years, compared with land fallowed for only between 1 and 3 years.

Baduy perceptions concerning poor soil (**taneuh anggar**) are confirmed by laboratory analysis, particularly with respect to pH, cation exchange capacity, base saturation, saturated aluminium, dry bulk density, water availability and permeability. However, an analysis of organic components (N, P, K and C and exchange bases (K, Na, Ca and Mg), is not consistent with the Baduy view. In other words, classification of soil based on the direct

observation of physical characteristics in the field by Baduy is a good predictor of fertility, although laboratory analysis is necessary to appreciate the status of detailed chemical components.

Today, because traditional Baduy are forbidden to use chemical fertilizers, duration of fallow and the kind of vegetation succession have an important role in maintaining soil fertility. The transfer of nutrients between soil and vegetation in swiddens has 3 aspects: uptake by vegetation, removal from the vegetation and return to soil. This latter is effected as litter, in rain wash and by burning and root excretions, and mineralisation of litter. Nutrient losses can be caused by soil erosion (Nye and Greenland, 1960).

Nutrient inputs from vegetation after swidden fields have been fallowed can be very rapid, depending upon the health and extent of coppiced vegetation and the remaining seed bank on the site. According to Kalpage (1976), the rate of accumulation of nutrients in forest vegetation is more in the early years of the fallow when most of the vegetative growth takes place. Therefore, the effects of fallow in swidden cultivation are critical. Soil fertility can be maintained by inputs of nutrients during the fallow period, and soil fertility is decreased through nutrient use by crops and as a result of soil loss through erosion. Soil loss by erosion and crop uptake occurs mainly during the cropping period. This is because nutrients are usually taken up by annual crops, such as rice, and the land surface is not densely covered by vegetation. However,

erosion usually decreases after harvesting rice, when the land surface is well covered by vegetation during the fallow period (Wiersum, 1984).

6. Land use types

There are four basic land use types in the Baduy area: forest, swiddens, gardens and settlements. Baduy divide forest into two main categories: protected and non-protected. Protected forest constitutes those areas which have never been opened for swiddening, and which they call **leuweung kolot** (old or mature forest not known to have been previously farmed), big forest (**leweung gede**) or entrusted forest (**leuweung titipan**). In addition, there are some small plots of protected forest located on hills (**dungus**). In general, protected forest (**leuweung kolot** or **leuweung gede**) is found in Inner Baduy. Two of the most important protected forest areas are **Arca Domas** and **Sasaka Domas**, located in Cikeusik and Cibeo, respectively. These places can be visited only once a year by traditional leaders (**puun**), who are accompanied by a few people from both Inner and Outer Baduy who undertake ascetic rituals (**ziarah**). This happens during the month of kalima (**bulan kalima**/May-June) in the Baduy calendar.

Another forest type indicates forest which can be opened for swiddening, **reuma kolot** (mature fallow forest). If protected forest has been opened for swiddening, the term **leuweung** is usually no longer used and is replaced by

reuma. Moreover, if **reuma** is opened to establish a settlement, the anthropogenic forest surrounding the hamlet is called **lindung lembur** (hamlet shelter forest) or **dukuh lembur** (hamlet fruit).

Generally speaking, most land use types derive from non protected mature forest (Figure 2.4). To practise swidden cultivation (**huma**), a piece of land is cleared completely of vegetation. However, woody plants and those of economic value, such as fruit , are only pruned. Branches and stems are collected for fuel. The remaining biomass is burned to supplement soil nutrients. The piece of land is then prepared for planting rice and other annual crops. A piece of land is usually only cultivated for one or two years before being fallowed. The length of time depends on soil fertility. After harvesting rice and other annual crops, the land is fallowed and transformed into secondary forest (**reuma**) through natural succession. A swidden in fallow for less than one year, and which still has lots of dried rice stalks, is called **jami**. From this land, annual crops such as taro (**taleus**= Colocasia esculenta), African tuber (**kumili**= Plectranthus rotundifolius), and pigeon pea (**hiris**= Cajanus cajan) continue to be harvested. In addition, if the Albizzia trees (Paraserianthes falcataria) have been grown during swiddening, these are also allowed to grow together with natural vegetation. Therefore, although rice has been harvested, land is regularly visited by the owner to check fallowed land (**nempo jami**).

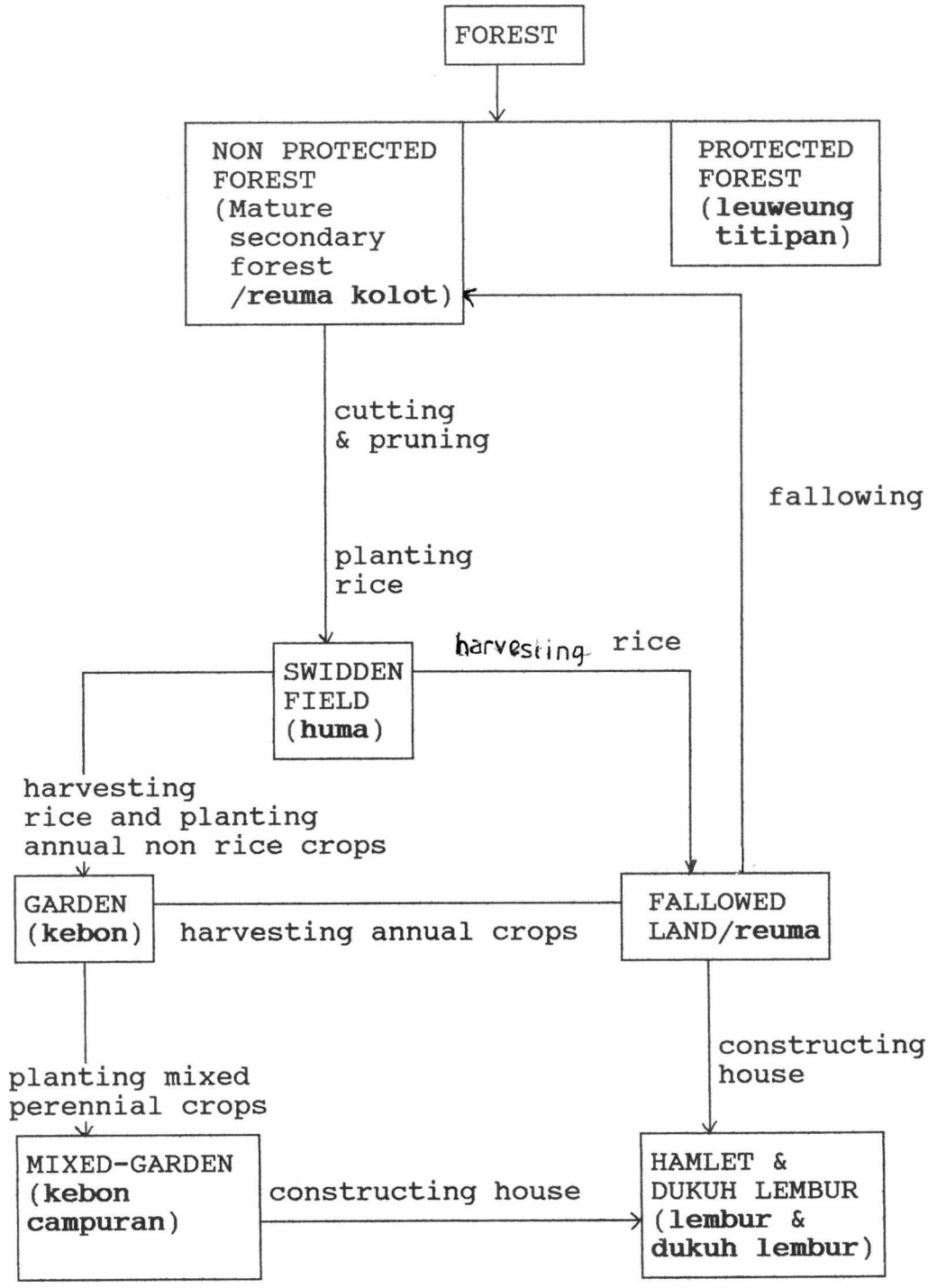


Figure 2.4. Development of land use system in Baduy, West Java

Secondary forest can be opened for rice planting again in the following year or fallowed for more than three

years. People will shift to another piece of mature **reuma** for rice planting and follow the same procedure: cutting and pruning, burning, weeding, harvesting and fallowing. In Outer Baduy, due to high population density and lack of **reuma**, farmers temporarily rent non-Baduy land and share crop, while waiting for their own land to fallow. They usually return to cultivate their own land after about 3 years swiddening in the non-Baduy area.

The **reuma** lands of Inner Baduy are different from those of Outer Baduy. Inner Baduy **reuma** lands are communally owned and all that is inherited by individuals are some perennial crops which grow on their land. By contrast, Outer Baduy **reuma** lands are owned by households and can be sold, rented and mortgaged to other households. The **reuma** land which has not been inherited by individual household members and which they own in common is called **gembulan reuma**.

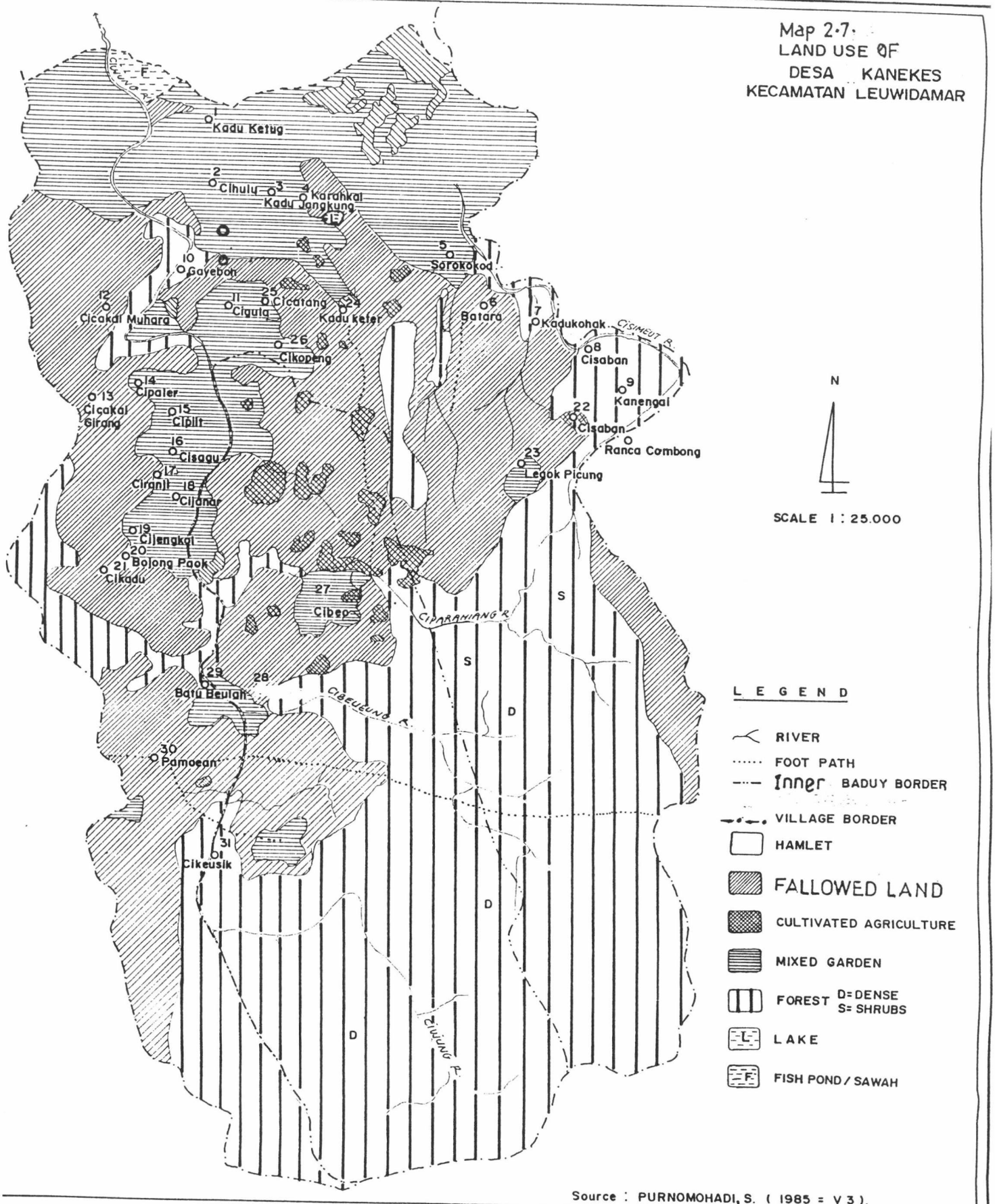
In some cases, the development of the land use system is from swidden fields into monocultural gardens (**kebun**) and mixed-gardens (**kebon campuran**), triggered when other annuals or perennials are cultivated after the rice harvest. During the last decade, mixed gardens have become the norm in Outer Baduy due to the introduction cash crops such as clove (Syzigium aromaticum), coffee (Coffea arabica), and Albizzia (Paraserianthes falcataria). By the 1990s, however, clove had been abandoned because of the very low market price.

Eventually new land develops into a settlement or

hamlet (**lembur** or kampung) with anthropogenic forest surrounding the hamlet (**dukuh lembur** or **lindung lembur**) [Figure 2.4]. In 1984, using LANDSAT remote sensing imagery, the total Baduy area was calculated at about 5,102 hectares. Of this, permanent forest constituted about 2,492.06 ha (49 per cent), swiddening fields 709.04 ha (13.40 per cent), fallowed lands 1,876.25 ha (36.77 per cent), and settlements 24.50 ha (Map 2.7) [Purnomohadi, 1985: 56]. The land mainly belonged to Inner Baduy, approximately 57 per cent of the total area (2900 ha), while the population was only 8 per cent (395 persons) of the total Baduy population of 5055 persons. Therefore, shortage of swidden land is a major problem for most Outer Baduy today.

7. Vegetation

The Baduy area has a high species diversity for plants growing in four main biotopes: swidden (**huma**) plots, hamlet fallow land/secondary forest (**reuma**), anthropogenic forest surrounding hamlets (**dukuh lembur**) and mature forest (**leuweung titipan**). A detailed list of plants recorded in these different biotopes is provided in Appendix 1. These species-rich biotopes serve various ecological, socio-economic and cultural purposes: to maintain the genepool, to protect soil, to maintain the micro climate, to protect against wind and sunburn, to conserve humus resources, to provide natural pesticides, to provide food and income,



Source : PURNOMOHADI, S. (1985 = V 3).

including staple food, vegetables, fruit , medicinal plants, magical plants, commercial plants, and handicrafts.

7.1. Dukuh Lembur

The Baduy hamlet is commonly encircled by anthropogenic forest, **dukuh lembur**, or what Terra (1958: 168) calls **talun** [1]. The **dukuh lembur** is planted mainly with medicinal species, fruit trees, and plants providing building materials. The vegetation structure resembles mature forest (Figure 2.5). A rich species diversity index with different maturation times for each species means that **dukuh lembur** products can be harvested throughout the year. These products mainly fulfil daily consumption needs, but some surpluses, such as fruit, can be sold to obtain additional income. These species include durian (**kadu**=Durio zibethinus), locus bean (**peuteuy**=Parkia speciosa), mango (Mangifera odorata), coconut (**kalapa**=Cocos nucifera), rambutan (**tundun**=Nephelium lappaceum), aren (**kawung**= Arenga pinnata) and picung (Pangium edule).

Durian or **kadu** (Durio zibethinus) is well known in the Baduy area and is marked in the names of a number of hamlets: Kadujangkung ('high durian tree'), Kadukohak ('pierced durian fruit'), and Kaduketer ('trembling durian'). Durian is a big tree which fruits after approximately 7 years growth. Fruit quality can be

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[1]). The ecology of the **talun** system in West Java has been studied by Linda Christanty et al 1986.

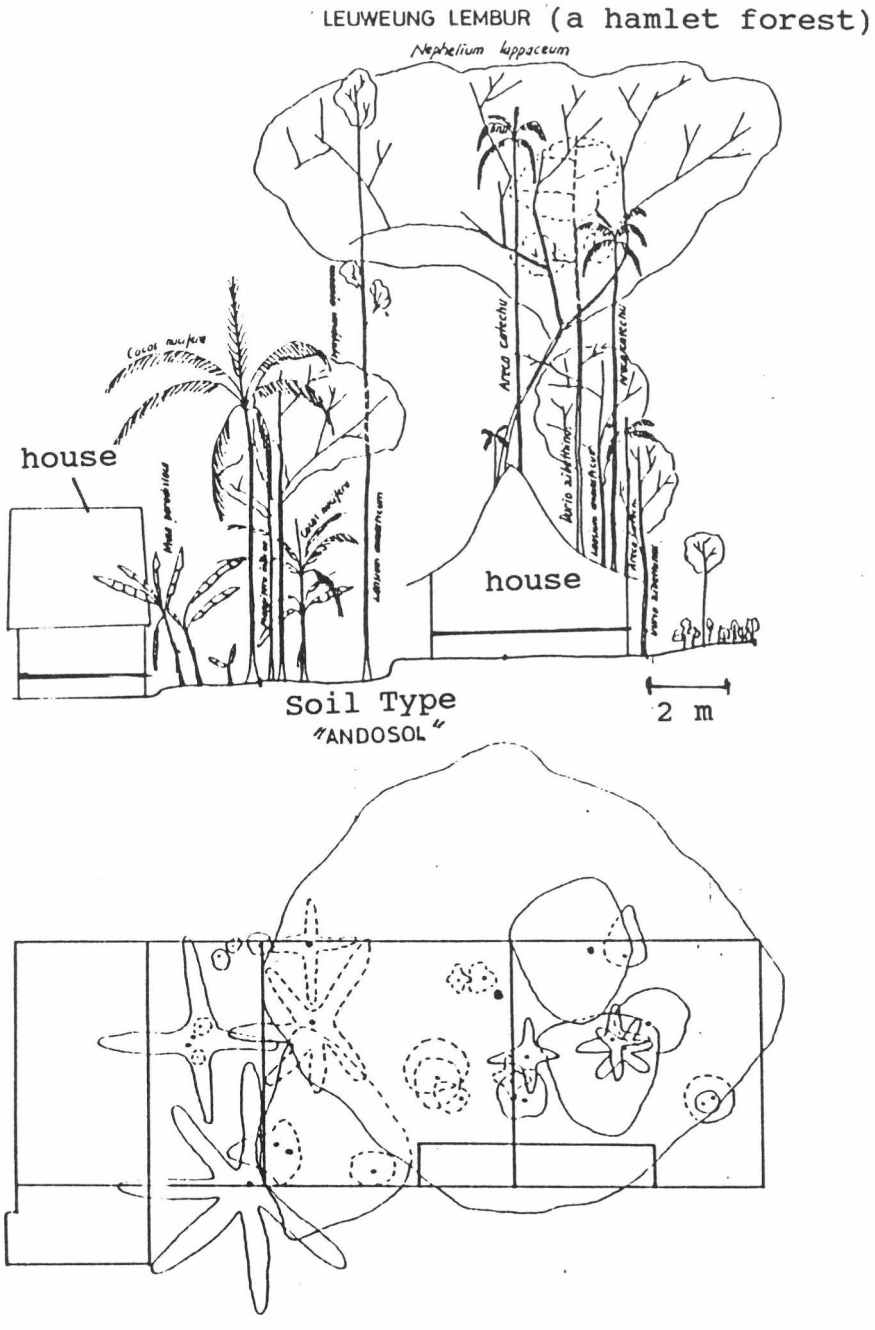

Figure 2.5. Vegetation structure of hamlet forest (**dukuh lembur** or **leuweung lembur**) in Baduy

distinguished on the basis of the size and taste of the edible aril. The best durian are held to have big fruits with a thick edible aril (**kandel**), small seed, and are sweet. A bad durian is popularly known a **kadu esel** (thin edible aril), has a big seed and is not sweet.

Petai or **peuteuy** (Parkia speciosa), is also a big tree, the pods of which contain 10 to 20 beans. At maturity the pod may be as long as 60 cm, turning from green to black. The beans are usually eaten with a hot chili sauce (**sambel**), fresh or roasted and boiled, and exude a strong smell.

Rambutan or **tundun** (Nephelium lapaceum) trees fruit at 4 or 5 years. The quality of the fruit varies enormously. For example, the **tundun** is sour and so juicy that the edible part sticks to the seed. Another variety of **rambutan**, **rambutan Aceh**, is pleasantly sweet and drier edible parts do not strongly stick to the seed.

Aren or **kawung** (Arenga pinnata) is a palm which can be grown at a greater altitude than the coconut. It provides various resources for the Baduy, the most important of which is sugar (**gula kawung**). In Inner Baduy, however, aren syrup which drips from the peduncle is forbidden as a source of sugar. The fresh juice is usually collected in a bamboo for daily drinking and is called **tuak** or **wayu**. After a few days it ferments into toddy, and on further fermentation converts into acetic acid. This is used for medicinal rice (**ubar pare**), when it is mixed with kitchen ashes, a **cangkudu** (Morinda citrifolia) leaf, and orange

skin (Citrus grandis). Aren fibre (**injuk**) is used for roofing mixed with **kiray** leaf (Metroxylon sagu) and as cordage for binding together the parts of houses and farm houses. Immature Arenga leaves are used as cigarette wrappers, and immature leaf ribs are used in a ceremony for planting and harvesting rice. In addition, the leaves are used in various rituals following the rice harvest, particularly **ngalaksa**. The leaves and leaf ribs are fashioned into an arrow (male) and a kind of doll (girl) shaped and are offered to the ancestors in a ritual sacrifice (**ngalaksa**).

7.2. Swiddens

Of the various crops planted in a Baduy swidden field (Figure 2.6), the most important is rice (**pare**=Oryza sativa), which is considered to be sacred. This belief can be related to old Sundanese traditions. In the past, most Sundanese believed that rice was originally created by the rice goddess Nyi Sri Pohaci, as indicated in the following myth (Soeganda, 1982: 170-72):

> Once upon time in Swargaloka (heaven), 'Sanghyang Guru' intended to build two halls in a row 'Bale Bandung'. For this purpose, 'Sanghyang Narada' was asked to look for a special ingredient by some 'dewa'. The 'dewa' went to many places to find this ingredient. However, 'Dewa Anta' although he was asked to go, cried instead of going out. This is because he didn't have any assistance. From his tears three eggs were created. These eggs were brought in his mouth to 'Batara Guru' following a suggestion from 'Batara Narada'. On the way, however, he was asked by an

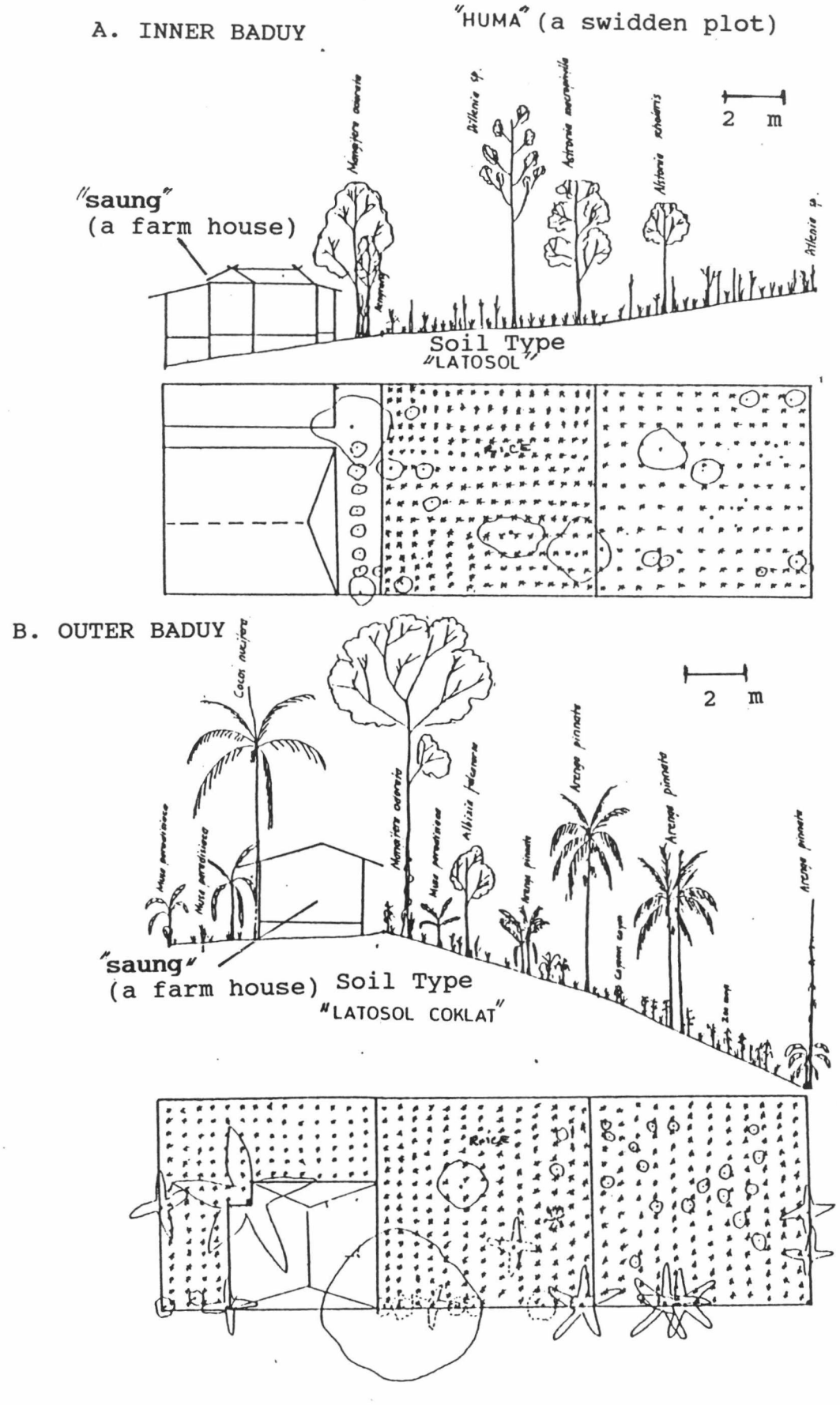

Figure 2.6. Vegetation structure of a swidden plot (huma) in Baduy

> eagle 'Elang Belang' where he was going. Because he was holding the eggs in his mouth, he could not answer. As a result, he got angry and was attacked by 'Elang Belang'. Consequently, two of the eggs fell out, broke and become young pigs; 'Sang Kalabuat' and 'Budug Basu', respectively. The rest of the eggs were presented to 'Batara Guru' who had changed into a pretty girl, 'Dewi Pohaci'. She was breast fed by 'Dewi Uma'. However, 'Dewa Sanghyang' was very worried that 'Dewi Pohaci' would be taken as a wife by Batara Guru, despite being his daughter. Therefore, Dewi Pohaci was given a fruit 'buah holdi'. After eating this fruit, she got sick and died. She was buried by 'Bagawat Sakri'. Her grave waited an order of Batara Guru. Afterwards a rice crop grew from the grave.

This myth legitimates the respect held by pre-Moslem Sundanese farmers for the rice goddess. Rice was commonly called **Nyi Sri** or **Kersa Nyai** ('the wish of Nyai'), while rice cultivation was punctuated from beginning to end with various rituals (Mustapa 1985 (1913): 89; Soeganda, 1982: 157; Locher-Scholten, 1987: 83).

Similar beliefs and practices are still found in Baduy today. A number of local rice varieties are planted annually in Baduy swiddens (**huma**). My own work indicates the existence of at least five local rice varieties which should be planted in each swidden field. Three are considered particularly sacred: **pare koneng, pare siang** and **pare ketan langgasari**. These varieties must be planted in separate parts of the swidden. Some households, who don't own enough land, are unable to plant these varieties. As a result, they don't have a **pungpuhunan** (sacred place in a swidden field) and the rituals must be undertaken by other households, and sacred rice seed for planting must be borrowed.

Overall, my own work has yielded 89 local Baduy rice varieties. A complete list of these is given in Appendix 2. In general, rice is divided into categories depending on stickiness (glutinous=**pare ketan** and non glutinous=**pare biasa**), seed hair (hairy=**pare bulu** and non-hairy=**pare leger**), maturity time (early maturity, less than 6 month=**pare hawara**, and late maturity=**pare leuir**), and the morphology of the rice stalk (blackish stalk=**jarami hideung** and ordinary stalk). These distinctions yield the labelled categories listed in table 2.15.

The leguminous pigeon pea (**hiris**=Cajanus cajan) is usually planted in the same hole as rice. This crop has an important role in improving soil fertility by fixing nitrogen (N), and therefore serving as a kind of green manure. In addition, it has a high protein content. Pulses are commonly eaten by the Baduy, usually in the form of a traditional soup **ceungceum**, fried without oil (**sangray**), and young fruits are eaten raw mixed with chili sauce (**sambel hiris**) or cooked.

Other cereal crops are also planted in swiddens: job's tears, corn, and sesame. Job's tears (**hanjeli**=Coix lacryma-jobi) is usually planted in rows along the outer border of swiddens. According to some informants, this crop was more important for the Baduy before the introduction of rice. Today Coix is usually made into a porridge (**bubur**), a kind of fermented cake (**peuyeum**), other kinds of cakes (**kueh**), when the flour is mixed with aren sugar.

Table 2.15. Some local rice varieties recorded in Baduy

Rice Name	General characteristics
Pare bentik	non glutinous, non hairy, and white seed
Pare koneng	non glutinous, non hairy seed, and white seed
Pare limar	non glutinous, non hairy seed, and red seed
Pare siang	non glutinous, hairy seed, and red seed
Pare sereh	non glutinous, hairy seed, white seed, and early maturity
Pare ketan langgasari	glutinous, non-hairy seed, and white seed
Pare hawara bunar	non glutinous, non-hairy seed, white seed, and early maturity
Pare hawara koas	non glutinous, hairy seed, white seed, and early maturity
Pare ketan jalupang	glutinous, hairy seed, white seed, and early maturity
Pare ketan kasumba	glutinous, non hairy, white seed, and early maturity

Sweet corn (jagong=Zea mays) has an important role as an additional staple food, usually prepared by boiling (**rebus**) and baking (**beuleum**) in the farm house (**saung**) or in the village house (**imah**). Another cereal, sesame (**watu**=Sesamum orientale) is also planted, and is usually used for cakes (**wajit**=mixed with brown sugar) and hot chili sauce (**sambel**).

Bananas (pisang or **cau**=Musa paradisiaca), sweet potatoes (ubi jalar or **mantang**=Ipomoea batatas) and manioc

(singkong or **dangdeur**=Manihot esculenta) are also commonly planted in swiddens, of which there about 28, 9 and 8 local varieties respectively.

7.3. Reuma

As soon as a swidden plot has been abandoned, regrowth vegetation rapidly takes hold (Figure 2.7). Common regrowth species include **harendong** (Melastoma malabtricum), **kitambaga** (Flemingia lineata), **ki seueuh** (Piper aduncum), **kaso** (Sacharum spontaneum), **beunying** (Ficus brevicuspis), and **seuhang** (Ficus grossularis). **Reuma** contains a mixture of wild and domesticated species. These latter include mango (**buah**=Mangifera indica), horse mango (**limus**=Mangifera foetida), Albizzia (**kalabise**=Albizzia calfataria), locus bean (**peuteuy**=Parkia speciosa). **Kiray** (Metroxylon sagu) and aren (**kawung**=Arenga pinnata) are also commonly found in **reuma**. Thus, although **reuma** is technically fallow it still provides useful food and materials, including those contributing to a cash income.

7.4. Leuweung Kolot

Mature forest (**leuweung kolot**) contains a high diversity of plants (Figure 2.8). Although by definition it has never been opened for cultivating rice, mature forest performs many useful functions. For instance, maintains the hydrological system of the Ciujung river, provides animal

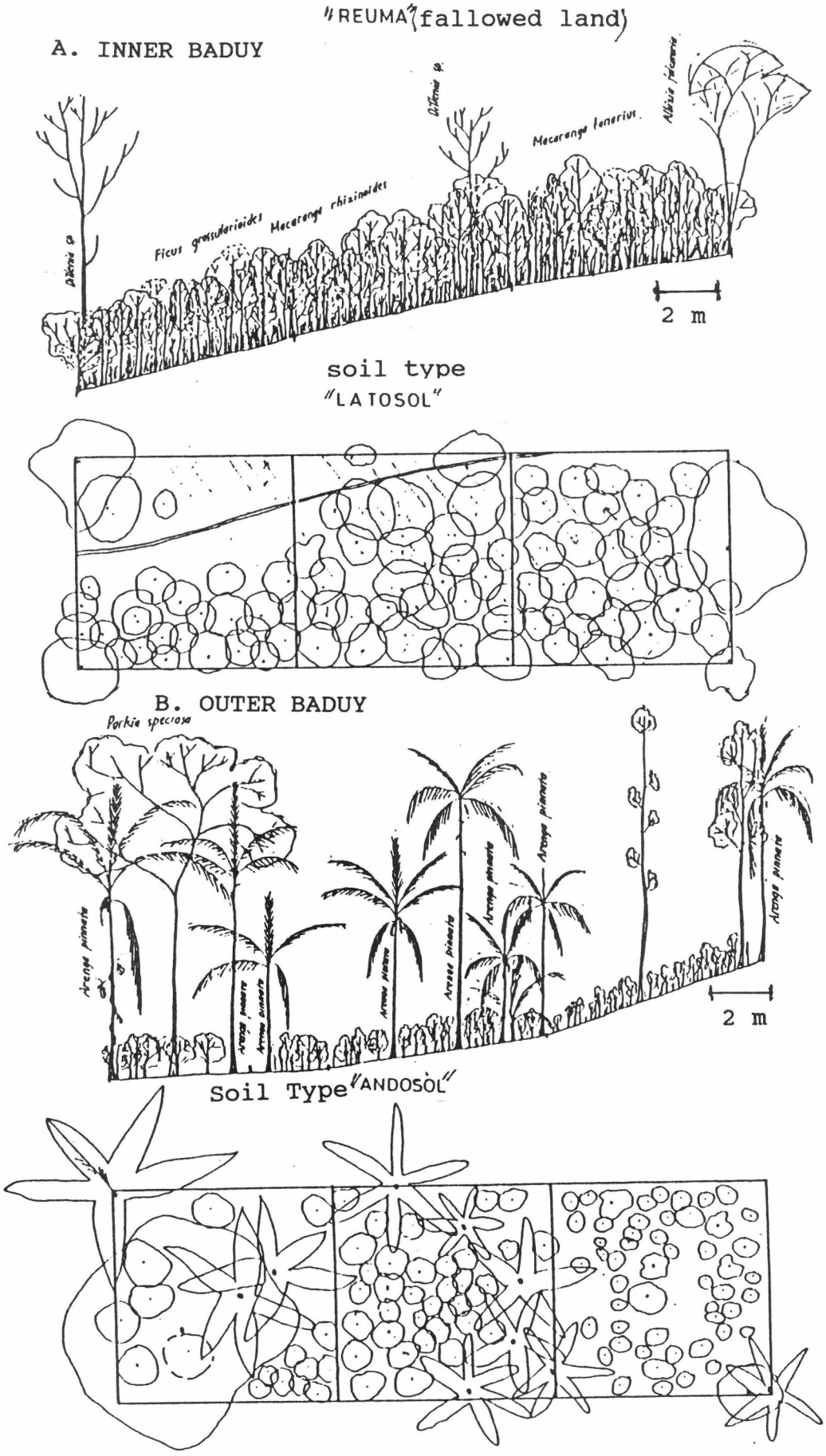

Figure 2.7. Vegetation structure of Baduy fallowed land (**reuma**)

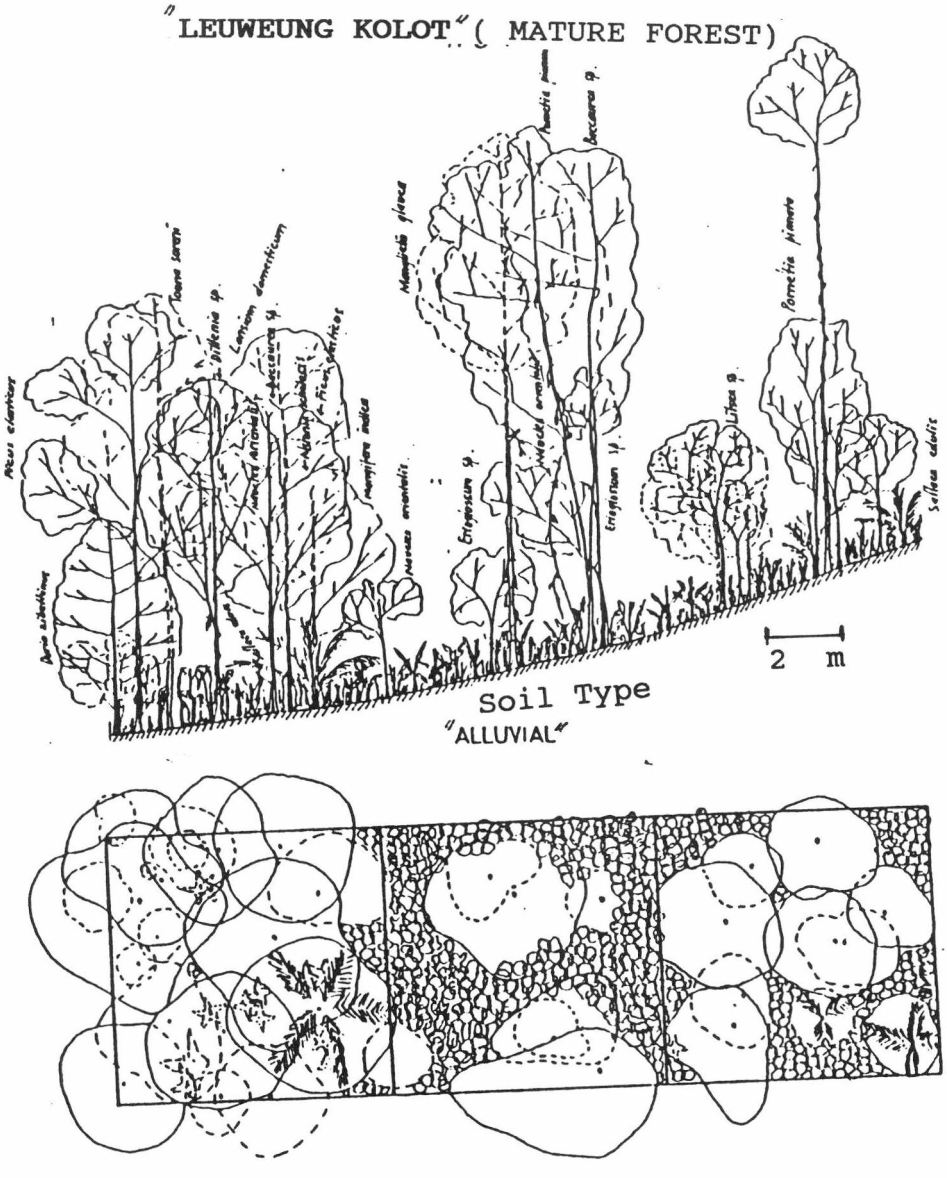

Figure 2.8. Vegetation structure of Baduy mature forest (leuweung kolot)

habitats, plant genetic resources, protects the soil and maintains the microclimate. It provides a variety of non timber forest products, such as fruit , medicinal plants, ritual plants, handicraft materials, fungi, honey bees, bamboo shoots, and other vegetables. Plants recognised by Baduy as providing particular benefits include **asam keranji** (Dilium indum), **binglu** (Mangifera caesia), gharu (Gonistylus macrophyllus), jengkol (Pithecellobium jeringa), durian (Durio zibethinus), **pelah** (Daeronarops ruber), **putat** (Planchonia indica), salak (Salacca edulis), and **teureup** (Artocarpus elasticus). In addition, at least 15 local bamboo varieties (Bambusa spp, Gigantochloa spp and Caralia sp) were recorded, used variously as building materials, string, and for their edible shoots. Some places in the forest are considered sacred and can only be visited at special times to perform annual rituals.

8. Wild animals

The Baduy area supports a large number of wild animals, particularly when compared with other parts of West Java. My own field survey records 124 species: 14 mammals, 82 birds, 9 reptiles and 19 fish. A more detailed list can be seen in Appendix 3.

Primates include the long tailed macaque (kera or **monyet**=Macaca fascicularis), the Java leaf monkey (**surili**= Presbytis aygula), the silvered leaf monkey (**lutung**=Presbytis cristata), and the Java gibbon (oa or

kueung= Hylobates moloch), the calls of which are particulary to be heard in the morning in the mature forest (**leuweung titipan**) of Cikeusik and Cibeo. Two of them, **surili** and **kueung**, are legally protected animals in Indonesia, and are now rarely found in West Java because of habitat destruction.

Five other mammal species found in Baduy are also protected: the scaly anteater (trenggiling or **peusing**=Manis javanica), the Java porcupine (landak=Hytrix javanica), the stink badger (teledu or **sigung**=Mydaus javanicus), the mouse deer (kancil or **peucang**=Tragulus javanicus), and the barking deer (**mencek**=Muntiacus muntjak). These animals are rare and only sometimes found by Baduy.

Of the various mammals, squirrel (bajing or **buut**=Callosciurus notatus), **peucang** and **mencek** are particularly hunted over three days before each annual **kawalu** ritual by an Inner Baduy group led by the **puun** (except Cikartawarna) using nets. But outside the **kawalu** period, **buut** is usually trapped using traditional traps made from bamboo, called **kancung** (Figure 2.9). The meat is eaten with new swidden rice after fasting. However, **peucang** and **mencek** are now rarely caught.

Various bird species are well recognised and given local names by Baduy, mainly based on diagnostic vocalisations (e.g. the brown hawk-owl (**rongrong**=Ninox sculata, vocalisation: 'rong, rong'), banded broad bill (boroboy=Euralymus javanicus), vocalisation: 'borobooy, borobooy'), orange bellied flower pecker (**ceced**=Dicaeum

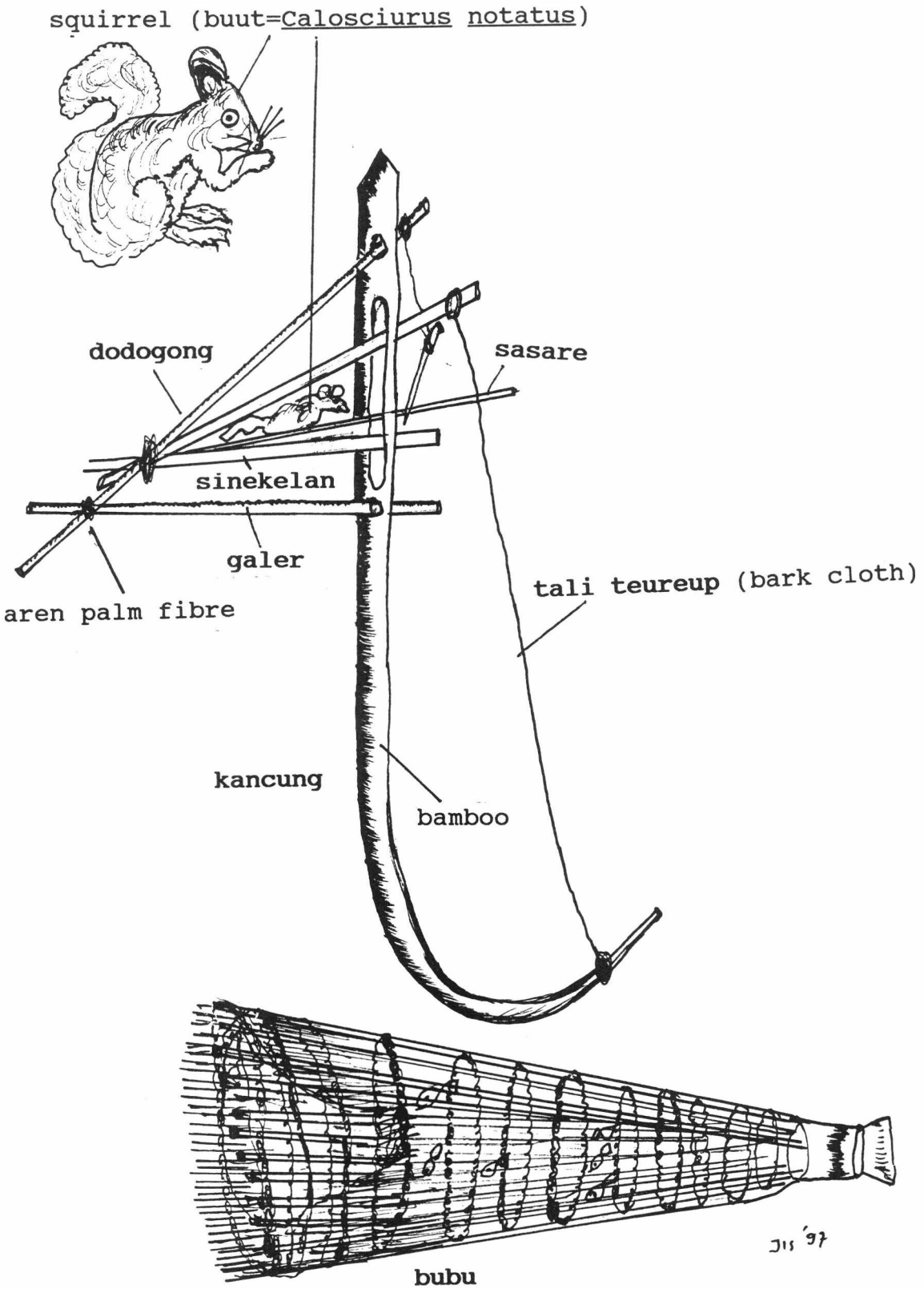

Figure 2.9. Traditional animal trap for catching squirrel (**kancung**) and fresh water (**bubu**)

trigonstigma, vocalisation: 'ced, ced'), and lesser coccal (**dudut**=Centropus bengalensis, vocalisation: 'dut,dut'); or distinctive behaviour, such as the velvet fronted nuthatch (**saleser**=Sitta frontalis; **saleser** mining creeper). Some bird species serve as indicators of seasonal change and natural and human disasters. Thus, the frequent sound of the **kangkangkot (Cuculidae)** predicts the change from the dry to the wet season. The Baduy also believe that a village fire and the death of a hamlet member are usually indicated by frequent call of the **'teptutung** and **aehaeh** (Cacomantis sp), respectively. An owl, **loklok** is feared because it is believed to be possessed by an evil spirit.

Some species of river fish, such as **soro**, **kancra** (Labeobarbus douronensis), **paray** (Rasbora sp), and **hurang** (shrimp), are also in demand for the **kawalu** ritual. Fresh water fish (**lauk tiis**) may only be consumed for various rituals, and salted fish (normal household food in Baduy) is prohibited. Traditional fish traps are usually used to catch river fish, such as **bubu** made of bamboo (Figure 2.9).

Nine species of reptile are recorded in Baduy. Among them, is the snake **oray taneuh** or ular tanah (Agkistrodon rhodostoma), which is commonly found in swiddens and **reuma**. This snake is poisonous, and is the colour of dry leaf litter, which makes it difficult to see. Some Baduy have died or a have had a limb amputated because they have been bitten by this snake.

9. Population

We have population figures for the Baduy since the late nineteenth century. In 1888 it was recorded that there was a total of 291 Baduy living in 10 hamlets (Jacobs and Meijer, 1891: 45-47), Inner Baduy representing 63 per cent of the total (184), living in three hamlets. The rest lived in 7 Outer Baduy and Dangka hamlets. The detailed breakdown is given in Table 2.16.

Table 2.16. Population of Baduy in 1888

Hamlets	Adults		Children		Total
	Male	Female	Male	Female	
Cibeo	20	26	22	25	93
Cikartawarna	5	7	7	5	24
Cikeusik	15	16	15	21	67
Inner Baduy	40	49	44	51	184
Cadasngampar	6	6	7	4	23
Kamancing	2	2	1	3	8
Cilengor	3	3	4	5	15
Nungkulan	3	3	2	5	13
Kaduketug	3	3	3	2	11
Cihandam	6	6	4	6	22
Cihulu	3	3	5	4	15
Outer Baduy and Dangka	26	26	26	29	107
TOTAL BADUY	66	75	70	80	291
% Inner Baduy	61	65	63	64	63
% Outer Baduy	39	35	37	36	37

Source: Jacobs and Meijer (1891: 45-47; Garna, 1987: 45).

Eleven year later (in 1899), the Baduy population had apparently risen to 1407 residing in 26 hamlets (Penning,

1902: 380-382), representing an increase of approximately 1116 people, or 101 persons annually. It is interesting to note that the population was dominated by Outer Baduy, at 87 per cent of the total (1220 people) living in 23 Outer Baduy and Dangka hamlets. The Inner Baduy population increased by only 3 people, from 184 people in 1888 to 187 in 1899, living in three hamlets.

85 years later, in 1984, the total Baduy population was recorded at 5055: 395 Inner Baduy living in 3 hamlets and 4660 Outer Baduy living in 37 hamlets, not including the dangka area (Purnomohadi, 1985: 37-38). Thus, the Inner Baduy population would seem to have only increased by 208 individuals since 1899, while Outer Baduy during the same time increased by 3440.

A survey conducted in 1994 records 502 Inner Baduy and 5938 Outer Baduy living in 44 hamlets (Kanekes village sensus, 1994/1995). Thus, during the last 10 years, Outer Baduy increased by 1278 people, or 127 people annually, while Inner Baduy increased by only 107 people or 11 people annually (Table 2.17). In both Inner and Outer Baduy, the population composition was dominated by children under 10 years (Table 2.18 and Table 2.19).

Table 2.17. The Baduy population of Desa Kanekes, West Java in 1994-1995

Hamlets	Household	Male	Female	Total
A. Inner Baduy				
1 Cikeusik	47	85	77	162
2 Cikartawarna	24	39	42	81
3 Cibeo	79	134	125	259
Sub-total	150	258	244	502
B. Outer Baduy				
1 Cigoel	5	9	10	19
2 Babakan Kaduketug	34	78	69	147
3 Kaduketug	92	191	195	386
4 Babakan Balimbing	18	38	27	65
5 Babakan Marengo	17	31	33	64
6 Gajeboh	64	139	137	276
7 Cicakal Hilir	58	139	122	261
8 Cipaler	73	150	149	299
9 Cihalang	13	27	35	62
10 Cicatang	25	49	53	102
11 Cibongkok	11	23	26	49
12 Cikopeng	25	44	43	87
13 Cigula	20	48	52	100
14 Cikulingseng	14	41	31	72
15 Batubeulah	16	28	23	51
16 Cisadane	45	82	86	168
17 Cibogo	25	45	39	84
18 Cisagu Pasir	14	37	31	68
19 Cisagu Landeuh	11	29	24	53
20 Ciranji	26	64	58	122
21 Cijanar	25	63	48	111
22 Cikadu	54	108	95	203
23 Cicengkol	26	57	55	112
24 Cihulu	37	101	105	206
25 Cibitung	16	43	38	81
26 Babakan Eurih	9	23	21	44
27 Cipiit	39	88	83	171
28 Cicangkudu	8	20	18	38
29 Ciranca Konang	7	9	9	18
30 Kanengai	6	12	13	25
31 Cicakal Girang	60	124	118	242
32 Cisaban I	102	222	245	467
33 Cisaban II	51	141	124	265
34 Kadukohak	37	74	70	144
35 Leuwihandam	21	48	51	99
36 Panyerangan	7	14	16	30

37 Batara	37	79	79	158
38 Binglu Gembok	10	21	22	43
39 Pmoean	26	35	30	65
40 Kadujangkung	32	67	62	129
41 Karahkal	52	128	137	265
42 Ciwaringin	14	31	29	60
43 Sorokokod	54	98	97	195
44 Kaduketer	57	122	110	232
Sub-total	1393	3020	2918	5938
Total Baduy	1543	3278	3162	6440

*). Baduy living outside Kanekes are not included

Source: Tabulation of data collected by Carik Desa Kanekes (1994).

Table 2.18. Age composition of Inner Baduy population in 1994-1995

Age group	Male	Female	Total	Per cent to total
(1) 0-5	52	35	87	17.33
(2) 6-10	29	33	62	12.35
(3) 11-15	13	25	38	7.57
(4) 16-20	17	24	41	8.17
(5) 21-25	16	33	49	9.76
(6) 26-30	34	15	49	9.76
(7) 31-35	7	10	17	3.39
(8) 36-40	16	22	38	7.57
(9) 41-45	7	7	14	2.79
(10) 46-50	17	13	30	5.98
(11) 51-55	3	3	6	1.20
(12) 56-60	11	10	21	4.18
(13) > 61	36	14	50	9.96
Total	258	244	502	100.00

Source: Tabulation of data collected by Carik Desa Kanekes (1994)

Table 2.19. Age composition of Outer Baduy population in 1994-1995

Age group	Male	Female	Total	Per cent to total
(1) 0-5	659	677	1336	20.75
(2) 6-10	599	455	1054	16.37
(3) 11-15	283	254	537	8.34
(4) 16-20	200	279	479	7.44
(5) 21-25	141	260	401	6.23
(6) 26-30	266	271	537	8.34
(7) 31-35	196	177	373	5.79
(8) 36-40	237	297	534	8.29
(9) 41-45	186	102	288	4.47
(10) 46-50	137	120	257	3.99
(11) 51-55	69	60	129	2.00
(12) 56-60	108	102	210	3.26
(13) > 61	197	108	305	4.74
Total	3278	3162	6440	100.00

Source: Tabulation of data collected by Carik Desa Kanekes (1994)

As can be seen from the data, there has been a rapid increase in the population, particularly of Outer Baduy, of more than one hundred persons per year (Table 2.17). This has placed increasing demands on other resources, such as food supply, agricultural production, swiddens, and forest. However, agricultural land availability in the Baduy area has been a limiting factor. As a result, fallow time has decreased with its consequent affects on soil fertility, agricultural production and food supply. The Baduy swiddening system has been sustained despite high population pressure, to a large extent because most Outer Baduy have engaged in temporary share cropping and worked for wages in the neighbouring non-Baduy area.

CHAPTER 3

BADUY SOCIAL AND POLITICAL ORGANISATION

Baduy social organization is closely related to their self-conception as a **mandala** community (an ascetic group) within the wider historic Sundanese area. We can observe this in the division of the Baduy into three major areas: **tangtu** (Inner Baduy), **panamping** (Outer Baduy), and **dangka** (buffer zone). Those living in the **tangtu** area are considered most sacred, while **panamping** and **dangka** people are less so. Also, adherence to a traditional identity is stronger in Inner Baduy (**tangtu**) than in Outer Baduy (**panamping**) and in the **Dangka**. Moreover, the Inner Baduy area is considered **tanah larangan** (prohibited land) or **tanah suci** (**sacred land**), where only people who strongly adhere to ancestral traditions, **urang tangtu**[1] are permitted to live. Anyone who violates taboos or customary law is banished to the **Dangka** (exterior area). However, after forty days he or she can be accepted back by the traditional leader (**puun**) into the Inner Baduy community, or can move into an Outer Baduy area, **panamping** or **dangka**, if they feel unable to maintain their traditions in the required way.

Because **tangtu** hamlets (Cikeusik, Cikartawarna and

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[1]). **Tangtu** is derived from the sanskrit 'tantu', meaning original line of descent (**silsilah**) or propagator of rice (**cikal bakal**). In old Sundanese 'tangtu' means place (**tempat**), definite (**pasti**) or literature (**pustaka**)[Danasasmita and Djatisunda, 1986: 11-12].

Cikeusik) are located in the Inner or core area and encircled by **panamping**[2] hamlets (more than 40), they are also known as **Baduy dalam** (Inner Baduy) and **Baduy luar** (Outer Baduy), respectively. In addition, Inner Baduy are also commonly called **urang Baduy Daleum** (**daleum**=nobility) instead of **urang Baduy Dalam**. In fact, and as I have already mentioned, this group is originally thought to have consisted of traditional leaders (**puun**) and their staff, and all relatives are considered to be descended from ancestral Batara.

1. The name Baduy

Since the early nineteenth century various names have been given by scholars to the traditional Sundanese minority who live in the area of 'Desa Kanekes': **urang Baduy** (Baduy people), **urang Rawayan** (Rawayan people), **urang Kanekes** (Kanekes people), and **urang Parahiang** (Parahiang people) (Kruseman, 1888; Jacobs and Meijer, 1891; Penning, 1902; Pleyte, 1909; Van Tricht, 1929; Geise, 1952). It has been variously suggested that these names are derived from rivers (Cibaduy, Cikanekes, Ciparahiang), religion (Budha), mountains (Gunung Baduy), the distinctive bamboo bridge (Rawayan), or even from the Arabic Badoewi, Badu or Badaw, meaning nomadic desert people.

Although the name 'Baduy' is now well established

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[2]). **Panamping** is derived from **tamping**, meaning 'outside' or 'place of exile' (**buang** or **buangan**), while dangka means 'dirty place' (daerah kotor) [Danasasmita and Djatisunda, 1986: 13-14].

among outsiders, it is strongly rejected by Baduy themselves. They prefer to call themselves **urang Kanekes** (Danasasmita and Djatisunda, 1986: 1), as the name Baduy is considered demeaning, given to them by outsiders to emphasize their status as non moslems and nomadic swiddeners resembling the Badoewi in Arabia or Buddhists. However, with the introduction of a government identity card (kartu penduduk=KTP) in the 1980s for some Outer Baduy, the status **Sunda Wiwitan** was formally recorded as their religion. Since that time they have accepted their designation as Baduy (Garna, 1993: 120). The full range of names used by outsiders to designate Baduy include: **urang Baduy, urang Kanekes, urang Rawayan, urang Baduy dalam, Urang Tangtu** or **Baduy jero** (particularly for Inner Baduy), urang **Baduy luar** or **urang Baduy panamping** (Outer Baduy), **urang Cibeo** (if they come from Cibeo hamlet), **urang Cikeusik, urang Cikartawarna, urang Kaduketug, urang Kadujangkung** and various other local names based on places of origin. In addition, Baduy are also called **urang tonggoh** (hill or mountain people), **urang girang** (upstream people), particularly by the neighbouring moslem community, who on the whole live in the lowlands. Conversely, the moslem community are called by Baduy: **urang are** (valley people), **urang landeuh** (low land people) and **urang islam** (moslem people).

2. Theories of Baduy origins

Although the Baduy have appeared in the scholarly

literature for a long time, the history of this community is still not clear. There are three main theories concerning their origin (Ekadjati, 1995: 60-71). The first is that they are descendants of people who managed to escape from the Hindu kingdom of Pajajaran, near present-day Bogor, before Islamic forces from the Sultanate of Banten destroyed it in AD 1579. The second is that they are descendants of Hindu people who originally lived in Banten but who fled to present day Kanekes from Islamic forces of the Sultanate of Banten. The third theory, based on an old Sundanese text, is that Baduy are descendants of an ascetic group living in sacred parts of the forest in pre-islamic times (Danasasmita and Djatisunda, 1986: Bakels and Boevink, 1988). Such places and people were usually called **mandala** areas and **mandala** communities respectively (Danasmita and Djatisunda, 1986: 3). In the past, **mandala** communities were common in various sacred places in Java, such as on the top of mountains or at the source of rivers. They had a special obligation to harness power which brought harmony within their own community but also in the realm of their king (Bakels, 1993: 349, Lombard, 1983: 266-267).

3. Religion and belief

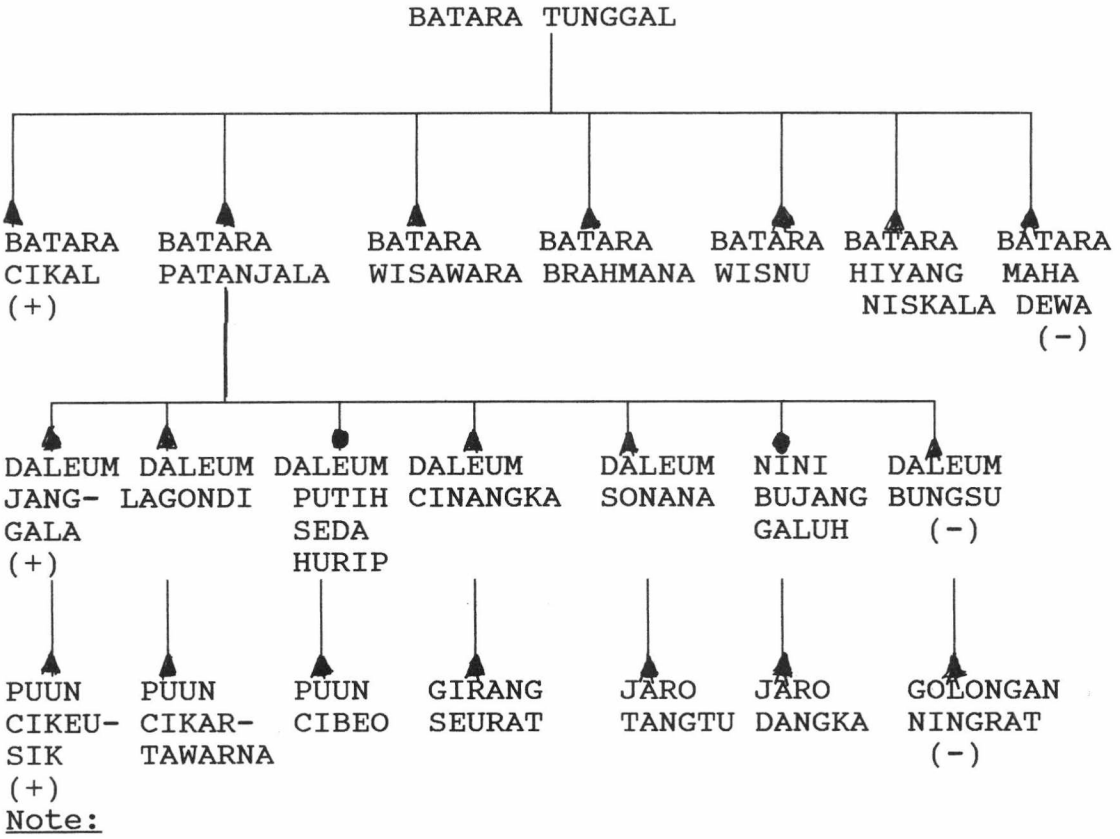
The religion of the Baduy community is called **Sunda Wiwitan** (original Sunda). They believe in one god called **Batara Tunggal, Sanghyang Kersa** or **nungersakeun** (the spirit

or being who is worshipped as the creator and ruler of the world) and their prophet (**nabi**), called **Nabi Adam** (Danasasmita and Djatisunda, 1986: 75). They see their religion as the first religion created in the world, so **Sunda Wiwitan** also means 'first religion' or 'original Sundanese religion'. Moreover, the prophet Muhammad (Nabi Muhammad) and Islam are considered to have developed later.

In Baduy cosmology, the earth was initially created from solid transparent matter (**ngenclong**). It then grew as big as a mosquito wing, and was followed by other parts. The original place where the earth became hard is called by them **Sasaka Pusaka Buana**, **Arca Domas**, or **Pada Ageung**, located near the present day Cikeusik hamlet (Moechtar, 1975: 36; Danasasmita and Djatisunda, 1986: 24; Garna, 1987: 215). **Sasaka Pusaka Buana** is derived from **sasaka** and **buana**, meaning 'pole, foundation or basis' and 'place or earth', respectively, indicating this place as the centre of the earth where all life began. Two of the seven bataras (**batara tujuh**) descended from **Batara Tunggal** in this place, and these are considered to be the ancestors of present day **puun**. The rest of the world was called **salawe negara** (25 regions): Parahiang, Karang, Jampang, Sajira (Tangerang), Jasinga, Bongbang and Banten, and was established by the five other **bataras**.

According to Baduy belief, the 'seven bataras' (**tujuh bataras**) were created (**dikersakeun**) by **Batara Tunggal** in **Pada Ageung**. This **batara** had no children and disappeared (**ngahiyang**). Nevertheless, he is considered to be the

ancestor of Baduy traditional leaders (**puun**). The second Batara, **Batara Patanjala**, had 7 children (Pleyte, 1909: 502-505), from which Puun Cikeusik (the oldest), Cikartawarna (the second), and Cibeo (the third) are said to be descended respectively through Batara Janggala, Batara Patanjala, and Daleum Putih Sidahurip (Figures 3.1 and 3.2).



Note:

▲ = male ● = female (+) oldest (-) youngest
Batara tunggal=one batara; **daleum**=royal family; **puun**=traditional leader of Baduy community; **jaro dangka**, **jaro tangtu** and **girang seurat**=**puun** assistants; and **ningrat**=Banten noble families, such as **sultan** and **ratu** (king).

Figure 3.1. Mythical genealogy of Baduy traditional leaders (After Pleyte, 1909: 503-504; Bakels and Boevink, 1988: 138)

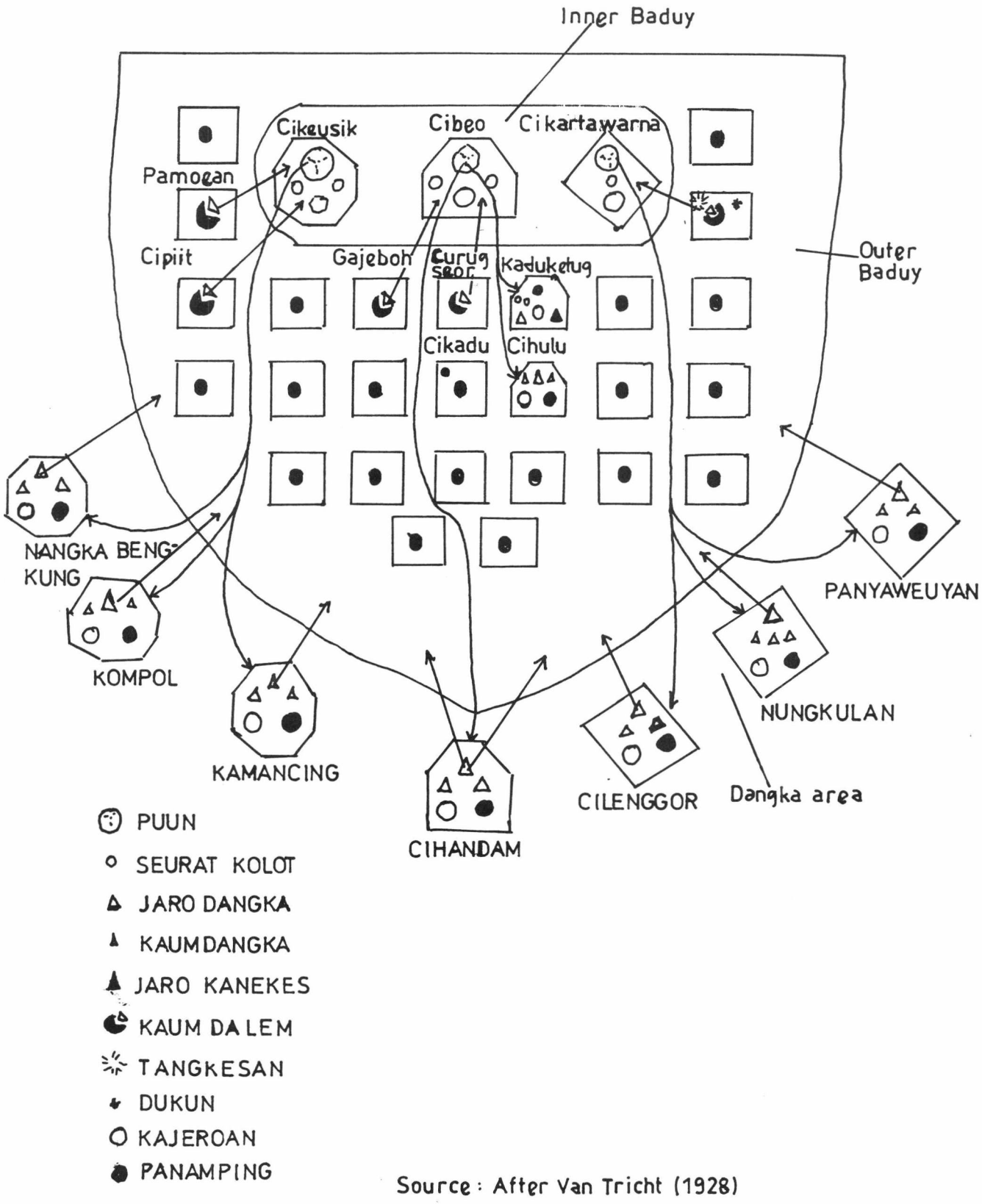


Figure 3.2 Religious leadership system of Baduy community

For this reason the **Sasaka Pusaka Buana** is believed to be the centre of the earth (**pancer dunia**), the first place created by god, and **Sasaka Domas** the place where the **Batara Tujuh** were sent to the earth (Danasasmita and Dajatisunda, 1986).

In addition, all **puun** assistants living in Inner Baduy and noble families (**golongan ningrat**) in the non-Baduy area, are said to be descended from these same ancestors. According to Jacob and Meijer (1891: 13), at the time they made their enquiries, Puun Cikeusik (Puun Djarmah) claimed his descent through the line: 1) Batara Tunggal, 2) Batara Patanjala, 3) Dalem Janggala, 4) Aki Heula Ngambang, 5) Puun Kasibah, 6) Puun Sadan, 7) Puun Sanika, 8) Puun Mangger, 9) Puun Raji, 10) Puun Djongget, 11) Puun Waksir, 12 Puun Tarsi and 13) Puun Djarmah.

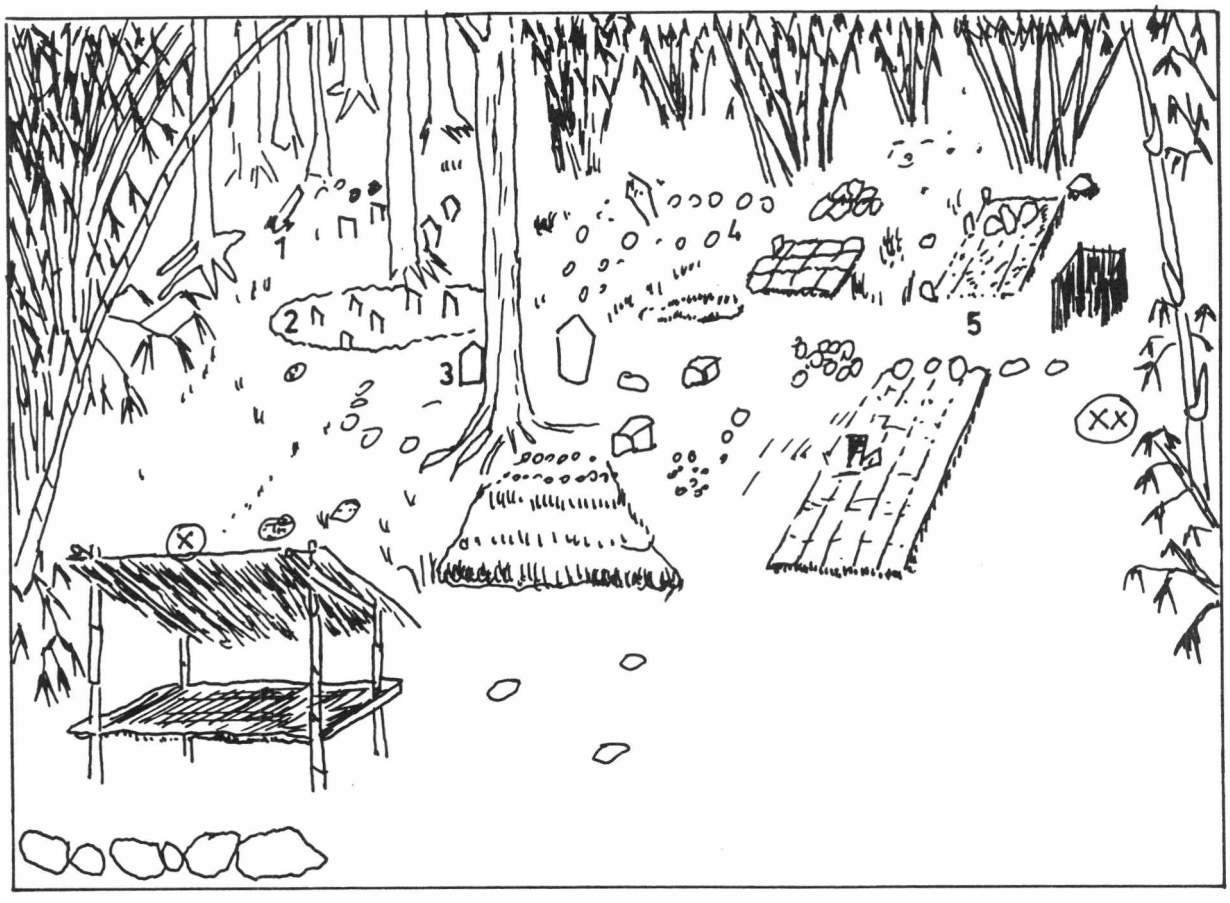
The inhabitants of the sacred hamlets are called **kajeroan** or Inner Baduy. The families who inhabit the intermediate area belong to a lower class of commoners called **panamping** (Outer Baduy). Some Outer Baduy hamlets, however, contain noble families or **kajeroan**. In an enclave in the moslem area, **dangka** hamlets are found, inhabited by both noble families and commoners. Each has a headman called a **jaro dangka** assisted by two or three **kaum dangka**. The **dangka** hamlets are divided into three groups, each being subordinate to one of three sacred **kajeroan** hamlets. Moreover, each **panamping** hamlet is inhabited by families who are subordinate to several **jaro dangka** in the non-Baduy areas (Figure 3.2).

Sasaka Pusaka Buana or **Pada Ageung** is located on Pamuntuan hill, upstream of Ciujung, on the western tip of Mt.Kendeng. However, its precise location is a secret. Today it is usually visited annually by **Puun** Cikeusik and a small number of people who conduct ascetic rituals (**ziarah**) over three days, on 16, 17 and 18 of the month **kalima** (**bulan kalima**) in the Baduy calendar (May-June). Because this sacred place is the traditional responsibility of Puun Cikeusik, he is often called **Tangtu Pada Ageung**. In addition, he is also considered to be descended from the **Pada Ageung** ancestor. **Pada Ageung** derives its name from the big stone (big=**ageung** in polite Sundanese language) located on the top of this hill. The stone is surrounded by seven terraces which resemble rice fields and on the top are found small stone statues covered with vegetation (see Figure 3.3). **Arca Domas** or **Sasaka Domas** refer to the stone statues or terraced pyramid and consist of many terraces (**sasaka anu loba**) [Moechtar, 1975: 36].

Sasaka domas is located in sacred forest upstream of Ciparahiang river, near Cibeo hamlet. This place is the responsibility of Puun Cibeo, who is therefore also called **Tangtu Parahiang**. As with **Pada Ageung**, **Sasaka domas** is visited annually by its **puun** and some other people during **kalima**, to conduct ascetic rituals (**ziarah**).

According to Baduy belief, the universe is divided into 3 realms: **Buana Nyungcung** located in the upper world and entrusted to **Ambu Luhur** (**Ambu**=mother, **luhur**= upper),

Figure 3.3. General view of Arca Domas



Source: After Van Tricht (1928:55)

1 = Higher part, place of the Batara Tunggal spirit
2 = 'Lemah bodas', place of Inner Baduy ascendants grave
3 = Timbunan kuburan (piles of human corpses)
4 & 5 = Praying place for ascetic ritual
(X) = Talahab (bamboo shelter)
(XX) = Bamboo forest

Buana Panca Tengah considered to be the world where all human and biological creatures live and which is entrusted to **Ambu Tengah** (**tengah**=middle), and **Buana Larang** (the lower world) located below and entrusted to **Ambu Handap** (**handap**=down). There are 18 layers between **Buana Nyungcung** and **Buana Panca Tengah. Mandala Hyang** or **Hyang** is located in the second layer called **Bumi Suci Alam Padang** (**padang**=bright light). This is considered to be the dwelling place of the rice goddess **Nyi Pohaci Sanghyang Asri** and **Sunan Ambu** (Danasasmita and Djatisunda, 1986: 78). According to Baduy belief, the human soul has been sent to the earth (world) from **Mandala Hyang** and must eventually return to the same place, once its duties in the world are finished. Therefore, to ensure that souls will return to **Mandala Hyang** or **Kahiyangan** after death, rice and the goddess rice **Nyi Pohaci** are objects of profound veneration for Baduy.

Baduy mythology can be shown to have been influenced by both Hinduism and Islam. Some ancestors have Hindu names (Danasasmita and Djatisunda, 1986: 81, Garna, 1987: 221), while the concept of Nabi Adam, who was first sent to the earth in Parahiang, indicates Islamic influence. Baduy also have a declaration of faith (**syahadat**) and a fasting month (**bulan puasa**) adopted and modified from Islam.

Baduy religion has been said to focus on six main obligations (Danasasmita and Djatisunda, 1986: 8):

(1) Ngareksakeun Sasaka Pusaka Buana
(2) Ngareksakeun Sasaka Domas
(3) Ngasuh ratu ngayak menak
(4) Ngabaratakeun nusa telu-puluh-telu, bangawan

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sawidak lima, pancer salawe nagara
(5) Kalanjakan kapundayaan
(6) Ngukus kawalu muja ngalaksa

These can be translated as:

(1) To keep **Sasaka Pusaka Buana** sacred
(2) To keep **Sasaka Domas** sacred
(3) To protect the King or Sultan or President and noble families
(4) To conduct ascetic rituals for the thirty three hamlets, sixty five rivers, and twenty five regions
(5) To hunt animals and catch fish for the **kawalu** ritual
(6) To burn incense when conducting ascetic rituals, and to perform the **kawalu** and **ngalaksa** rituals.

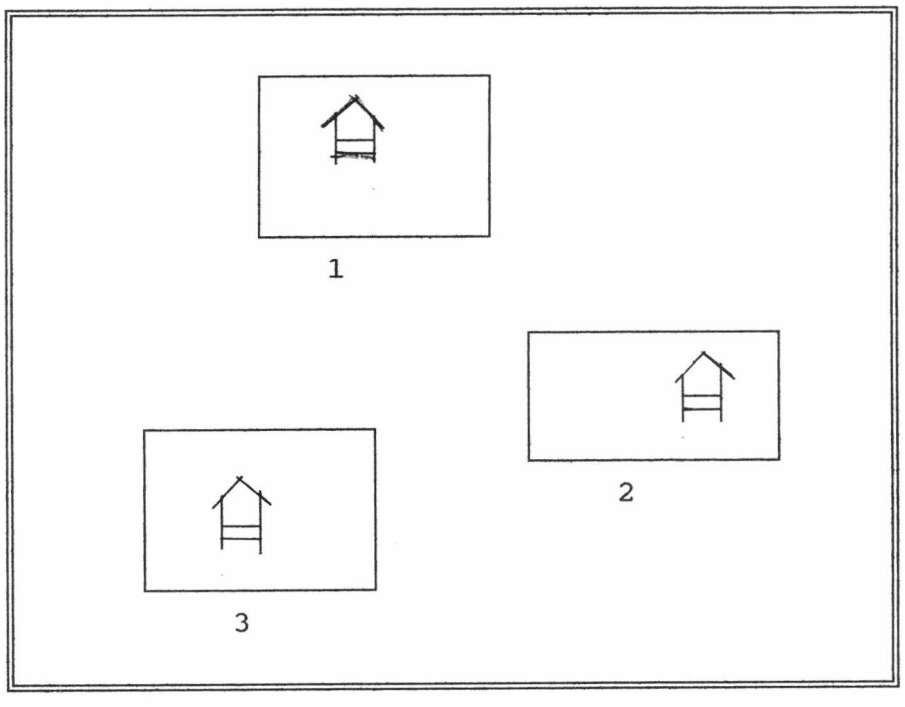
Baduy upland rice cultivation (**ngahuma**) for subsistence can only be properly understood in relation to these obligations. In other words, rituals such as **kawalu** and **ngalaksa** firmly unite the practise of swidden cultivation with their religion, **Sunda Wiwitan.**

4. Pattern of Settlement

Until the 1930s, the majority of South Bantenese peasants practised swidden cultivation (**ngahuma**) (Kools, 1935, Soepomo, 1982 [1933]). The agricultural lands were mainly under communal ownership. Blocks of swiddens (**geblogan huma**) only temporarily belonged to individual farmers, for a period of one or two years during cropping, while after harvesting fallowed land returned to communal ownership (Soepomo, 1982 [1933]: 118). At that time, settlements were very mobile, moving from one place to another. As a result, the south Bantenese were popularly called **jelema manuk** or 'bird men' (Kools, 1935; Williams,

1990: 12). The physical village was poorly-defined and people spent more time in farm houses (**saung**) and swidden rather than in the village.

According to some of my older informants, in the past when forest areas were converted into swidden fields, each plot was accompanied by a farm house (**saung**), and several (between 3 and 5) such plots together would form a grouping called a **catihan** (Figure 3.4).



Number 1,2 and 3 swidden plots and farm houses (**saung**).

Figure 3.4. Simple **catihan** arrangement consisting of 3 swidden fields in the same block (not to scale). Numbers refer to swidden plots (each with a farm house, **saung**). ———=swidden plot border belonging to one household, and ═══=block border.

A farm house was usually used only for one or two years. If the swiddeners moved to another place, a new farm house was built using materials from the previous farm house. In some cases, however, although the swiddeners moved to other places, the farm house did not move. Instead, it formed the basis of a more permanent house, and a second house was built by another family member of the first house. As a result, one or two permanent houses (**umbulan**) and accompanying rice barns (**leuit**) emerged, occupied by family and close relatives. Houses and rice barns were constructed from wood, bamboo, aren palm fibre (**injuk kawung**=Arenga pinnata), and **kiray** (Metroxylon sagu) leaf. These houses comprised a single or double room on a framework of wooden poles, with walls made of woven bamboo, and roofs thatched with **kiray** leaf mixed with aren palm fibre. Each house was usually occupied by a married couple or sometimes by an extended family. When the **umbulan** had grown to between 4 and 10 houses, it was called a **babakan** (new hamlet). If the **babakan** grew to between 10 and 30 or more houses it became a **lembur** or kampung (also **ampian** [Haar, 1948: 72]). The babakan or **lembur** or **ampian** are usually located along rivers or near water sources.

The **lembur** of south Banten can be further divided into two groups: **babakan** or **lembur anyar** (new hamlet) and **lembur kolot** (**old hamlet**) or **lembur gede** (big hamlet). Hamlet names are usually based on rivers, plants, and general landscape features. Hamlets named after rivers usually have **ci** (**ci**= water) as a prefix, as in **Ci**simeut, **Ci**boleger, and

Cisadane. Hamlet names based on plant names or landscape features, include Kadujangkung (**kadu**=durian, **jangkung**= tall tree), Nangka Bengkung (**nangka**=jack fruit, **bengkung**=bent), Kawung kembang (**kawung**=aren palm; **kembang**=flower), Lembur sawah (located in sawah area), and Lembur masigit (**masigit**=mosque, first big mosque established in the area).

Some hamlets are coterminous with an administrative village, with an official village leader called **jaro** or kepala desa (Figure 2.5). This kind of arrangement has existed for a long time in the Banten area. Ter Haar (1948: 72), for example, says that the Banten village (desa) consists of a number of quite small hamlets (**ampian** or **kampung**), led by a **kokolot** or **tua-tua** who mediates between the people of the hamlets and desa chiefs or **jaro**, who are aided by a pair of messengers.

The local term **ampian** is now rarely used in south Banten, although it is still recognised, particularly by old people. Today, the terms **babakan**, **lembur** or **kampung** are usually used instead. The status terms **kokolot** and **jaro** are also still commonly used, particularly in the Baduy area. However, in other Sundanese villages outside the Banten area, 'kepala desa', and 'tua kampung' are predominantly used today.

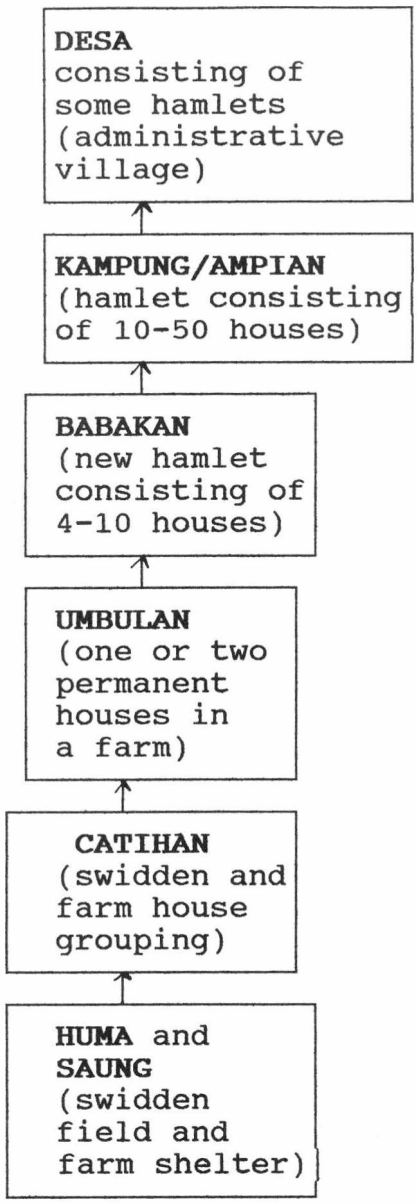


Figure 3.5. The process of settlement growth in South Banten

Historically, the first administrative village to be established near the Baduy area was Cisimeut village around 1850. According to some informants, this resulted in the authority of the Jaro Dangka in a grouping of ordinary Sundanese hamlets being increasingly eroded by the formal village leader. Later on the Baduy Dangka Kamancing was

taken over by the village leader of Cisimeut.

More recently, because of population increase and road development, hamlets in south Banten, particularly in the non-Baduy area, are commonly located along roads instead of rivers. Around these hamlets or settlements are to be found swidden fields or **huma** (mainly cultivated by Baduy as tenants), fallowed lands or **reuma**, mixed gardens (**kebon**; dominated by fruits and plants useful as building materials), rubber plantations (**kebon karet**) and wet rice fields (sawah). This land is owned privately by each household. Communal lands are now rarely found due to privatisation, particularly since the 1950s.

Today, house forms vary, including temporary structures on piles constructed from wood and bamboo, with roofs of **kiray** leafs; some semi-permanent structures of mixed materials, including both bamboo and masonry walls; and permanent masonry houses with roof-tiles (**genteng**). Rice barns have rapidly decreased in number since the Javanese green revolution of the 1970s, because the grains of the new high yielding varieties readily drop from the stalks and cannot be easily bundled. Rice is usually stored in sacks inside houses instead of hanging-up on bamboo rails (**lantayan**) and stored in the rice barn (**leuit**). Thus, areas adjacent Baduy settlements have been influenced by the green revolution, even though many of the other conditions necessary for its success are absent, such as a developed irrigation system, chemical fertilizers and pesticides.

Unlike non-Baduy settlements, those of Baduy are much more traditional. Each Baduy settlement has a clear symbolic orientation, based on a main directional axis leading to a sacred place: **Arca Domas**, **Sasaka Pusaka Buana** or **Pada Ageung** and **Sasaka Domas** or **Mandala Parahiang**, all located in Inner Baduy, near Cikeusik and Cibeo respectively (Map 3.1). According to Baduy cosmology, **Arca Domas** and **Sasaka Buana** are believed to be the centre of the earth (**pancer dunia**), the first place created by god, and the place where the **Batara Tujuh** (the Seven Bataras, the oldest of which, Batara Cikal, is considered the ancestor of Baduy traditional leaders) were sent to the earth (Danasasmita and Djatisunda, 1986: 75). Within this symbolic framework, therefore, settlements to the south, in the core area, containing the three Inner Baduy hamlets of Cikeusik, Cikartawarna and Cibeo, are considered most pure; while those to the north, north east and north west, where Outer Baduy hamlets are located, are considered less pure (Map 3.1). Based on Baduy perceptions, the oldest hamlet (lembur or kampung) is Cikeusik, located close to the sacred place of **Arca Domas.**

Internally, each hamlet is also ordered according to cosmological coordinates. The settlements of Inner Baduy are usually composed of houses (**imah**), rice barns (**leuit**), public rice pounding places (**lisung lembur** or **lisung** kampung), and a meeting house or **bale kapuunan** [3] (Figure 3.

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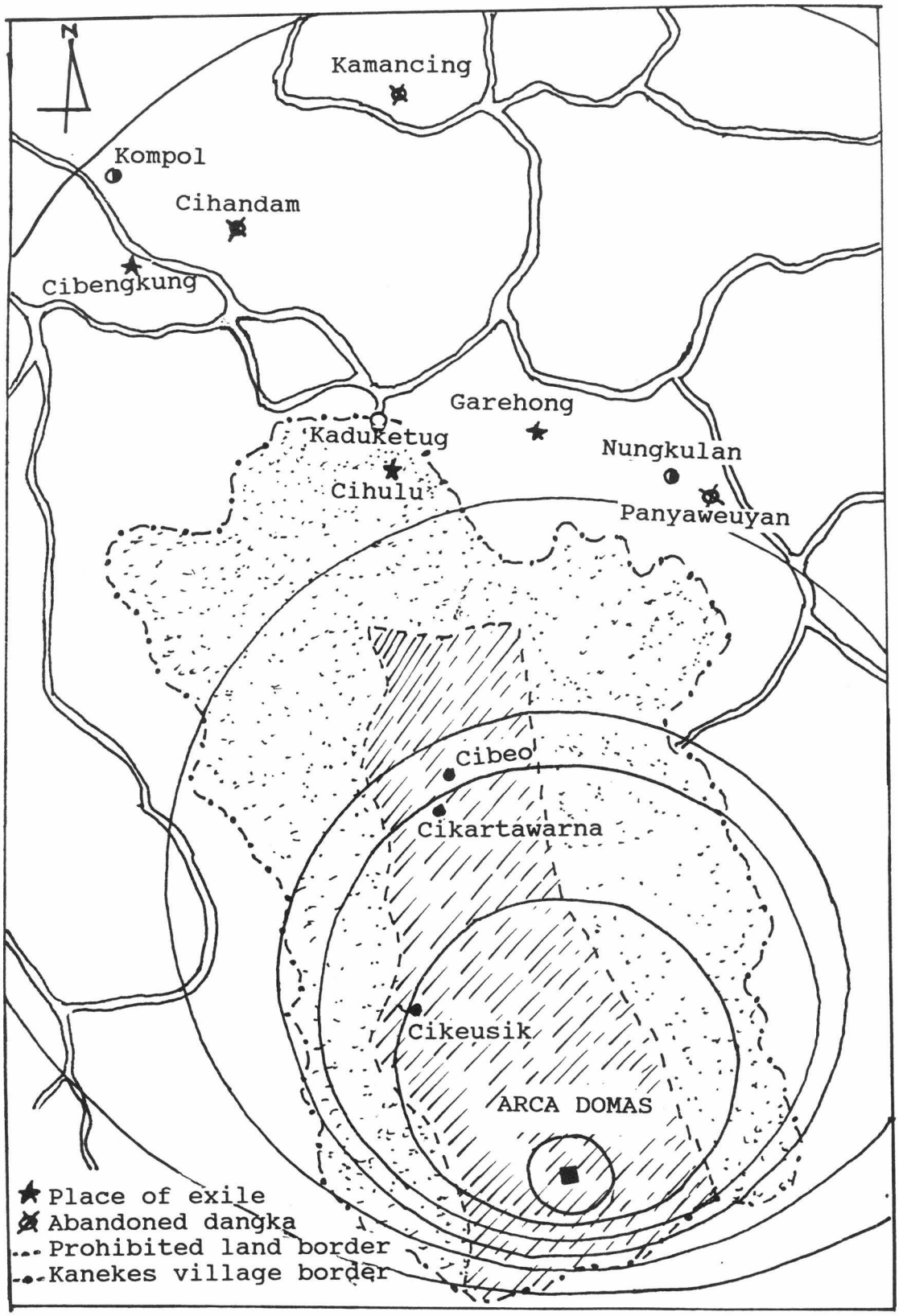
[3]). The exception is Cikartawarna , where a **bale kapuunan** is not found

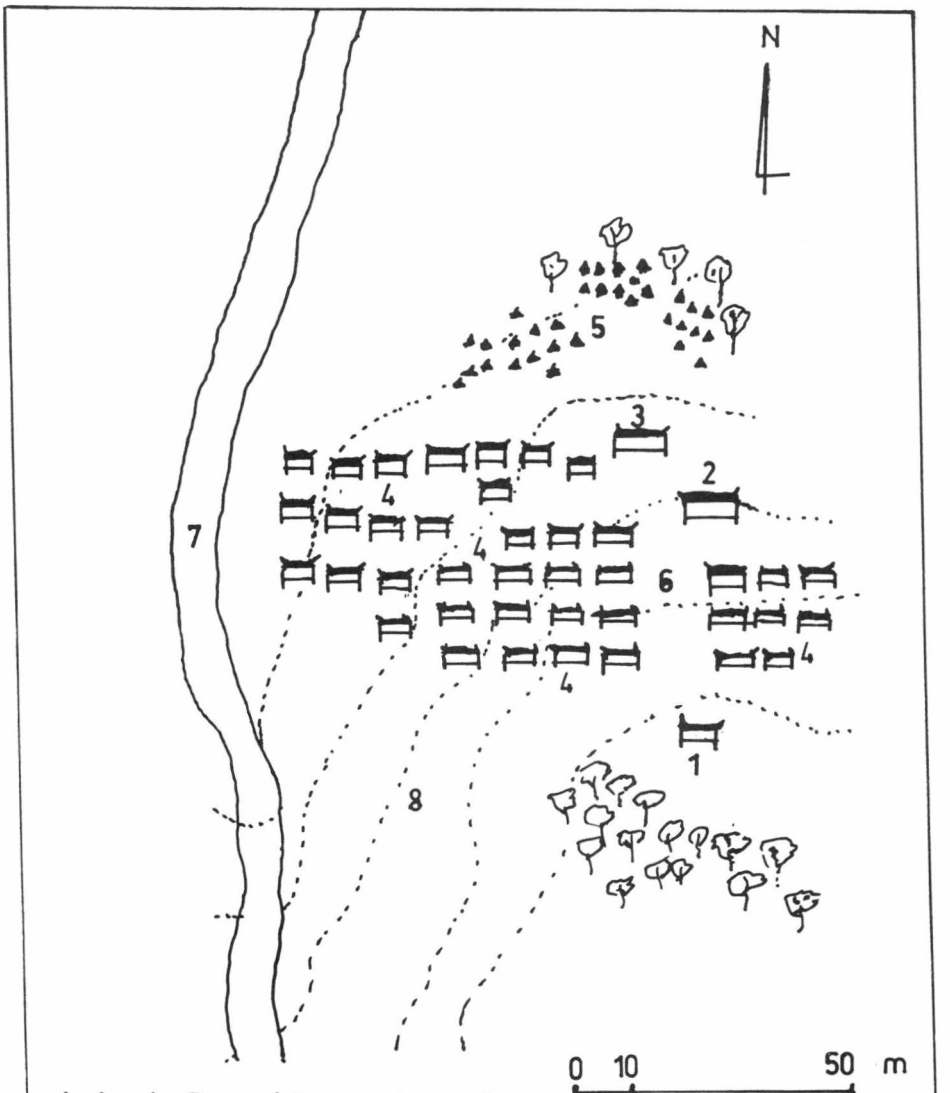


Source: Margantara (1981)

Map 3.1. Baduy area showing Inner Baduy, Outer Baduy and the Dangka area in relation to the distance from sacred places

6). Houses are set very close together, along a main axis which is usually north-south. Houses of traditional leaders (**imah puun**) are located to the extreme south. This is consistent with the belief that the spirit (**sanghyang**) or soul of their ancestor (**wongatua**), who is considered to live in the sacred place to south, should have easy access to the hamlets. In contrast, the meeting house and public rice pounding area are located in the northernmost area. The **imah puun** is occupied by the **puun** who is currently in office (**puun jeneng**). Should he retire this house must be given to the new **puun**. Between the **imah puun** and the meeting house ordinary dwellings are located, each surrounded by rice barns. In the centre there is an open square about 4 metres wide. The river is located outside the house complex, and is commonly used for bathing, washing, and fishing.

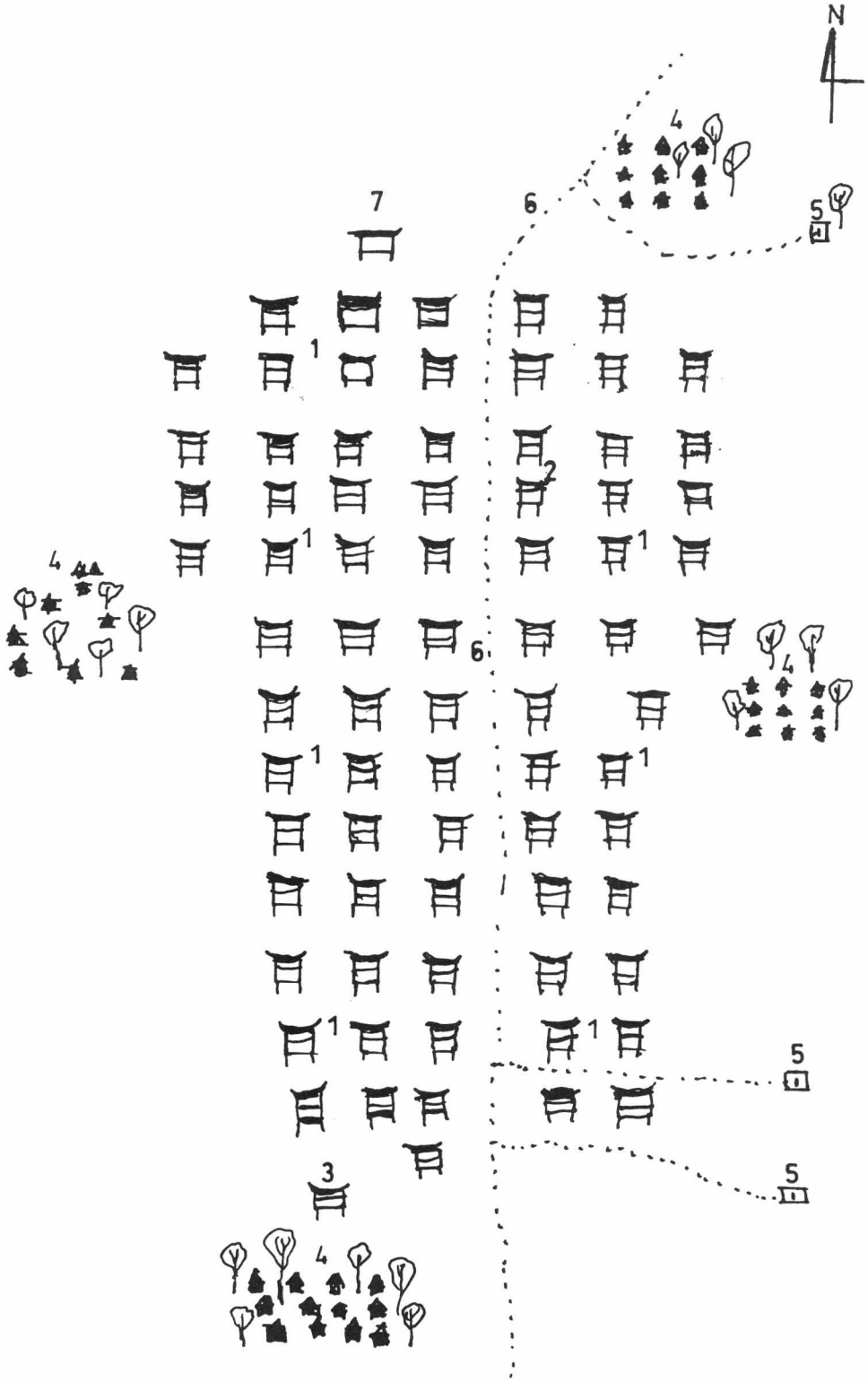
Outer Baduy settlements are much like those of Inner Baduy, particularly in old hamlets composed of houses, rice barns, and public rice pounding areas (Figure 3.7). The public rice pounding area is located to the north or north west, with the wooden mortar (**lisung**) towards the east (Figure 3.7). The house of the traditional leader (**imah kolot lembur**) and of the **jaro dangka** are found only in older larger hamlets, such as Kaduketug. These houses are usually located in the southernmost area. In addition, a meeting house is also not found. The **jaro pamarentah** house located in Kaduketug in the past, is today established in a new hamlet, Cigoel. The houses of the **jaro pamarentah**,



Source: After Wiryowartono (1993:7)

Figure :3.6. Sketch plan of Cikeusik, Inner Baduy

Figure : 3.7. Arrangement of a simple hamlet : Kaduketug, Outer Baduy (not to scale)



1. Imah (house)
2. Imah jaro pamarentah (official leader's house)
3. Imah kokolot lembur (hamlet religious leader's house)
4. Leuit (rice barn)
5. Pancuran (bathing place)
6. Jalan satapak (footpath)
7. Saung lisung (rice pounding shelter)

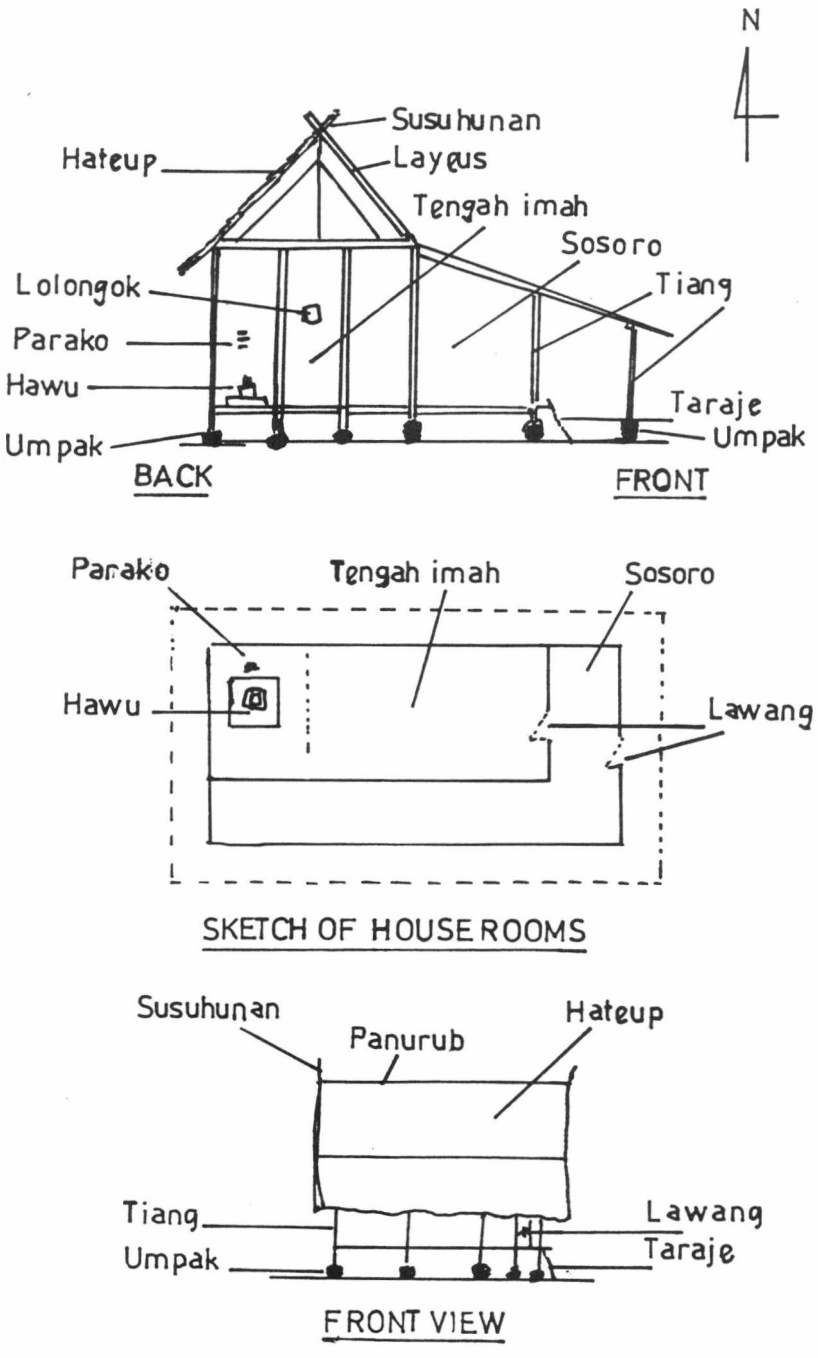
kokolot lembur and **jaro dangka** must be vacated when the present incumbent retires.

The river is mainly used for bathing, washing and drinking. In some places, river water or water from other sources is run-off along bamboo pipes (**pancuran**) and collected in hollowed tree trunks placed at bathing places near houses.

As in Inner Baduy, hamlet space in Outer Baduy is symbolically ordered. Hamlet position must be located along a north-east (**bahe kaler-timur**) axis. The house of a son or daughter may not be located to the south (**kiduleun**), mountain-wards (**ditonggoh**) or in the shade (**ngalangkangan**) of a parental house.

Houses are built close together, and the veranda (**sosoro**) faces a common footpath. The front, back and sides of the house are called **buruan**, **buri** and **pipir**, respectively. The **buruan** can never been planted with crops, and is mainly used by playing children (**ulin barudak**) or for drying rice (**moe pare**) or other crops. Behind the house (**buri**) there is a special place for throwing rubbish and water waste called **kolomberan**.

In Inner Baduy, houses (**imah**) are simple, and approximately 6 m x 6 m (Figure 3.8). They are constructed from wood, bamboo, **kiray** (Metroxylon sagu) leaf, and aren palm (**kawung**=Arenga pinnata) fibre. The houses are typically built on 14 stilts over a base of stone (**umpak**), are timber framed with floors about 50 cm from the ground. The space under the house (**kolong imah**) is generally kept



Source: After Wiryowartono (1993:9)

Figure 3-8 The Traditional house of Inner Baduy

free though may be used for firewood. The floor and walls are made of split-bamboo (**talupuh**) and woven bamboo (**bilik** or **sase**) respectively. The giant bamboo or **awi gombong** (Gigantochloa verticillata) and **awi mayan** (Gigantochloa sp) are commonly used for making **talupuh** and **bilik**, respectively. The roof (**hateup**) is made of **kiray** leaves covered with aren palm fibre. Alang-alang or **eurih** grass (Imperata cylindrica) cannot be used for roofing because animals such as wild pig and birds use it for nesting. The Baduy prohibit the use of materials for the human house which are also used by animals (**jelema mah telok sarua jeung sato**). Nails and hinges are also prohibited, and are replaced by wood and sharp bamboo pegs. Lianas (**areuy**) and rattan are used for binding. Roof tiles are also prohibited, because living humans should never be covered by earth (**jelema hirup telok ngeyuhan ku taneuh**).

Houses have one door made of finely split bamboo tied with aren palm fibre or bamboo string, called panto **gedek**, and a bamboo ladder (**taraje**) is used to enter the house. There are no windows but instead a hole approximately 3 m x 3 m, called **lolongok**, has a view outside the house (**longok**, **tempo** or **ngintip**). The one main room (**tengah imah**), is surrounded by an L-shaped space with a bamboo wall, called **sosoro** with its own entrance (**lawang**). Each dwelling is usually occupied by a single family, a married couple and unmarried children sleeping and eating in the main room (**tengah imah**). In this room also is a firewood stove (**hawu** or **tungku**) for cooking, and woven pandanus mats

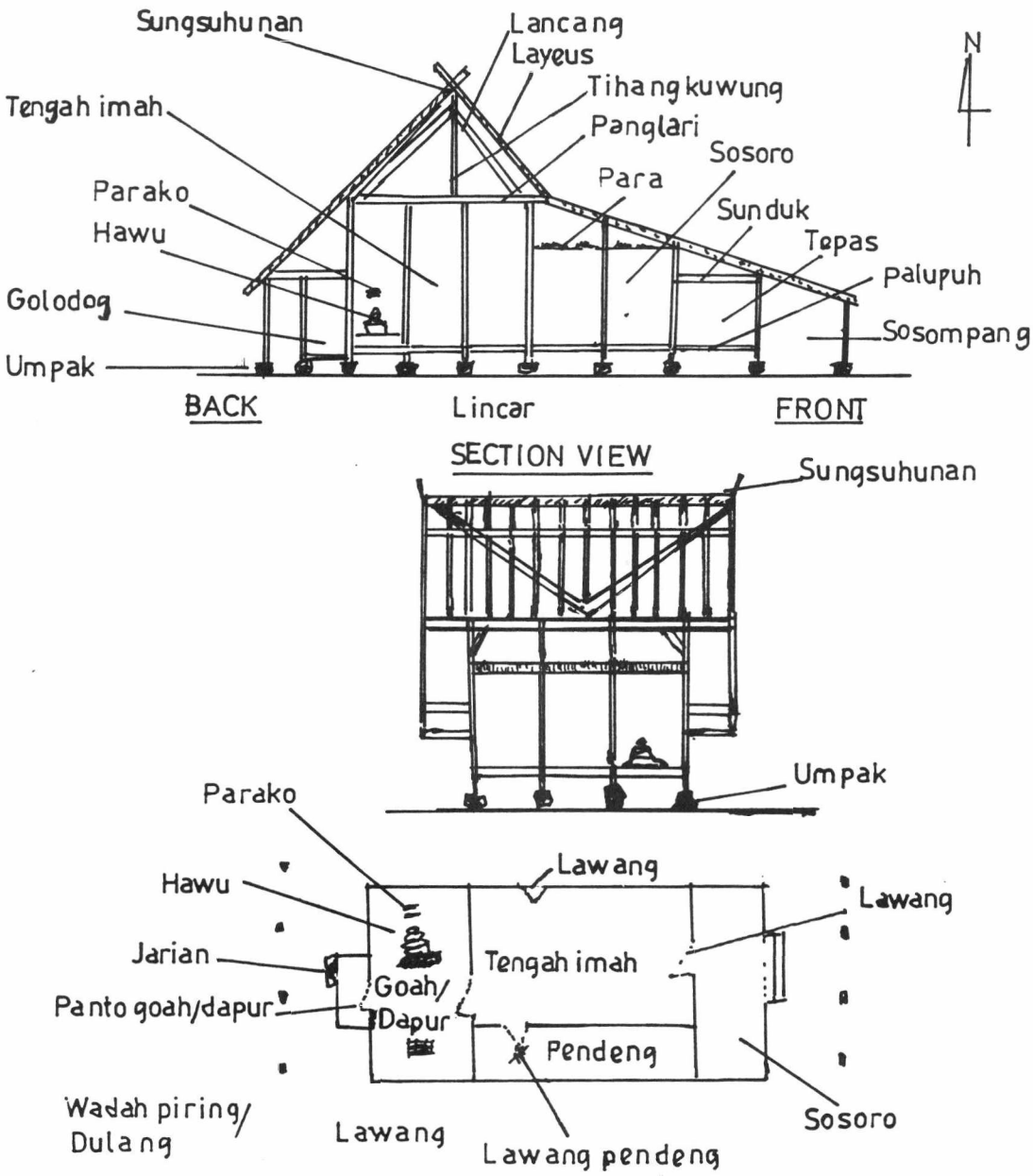
(**samak pandan**) for sleeping. Above the stove is a shelf called **parako** for salt, seed crops and cooking utensils. The outer room (**sosoro**) is usually used for receiving guests and for the extended family, and contains one or two firewood stoves.

The meeting house (**bale kapuunan**) is similar to the ordinary domestic house, though smaller and consisting of only one room. It is usually used for meetings and for performing rituals.

Outer Baduy houses are made of the same materials as those of Inner Baduy. However, nails, hinges, and padlocks are commonly used. The common house type is called **sulah nyanda,** which is about 14 m x 7 m (Figure 3.9). It has few windows and doors. The front, room (**pendeng**), side, kitchen, and back door are usually called **lawang hareup**, **lawang pendeng**, **lawang**, **lawang dapur**, and **lawang goah**, respectively. The position of the front door is not allowed to be aligned with that of the kitchen door, and this is believed to protect the contents of the house from theft.

The house is divided into a main room (**tengah imah**), one or two small rooms (**pendeng**), and a kitchen (**parako**). Along the front is a verandah (**sosoro**) commonly used for conversation (**ngobrol**) with neighbours or guests. The **tengah imah** is usually a sleeping place for the owner or for guests, while the **pendeng** is only used for sleeping by the owner. The **parako** is mainly used for cooking and is the domain of women (**paranti masak bikang**).

Rice barns (**leuit**) also share this basically simple



SKETCH OF HOUSE ROOMS

Source : Wiryowartono (1993:10)

Figure 3.9 · The Traditional house of Outer Baduy

structure. There are two types (Figure 3.10). The first type is set on four stones (**umpak**), one at each corner, on which are placed four horizontal pieces of timber in the form of a square. Where these pieces of timber cross are set vertical pillars, which carry large circular vermin-shields at a height of about 150 cm from the ground. Horizontal cross members are slotted into the pillar above the vermin-shields, which carry the grain storage structure. This has a timber frame, with walls sloping outward slightly, consisting of either bamboo matting of the same type as that used for houses or with flattened bamboo haulms split in two. The roof is steeply sloping and the gables are again filled with bamboo matting. In one of the gables is the access door which is hinged at the top with aren palm fibre. The door is secured by a strip of bamboo which passes over it, and slots into bamboo holders. The second type of rice barn is set closer to the ground on short pillars which extend to form the main frame. The floor is solid bamboo and the walls are again of bamboo matting, as are the gables. The walls, however, do not have the same marked outward slope as the first type, and the vermin shields are lacking. The first type is predominantly found in Inner Baduy, while the second type is more usual in Outer Baduy.

Another component of village space, the public rice pounding shelter (**lisung lembur** or **lisung kampung**), which is also oriented along the north-south axis, is located north of the meeting house in Inner Baduy or to the north

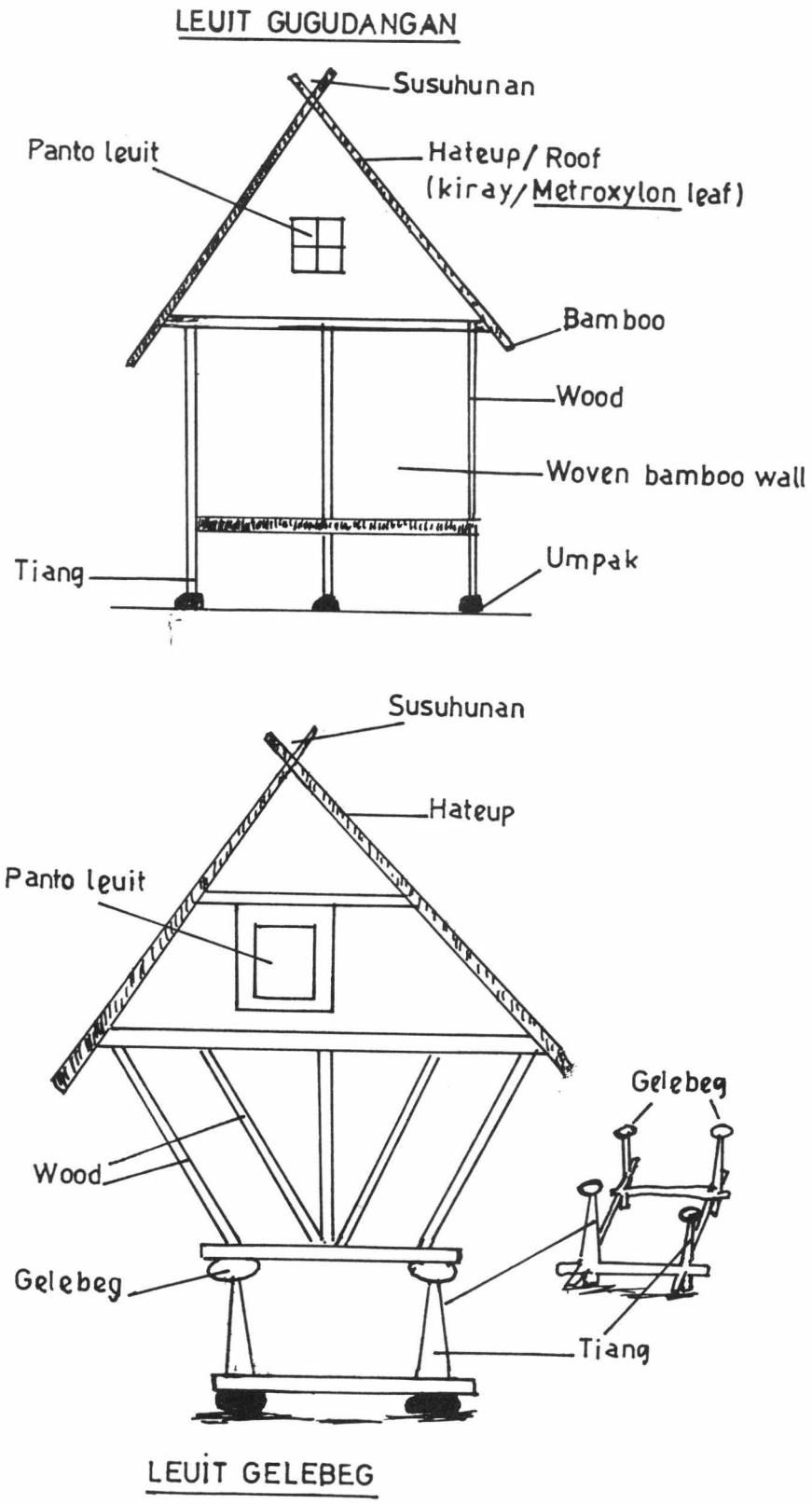


Figure 3.10. The Traditional Baduy rice barn (leuit)

or north west in Outer Baduy. The **lisung lembur** is a simple structure made of bamboo poles lashed together, with shorter bamboo rafters set into a horizontal piece of split bamboo lashed between the arched upright bamboo poles. The roof is made of **kiray** leaf, and comes down to about 150 cm above the ground (Figure 3.11). The mortar itself (**lisung**) is made of a hollowed tree trunk with a rudimentary head carved at one end. It has a long narrow trough for separating the rice grain from padi stalks, and a deep round hole for the final husking of the grain. The height of the **lisung** is about 40 cm. Rice is commonly pounded by girls and women working together in what is a characteristically female social activity.

Traditional law prevents the establishment of new hamlets in Inner Baduy. In order to solve the problem of increasing population, an existing hamlet is usually relocated to a new area. By contrast, new hamlets are often established in Outer Baduy, particularly if an existing hamlet is considered too crowded. Therefore, as population has increased in Outer Baduy, so hamlet numbers have increased also. For example, according to Jacobs and Meijer (1891: 45-47), in 1888 there were 7 Outer Baduy hamlets, increasing to eleven a year later. By about 1902 there were 24 hamlets (Pennings, 1902: 380-382). By 1994 the total number of Outer Baduy hamlets, not including those in non-Baduy dangka areas, was officially recorded as 44 (Catatan Carik desa Kanekes, 1994).

The first stage in establishing a new hamlet

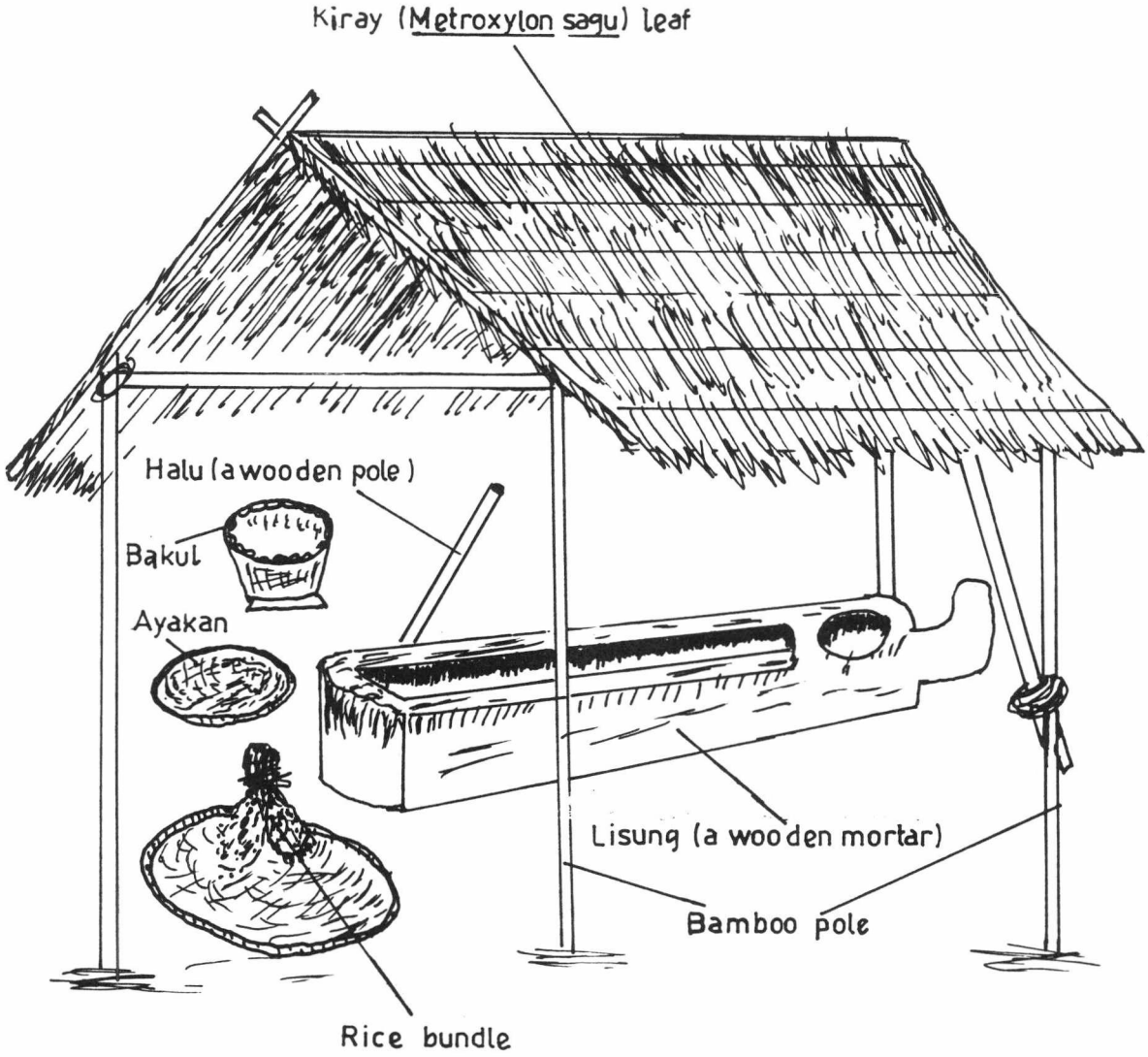


Figure 3.11. A Baduy rice pounding shelter (saung lisung)

(**babakan**), is to ask a representative of a traditional leader (**tangkesan**) to find an appropriate place. In locating a new hamlet, various ecological, practical, and socio-cultural factors have to be taken into account. The location should not be too far to the south, not too steep, near a plentiful water source, and with good soil, vegetation, and water quality. An appropriate place may be found by calculating the **naptu** (a form of augury) of location, hill and water. Of first priority are soil and water quality, and to determine these, a bottle of water is usually put in the soil. After one month, the water in the bottle is examined. If the water in the bottle is more or less intact and clean, the place is considered to be good (**bagus** or **endah**). The ecological rationale for the test may be that burying water in the bottle is an effective way to test soil moisture and mineral iron content. For example, if a certain area has less ground water or dry land and high iron content, the water in the bottle may be less and a dirty (iron-stained) colour. This is because water in the bottle has been subject to high water evaporation and mineral iron in the soil.

The next stage in establishing a village is cutting back the vegetation. However, before doing this a special ritual called **narawas munar lembur** and **nukuh** must be performed, the timing and performance of which are organised by a traditional ritual expert or **dukun** (**tangkesan**). A day for clearing forest is first calculated by the **tangkesan** based on 'day **naptu**' (**naptu poe**), 'date

naptu' (**naptu tanggal**), and 'name **naptu'** (**naptu ngaran**) of the particular topographic, hydrographic and forest coordinates [4]. Firstly, location is calculated using name **naptu** (**naptu tempat**). In considering Marengo as a new settlement the calculation is as follows: Ma=1, re (ra)=2, and ngo (nga)=6, which gives a total **naptu** of 9. Secondly, day **naptu** is calculated. For example, if monday (**senen**) is chosen for doing **narawas** the day **naptu** (**naptu poe**) is 4. Combining, both name and day **naptu** we get 9 + 4= 13. This number is then combined with date **naptu** (**naptu tanggal**), which generates values as follows; **satanggal** (5), **dua tanggal** (9), **tilu tanggal** (7), **opat tanggal** (4) and **lima tanggal** (8). For example, if monday is the first date (**satanggal**) it gives a date **naptu** of 5. Therefore the total **naptu** becomes 13+5=18, which when divided by 3 [5] is 6. Given this result monday of the first date is considered an auspicious day (**bagus**) for performing **narawas**, because the number divided by three yields zero (**henteu nyesa**).

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[4]) There are three main **naptu** in Baduy used for calculations: day naptu (**naptu poe**), date naptu (**naptu tanggal**), and name naptu (**naptu ngaran**). In day naptu: sunday (**minggu**)=7, monday (**senen**)=4, tuesday (**salasa**)=3, wednesday (**rebo**)=7, thursday (**kemis**)=8, friday (**jamahat**)=6, and saturday (**saptu**)=9. In date naptu; the first date (**satanggal**)=5, second date (**dua tanggal**)=9, third date (**tilu tanggal**)=7, fourth date (**opat tanggal**=4), and fifth date (**lima tanggal**)=8. In name naptu (**naptu ngaran**, based on 21 letters): Alif=1, ha=4, na=3, ca=3, ra=2, ka=2, da=3, ta=3, sa=2, wa=4, la=4, pa=2, dha=5, ja=3, ya=8, nya=9, ma=1, ga=7, ba=5, tha=6, and nga=6.

[5]). Number 3, or odd numbers generally, are considered important, because household property is usually inherited by dividing by 3; for a husband (**hak salaki**), a wife (**hak bikang**), and children rights (**hak anak**). In addition, the meal provided in various rituals, requires that one meal portion be consumed by 3 persons.

However, if a number divided by 3 yields a remainder (**nyesa**), it is considered to be an inauspicious day (**sial**) for performing **narawas**. A similar divinatory process is used to determine a date for cutting vegetation (**narawas**) or forest (**nukuh**). For example, cutting vegetation on the first date (**satanggal**) must begin from the west (**barat**) because dangerous animals are believed to come from the east (**wetan**)[6] at that time.

Cutting vegetation is usually done on a single day by approximately 200 people from the hamlet helped by people from neighbouring hamlets. On this occasion the participants usually consume fresh water fish and swidden rice rather than salted fish and market (sawah) rice. In addition, the land is flattened (**diratakeun**) with the assistance of community or wage labour. The land is now ready for the erection of houses. The cost of constructing an Outer Baduy house in the early 1990s was estimated at 4 million rupiah (1,143 pound sterling; 1 UK £= 3,500 rupiah) per house. Some house materials, such as wood, woven bamboo walling, and **kiray** must, in some cases, be bought. A **jajalon kiray** roof (1 m x 1 m), a wooden pole (5-7 m), and woven bamboo walling (4 m x 4 m) can be bought for 300-400, 5,000-8,000, and 3,000-5,000 rupiahs, respectively. An entire house requires 300 **jajalon** of **kiray**

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[6]). Baduy believe that the threat of dangerous animals or non auspicious link date to direction: in the first date (**satanggal**), second date (**dua tanggal**), third date (**tilu tanggal**), fourth date (**opat tanggal**), and fifth date (**lima tanggal**), in the east (**wetan**), south (**kidul**), west (**barat**), north (**kaler**), and upper (**luhur**), respectively.

or 300 x 300-400 rupiah= 90,000-120,000 rupiah. In addition, labour costs amount to some 2,000-3,000 rupiahs per day per person.

After house construction is complete a ritual called **nukuh lembur** must be performed by the **tangkesan**. A day for moving into the new house and for performing the ritual is calculated by the **tangkesan** using various **naptu**, as in determining the first ritual, **narawas lembur**. Auspicious days for moving into a new settlement are usually Saturday night, Sunday night, and Wednesday night, while Thursday night, Tuesday night, and Friday night are prohibited. This ritual is attended by all new house owners and some invited guests from the same or neighbouring hamlets. Meals consisting of swidden rice, fresh water fish, and venison must be provided. In addition, after the passing of about 5 years, another **nukuh lembur** ritual is performed, particularly if bad luck has befallen community members, such as disease or a poor rice harvest. A special meal consisting of swidden rice, fresh water fish, squirrel (**buut**=Callosciurus notatus), deer (**peucang**=Tragulus javanicus) and muncak (**mencek**=Muntiacus muntjak) meat is prepared; sawah rice and salted fished are not allowed to be consumed in this ritual.

An auspicious day for the annual **nukuh lembur** is usually calculated by the **tangkesan** using various **naptu** as mentioned earlier. The **naptu** notes are usually written on a piece of wood called the **kolenyer** in Baduy (Figure 3.12 and Figure 3.13). The **kolenyer** is mainly used for providing

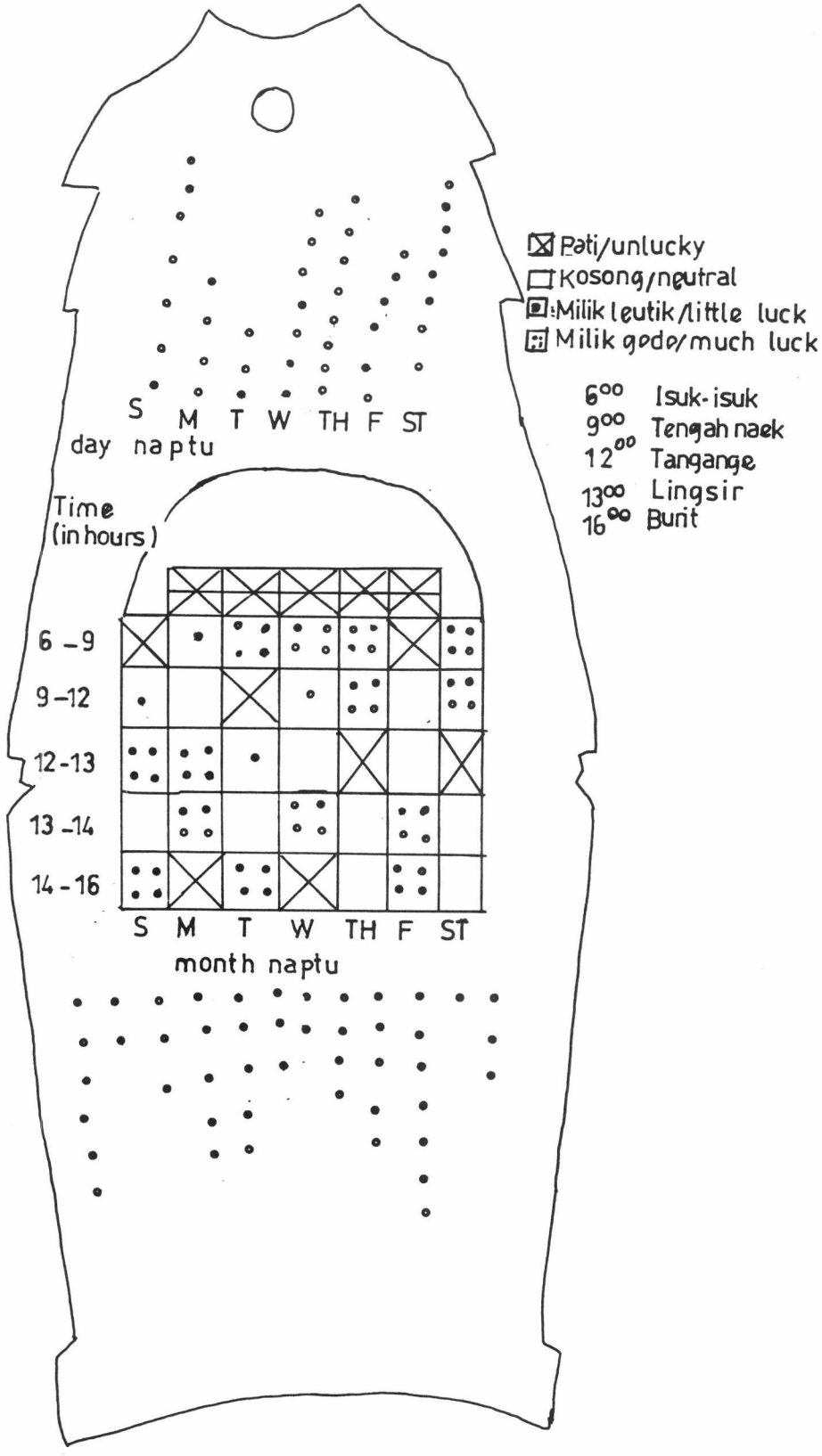


Figure 3.12. 'Kolen yer' made of wood, a divining device used to locate auspicious times for engaging in special work (front)

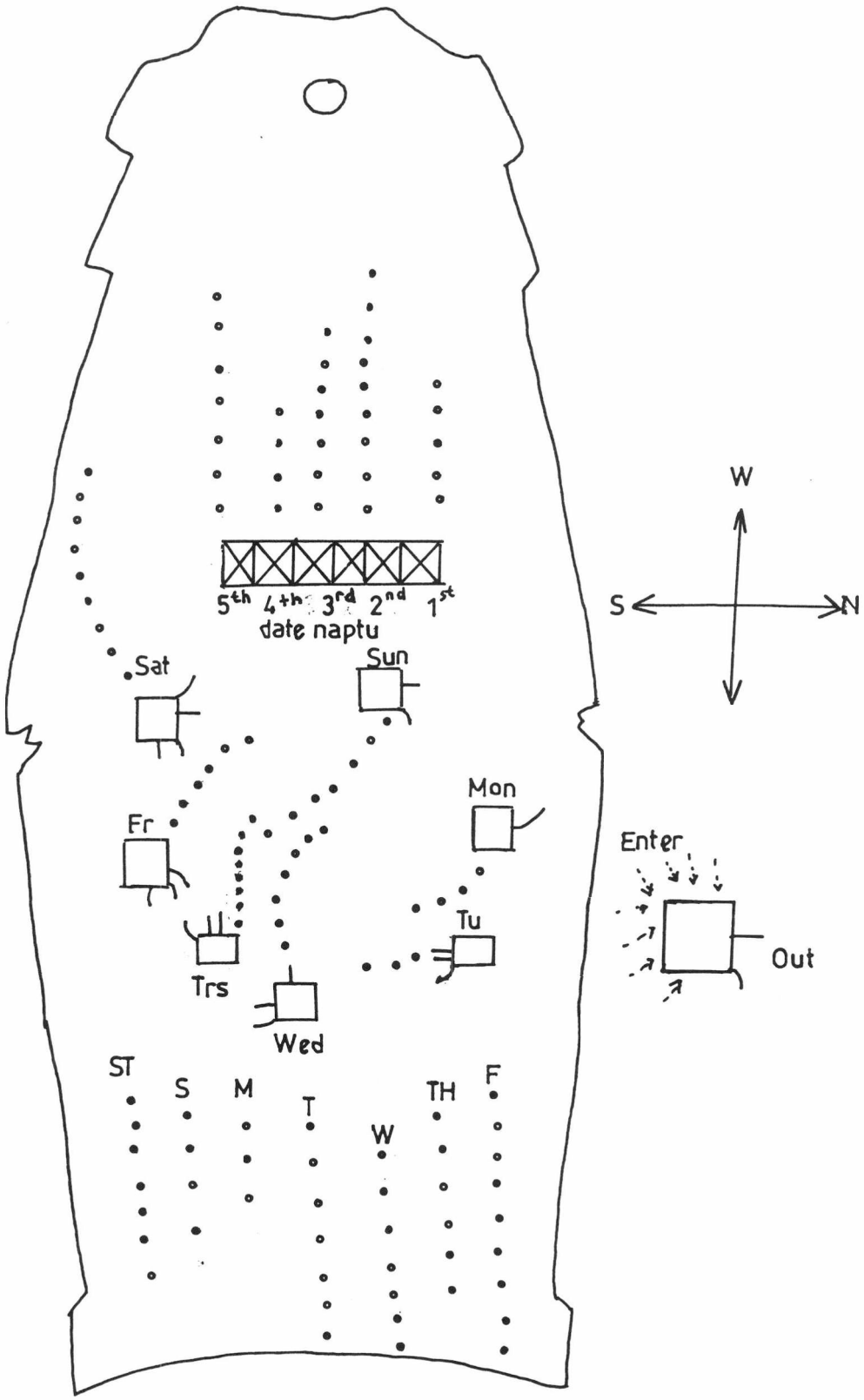
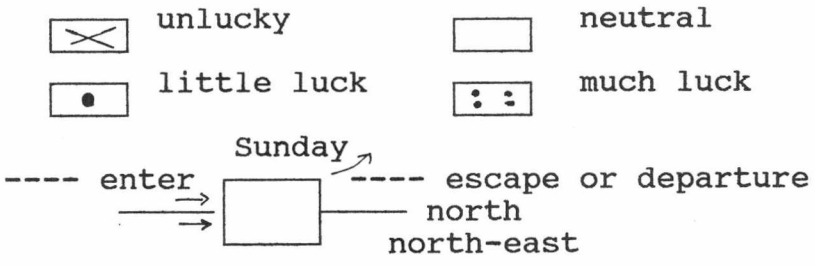


Figure 3·13. 'Kolenyer' made of wood, a divining device used to locate auspicious directions (back)

guidelines to find auspicious times and auspicious position directions. One day is usually divided into 5 periods of time; **isuk isuk** (5.00-9.00), **tengah naek** (9.00-12.00), **tangange** (12.00-13.00), **lingsir** (13.00-14.00), and **burit** (14.00-16.00) (Figure 3.12), while the auspicious directions for arriving and leaving from a certain area are divided into 8: north (**kaler**), south (**kidul**), west (**barat**), east (**wetan**), south east (**timur kidul**), south west (**barat daya**), north west (**barat kaler**), and north east (**kaler wetan**) [Figure 3.13). The various symbols used in the kolenyer as follows:



If, for example, someone wants to hunt animals or to press for payment of a debt on Sunday, the auspicious time must be chosen in the afternoon; during **tangange** and **burit**, because these times based on the **kolenyer** are considered to be more auspicious (Figure 3.13). In addition, direction of arrival on a Sunday should be to the west, east and south, while direction of departure must be to the north and north east.

5. Leadership system

There are two leadership systems in Baduy: traditional (**kapuunan**) and official (**pamarentahan desa**). The position of official village leader (**jaro pamarentah** or **jaro governemen**) was introduced by the colonial Dutch government in 1850 (Bakels and Boevink, 1988: 17). Before that time, Baduy were entirely responsible for their internal administration. Today, there are more than 40 traditional leaders recognised by the Baduy (Table 3.1).

Table 3.1. Numbers of traditional Baduy leaders*)

Location	Puun	Girang Seurat	Jaro Tangtu	Baresan	Jaro Dangka	Total
Cibeo	1	1	1	9	-	12
Cikeusik	1	1	1	11	-	14
Cikartawarna	1	-	1	5	-	7
Outer Baduy	-	-	-	-	7	7
Total	3	2	3	25	7	40

*) These are only the main leaders, and do not include a coordinators of some jaro, **Jaro Tanggungan 12** (Kaduketer), and traditional leaders in some old hamlets, **kokolot lembur**.

Source: Moehtar (1975: 17)

5.1. Puun

Puun are considered to be the most important leaders in the Baduy community.The title and position are inherited patrileneally. There is no fixed rule as to how many years a **puun** may govern a community, though they generally retire

on reaching old age or on the death of wife. According to tradition, a **puun** who has no wife must retire as soon possible, because various rituals must undertaken by both a **puun** and his wife. If a **puun** has no son, he may be replaced by another male relative. For instance, in Cikeusik Puun Jainen was replaced by his son-in-law (Puun Saiti). In Cibeo, Puun Ajal was replaced by his younger brother (Puun Jante), while in Cikartawarna, Puun Kepuk was replaced by the elder son of the elder brother (Puun Kite) because his eldest child was female. In general, **puun** are selected on the basis of dreams experienced by shamans (**dukun**) and other old people who are part of the assembly which supports the puun staff (**baresan kolot**).

In their daily life, the family of a **puun** is required to respect many prohibitions. For instance, they are not allowed to consume sawah rice (**kejo sawah**), as sawah rice is assumed to be contaminated by poisons from chemical fertilizers and pesticides. They are also not allowed to go out from their area. Therefore, traditional leaders are more-or-less confined to their farm houses (**saung huma puun**) where they receive guests seeking help (**ziarah ka puun**). **Puun** are considered to have supernatural powers (**sakti**), and many people from towns, such as Jakarta, Bandung, Bogor, Cianjur, Semarang, Surabaya, Lampung and Medan seek their help. Various articles-incense (**menyan**), white cloth (**lawon bodas**), knive (**peso**), perfumes (**minyak wangi**), and money (**duit**)- must be provided in order to consult a puun. All guests must first be received by an

assistant, a **seurat** (**girang seurat**) or **tangtu** (**jaro tangtu**), who will arrange the meeting with the **puun** in a meeting house or **jaro tangtu** house (**imah jaro tangtu**). The guests are not allowed to enter the **puun's** house. His house (**imah puun**) is located in the southernmost (most sacred) part of the village, and when he retires, the house is given to the new **puun**. Other support staff provided with special houses include: **girang seurat**, **jaro tangtu**, **tangkesan** and **jaro dangka**.

5.2. Seurat

The second most important traditional leader in the Baduy community is the **seurat** or **girang seurat**, a post also acquired though inheritance and dream divination. There are only two **seurat** at the present time, in Cibeo and Cikeusik. There is no **seurat** in Cikartawarna. In the old Sundanese Kingdom (Mochtar, 1975: 16, Danasmita and Djatisunda, 1986: 20) the **seurat** was a chief minister to the king or **mangkubumi** (responsible for managing land). Today, in Baduy, he has sacred communal swidden fields (**huma serang**), and his role is to assist in receiving guests. As a form of respect, he is commonly addressed as **girang** or **girang seurat**.

5.3. Baresan

There are 25 persons described as **baresan kolot**,

selected by **puun** in order to assist in maintaining order according to traditional laws (Table 3.1). They are mainly people over 30 years of age who are regarded as being rich in knowledge and experience. Their functions resemble those of **manangganan** under **mangkubumi** staff in the old Sundanenese Kingdom (Danasasmita and Djatisunda, 1986: 20).

5.4. Jaro Tangtu

Each **puun** is also assisted by a **jaro tangtu**, a title and role acquired through inheritance and dream divination, who has a special responsibility to maintain daily Baduy customary law. He has an important role in the annual purification ritual (**pembersihan adat**) in which various crops and goods prohibited for Baduy are destroyed. Regular meetings to discuss laws which have been contravened are conducted in Outer Baduy by the three **jaro tangtu**. However, this meeting is usually dominated by the **jaro tangtu** of Cikeusik and another **jaro tangtu** (particularly **jaro tangtu** of Cikartawarna) serves as witness (**saksi**). This is because the **jaro tangtu** of Cikeusik (following the mythic genealogy) is most senior. In addition, **puun** and **jaro tangtu** in Cikeusik are known for their courage and endurance (**keponggawaan**) in Cikartawarna for gentleness and piety (**pinandita**), and in Cibeo for their hospitality to guests (**kesatriaan**) [Moechtar, 1975: 35].

5.5. Jaro Dangka

Seven **jaro dangka** are recognised in Baduy (Table 3.1). **Jaro dangka** selected by **puun** and **dukun** during dreams have special duties similar to those of **jaro tangtu**. However, they are more important in Outer Baduy and the buffer zone (Dangka) area today. They are deemed to be representatives of **puun** outside the **tangtu** area (Inner Baduy). In addition, they are permitted to lead the **ngalaksa** ceremony. Each **jaro dangka** is linked to one of three **puuns**: **jaro dangka** of Nangka Bengkung (Cibengkung), Kompol, and Kamancing to the **puun** of Cikeusik; Cihandam to the **puun** of Cibeo; and Cilenggor, Nungkulan, and Panyaweuyan to the **puun** of Cikartawarna (Van Tricht, 1928, see Figure 3.2).

5.6. Jaro Warega

One **jaro dangka** is selected as coordinator of all **jaro dangka**: **jaro warega**. The **jaro dangka** of Kamancing (who in the past resided in Kamancing, but who now lives in Kaduketug) is usually selected to be **jaro warega**. His main duty in addition to being an ordinary **jaro dangka**, is to maintain the relationship between the Baduy community and the government. However, due to the introduction of jaro pamarentah during Dutch period, the function of the **jaro warega** now overlaps with that of the **jaro pamarentah**. Today, his particular role is to lead the **seba** ceremony when a delegation of Baduy visit the camat (sub-district),

bupati (district) and resident in Rangkasbitung and Serang to make an offering of agricultural produce and to ask for protection of their land and forest.

5.7. Jaro Tanggungan dua belas

The **Jaro Tanggungan dua belas (12)**, also called **tanggungan** (**tanggungan**= person in position of responsibility), has a responsibility to coordinate all **jaro** in Baduy. This duty is similar to that of the **patih** (a chief minister to the king) in the old Sundanese Kingdom (Danasasmita and Djatisunda, 1986: 21).

5.8. Parawari

Each **puun** and his staff are assisted by a group of **parawari** consisting of between 3 and 10 persons, led by a shaman (**dukun** or **panengen**) or other officer. The role of **parawari** is to assist in various rituals in Inner Baduy, such as planting rice in **huma serang** (**ngaseuk huma serang**) and **kawalu**.

5.9. Panengen, Dukun Pangasuh and Tangkesan

The **puun** are also assisted by a ritual healer and diviner. This person is called **panengen** in Cikeusik (though living in Pamoean, Outer Baduy), **dukun pangasuh** in Cikartawarna (living in Batubeulah, Outer Baduy) and

tangkesan in Cibeo (living in Cikopeng, Outer Baduy) [Figure 3.2].

The **tangkesan** is also recognised as a ceremonial leader in Outer Baduy, on such occasions as the weeding ceremony and the establishment of new settlements. In addition, each puun is assisted by **pareken** who have a duty to assist **puun** in household matters.

5.10. Jaro Pamarentah, Carik, Pangiwa and Kokolot Desa

As in non-Baduy areas, Baduy also operate on official administrative structure. The official village chief is called **jaro pamarentah** (**jaro gopernement** during the Dutch period). On the basis of my own data and those of Bakels and Bovink (1988) we can list the names of the following **jaro pamarentah** since 1850: Tarpi (1850), Sartim, Raini (1888), Karcim, Ratna, Yalpin, Hasan (1939), Aska, Hasan, Saltiwin (1953-1960), Samin (1961-1970/1971), Kalman (1971-1975/1976), Samin (1976-1980/1981), Marsinun (1981-1982/1983), Nakiwin (1985-1988/1989), Asdura (1989-1991/1992), Asrap (1992-1994/1995) and Pulung (1995-present day).

The **jaro pamarentah** is selected by **puun** through inheritance and dreams. He is supported by a secretary (**carik desa** or **juru tulis** in other Sundanese villages), and an assistant in charge of issuing orders (**pangiwa** or **suku lampah**) and some **kokolot desa** (hamlet leaders, similar to **rukun kampung** or RK leader in other Sundanese villages).

Because Baduy refuse to attend school, and because almost all of them cannot read and write, the village secretary is usually non-Baduy. Today, a village secretary, Carik Ukang, comes from a neighbouring area, Nayagati village.

There is some conflict between the traditional and official leadership systems. The **jaro pamarentah**, in particular, is in a difficult position. On the one hand, he is under pressure from the sub-district to join various government programmes, while on the other hand, he is strongly influenced by traditional leaders to resist. Some **jaro pamarentah** have even been discharged by **puun** because it was considered that they had disobeyed traditional laws, such as receiving government subsidies and adopting the Baduy resettlement programme.

6. Kinship and life-cycle

Kinship relationships between Baduy are similar to those of other Sundanese. The fundamental Baduy kinship unit is the nuclear family (**kaluarga**) composed of a husband, wife and between two and four children residing in a single house. Sometimes a house contains an extended family, which also includes a son or daughter in-law. This is particularly the case in Inner Baduy. The nuclear family is responsible for production of its own food supply, but may exchange food, labour, and contribute or participate in various rituals through wider kinship and affinal links called **dulur** (kin). Closely related consanguineous kin

(**saboronjot**, in other Sundanese villages called **bondorojot**) usually reside in the same hamlet (e.g. figure 3.14). However, in Outer Baduy, if a hamlet is too small, a new hamlet may be established and occupied by **saboronjot**.

Unlike the Sundanese villages described by Palmer (1967: 314), **golongan** or occasional bilateral kin groups, which mainly contribute to or participate in life cycle ceremonies, are not widely found among the Baduy.

In addition, an ancestor-oriented descent group (**turunan**) is found. All Outer Baduy are divided into three **turunan**; Cikeusik, Cikartawarna and Cibeo, known as the 'descent group' from Cikeusik (**turunan ti Cikeusik**), Cikartawarna (**turunan ti Cikartawarna**), and Cibeo (**turunan ti Cibeo**), respectively. These groupings are important for Outer Baduy as they link them to Inner Baduy through participation in various rituals, usually via **puun**. For example, most people in Kaduketug participate in annual rituals in Cibeo and **dangka** Cihandam, as the **puun** of Cibeo and **Jaro Dangka** Cihandam are considered to be their ancestors (see also Figure 3.2).

Baduy kinship terminology is similar to that of ordinary Sundanese[7] (Koentjaraningrat, 1972a: 58; Danasmita and Djatisunda, 1986: 64; Suhandi Sam et al, 1986: 26-27; Garna, 1987:108). The terms designating all kin types to seven generations ascendant from ego are: **ayah**, **kai**, **uyut** (grandfather of father), **umpi**, **cenggeh**, **mitelu**, and **wareng**.

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[7]). A more detailed discussion of Sundanese kinship terminology can be found in Ukun Suryaman (1961).

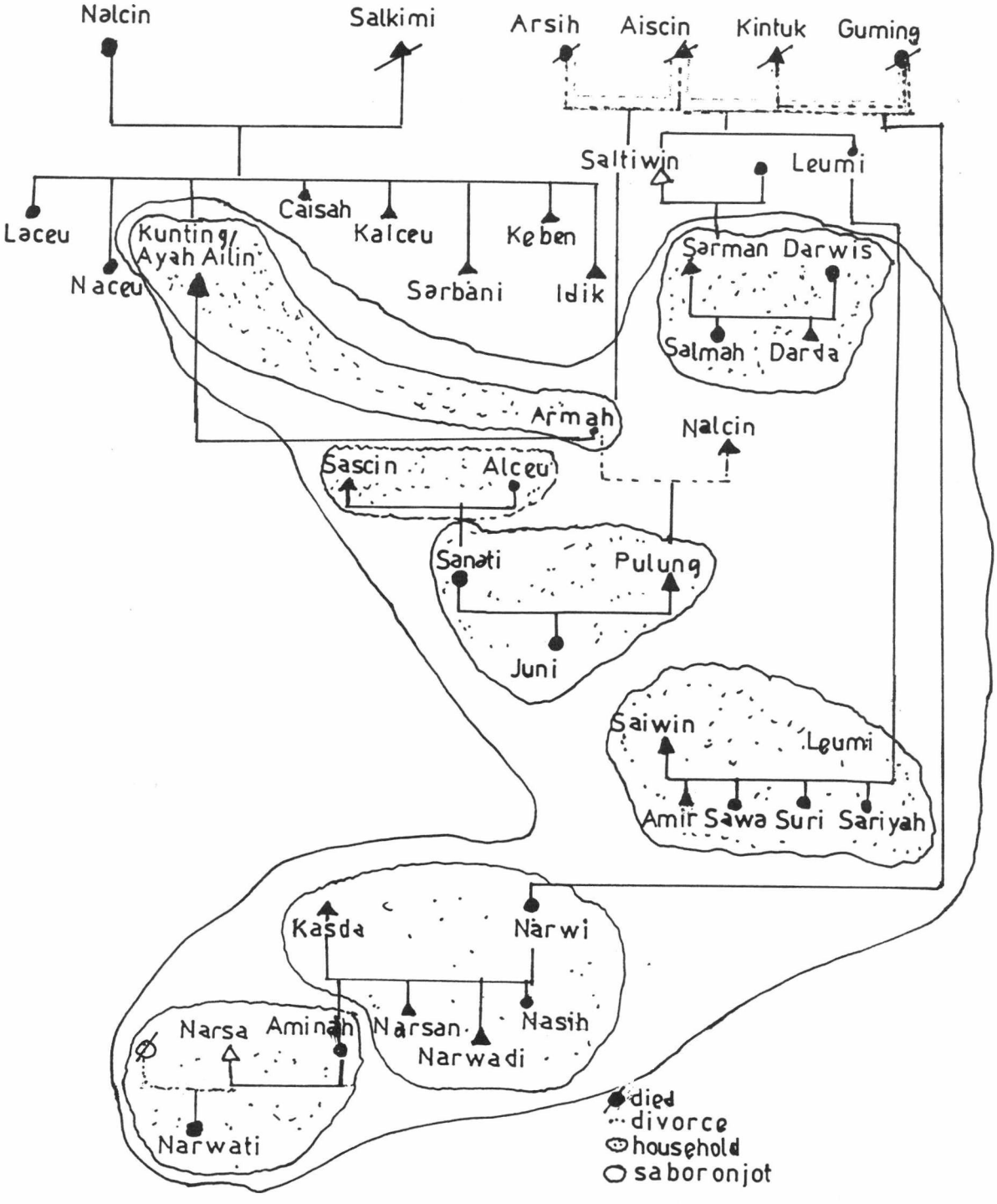

Figure 3,14. Genealogical relationsnips between households (saboronjot) living in Marengo hamlet

If particular generational status is not known the general terms **kolot** (parent) or **karuhun** (ancestor) may be used. In addition, various terms to seven generations descendent from ego are recognised: **anak**, **incu**, **uyut**, **umpi**, **cenggeh**, **mitelu**, and **wareng**. However, these different terms are used only until three generations ascendant and descendant from ego (Table 3.2, Figure 3.15, Figure 3.16 and Figure 3.17).

Ego calls him or herself **aing**. For instance, my father is called **ayah aing**. Ego is called by his younger brothers and sisters **kaka** or **akang**, while female seniors are called **teteh**. The boys are usually called by their parent and senior brothers and sisters **aceng** or **ceng**, while daughters are called and **enok** or **nok** (Table 3.2). They are also called only by their proper name, such as Antiwin, Calsin, Dascin, Sawi and Caisah. Parents in-law are called **warang**, while sons and daughter in-law are called **anak besan** or **minantu** (Figure 3.16).

Table 3.2. Baduy Kinship terms

Baduy Kinship terms	Abbreviation of kin terms in English *)
Aing	Ego
Ama/Ayah	F=Father
Ambu	M=Mother
Aceng/Ceng	S=Son
Enok/Nok	D=Daughter
Salaki	H=Husband
Pamajikan/Bikang	W=Wife
Ayah jeung Ambu	P=Parent

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Salaki	H=Husband
Pamajikan/Bikang	W=Wife
Ayah jeung Ambu	P=Parent

Anak	C=Child
Lanceuk or Adi	G=Sibling
Salaki pamajikan	S=Spouse
Dulur lalaki	B=Brother
Dulur bikang	Z=Sister
Uyut	GrFF, GrMM
Aki/Kai	FF
Nini/Ambu kolot	MM
Akang/Kaka	eB
Teteh	eZ
Adi	YB, YZ
Incu	SD, SS, DD, DS
Uyut	GrSD, GrSS, GrDD, GrDS
Ua	FeB, FeZ, MeB, MeZ, BWi, MeBW, MeZH
Bibi	FYZ, MYZ, FYBW, MYBW
Emang	FYB, MYB, FYZH, MYZH

*) After Barnard and Good (1984:4).

Ego's wife is called **pamajikan**, **bojo** or **bikang**. Conversely, ego is called by his wife **salaki**. Younger brothers and sisters of ego's wife are called **adi beuteung**, while older brothers and sisters of egos's wife are called **dahuan**. Ego's father wife and ego's mother wife are called **mitoha lalaki** and **mitoha bikang** (or **mitoha awewe**), respectively (Figure 3.16).

Figure: 3.15. Terms of reference

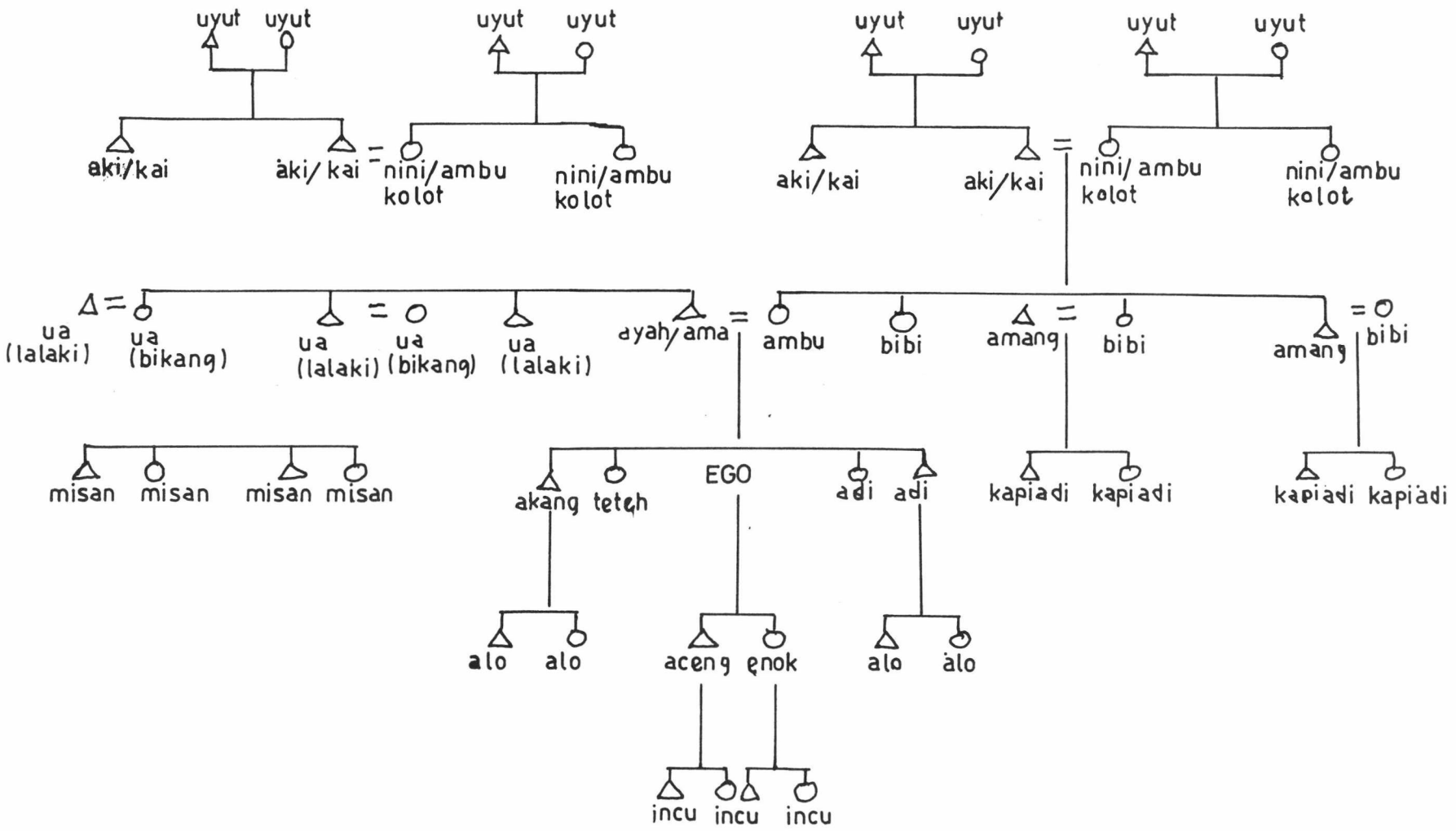


Figure : 3.16 Terms of affinity

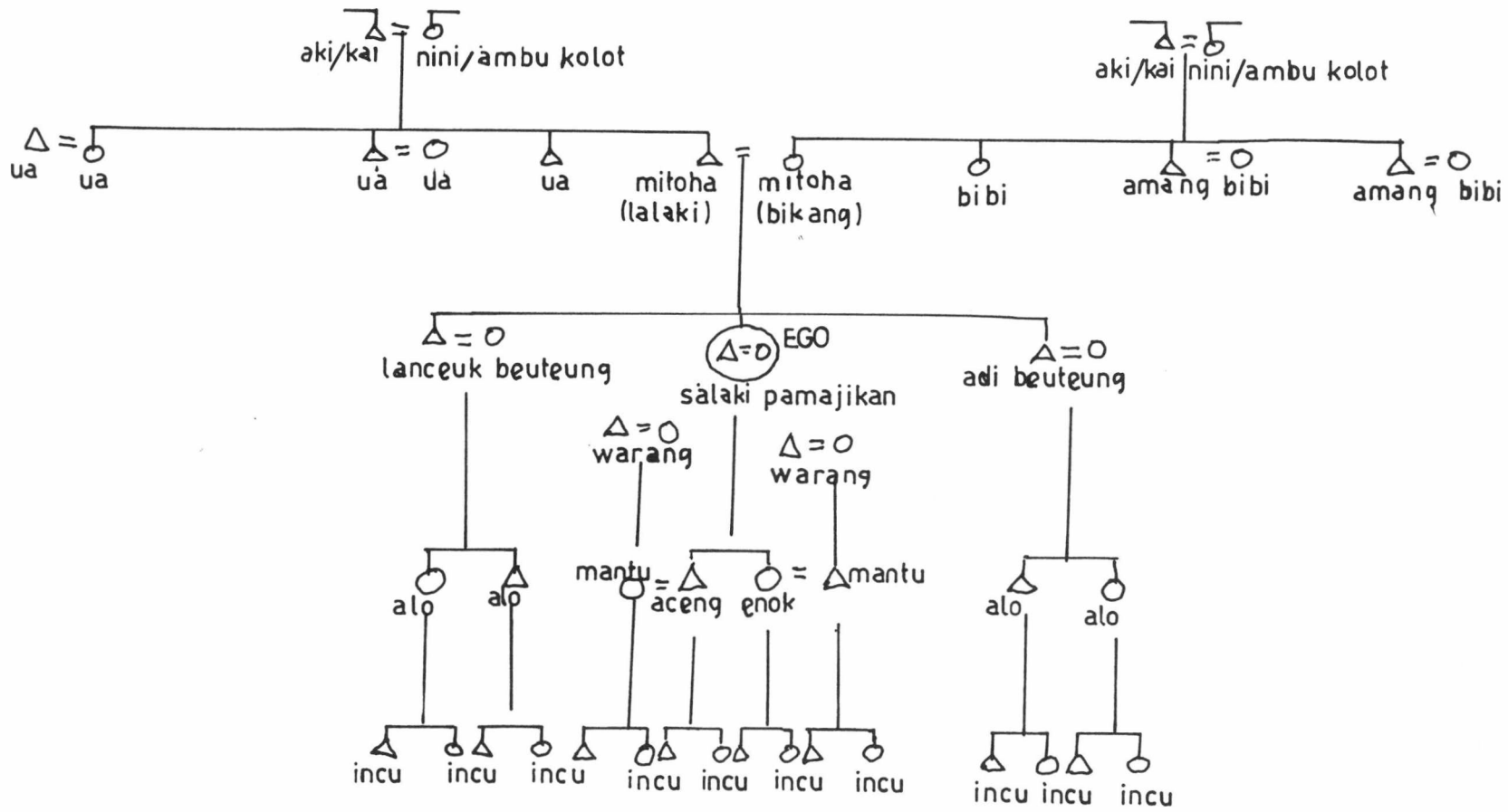
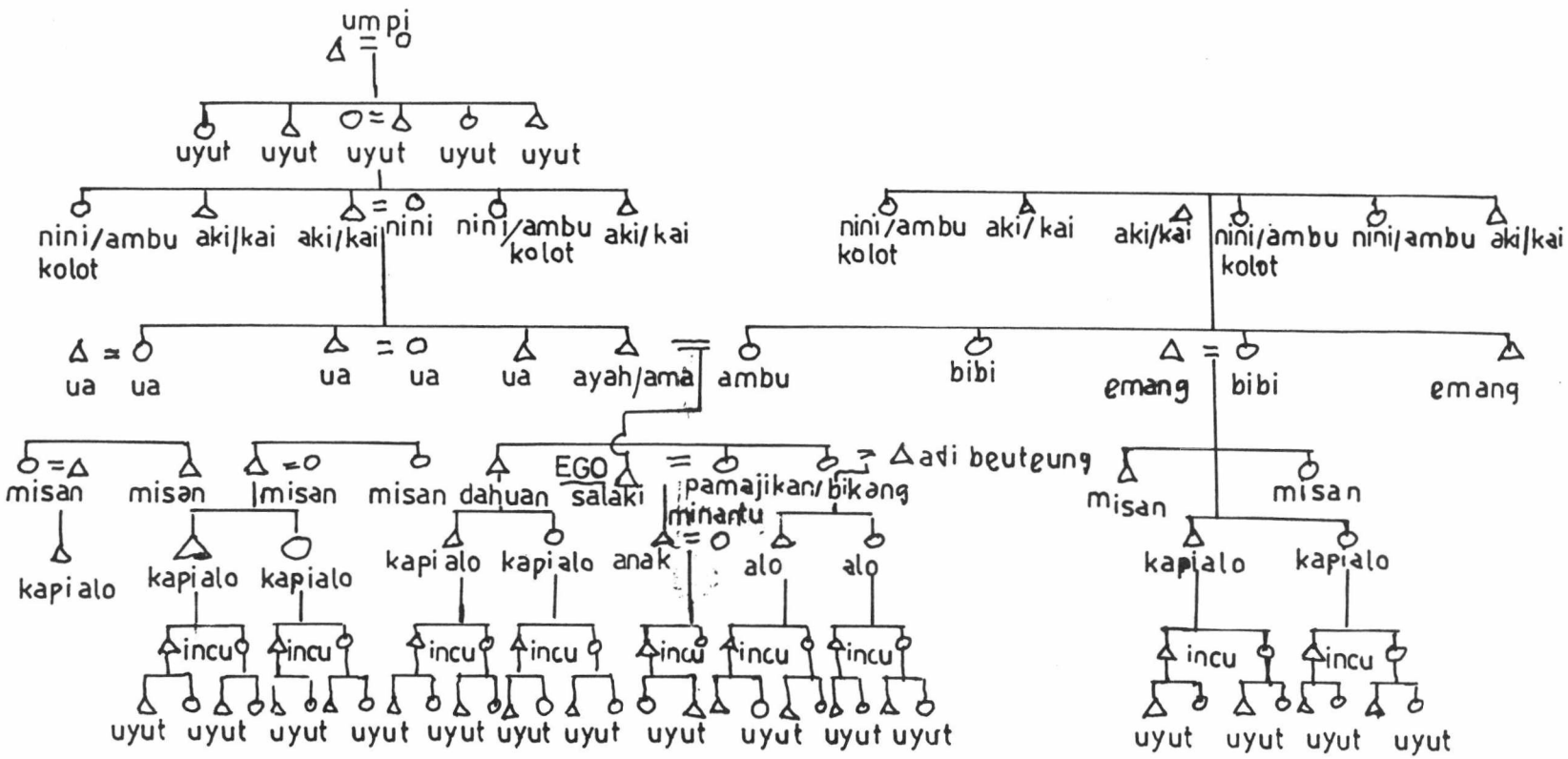


Figure: 3.17. Terms of address



Wareng	+7
Mitelu	+6
Cenggeh	+5
Umpi	+4
Uyut	+3
Aki/Kai & Nini/Ambu kolot	+2
Ayah & Ambu	+1
Ego	+0
Anak	−1
Incu	−2
Uyut	−3
Umpi	−4
Cenggeh	−5
Mitelu	−6
Wareng	−7

6.1. Childbirth

Children from a very early age are economically active (cf. White, 1976). By 5-6 years girls are already involved in various jobs helping their mother, such as caring for younger siblings (**ngasuh adi**), cooking rice (**ngejo**), boiling water (**naheur cai**), washing dishes (**kukumbah piring**), washing clothes (**nyeuseuhan**), and fetching water (**ngala cai**). It is generally more difficult to ask boys to help their parents (**euweuh gawena**) at this age. By the time they are between 10 and 11 years, however, they are accompanying their father to work, and have been provided with a machete (**golok**). They may be asked to help in collecting firewood (**ngalasuluh**), carrying rice (**mikul pare**), and cutting forest (**nuar** and **nyacar**).

During pregnancy women never stop engaging in various swidden activities. However, during the ninth month they spend most of their time on various household activities.

Childbirth is usually assisted by a midwife (**indung beurang** or **paraji**). An **indung beurang** has knowledge of the necessary ceremonies, magical spells, and medicine which are appropriate to birthing. The baby (**orok**) is visited by the **indung beurang** 3 and 7 days after childbirth. On each visit the baby is usually bathed by her, and the mother is given a **sambal** (sauce) made of **koneng** (Curcuma domestica), **cikur** (Kaemferia galanga) and **kunci** (Kaemferia pandurata), which has been prepared to the accompaniment of a magical spell, and which should be consumed daily until 7 days

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after childbirth.

On day 7 a ritual called 'dropping water on the baby's eye' (**meureuhan orok**) is performed, led by the **indung beurang**. At the same time, the baby's name is given by a diviner (**dukun**). The ritual is attended by close relatives. In the early morning, the baby is bathed by the **indung beurang** using water containing the bright red flowers of **kimancirang** (Ficus pumilia) and a coin. According to an Outer Baduy informant, this is aimed at ensuring a pretty girl or a handsome boy (**kimancirang** or **mencrang**= bright colour or pretty), and wealth (symbolised by the coin). In addition, a **pahinum** is provided. This is a 'medicinal cake' made of **koneng gede** (Curcuma xanthorhiza), **koneng leutik** (Curcuma domestica), **cikur** (Kaemferia galanga), **daun capeu** (Blumea balsamifera), **pedes** (Piper nigrum), and **cabe Jawa** (Capsicum sp), which are boiled and the water drunk by the baby's mother.

The ritual begins by inviting the baby's father to come to the main room. He chews betel, gambier, and areca nut, utters a magical spell, and speaks about the aim of the ritual. The ritual continues with the diviner (**dukun**) chewing betel and burning incense (**menyan**) in the front of a special meal of rice and **panglay** (Zingiber cassumunar), which is offered to their ancestor. In addition, the ancestor is offered some rice wrapped in banana leaves which is placed in some part of the house structure by the father.

A wrapped betel leaf is taken by the **dukun** from a

bokor (copper bowl with a wide rim), blown on and moved in a circular direction around the baby who is laid on the stretched out legs of its mother. From the betel leaf wrapper is a thread (**kanteh**) which is coiled around the wrist of the baby. At the same time, water is dripped into the eye of the baby using the tip of betel leaves. The mother's eye is also treated in the same way. The objective of giving the thread to the baby is to protect it from supernatural creatures (**tolak bala**), while the objective of dropping water into the eye is to obtain sharp-sightedness. At this point, the baby is formally given a name by the **dukun**.

A special meal is provided for relatives who attend the ritual. This meal is eaten together (**riungan**), but some food is also delivered to close relatives who did not come to the ritual. 40 days after childbirth, the hair of the mother is washed (**diangir** or **beberisih**) indicating that sexual intercourse (**sapatemon**) between mother and father is no longer prohibited. At this time various goods, 5-10 litres of rice (**beas**), cakes (**kueh**), glutinous rice cake (**ulen**), money (**duit**), and chicken (**kotok**), are sent to the **indung beurang** as payment (**ngamulangkeun**) for assisting with the birth.

6.2. Naming a child

A Baduy child is usually given a name by a **dukun** at the **meureuhan** ceremony, as mentioned earlier. The name is

based on the **dukun**'s dream. Characteristically, the name is a modification of a parental name and indicates his or her birth date. Thus, two or three syllables are taken from the name of a parent, while two or three syllables are taken from the birth date. For example, the children of **Sas**cin and **Als**e are called **Sas**ceu (a boy) and **Als**i (a girl), incorporating the first syllables of the same sex parent's name. Similarly, the names **Sap**in (male) and **Sam**ah (female) are modified from the birth date, **Sap**tu (**Saptu**=Saturday) and **Sal**asa (**Salasa**=Tuesday) respectively. Other names, such as **Sam**ani, **Nar**di, **Nar**wati, **Nas**ih and **Nai**win, are modified parental names: from **Sar**di, **Nar**man, **Nar**wan, **Nas**pura, and **Nak**iwin respectively.

The old Sundanese tradition of teknonymy, whereby a parental name is replaced by that of the first child plus affix 'father of' or 'mother of', is still strongly maintained in the Baduy community. For example, with the birth of their first daughter, Sasceu, Sascin and Alse become known as Ayah Sasceu and Ambu Sasceu, respectively. Today, teknonymy has disappeared among ordinary Islamic Sundanese.

6.3. Sunatan and peperan

Circumcision is practised amongst Baduy for both boys and girls, called **sunatan** and **peperan** respectively. **Peperan**, however, is conducted in secret and attended only by a few household members. The ceremony should be

performed in the month of **kalima** (**bulan kalima**). Children between 4 and 7 years are assembled and male and female ritual specialists, known as **bengkong** and **paraji** respectively, are invited. Baduy male circumcision is different from that of ordinary Islamic Sundanese and from that of the Javanese, and is called **nyelamkeun**, the tip of penis only being incised by **bengkong**. According to Koentjaraningrat (1985: 119), formal Javanese circumcision is considered to mark the onset of adolescence or a kind of initiation ritual into Islamic adulthood, and is performed between the ages of ten and fourteen. Among the Baduy it is usually performed between the age of 4 and 7 years, and presumably cannot mark the onset of adulthood.

In the Baduy ceremony, cockerels (**kotok**) are sacrificed (**ngabela**) according to the number of children being circumcised. In addition, a special meal of rice cooked in coconut oil (**tumpeng**) is provided for all people who attend the ritual (**upacara riungan**) or distributed to close relative in their homes. On no other occasion are cockerels allowed to be killed.

6.4 Marriage

Baduy children are considered to enter adolescence between their sixteen and seventeen years old. For a girl, adolescence comes with her first menstruation, which is not marked by a special ritual. From this age children are considered marriageable. Among Inner Baduy, marriage

between individuals in the same hamlet is common. Marriage between relatives is common, including between bilateral cousins. However, marriage between consanguines where the man is of a younger generation than the women, such as between nephew and aunt, is prohibited and assumed to be subject to supernatural punishment, through illness, failure of the rice harvest, or typhoon damage. In a few cases, marriage between Inner Baduy hamlets is practised, particularly if no appropriate partner can be found in the natal hamlet. Indeed, traditionally daughters of **Puun** Cibeo marry with sons of **Puun** Cikeusik, while daughters of **Puun** Cikartawarna marry sons of **Puun** Cibeo (Figure 3.18) [Geise, 1952].

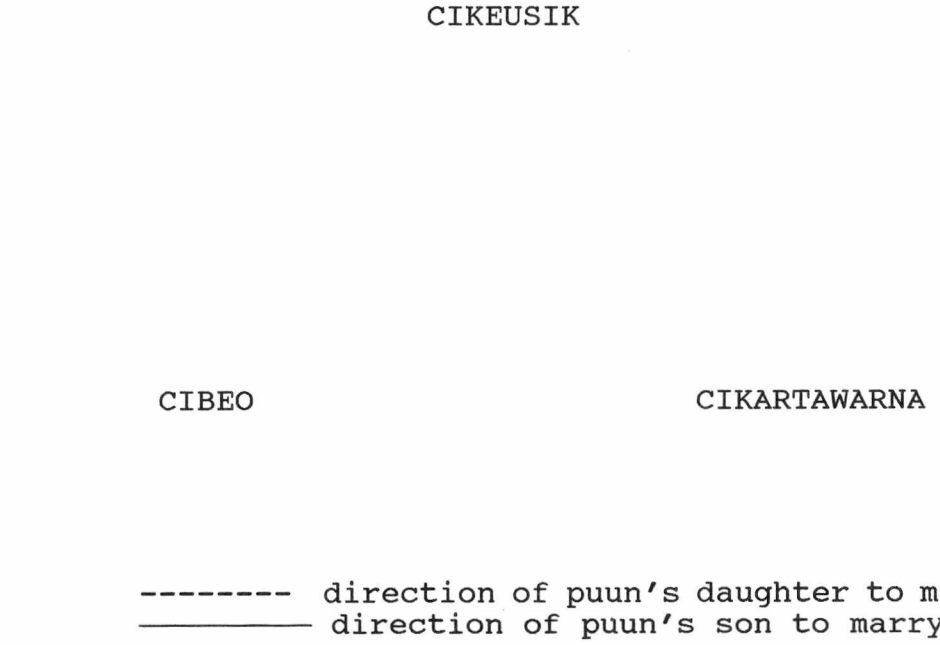

Figure 3.18. Marriage system of **puun** family (after Geise, 1952).

Inner Baduy men have also been known to marry women from Outer Baduy. A former puun of Cibeo is a case in

point. He had originally married a relative from the same hamlet, but later divorced her and remarried a girl from Outer Baduy. His new wife, consequently, had to move to Inner Baduy. Conversely, a **Jaro Tanggungan 12**, Jaro Saidi, living in Kaduketer, Outer Baduy, had married a girl from the Inner Baduy hamlet of Cibeo, who then had to move to Outer Baduy.

Among Inner Baduy, marriage is arranged by parents. Going out with a girl or boy friend (**bobogohan**) and making free love is prohibited by customary law (taboo or **buyut**). Polygamy is also prohibited. Anyone found **bobogohan** with an unmarried friend of the opposite sex will be punished by the **puun**, by being sent to the dangka area in Outer Baduy or to the non- Baduy area. Some **dangka** areas are known as places of exile for Inner Baduy: Cihulu, Bojongkoang, and Cibengkung for males from Cibeo, Cikartawarna and Cikeusik, respectively; while Kaduketug, Panyaweuyan, and Cipiit are chosen for females from Cibeo, Cikartawarna and Cikeusik, respectively. They are usually sent to the **dangka** area for 40 days, supervised by the **dangka** leader (**jaro dangka**) and official leader (**jaro pamarentah**), particularly only for Kaduketug. After 40 days, they are allowed to return to their hamlet or move permanently to Outer Baduy. They can be married by a **jaro dangka**. In order to avoid ancestral punishment (**seuseulan ti karuhun**), their father may approach the person with responsibility for maintaining law (**jaro tangtu**), and make an offering of betel leaves (**seureuh**), gambier (**gambir**), areca nut (**jambe**) and incense

(**menyan**) placed in a copper or silver bowl with a wide rim (**bokor**) called **ngabokoran** (see also chapter 7 pp 400-403). The father apologies for his son's sin, this apologize is received and is transmitted to the **puun**.

A wedding ceremony is prepared when both sets of parents agree to the marriage. They come to the **jaro tangtu** to make the arrangements. Before the **lalamar** ceremony it is necessary to prepare various articles: betel leaves, gambier and betel nut put in a **bokor** is sent to the house of the **jaro tangtu**. The **lalamar** ceremony usually take place in a meeting house (**bale kapuunan**) in the afternoon between 18.00 and 19.00 hours. A **bokor** of betel leaves covered in white cotton cloth is brought from the house of **jaro tangtu**. In addition, a ceremonial sunshade (**payung keagungan**), lance and other heirlooms are brought to the meeting house.

The **jaro tangtu** acts as a representative of the parents of the groom and the bride gives a **bokor** to the **puun** in order to seek his agreement to marry them. After he has agreed, the betel leaves, areca nuts and gambier are offered to everyone who attends the **lalamar** ceremony. Everyone should compete to chew betel as much as possible (**pagede gede nyeupah**). The period between the **lalamar** and the actual wedding ceremony is not precisely fixed. Its length depends on the time needed to make the preparations. However, the wedding must take place in the month of **kalima** (**bulan kalima**/May-June).

Before the wedding ceremony, a **pasabunan** must be

prepared which is a copper or silver bowl with a wide rim in which betel leaves are placed. Various articles, such as white cotton cloth, betel leaves, gambier, areca nuts, and rice cooked in coconut milk (**nasi kuning**) are offered to the **puun**. On the wedding day, a ceremony in a meeting house begins with a speech from the **jaro tangtu** to obtain blessings from the **puun**. This is witnessed by, among others, the traditional leaders (**barisan kolot**). After this the **bokor** is given to the **puun** (**ngabokoran**), who blesses it. The ritual continues in the house of the bride's family, to which the groom goes accompanied by the **jaro tangtu**. The groom (**panganten jalu**) and bride (**panganten bikang**) sit in front of the **jaro tangtu**. Their thumbs are then held and a magic spell (**jampe**) is uttered by the **jaro tangtu**. To close the ceremony a simple sacred communal meal is provided for all people who attend the ceremony. Those who cannot attend are sent their portion of the **hajatan** food, delivered to their home.

There is no fixed rule concerning residence after marriage, but newly married couples usually stay in the house of the husband's family, with a separate room and stove (**tungku**). This symbolises the fact that a new social unit has been created, a 'separate kitchen' refers to a new household. In addition, a newly-married couple is also provided with a swidden plot as well as a farm house.

Unlike Inner Baduy, marriage between individuals within and between hamlets is common in Outer Baduy. In addition, individuals have more choice in deciding their partners.

However, walking out (**bobogohan**) and free love are strongly prohibited, and threatened by supernatural punishment. Polygamy is also prohibited. Marriage is ideally for life, though today the divorce rate among Outer Baduy is increasing.

If the male partner involved agrees to a match, he goes with his father to the girl's family for a **lalamar**. The wedding is then arranged for the month of **kalima** in the Baduy calendar. To find an auspicious day, the name **naptu** of the groom and bride is calculated. For example, if their names are Sapan and Sawi, Sapan= Sa=2 and pan= pa=2, giving a total of 4, while Sawi = Sa=2 and wi = wa=4, giving a total **naptu** of 8[8]. Moreover, this number is fixed with 4 human life characters; **sri** (relating to rice or wealth), **lungguh** (good occupation), **gedung** (house), **lara** (misery), and **pati** (death or misfortune). Both **sri** and **gedung** are considered to be good for conducting wedding ceremonies. If a name **naptu** is fixed with **sri**, the wedding should be Monday and Tuesday, while if it is fixed in **gedung**, it should be on Wednesday and Thursday. If it is not fixed with **sri** and **gedung**, the name of the bride should be changed by the **tangkesan**. In addition, the name **naptu** of the groom should always be higher than that of the bride.

Using such criteria, 8 (4+4, both naptu's name) is fixed with **gedung** which is calculated by 1) **sri**, 2) **lungguh**, 3) **gedung**, 4) **lara**, 5) **pati**, 5) **sri**, 6) **lungguh**,

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[8]). For more details on such calculations see section on settlement, above pp 123-124.

8) **gedung**, 9) **lara**, and 10) **pati**. This means that the wedding should take place on a Wednesday and Thursday. On the first day, the main ritual should be done in the house of a moslem leader (**panghulu**) in kampung Cicakal Girang, in Outer Baduy or in Ciboleger, in the non-Baduy area. A groom usually wears the formal black or blue clothing and goes in the afternoon to the house of the **pangulu** without the bride, accompanied only by the bride's father and their close relatives. They are received by the **panghulu** and the ritual begins. The Baduy profession of faith is pronounced with the assistance of the **panghulu**.

Audubillah himina syaiton ni rojim
bismillah hirahmanirahim,
Allahuma saliallah saidina Muhamad
dina olaham ailihim saidina Muhamad
Ash hadu anla ila ha il-allahu. Wa
as hadu an-na Muhammadan Rasu-lullah

Sun aweruhi satuhune ora ana
pangeraning allah lan isun angweruhi
satuhune iku utus pangeran kersaning
allah.

Kai Panghulu kaula anten piaturan
ngairasaya ngahaturkeun dulur
kaula Nyi Sawi jeung Ki Sapan
sarta kalawan mas kawin 20 lears
panikahna seren ka kai Panghulu,
amit.

Which can be translated as:

I seek god's protection from the temptation of satan
In the name of God who is generous and the all merciful lord
There is no God other than Allah,
and the Prophet Muhammad is his messenger

Kai Panghulu, I come to you to provide my relative
Nyi Sawi and Sapan with bride price of 20 lears
(old Arabic currency) to fulfil the terms of the marriage
to Kai Panghulu. Peace be with you.

This ceremony continues with agreement given by the bride's father that he will accept Sapan as his son in-law with the bride price of 20 lears.

During the following night, an epic narrative is sung (**baca carita pantun**) in the bride's house by a male Inner Baduy singer who sometimes accompanies himself on a zither (**kacapi**). These rituals are attended by close relatives and friends and traditional cakes and betel leaves are offered. The **pantun** incorporate myths (**lalakon baheula**), for instance about the nobility of the old Sundanese kingdoms. The **pantun** performance usually starts in the evening about 19.00 hours, and ends about 4.30 the following morning. The next morning, the ritual continues with the traditional part of the marriage ceremony (**kawin batin**) led by the **tangkesan**. In the house yard, the couple are decorated with rice-flour paste by a make-up person (**juru aes**) and sit in front of their parents who carry the rice mixed with some coins in a woven bamboo basket. A cock and hen are held by the groom and bride, respectively. The **tangkesan** (**dukun**) rests his left hand on the head of the bride, his right hand on that of the groom and mutters some prayers to the ancestors. When he has finished, the parents throw rice grains over the bridal couple. The rice grains are eaten by the two chickens and coins are collected by children and adults who attend the ritual. The money, and rice and chickens symbolise wealth (**harta benda**) and fertility (**bibit rumah tangga**), respectively, and are intended to bring prosperity to the new household.

Before the couple move to a new house built next to the groom's father or father in-law, the couple commonly join the husband's or wife's family house. In rice cultivation, however, they are given a separate swidden plot and their own field house. To prepare for this, they are usually given special rice bundles by both parents (**tunggal kuras**).

6.5. Death

The death ceremony is called **kaparupuhan**. A corpse is usually first bathed by a man or woman, all body is covered with cotton wool (**kapas**) and wrapped in a shroud (**boeh**) by a **panghulu** (not to be confused with the islamic panghulu who leads the wedding ceremony), who is thought to be able to expel human sin. With the help of the **panghulu**, the human soul will return to **Mandala Hyang** (see earlier section on mythology). However, if it is not expelled, the soul is said to go to **Buana Larang** or **Buana Peteng** (Danasasmita and Djatisunda, 1986: 72). The corpse is carried on the shoulders by pall-bearers led by **jaro tangtu**. To help the soul return to **Mandala Hyang**, one of his or her relatives weeps (**ceurik panglayunan**). Weeping stops when the magical spells of the **panghulu** are finished. A grave has been previously dug using wood and a machete in Inner Baduy and a hoe in Outer Baduy. The corpse is placed in the grave with the head to the west and facing south, considered to be the direction of **Sasaka Pada Ageung**. Two

red **hanjuang** plants (Cordyline fruticosa) are planted above the head and the feet. The grave (**kuburan**) is sealed with a magical spell from the **panghulu** and the soul of the corpse asked to eat, walk, and trust in **Ambu Handap**. The soul is then assumed to go to **Sasaka Pada Ageung**. After 7 days, the grave is abandoned, and the soul is assumed to have gone to **Bumi Suci Alam Padang**. For this reason, after 7 days the grave is usually abandoned and never again maintained. Graves are usually located to the north-west of each hamlet, which is consistent with the symbolic geometry which I outlined earlier.

Three death rituals are generally performed in Outer Baduy. The first (**poena** or **poe kahiji**) is organised by family and close relatives. Swidden rice is pounded by women in the communal hamlet pounding place (**lisung kampung**). Traditional cakes and meals are made by women in the kitchen. In addition, fish are bought in town or from small shops in the neighbouring non-Baduy area. The ritual which follows involves a magical spell by a **panghulu** and various meals provided for all people who attend. In addition, money is given to the **panghulu**, the person who assists in bathing the corpse, the rice pounders and cooks. Three days after a funeral (**tiluna**) is conducted another ritual takes place when a magical spell is spoken by the **panghulu** over the grave. Various meals continue to be provided for the **panghulu**, and for relatives and friends who gather together in the house. Finally, 7 days after a funeral, a ritual is performed in which a magical spell is

spoken again by the **panghulu**. The person who assists in bathing the corpse, the rice pounders and the cooks, spend a night in the house. The **barisan kolot** are also invited. The next morning, the **panghulu** goes to the grave to utter a magical spell. After he returns home, a meal is consumed by those who have attended the ritual. Food is sent to relatives who have not attended, including the **jaro pamarentah**.

6.6 The exchange economy

Swidden cultivation is the main source of Baduy subsistence and considered to be an obligation stemming from Baduy religious practise, **Sunda Wiwitan**. However, Baduy women are also involved in making traditional woven cloth (**kain tinun**). The materials (Figure 3.19), particularly various coloured yarns, are usually bought in towns, such as Majalaya, Bandung and Jakarta. Some Outer Baduy are recognised yarn buyers, and they go to town about once a month for this purpose. The materials are then sold to other Outer Baduy in the same hamlet or to other hamlets. Various types of cloth, such as **suat songket**, **suat samata**, **adu mancung** (see Bakels, 1993) are sold to particular Outer Baduy whose houses are frequently visited by guests.

Unlike Outer Baduy, Inner Baduy weaving materials consist of the fibrous **pelah** leaves (Daemonarops ruber), which are collected from mature forest (**leuweung titipan**).

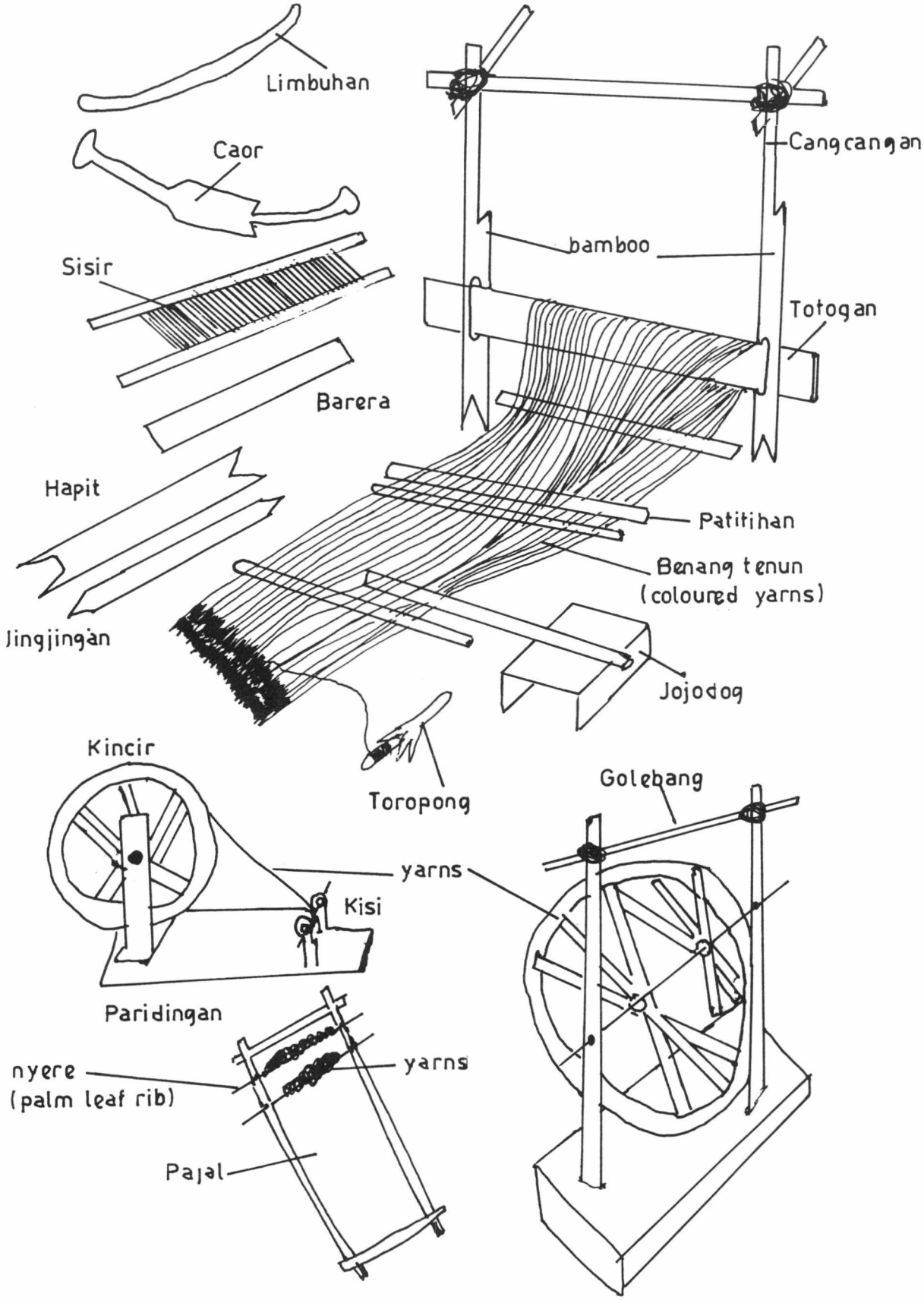

Figure : 3.19. Various materials commonly used for making traditional woven cloth (kain tinun)

Some Baduy men are also involved in making traditional woven bags from barkcloth; **koja** and **jarog** (Figure 3.20). The material used is the bark of the young **teureup** tree (Artocarpus elasticus), tanned with **gintung** bark (Bischafia javanica) or **salam** (Syzigium polyanthum). These handicraft products are produced for personal use, as well as being sold to visitors or to small shops (**warung**) in the neighbouring area.

Trade in non-rice crop is also important for some people. Banana (**cau**=Musa paradisiaca), durian (**kadu**=Durio zibethinus), locus bean (**peuteuy**=Parkia speciosa), pepper (**rinu**=Piper rindu), and brown aren sugar (**gula kawung**=Arenga pinnata, Outer Baduy only) are commonly carried by foot (**pikul**) to small shops in the non-Baduy area.

Outer Baduy take fruits, aren sugar, and timber (**kalabise**=Paraserianthes falcataria) to non-Baduy areas or sell them to Outer Baduy middlemen, who then take them to the district town, Rangkasbitung, by rented vehicle.

Some small shops (**warung**) are also found in Outer Baduy hamlets. These supply daily Outer Baduy needs, such as cigarettes, cooking oil, sugar, coffee, milk and noodles. Goods are bought monthly from the district town, Rangkasbitung. Some traditional Outer Baduy clothes, such as black shirts (**kampret**), short trousers (**kokolor**, **pokek**), female sarongs (**sarung**) sewn in the non-Baduy area, and printed batik male headcloths (**lomar** or **iket**), bought in towns, such as Tanah Abang Jakarta, Cirebon and Semarang

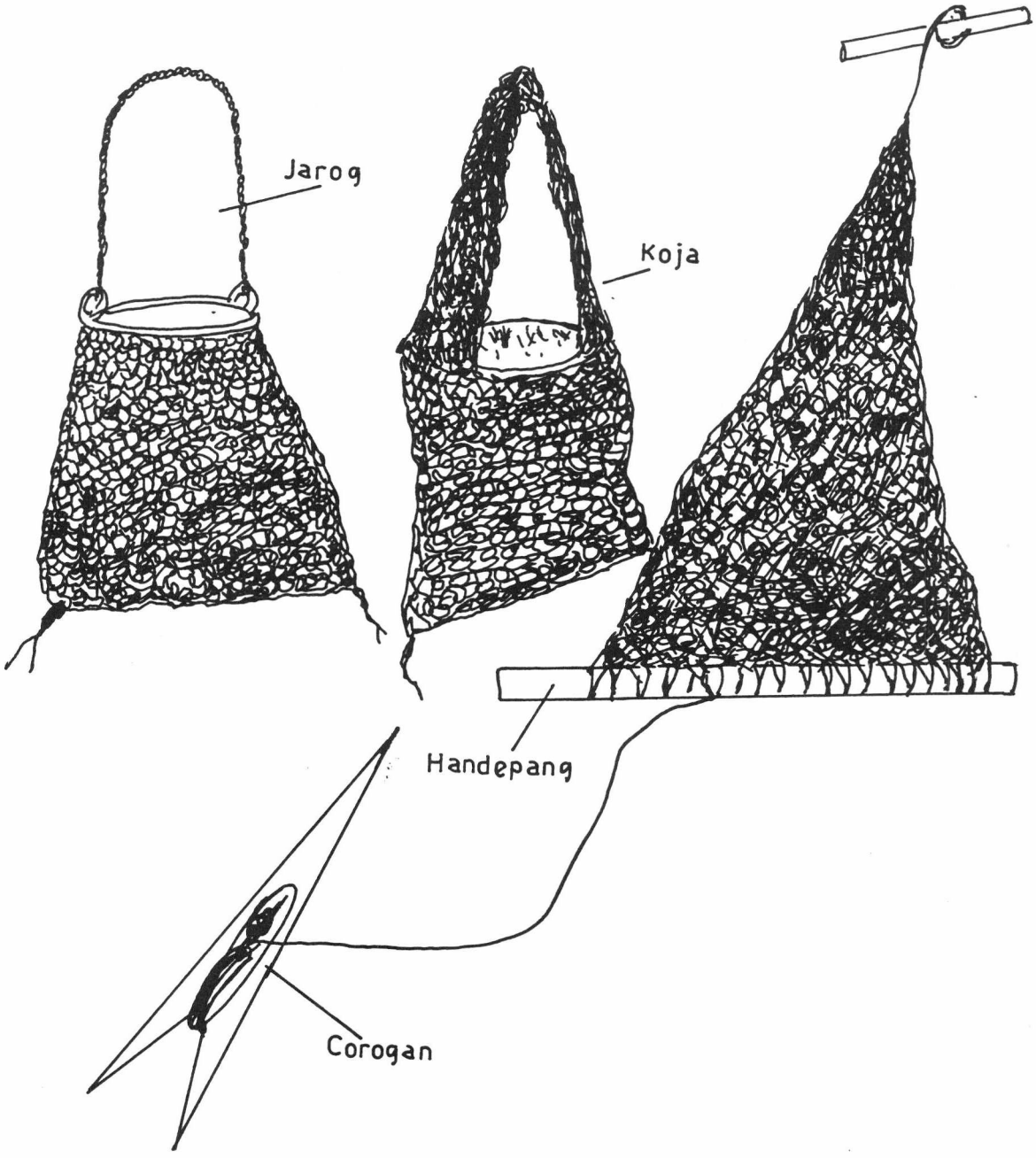

Figure 3.20: Traditional woven bags made from barkcloth: 'koja' and 'jarog'

are sold for cash or credit by Outer Baduy hawkers in some hamlets. Some Outer Baduy also earn wages though weeding gardens, harvesting wet rice, hoeing, cutting timber, and carrying timber. These jobs are particularly important when Outer Baduy are temporarily resident (**nganjor**) in non-Baduy areas, cultivating rented swidden land, sharecropping and providing labour to Muslem Sundanese.

CHAPTER 4

THE HISTORY OF AGRICULTURAL LAND USE IN SOUTH BANTEN

There is a Javanese saying:

> Land is our heritage and our blood; even if it is only as wide as our forehead and as long as our finger, we will defend it with our blood" (SKEPHI and Kiddell-Monroe, 1993: 231).

This saying well expresses the importance of land for Javanese farmers, as a source of food and income, cultural heritage and as a status symbol. In status terms, it divides two groups of people: the 'well-off people' (**jalma beunghar** in Sundanese, or **wong sugih** in Javanese) who own large units of land, and 'poor farmers'(**jalma sangsara** in Sundanese, or **wong cilik** in Javanese) who own little or no land (Koentjaraningrat, 1964; Igarashi, 1985; 23). The Baduy do not fit easily into this classification.

For Baduy, land provides not only food and income, but is also vital for maintaining their religion and identity as Baduy. Land is mainly used for the annual cultivation of upland rice (**huma**), and this is considered to fulfil a religious obligation, **Sunda Wiwiwitan**. Therefore, if land is lost to production, this not only affects their food and income, but also has ramifications for their religion and identity.

Baduy have always had strong ties with the land on which they live, even though it has for a long time been influenced by various internal and external factors. We can

consider these influences according to three main historical periods; the **zaman ratu** (the period of the Sundanese Hindu Kingdoms before 1520 and the Banten Sultanate period: 1520-1808), the **zaman penjajahan** (the colonial period: 1808-1950[1]), and the **zaman kemerdekaan** (the post colonial period: 1950-to present). To understand the formation of the relationship between Baduy swidden cultivation and their sense of identity it is necessary to look at the history of agriculture in this part of West Java.

1. The Zaman Ratu: the pre-colonial period

The pre-colonial period in Banten is called by the Baduy the **zaman ratu**, the 'period of kings', and includes the Hindu Sundanese period before the early sixteenth century, and the Sultanate of Banten period between the sixteenth and the early nineteenth century.

Before the establishment of the Sultanate of Banten, the dominant political units in Java were the Hindu kingdoms, which developed from west to east (Donner, 1987: 59).In West Java, for example, we have records for several Hindu kingdoms: **Salakanagara**, **Tarumanegara** (from about the fifth to the seventh centuries), **Kerajaan Sunda** (Kuningan, Galuh; approximately between the end of the seventh century and the early fourteenth century), and **Pajajaran** kingdom

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[1]). Formally, Indonesian independence was proclaimed on August 17, 1945. However, between 1945 and 1950, the government administration was in transitory condition.

(also called **Kerajaan Sunda**, with its capital located in Pakuan Pajajaran, 1333-1579) [Adiwilaga, 1975: 59; Ekadjati, 1984: 79-87; Atja and Ekadjati, 1989: 170]. In Central Java, the Hindu Kingdoms were dominant between the seventh and tenth centuries, while in East Java, the most important state was Majapahit, between 1293 and 1478 (Donner, 1987: 59; Hefner, 1990: 31).

Recent scholarship suggests that the origin of the Baduy is to be found in one of the religious groups, called **mandala** or **kabuyutan** (Danasmita and Djatisunda, 1986: 3-4; Bakels and Boevink, 1988: 12-17), which developed during the Hindu kingdom, **Kerajaan Sunda**, under king Rakeyan Darmasiska (1175-1297), or certainly before the Kingdom of Pajajaran (Garna, 1987: 34; Ekadjati, 1995: 66). It is from this time, that some **mandala** groups or **kabuyutan**, including **kabuyutan parahiangan** (Baduy sacred places) appear to date (Danasmita and Djatisunda, 1986: 4-5; Ekadjati, 1995: 66). But our knowledge of Baduy agricultural land use during this pre-Banten sultanate period is poor and fragmentary.

In general terms, the ancient Hindu kingdoms of Java, in particular the lives of the temples, the court and the aristocracy, depended on taxes and bonded labour, wealth ultimately deriving from wet rice agriculture, or **sawah** (Pigeaud, 1960: 467; Onghokham, 1984: 1984: 5; Dove, 1985a: 12; Dove, 1985b: 179-180). In other words, **sawah** cultivation in Java was greatly encouraged by the social and religious requirements of Hinduism (Donner, 1987: 59). However, it should be noted that this dominance of **sawah**

cultivation only holds for Central and East Java, and it was here that **sawah** farming systems have been known to have been practised since at least the ninth century (Geertz, 1963: 42-44; Meer, 1979: 133; Hefner, 1990: 32; Hoadley, 1994: 26). In West Java, although the inhabitants of the pre-Islamic lowland kingdoms like Pajajaran were probably familiar with the cultivation of wet rice (Koentjaraningrat, 1972b: 54), the people of the interior were perceived as 'nomadic', dependent on a system of swidden cultivation called **huma** or **gaga** (Haan, 1910; Kools, 1935; Terra, 1953: 190; Terra, 1958: 161; Geertz, 1963: 44; Anwas, 1975: 57; Lombard, 1983: 264). Like other areas in West Java, **sawah** in Banten did not develop at that time. For example, the old Sundanese lontar-leaf manuscript of 1518, called **Sanghyang Siskanda ng Karesian**, and registered as 'kropak 630' in the National Museum Jakarta, mentions that the main agricultural system of the Sundanese people had in the past been **huma** or **gaga**. The relevant passage is as follows:

> .....Jaga rang ngajadikeun gaga ... tihap ulah sangsara. Jaga rang nyieun kebon tihap mulah ngundeur ka huma beet sakalih ka huma lega sakalih. Hamo ma beunang urang laku sadu. Cooan mulah tihap meuli, mulah tihap nukeur, pakarang ulah tihap nginjeum (Atja and Danasasmita, 1981b).

This can be translated as:

> ....It must be remembered that we cultivate dry land (**gaga**)....to avoid suffering life. Also remember, we cultivate garden (**kebon**) to avoid picking vegetables from swidden (**huma**) of other people. Our efforts in crop cultivation have become superfluous. We have livestock to avoid buying or exchanging, and we have agricultural tools (**pakarang**) to avoid borrowing.

The same manuscript also offers us some evidence for the accompanying philosophical ethos, one which sought, through **Sanghyang siskanda ng karesian** principles, to work seriously to maintain a simple way of live (**tapa di nagara**), by practising **huma** or **gaga**. The benefits to be obtained are stated as follows:

> ....imah kaosi, loit kaosi, paranje kaosi, huma kaomean, sadapan karaksa, palana ta hurip, sowe waras nyewana (kropak 630, translated by Atja and Danasasmita, 1981a: 1).

This can be translated as:

> .....our need in the house (**imah**) or household and rice barn (**leuit**) to be fulfilled, chicken in the cage (**paranje**) to be fulfilled, swidden cultivation (**huma**) to be managed, sugar palm to be tapped, the livestock to be looked after, and our life to be always healthy.

As a **mandala** group, the Baduy way of life has been accompanied by many prohibitions linked to an adherence to ancestral law (**karuhun**). For example, cultivating wet rice (sawah) and raising large livestock (such as water buffalo) are not allowed (Pigeaud, 1963; Ekadjati, 1995:63). They mainly practised swiddening in isolated areas (**daerah pedalaman**), where forest was still abundant, human population scarce, and control of the state (as evidenced in paying tax) was weak.

We may reasonably assume that the ancient Hindu kingdoms of West Java were similar to those of other places in Central and East Java, for example, in terms of there being a lowland, 'open area' or coastal area, with a

relatively high population density (Lombard, 1983: 266; Hefner, 1990: 31; Dove, 1985b: 179-180). There must also have been important similarities between the ecological and socio-economic condition of the centre compared with the periphery. On the one hand, the lowland was the centre of the state, of political culture, and the source of state incomes through collecting various taxes and labour. On the other hand, the mountain and forest areas were viewed as wild and dangerous areas inhabited only by some religious or **mandala** groups who sought isolated places because of their spiritual power (Lombard, 1983: 266).

Since the time of the earliest records, the Banten region has been divided into coastal and mountain areas. Before the fifth century the coastal area of Ujung Kulon and Panaitan was the centre of the Salakanagara kingdom, led by king Dewawarman whose main income came from taxes on the trade in pepper (**lada**) through the Sunda strait (selat Sunda) (Adiwilaga, 1975: 59; Atja and Ekadjati, 1989: 170). From this time it is possible to divide the area along ecological and socio-economic lines into two regions: south Banten and north Banten. The southern part, a mountainous region, was mostly covered with dense forest, had poor communications, and very few inhabitants (Kools, 1935; Mohr, 1945: 257; Terra, 1958: 160; Kartodirdjo, 1966: 29, Ekadjati, 1984). By contrast, north Banten, consisted largely of lowland, had developed communications, and a high population density. Between the twelfth and fifteenth centuries, the northern lowland Banten area provided

harbours for the Sundanese Hindu Kingdom (Suleiman et al, 1978: 1; Barbosa 1516 cited by Djajadiningrat, 1983 [1913: 83]). In addition, near the capital of Pajajaran (present-day Bogor), have been found two roads connecting the coastline of north Java with the capital of the Hindu Kingdom. One connected the capital of Pajajaran and Banten Girang, running via Jasinga and north of Rangkasbitung. Rivers, such as the Ciliwung and Cisadane, where were also used for transportation between the interior and coastal areas (Ekadjati, 1984: 78). The northern and southern regions have come to be known as the **pesisir** and the Sunda highlands (**Sunda**), respectively (Geertz 1963: 42-43).

For a long time, south Banten has been considered to be on the periphery of the traditional Sundanese state. In terms of Hindu and Buddhist cosmology the forest was regarded as wilderness and a dangerous area[2] where evil spirits were found. This idea is reflected in the still popular Javanese and Sundanese puppet stories, **cerita wayang** (Lombard, 1983: 266; Daldjoeni, 1996: 4). Wilderness forest was also considered to be a source of spiritual power (**padepokan**), with the main focus on isolated mountain forest, inhabited by religious ascetics (**resi petapa**) empowered with healing knowledge. **Wayang** stories refer to **ksatria** (noble warriors) who when hurt in fights with

---

[2]) Indeed, the forest was an objectively dangerous place. For instance, between 1819 and early 1821 it was reported that 35 people were killed by tigers in south Banten (Elson, 1994: 11). Another report, from 1885, for the district of Caringin in south Banten, reports between 30 and 60 people killed annually by tigers (Kools, 1935).

gigantic forest demons (**raksasa hutan**) while opening forest, consulted such ascetic healers (Lombard, 1983: 272; Daldjoeni, 1996: 4). The source of these powers were forest plants and magical spells. As a result, these ascetics and their forest settlements (**padepokan**) were respected and protected by the king. In return, the ascetics assisted the king in maintaining his political legitimacy and by providing him with spiritual knowledge.

The negative image of the forest put the king and state officials under pressure to open up new agricultural land converted from forest. In order to make this effective, incentives were offered interior villages, mainly religious groups who lived in the forest, usually in the form of tax exemption (Lombard, 1983: 266; Ekadjati, 1995: 67). The positive relationship between the Baduy in particular as a **mandala** group and the Sundanese Kingdom at this time is reflected in the manuscript **kropak 630** which has already been referred to. Thus:

> .... lamun miprangkeun kabuyutan na Galunggung, a(n)tuk na kabuyutan, awak urang na kabuyutan, muliyana kulit lasun di jaryan, madan na raja putra, antukna beunang ku sakalih" (Atja and Saleh Danasmita, 1981c: 29, 35).

Which can be translated as:

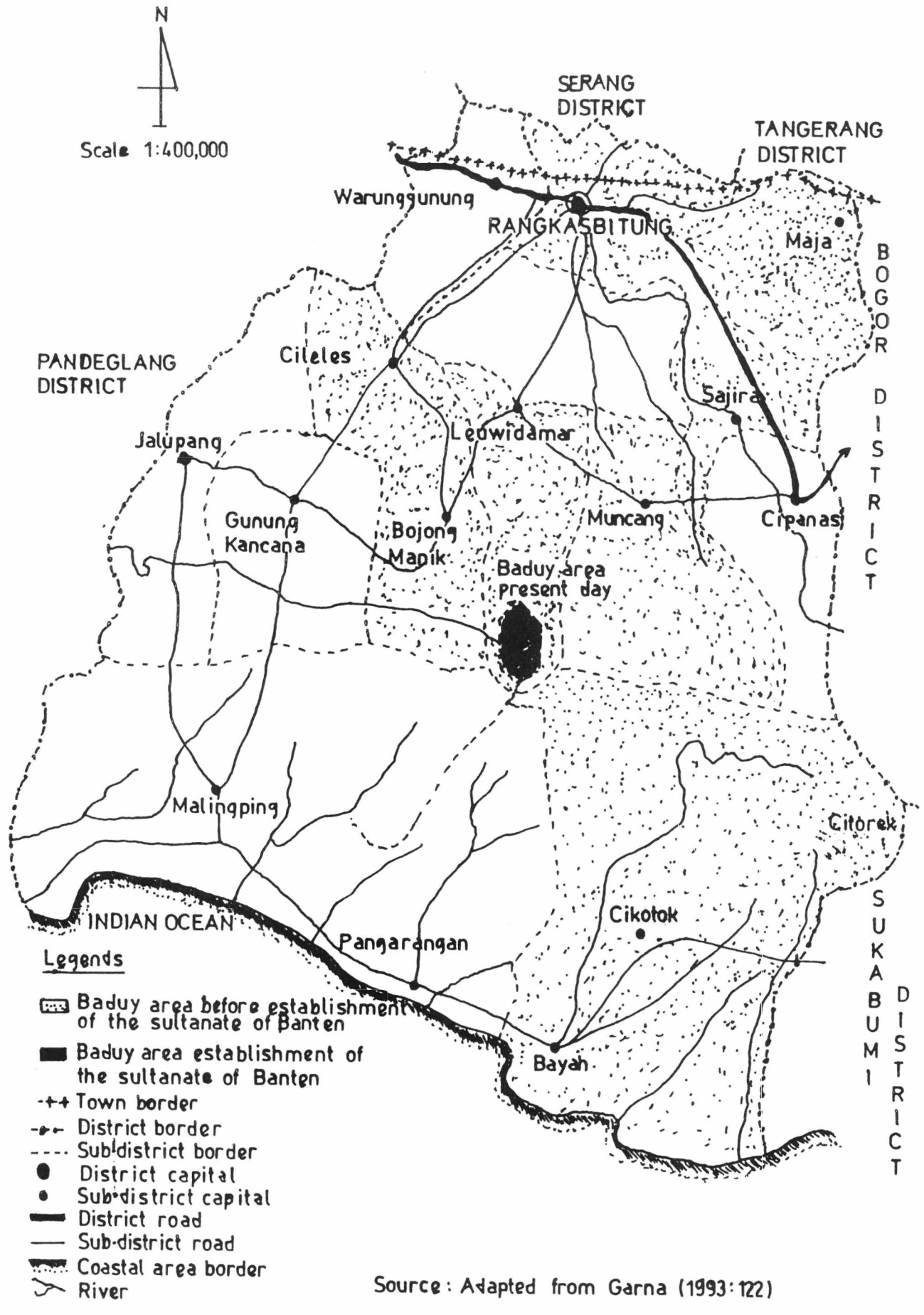
> If there was war to take over the **kabuyutan** in Galunggung, the king should go to the **kabuyutan** and it should be defended. If the **kabuyutan** couldn't be defended, the civet skin in the rubbish place was respected instead of the king who was not able to defend the **kabuyutan**.

We can summarise the relationship between religion and political power, and the position of the Baduy in the ancient Sundanese Hindu Kingdom, in the following way. Land was regarded as belonging to the gods, and the king represented the gods on earth. The land, therefore, belonged to the King. In order to fulfil the daily needs of the king's household, to support his relatives, and to perform rituals, income was required. This was achieved by raising taxes and by using labour provided by peasant farmers recruited through the nobility. The nobility, called **priyayi** in Javanese (**yayi**= younger king), were thus considered mediators between peasants and the king and were given land (**lungguh** in Javanese; a form of apanage or reward for holding high-ranking position in the service of the king) and farm labour. If they retired, the land and labour returned to the King (Onghokham, 1984: 5). Religious or **mandala** groups who lived in isolated forest, were also supported by the King (Ekadjati, 1995: 66-67), as we have seen. Thus, there was no incentive for the Baduy to convert their land from swiddens and every incentive to maintain it in a sustainable way, unfettered by outside intrusion. They still consider their land to belong to the **ratu** or **maharatu** (god or king), and Baduy who wish to cultivate the land must seek permission from their religious leaders or **puun** (Kools, 1935), who hold it on behalf of the king. Thus, land is regarded as being borrowed from the 'ratu', and must therefore be carefully managed. It cannot be inherited, sold or rented. In the pre-Islamic period

agricultural land was obtained by opening forest. There was little conflict as forest was still abundant and the population low.

Baduy cosmology encompasses an original territory that is much wider than that which they occupy at the present day, desa Kanekes. In Pajajaran times, although the core area was still considered to be what is now 'Inner Baduy', Baduy land included several sub-districts (**kecamatan**) of what is today Lebak district (**kabupaten**): Muncang, Sajira, Cimarga, Maja, Bojongmanik, Leuwidamar, and Citorek (Van Tricht, 1928: 69; Kools, 1935; Garna, 1993: 125; see Map 4.1). Part of the concrete evidence for this is the presence of megaliths in the Banten area suggesting the existence of religious groups similar to the Baduy, such as at **Baduy karang** in Sajira (Garna, 1993: 125; Forbes, 1945: 117-118), and historical records of the existence of non-moslem groups' in Guradog and Citorek, in Rangkasbitung and Cilangkahan district, respectively (Kools, 1935).

The last Hindu Sundanese Kingdom, Pajajaran, established links with the Sultanate of Banten in 1520 and was finally abolished in 1579 (Kartodirdjo, 1966; Ekadjati, 1995: 76). It is from this time that wet rice cultivation or sawah appears to have been introduced into the Banten region. The new farming system, sawah, first developed intensively in the lowlands of north Banten, as it was here that the ecological and socio-economic conditions were most appropriate: flat topography, relatively fertile soil due to heavy alluvial deposits of volcanic and other sediments



Map 4.1. Estimation of Baduy area before the establishment the Sultanate of Banten

from the Southern mountainous areas, and a high population density due to proximity to the centre of the Sultanate.

The area devoted to sawah expanded gradually, much of which constituted state-owned land the purpose of which was to provide income for the sultan. The so-called **sawah negara** (Kartodirdjo, 1966: 34) was cultivated by two categories of people: the **mardika** and **abdi**. The first consisted of cultivators who had been granted free status on account of accepting the rule of the sultan and adopting moslem law. The second category consisted of cultivators who had been forcibly subjugated and enslaved. In addition, some **sawah negara** areas were granted to relatives of the sultan, household officials, and personal favourites, usually following the conquest of a region and incorporation within the state. Such land was called **sawah ganjaran** or **pusaka laden** or **pecaton**(from **catu**= part) [Scheltema , 1985 (1931): 173); Kartodirdjo, 1966: 35]. Moreover, different terms were used depending on who the land had been granted to: **kawargaan** when it was allocated to children of the sultan by his legitimate wives, **kanayakan**, to the sultan's children by concubines and to the sultan's favourite, and **pangawulaan** to officials who retained the profits from it for their personal maintenance during their tenure of office. Both **kawargaan** and **kanayakan** were considered forms of permanent ownership whereby land could be inherited, but not be alienated without the sanction of the sultan (Kartodirdjo, 1966: 35-36).

Moreover, anyone with **kanayakan** was not only entitled

to a share of the crops originally owned by the sultan, but could also exercise the right to employ people to open up new land, or to have them render various services. In East Java people receiving **kanayakan** were called **sikep**. They owned bond persons (**numpang**) called **bujang** (unmarried poor farmers) who provided labour for cultivating **sikep** or **kanayakan** land (Onghokham, 1984: 7).

The rights to **sawah negara** were limited, so many land grantees started to open new plots of sawah by employing the compulsory services attached to their **pusaka** land. By opening the new sawah, they obtained both income and full rights in land. This sawah was opened up by employing the compulsory services attached to **pusaka** land called **sawah yasa** (self developed land). In addition, **sawah yasa** were also commonly opened by ordinary peasants. Cultivators of **sawah negara** had to pay about one tenth of the total production in taxes:**lelenjangan** or **lalanjan**. By comparison owners of **sawah yasa** had to pay a lesser tax: the **pakukusut** [Kartodirdjo, 1966: 36; Scheltema 1985 (1931): 173].

Unlike sawah, swidden cultivation was less developed due to being practised in wilderness areas beyond the direct authority of the kings (Dove, 1985a: 12). For instance, in early sixteenth century Banten, it was people of the northern lowlands who were first islamised and islamic missionaries then went to southern Banten, as far as the Pulosari valley (Kools, 1935). They were able to subjugate the local people without converting them to Islam. As a result, they were less easy to control and

swiddening was not limited or prohibited by the Banten sultanate. Local people still enjoyed the freedom to cultivate forest land, which was owned communally. For this reason taxation was difficult. Swiddeners could not be taxed because they did not own or cultivate the land individually. However, it has been reported that a special head tax, the **uang kepala, pati ciang** or **uang lawang** was levied by the state on swiddeners [Scheltema, 1985 (1931): 177].

2. The Zaman Belanda (the Dutch colonial period), 1808-1930

In 1808 the royal domains and the compulsory labour arrangements attached to them in Banten were abolished by the Dutch. Holders of **pusaka** land were compensated for the loss of income from tributes and services, while possessors of **sawah jasa** were allowed to retain their rights on **pakukusut** (Kartodirdjo, 1966: 37). In addition, noble families (**priyayi**) were redefined as government officials, whose role it was to collect land tax from farmers. The land rent was devolved by adopting the ideas of Stamford Raffles who had governed Java between 1811 and 1816 on behalf of the British (Eindresume 1880: 14-15; van Vollenhoven, 1931: 79; Bastin, 1954: 105-112; Onghokham, 1984: 17). According to Raffles, the land had belonged to the kings. Since the kingdoms had been abolished by Europeans, rights to land vested in kings had simply been transferred to the European authorities. In other words,

all people who cultivated land had now to pay land tax to the government. Each farmer had to pay 20 per cent or one-fifth of the total agricultural yield. For example, in February 1813 the lowlands of Banten lying to the north and west were leased out on a **zamindari** basis to **pangerans**, **temenggung**, **arias** and **ngabehis**, and other members of the rural nobility at an annual rental of 19,941 Spanish dollars, but there was no levy of taxes or services with respect to people or their land. However, the majority of swidden fields in the southern highland area were not taxed because they had never been surveyed and because of the inability of the British administration to maintain security in this area (Bastin, 1960: 302, 305).

Unlike the Raffles land rent scheme, in which individual farmers had to pay 20 per cent of their agricultural yield, the Dutch land tax was 20 per cent of the agricultural land area, and the responsibility to collect it was given to local officials, district leaders or **bupati** (Onghokham,1984:17).Land tax collection by **bupati** increased rapidly, particularly after the introduction of the cultivation system (**cultuurstelsel**=tanam paksa) by the Governor General Van Den Bosch in 1830, as a means of coping with financial deficits incurred by the VOC (**Vereenigde Oostindische Compagnie**, Dutch East Indies Company), bankruptcy and the Javanese war against Diponegoro (1825-1830). Van Den Bosch, who was Governor General in Java between 1830 and 1833, wanted to get export production moving as quickly as possible from Java to pay

interest owed in the motherland and to reduce outstanding capital loans (Elson, 1994: 45).

The cultivation system obliged peasants, instead of paying rent and taxes, to plant cash crops on one-fifth of their land, or alternatively to work 66 days a year on government owned estates or projects (Geertz, 1963: 53; Elson, 1944: 44). Annual cash crops, such as sugar cane, indigo, and tobacco were grown on sawah in rotation with rice, while perennial crops, such as coffee, tea, pepper, chinchona, and cinnamon were grown in the uplands for sale on the world market (Geertz, 1963: 54; Ferrnando and O'Malley, 1990: 171; Elson, 1994: 45-79). Twenty per cent of the most fertile land of each Javanese village which was most easily accessible was taken by the government, and farmers required to plant commercial crops belonging to the government (Adiwilaga, 1975: 67; Onghokham, 1984: 13).

It was because of these pressures and incentives linked to the cultivation system that swidden agriculture began to attract the attention of the government. The colonial administration wished to secure as much land as possible on which to plant commercial crops under the compulsory system and wanted to collect direct land tax and levy labouring tax from swiddeners (Pelzer, 1948: 23; Dove, 1985a: 12).

Although Banten had few economic attractions for the government due to poor soil and the lack of an irrigation system, three main cash crops - sugar cane, indigo and coffee - were introduced by the Dutch in 1830 in pursuance

of the cultivation system. Sugar cane and indigo production, however, were not successful due to lack of irrigation. Coffee became the most important crop, and was well adapted to the Banten area. It integrated well with swidden agriculture and did not demand a lot of labour (Geertz, 1963: 59). Tobacco was also introduced to Banten in 1844, but withdrawn in 1848. Pepper was grown as a government crop from 1844 to 1865, but yields were also very poor. In addition, cinnamon was grown in some upland districts from 1836 to 1865, also with little success (Williams, 1990: 6-7).

In 1870, the cultivation system was abolished and the land involved gradually taken over by private commercial plantations. In addition, the Dutch government implemented the Agrarian Act (**Agrarische Wet** or Undang-undang Agraria), which entitled the state to rent out uncultivated 'waste land' in bundles of up to 500 hectares for up to 75 years, and enabled the native population to lease land to non-natives for up to 20 years (SKEPHI and Kiddell-Monroe, 1993: 234). In West Java this period was popularly known as the land tax period (**zaman pajak**) [Adiwilaga, 1975: 68]. By introducing the Agrarian Act contradictory pressures were placed on upland forest: on the one hand swidden cultivation was seen as a cause of forest destruction and therefore something which should be stopped; on the other hand, private commercial firms saw an opportunity to rapidly convert forest land for production. The changes had very specific consequences for the Baduy.

From this time onwards swidden cultivation in south Banten has been the focus of increased attention, as demand for land to develop commercial plantations has increased, together with the incentive to obtain more income from land tax. Swidden cultivation, called **roofbouw** (Kool, 1935), was strongly disapproved by the government and considered to destroy soil and forest. In addition, swiddeners were not easily registered for land, labour or livestock tax because of their mobility. This obviously represented a major political problem (Adiwilaga, 1975: 57). Conversely, sawah cultivation was easy to tax. Strenuous efforts were made by the government to suppress swidden cultivation in south Banten, particularly between 1896 and 1906, but these efforts largely failed (Hardeman, 1906: 67-69; Overduyn, 1911: 90-95). Particularly in Lebak, various regulations were introduced after 1896.

In 1935 Kools published his **Hoema's hoemeblokken en Boschreserven in the Residentie Bantam** ('Swidden blocks and forest reserves in Banten residency'). This was a general review of swidden cultivation, relevant customary law, government decrees and regulations, and an appraisal of development possibilities. According to Kools (1935), uncultivated land was owned by everyone, and called **oellah recht** (**hak ullah** or 'god right'). Once cultivated, land became **hakeoel adam recht (hakul adam** or 'people right'). But in this interpretation, as the government was considered to be god's representative in the world, uncultivated land was regarded by some people as belonging

to the government.

Kools noted that people in south Banten were popularly called 'bird men' (**jelema manuk**) due to the way they moved around from place to place. He recorded local proverbs which reflected this view:

> Main buburu ka Madur
> Imahna di luhur sempur
> Satahun ka dua kabur
> Tiang hawur, atep blubur
> Sataun cicing, kadua mabur
> Tiang hejo, hateup blubur
> Dua tahun, katilu kabur
>
> Which can be translated as:
>
> Going hunting to obtain happiness to Madur
> His house established on **sempur** tree
> He lives one year only, and the second year he runs away
> House is made of bamboo poles and the roof is gathered
> One year stay, the second year he runs away
> Poles made of the green wood, the roof is gathered
> Two years stay, the third year he runs away

Swidden cultivation had been officially banned in decree no. 4046/38 on 30 July 1896 by the Resident of Banten (Kools, 1935: 149-154). As a result, swidden cultivation (**huma**) in some areas was reduced, semi-permanent upland rice cultivation called **tegalan**, **gaga** or **tipar** [3] and **sawah** replacing it. In addition, protected forests (**boschreserves**) were created (see Map 4.2), including 14267 hectares around Gunung Kendeng where the Baduy area is located, and neighbouring areas, such as

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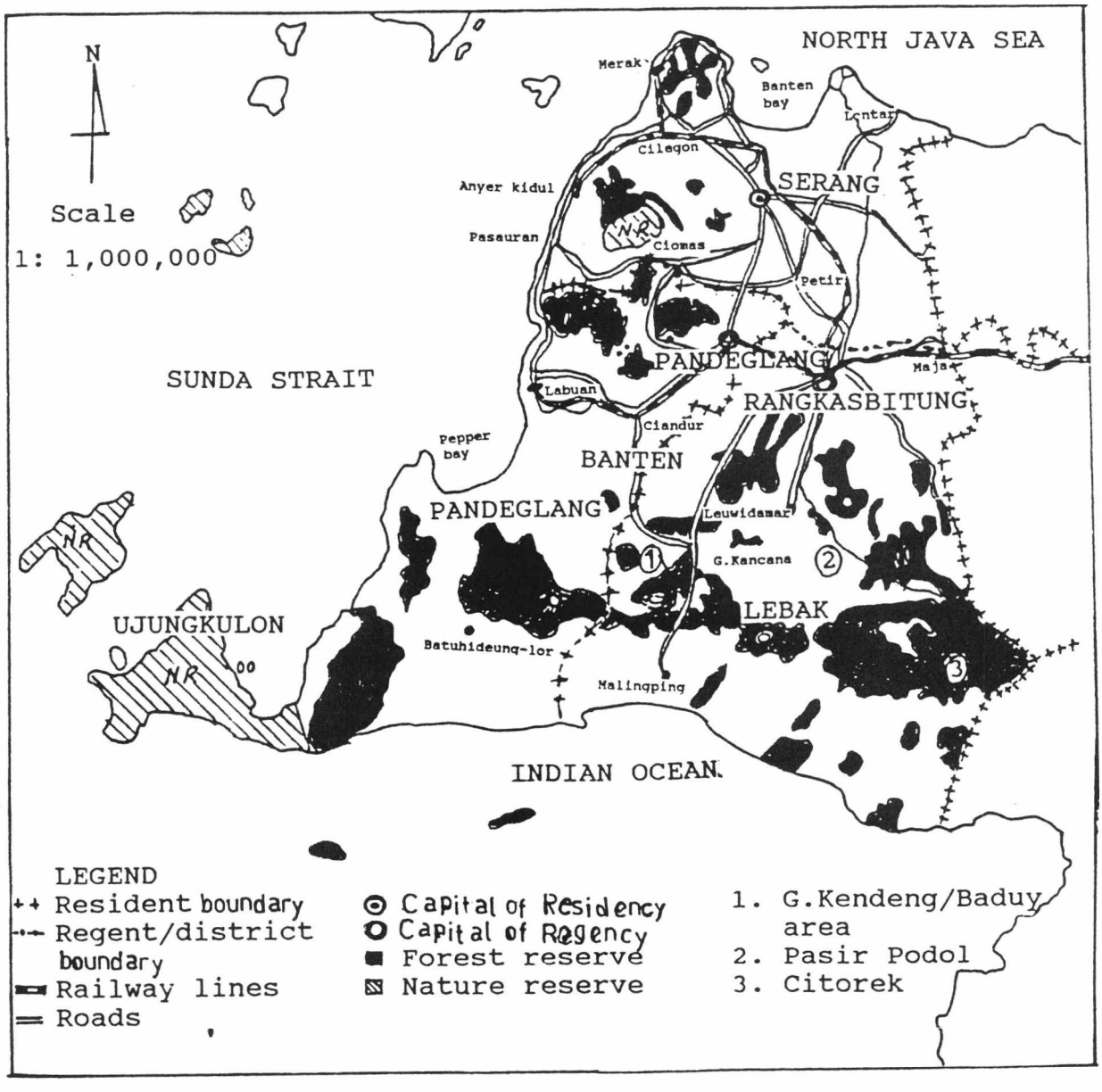
[3]). **Gaga** or **tipar** is semi-permanent cultivation of rice, by means of a dibble, in dry land (**tegalan**). This farming type is sometimes confused with swidden cultivation (Terra, 1958: 160-161).

Map 4.2. Map showing forest reserves (boschreserves) in Banten residency, as of 31 December 1934



Source: Kools (1935: app. XVI).

Pasir Podol (506 ha)[Kools, 1935: app.XI, XVI see Map 4.2]. Following the introduction of this regulation, **sawah** in three districts of south Banten (Lebak, Parungkujang and Cilangkahan) increased by 48 per cent (5553 bau), from 5782 bau in 1895 to 11335 bau in 1903; while **huma** (swidden cultivation) decreased by 94 per cent (6784 bau), from 7190 bau in 1895 to 406 bau in 1903 (Table 4.1).

Table 4.1. Changes in **huma** and **sawah** land use for Lebak, Parungkujang and Cilangkahan districts in south Banten, 1895 and 1903.

Districts	year 1895			year 1903		
	Sawah (bau)	Tegalan (bau)	Huma (bau)	Sawah (bau)	Tegalan (bau)	Huma (bau)
Lebak	2402	238	1971	3185	1346	282
Parungkujang	1632	-	2585	3669	465	-
Cilangkahan	1748	-	2634	4481	131	184
TOTAL	5782	238	7190	11335	1942	406

Source: Kools (1935)

This regulation, however, was strongly opposed by the people of south Banten, as a result of which they were still allowed to practise swidden cultivation in restricted areas, on land rented from the government. This regulation was introduced by the Resident of Banten in decree no. 10453/7 on 12 September 1924, and was known as the **hoemablok regeling** or **hoemabloken**, designed to protect forest areas and soil erosion (Kools, 1935: 186). In 1931, the land rent was f 2.00/bau (one bau is 7096,5 sq.metres) [Ekadjati, 1995: 133). It was in accordance with the land property law ('domain' principle), whereby all agricultural

land belonged to the government

Although sawah cultivation continued to expand during the early twentieth century, in some areas it was rejected. This was especially the case among Baduy in desa Kanekes (Lebak district) and other groups in desa Guradog (Rangkasbitung district) and desa Citorek (Cilangkahan district) [Kools, 1935].

The status of swidden land in south Banten in the 1930s, is further clarified by referring to a study of traditional land rights in West Java undertaken by Soepomo between March 1931 and May 1932 for the Department of Justice. According to Soepomo (1982 (1933): 118-119) swidden cultivation in Lebak during the 1930s was only allowed in specially designated **huma** blocks or **geblogan huma**. If a plot was claimed (**diaku**) by someone, through local customary law, such a person obtained a right to cultivate upland rice for one year. After the harvest, the fallowed land could no be longer claimed by the first user and became available to anyone else (**bebas kembali**). The land was fallowed (**dipreikan** or **diperdeokan**) for several years and could be recultivated once covered in dense secondary forest. To open secondary forest, a special ritual called **nukuh** had to be performed two or three days before cutting the forest. The purpose of this ritual was to obtain permission from the spirit of the forest and to chase away dangerous animals, such as poisonous snakes.

Land fallowed for just one year was called **jami** and when recultivated it was called **ngajami**. If the land was

obtained from immature secondary forest it was called **ngareuma**, and if it supported mature secondary forest it was called **reuma kolot** (mature **reuma**). Long fallow land supporting mature forest was called **leuweung**.

Because a swidden field could only be owned for one year, the land could not be leased (**disewakan**) to other people. In addition, share cropping was not found and swidden work was usually shared (**liliuran**) among members of the same hamlet or **ampian** (Soepomo, 1982 (1933): 119). In addition, in the sub-districts (**kewedanaan**) of Cilangkahan and Gunungkencana in Lebak, swidden cultivation commonly supported perennial crops, such as coconut and fruit , in addition to rice. According to local customary law, these crops belonged to the first owner, even if the land no longer belonged to him. The first owner was allowed to maintain and harvest such crops, a share of which were commonly given to the new owner.

It was common that if someone wished to open forest (**nyacar**) in such an area it was marked by the former owner, who lived in the same hamlet or **ampian**. Therefore, the new cultivator had to ask the first owner whether such land would be recultivated or abandoned. If the land was to be recultivated, the new owner had to find new land. However, if such land was not to be recultivated, the land could be used by the new owner, and the area marked by a wooden pole or shrub tied to a tree. Such a marker was called **diciri**, **disawen** or **ditrawas**, and was a clear indication to everyone that such land had been claimed. Receiving **jami** or **reuma**

from other people was commonly called **mulung jami** (gathering **jami**) or **mulung reuma** (gathering **reuma**).

There were sometimes conflicts among swiddeners competing for fallowed land, for example in the Lebak villages, Gunung Kancana and Malingping (Map 4.1). This was particularly so if the land had already been marked by someone, and was also marked by the new owner. To solve this problem, a **kokolot** (leader) as a mediator in each hamlet (**ampian**) [Haar, 1948: 72]. A kokolot might advise, for example, that a new owner find other land, as tradition required that priority be given to the former owner to recultivate fallowed land. If the former owner did not wish to recultivate in the next season, his right to that land would disappear and it could be cultivated by anyone. In addition, if the land was abandoned due to the death of its owner, it could be recultivated by others without asking permission from his lineal heir. Thus, in this situation the field could not be inherited.

Anyone could cultivate swidden fields in other hamlets or **ampian** on a temporary basis (**ngadon** or **nganjor**), asking a **kokolot** (hamlet leader) living close to select a field. If no local person wished to cultivate such land it could be used by someone from a neighbouring **ampian**. If the land already belonged to someone in the **ampian**, both a **kokolot** and the former owner had to be approached. If the land was not to be recultivated, the newcomer had to approach a village leader (**jaro**) to rent land (**nyewa**).

Anyone cultivating swidden fields in other hamlets

(**nganjor**) of Leuwidamar, Lebak, and Malingping, had to pay land rent of 5 rice bundles (5 **ranggeong** or **geugeus**) per bau to a village leader (**jaro desa**) after the harvest. This was called **pakukusut**. The word **pakukusut** is derived from **kusut** meaning 'security disturbance' (**gangguan ketertiban**) or 'security disorder' (**kekacauan**). It had to be paid to the **jaro**, as a form of insurance against loss, theft and inconvenience, as when rice was trampled by buffaloes or when the cultivator was bitten by a poisonous snake, and had to be helped by a village leader (**jaro**) [Soepomo, 1982 (1933): 122].

3. The Zaman Belanda: land classification

During the 1930s, although many swidden fields in Lebak district (such as Gunung Kancana, Bojongmanik, Sajira, Muncang and Leuwidamar) were bordered by government swidden field blocks (**geblogan huma**), villagers remained free to practise swiddening much as they had done before. The land was held communally and could be used flexibly in the ways already mentioned. However, in the years which followed a lot of communal swidden land was converted into private land, each household being provided with one **bau** (equal to 0.71 ha) by the government. This made it easier to collect land tax, as farmers were in more permanent settlements. Indeed, this regulation seems to have been deliberately aimed at settling 'nomadic' south Banten farmers (Ekadjati, 1995: 131-132). Land use in many places

was surveyed, classified and registered by the government during this period, which is why local people now call this the 'land classification period': **zaman klasiran** (Sundanese) or **de klassifi(c)eren** (Dutch).

During the **zaman klasiran**, much forest in Baduy and adjacent areas was surveyed and classified by **Mantri Ukur** (Field surveyors). The **mantri ukur**, assisted by **jaro pamarentah** (village leaders), village secretaries (**carik**), and general village assistants (**pangiwa**), together with other villagers, measured (**ngukur**) some thousands of swidden fields. One of my informants from Cisimeut had a vivid recollection of this:

> Rombongan klasiran indit ka leuweung raramean mawa bedug, korsi jeung meja. Rahayat ngilu rombongan, sawaktu-waktu kudu surak jeung keprok, sakabehan kudu surak. Lamun aya anu henteu ngilu surak, saperti pangiwa Wakiming (Sarkimin), datang ka imahna jadi gelo diganggu kunu boga leuweung di leuweung Moncongos, pal 4.
>
> Which can be translated as:
>
> A **klasiran** group went noisily into the forest bringing a table, chair and a small drum (**bedug**). They were accompanied by people who cheered loudly and clapped their hands. All had to participate. If someone didn't participate, such as pangiwa Wakimin (Sarkimin), when he arrived in his house he got ill due to the disturbed spirit in Moncongos forest at **pal 4** (**pal** is derived from **paal**, a unit of 1506,943 metres; an area where the government rubber plantation was located was called pal 4 because it was 4 **paals** from the sub-district centre).

Thus, the main purpose of making noise in the forest was to warn off spirits and also to announce to all villagers who owned swidden fields in the area that their agricultural blocks were being measured. Those villagers

wishing to register their fields had, therefore, to come to the **mantri ukur**. The procedures involved in registering land, were recollected by one informant as follows:

> Anu boga akuan huma asup ka kandang dibatasan ku awi, laju manehna diuk sila. Manehna mayar sagobang disebutna uang sila. Lahan huma akuanana ditanya, saperti ayana di blok mana, nerangkeun wates-watesna pakai bates alam, saperti wahangan, tangkal jeung batu atawa batas huma nu lain. Luas akuan humana henteu diukur langsung, tapi disebut bae 1 ha atawa 2 ha. Engkena anu enggeus dialukur lahan akuanana kudu bakal meunang kikitir jeung kudu bayar 3 ketip 5 sen sa hektar.
>
> Which can be translated as:
>
> Anyone who claimed a swidden field (**huma**) entered and sat with legs crossed (**sila**) in a enclosure bordered by bamboo. He paid **sagobang** or **uang sila**, as the registration fee. He was asked about the location of his land, to describe its natural borders, such as rivers, trees, and stones, and to name other swidden owners. The land was not measured directly, only estimated to the nearest hectare (e.g. 1 ha or 2 ha). Those who were registered received a land certificate and paid land rent of 3 **ketip** 5 **sen** per hectare.

During the **zaman klasiran**, swidden fields claimed by each household were converted into private household land; while lands used for communal purposes, such as for cattle grazing, collecting bamboo, and water, continued to be regarded as communal land. Swidden fields were gradually measured and certificated, while other land could not be converted into private land. During this period all forest adjacent present day Baduy areas (desa Kanekes), and including the dangka areas, and open to swiddening by Baduy and non-Baduy people alike, was surveyed and anyone able to pay the registration fee could receive a certificate (**surat**

kikitir tanah) from the **mantri ukur**. As a result, the communal land was increasingly converted to private ownership. All data on land ownership in a village was recorded in a 'letter C book' (**buku leter C**), which was the basis for calculating tax from each household. In this book, all agricultural land was described, giving the land owner's name, the size, location and classification of the land (fertile, moderate and poor soil, were class 1, 2, and 3, respectively). The tax (**pajeg tanah**) had to be paid yearly, the exact amount being determined by the size and land class.

During the **zaman klasiran**, Inner and Outer Baduy areas were also surveyed and registered by **mantri ukur**. However, traditional Baduy would not allow their land to be certificated for religious and cultural reasons, it being seen as contrary to traditional law, **pikukuh**. As a result, agricultural land was only divided into blocks located in different hamlets (**geblogan**). For instance, some Outer Baduy **geblogan** gave the responsibility of registering and paying the annual tax to particular elders (**kokolots**). This land was distributed to some hamlet members by the **kokolots**. Thus, based on my informants, we now know that blocks and **kokolot** who registered land and paid tax in the past included Cihulu (Jaro Alisah), Kaduketug (Aska), Gajeboh (Ki Naskin), Cicakal (Ki Arisah), Cicatang and Cikopeng (Ki Sepuh), Cisaban and Kadukohak (Ki Dalsiwin), Garehong (Ki Salipah), and Cibongkok (Ki Saceunti).

In Inner Baduy, agricultural land was registered and

divided into three blocks: Cibeo, Cikartawarna, and Cikeusik. Each block was directly supervised by a traditional leaders (**puun**), and was considered as communal land for annual swiddening.

Uncultivated forest land in the area adjacent Baduy was used for grazing (**daerah pangangonan**), as a source of water (**sumber air** or **hulu cai**), and for bamboo forests (**leuweung awi**); it was registered and proclaimed as 'communal village blocks' (**geblogan desa**). In addition, some dangka areas were also registered as **geblogan desa** and could not, therefore, be converted into private land.

During the **zaman klasiran**, Baduy cultivating land outside present day Kanekes, including dangka and adjacent areas, were not permitted to own private land. Their land was considered as a 'deposited good' (**barang titipan**), a gift from their ancestors, which could not be sold, mortgaged or rented. As a result, such swidden fields in non-Baduy areas were not formally claimed and registered. At the same time, non-Baduy were gradually certificating their communal land.

Another cause of agricultural land use change in some areas adjacent the Baduy was rubber planting by the Dutch government (**daerah kebun kontrak Belanda**). In 1927 some twenty-two rubber plantations were recorded in Lebak regency (Williams, 1990: 8). At that time, Baduy territory was directly determined by the government and a new border was drawn to legitimate the use of Baduy land in Leuwidamar sub-district, such as Gunung Tunggal and Pasir Kopo, for

rubber plantations. From the time of the agreement between the Baduy and the Sultanate of Banten in the eighteenth century, Baduy territory has progressively declined. By the beginning of the twentieth century, as a result of the expansion of rubber plantations in Lebak, and the need to maintain security in the face of local rebellions, a new border for the Baduy area was drawn by the colonial government. This action removed Muncang, Sajira, Cimarga, Maja, Bojongmanik, Leuwidamar, and Citorek from Baduy use, which reduced the area to desa Kanekes and some dangka areas, the area recognised today (Van Tricht, 1928: 69; Garna, 1993: 125).

Because of the Dutch economic monopoly it was forbidden to plant rubber trees outside the plantation areas. Local people planting trees were jailed and the trees removed. Elsewhere, mature rubber trees growing in swiddens were not permitted to be tapped. Instead owners were allowed to tap their rubber trees, they were paid monthly for compensation called **lisensi** (license).

Some forests were converted to agricultural land during the Japanese occupation (1942-1945) to grow food to offset famine. For example, mature forest at Leuweung Pasir Podol, Leuwidamar and Mucang, areas protected by the Dutch government and comprising about 506 hectares (Kools, 1935: app. XI, VI), was opened up for upland rice by people from Cipeuyah, Lebak Memplem, Coo, Muncang, Barengkok, Bantar waru, Ciangireun and Gardu. After harvesting the rice, the fallowed lands were planted with durian (**kadu**=Durio

zibethinus), locus bean (**peuteuy**= Parkia speiosa), and other useful trees.

Since the zaman klasiran, Baduy swiddens in the dangka and adjacent areas have declined in number. As mentioned above, some cultivated forest areas were certificated by non-Baduy people, and village chiefs (**jaro pamarentah** or jaro **gopernment** or **juragan**) and their staff (**carik** and **pangiwa**) were introduced by the Dutch government. As a result, the role of the **jaro warega** and other **jaro dangkas** in dangka areas tended to be superseded by **jaro pamarentah.** The traditional leaders only remained important for sacred ceremonies, such as **ngalaksa** (an offering of **sesajen** or food to the ancestors), and **seba** (the annual post-harvest gift of agricultural products to the Bupati and Resident in Rangkasbitung and Serang).

4. The Post colonial period

After Indonesian independence in 1945, forest in south Banten was rapidly converted further to agricultural land. As we have just seen, the mature forest of Pasir Podol (**leuweung** Pasir Podol), located on the border between Leuwidamar and Muncang districts, about 15 kilometres from Kanekes village, had first been converted to agricultural land during the Japanese occupation in 1943. However, after the occupation it was managed by the Forestry Department and planted with teak (jati=Tectona grandis). During the 1960s, however, the forest was taken over by BTI (**Barisan**

Tani Indonesia) under The Indonesian Communist Party (**PKI**), which aimed to distribute land to poor and landless farmers. When the **PKI** was abolished following the events of 1965, the land returned to the Forestry Department and in the late 1970s was managed by BKPH Cipanas, KPH Banten, the State Forestry Corporation (**Perum Perhutani**) unit III, West Java. Today it is planted with teak (Tectona grandis) and mahogany (**mahoni**=Switenia mahagoni). After the harvesting of mahogany and the replanting of young trees, the plots are commonly intercropped with upland rice (**tumpangsari**) by Outer Baduy under the supervision of forestry foremen (**mandor kahutanan**).

Other communal lands adjacent the Baduy areas have also been converted to private land by families with enough money to obtain a land tax certificate (**kikitir tanah P2**) and to pay the annual land tax (**pajeg tanah**) or **Ipeda** (**Iuran Pembangunan Daerah**=the local development tax).

According to one informant, some communal land in Cisimeut was claimed and converted into private land by a respected traditional leader (**jawara**). This land was mostly planted with rubber trees (karet=the para rubber tree; Hevea brasilinesis), the government monopoly to protect commercial plantation estates having been abolished. Rubber had first been introduced into south Banten by the Dutch after the enactment of the agrarian law and the commercial plantation development of the 1870s (Williams, 1990: 8). After Indonesian independence, the former Dutch rubber plantations in parts of Lebak district, such as Cikapek,

Gunung Tunggal and Kopo were mainly managed by the Indonesian government.

In addition, communal land was also claimed by some well-off farmers by proposing the ownership right to cultivate land. To obtain a land certificate, a special proposal was requested from a village leader (**jaro pamarentah**). Some proposals were collected and discussed at weekly village meetings (**rapat minggon desa**) and a form filled in and sent to the local **camat**. All forms had to be signed by the **camat** and sent to the tax office (**kantor pajak**) in Pandeglang, and to the Lebak district office in Rangkasbitung. The land certificate was then sent to the sub-district and village and given by the Jaro to the land owner. The certificate was called the land tax certificate or **kikitir tanah P2** (**pembayaran pajak**= land tax paying). The original land status data, such as land classification (fertile land, moderate and non fertile land), location, borders, plot number (**nomor persil**) was recorded in a 'letter C book' (**buku leter C desa**) deposited in the village office. Anyone with a land tax certificate (**kikitir tanah P2**) was regarded as having a legal right to cultivate land (**penggarap sah**) but was not regarded as the land owner (**bukan pemilik tanah**). However, in practise anyone with a certificate was considered to be a land owner, and such land could be sold, inherited, and leased. If the land was sold or inherited, an official land sale document called an **akte jual beli**, or an official land inheritance document, **akte waris tanah**, was issued. When land was sold, the

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document was signed by the seller, buyer, a witness and a village leader (**jaro**); and if the land was transmitted through lineal inheritance it was signed by a parent, children, a witness and a village leader. Although based on the Islamic principle that gives a male heir twice as much as a female, the land was commonly divided equally among all children, irrespective of sex. Various copies of the **akte waris** or **akte jual beli tanah** were made: one for the seller/inheriting son, one for the buyer/heir, one for the village leader (**jaro**), and one for the **camat** (as a Pejabat Pembuat Akta Tanah= PPAT).

Anyone seeking ownership rights to land or an agrarian land certificate (**surat sertifikat tanah**), had to fill in a form, attach a copy of the official land inheritance or land sale document and send it through a village leader (**jaro**) to a sub-district agrarian office (**kantor agraria**), via the **camat**. The letter was processed by the district agrarian official, who in his reply to the **camat** and **jaro** mentioned that the land would be measured by agrarian officials. After the land had been measured, the land certificate was sent by the district agrarian office to the land owner through a village leader. The land certificate is considered to be of greater legal weight than a land tax certificate (**kikitir tanah P2**), and is recognised for ownership as well as cultivation rights. Many people, however, only possess the land tax certificate, as a land certificate is more expensive.

According to an informant from Cisimeut village, who

I shall call Haji Sa, his father acquired agricultural land by claiming ownership during the **zaman klasiran**. After Indonesian independence, the land was certificated and passed on to his 8 children. In the 1950s, Haji Sa's land was mainly planted with rubber trees, but in order to obtain labour to plant rubber, he rented land to Outer Baduy for rice cultivation (**huma**). They were not required to pay rent, but instead planted rubber trees intercropped (**tumpang sari**) with upland rice, or planted rubber trees in fallowed land after harvesting rice. By renting land to Outer Baduy, the secondary forest (**reuma**) belonging to Haji Sa and his brother and sisters could be used to plant rubber trees. When clove (cengkeh= Syzigium aromaticum) had a high price in the 1970s, some rubber was replaced with clove. The clove seedlings generally became available in south Banten from the 1960s, having been first planted by Dutch in plantations at Gunung Haur, Cipanas. Many people also brought clove seedlings to Cisimeut from the towns.

As with rubber, clove was planted by Haji Sa by using cheap Outer Baduy labour. In 1979 Haji Sa's clove groves in Kaduheulang, Cisimeut, were harvested and sold to local middlemen. At that time, the price of clove was Rp 8,000/kg (by comparison, the price of gold was Rp 3,000/gram). Therefore, one kg clove could buy 2.7 grams of gold. And by selling the cloves, Haji Sa and his wife were able to undertake the pilgrimage to Mecca which cost Rp 800,000/person (the equivalent of selling 100 kilograms or 1 quintal of clove). In 1986, however, the clove price fell

and since that time many clove gardens have been abandoned or converted to other perennial crops.

One of the replacement crops has been coffee (kopi=Coffea arabica), which was first introduced in south Banten on a commercial scale between 1830 and 1870 (Williams, 1990:5), that is during the cultivation system (**cultuurstelsel**). West Javanese were required to plant coffee by the Dutch during the so-called **Prenger stelsel**, between 1720 and 1921 (Adiwilaga, 1975: 68), but coffee trees were rarely found in the Baduy area before the 1950s. However, by the 1970s, coffee was commonly found. Because its market price was not high, it was commonly used for home consumption in the villages.

At the same time, another crop, Albizzia (**kalabise**= Paraserianthes falcataria) was also introduced. This tree had been first introduced in Java by Miquel in 1855 from Banda, and after 1871 was distributed throughout the East, as far as New Guinea, the Bismarck Archipelago, and Solomon Islands (Burkill, 1935: 84-85; Soerianegara and Lemmens, 1994: 324). This big tree has been recognised as one of the quickest-growing trees of Southeast Asia, being endemic in the East Malesia region. In addition, it is important in restoring fertility to land because of the nitrogen-fixing bacteria found on its nodules. Its timber also fetches a high price. In two years, a tree can grow 30 feet high and 6 inches in diameter and in the four years, the timber is ready to be harvested.

Some Albizzia trees were initially introduced through

experimental plots (**demontrasi plot** or **demplot**) as part of a government programme located in villages adjacent the Baduy area during the 1970s. Thereafter trees were disseminated by villagers themselves.

Agricultural land use around the government rubber plantation at Gunung Tunggal, about 17 kilometres from Kanekes, has also changed. After Indonesian independence, although mainly planted with rubber trees, many places surrounding the plantation area, or where non productive mature rubber trees were being cut and replanted by younger trees, Outer Baduy commonly established swiddens (**huma**) by paying a rent of one-tenth of the rice yield to rubber plantation foremen (**mandor perkebunan**). In the 1950s, some Outer Baduy even had semi-permanent field houses. One of them was a Kanekes village leader, Jaro Samin, who was dismissed by the **puun** for receiving government subsidies.

Because so many Outer Baduy had established field houses (**saung**) in the Gunung Tunggal area by 1977, it was recognised by the Department of Social Welfare as an official **Pemukiman Kembali Masyarakat Terasing Baduy** or **PKMT Baduy**. This settlement now consists of 92 hectares converted from Dutch rubber plantation, located in Wantisari/Leuwidamar village. In 1978 it was settled by 38 Outer Baduy households and 13 non-Baduy households. Each household was provided with 500 m2 of homegarden (**pekarangan**) and 1.5 ha of upland fields (**tegalan**). Four years later, in 1981 and 1982, further Baduy settlements were established in Gunung Tunggal area: 90 hectares at

Pemukiman Kembali Masyarakat Terasing (**PMKT**) **Kopo 1**, and 115 hectares at **PKMT Kopo 2**. These settlements were located in desa Jalupang Mulya, and were also converted from the Dutch rubber plantation at Pasir Kopo. PMKT Kopo I and PMKT Kopo 2 received 52 Outer Baduy households and 23 non-Baduy households, and 14 Outer Baduy households and 32 non-Baduy households, respectively.

During the 1990s three further Baduy settlements were established: **Pemukiman Kembali Masyarakat Terasing** (**PMKT**) **Sukatani**, **PMKT Kompol**, and **PMKT Cilangir-Garehong**, located in Jalupang Mulya, Sangkanwangi and Nayagati village respectively. Each settlement received 40 Outer Baduy households mixed with a few non-Baduy households. Except in PMKT Sukatani and PMKT Cilangir, each household was provided with a private upland field (**tegalan**) of 1 ha.

Because most communal village land (**geblogan desa**) in areas neighbouring the Baduy was converted into private lands owned by non-Baduy and then rapidly planted with perennial economic trees, swidden cultivation has declined. Most time, labour, and capital has been invested instead in commercial gardens and sawah. The sawah areas are mainly located in valley areas, such as along the Ciujung and Cisimeut rivers.

Thus, non-Baduy land which has in the past been used for planting rice by Outer Baduy has decreased rapidly. This land, however, is still used for swidden by Outer Baduy, who pay rent in the form of cash, gold, share cropping, and labour plantation (see chapter 5, pp. 233-

246).

In Baduy itself, land continues to be embedded in the social, economic and cultural life of the community. Under Baduy customary law (**pikukuh**), the land is regarded as a 'deposited good'(**barang titipan**) of their ancestors and must be properly maintained. It is generally divided into two categories: sacred land (**tanah larangan**) and mundane land located in Inner Baduy, and in Outer Baduy and the Dangka area, respectively. The land is not owned by individuals, but is the common property of the Baduy community. The communal right to land, known **tanah adat Baduy**, cannot be bought, sold or leased. Nowadays, however, Outer Baduy land is bought, sold and rented.

Originally, people did not own the land on which they lived and worked; they merely controlled it. Baduy believe that they are merely a transient part of this world, **Buana Panca Tengah**, and that land belongs to their ancestors (**karuhun**) who have returned to **Buana Nyungcung** to which all human souls return upon death. However, like non-Baduy, in the Baduy area agricultural land has also undergone rapid change. For example, in Outer Baduy, rapid population growth and economic change has led to land being inherited, rented, and sold. But as has been noted, land certificates were forbidden as early as the 1950s. At that time selling and buying land could be done without registering at the village office. This kind of transaction was called **jual hawu**, meaning 'stove sale', as transactions were mainly conducted informally in front of a stove used for warmth

during the cooking of rice in the morning. Such informal transactions have led to subsequent conflict between children. For instance, in December 1995 there were several meetings in the house of the **jaro** to discuss land inheritance and boundary conflict. Two cases are indicative:

> One day at the end of December 1995 some Outer Baduy from Karahkal hamlet came to the house of a village leader (**Jaro**) in order to ask Jaro Pulung to mediate in a conflict between the families of Arman and Sana. According to Arman, his father, Ayah Arsilin, before he died, owned two swidden field blocks, located in Cibitung (0.5 ha) and Karahkal (0.1 ha). To this day this land has never been cultivated by him, because it has been usually cultivated by Sana, the son of his father's sister. As a result, Arman's family has now demanded the land. However, according to Sana the land was inherited from his grandfather through his mother or Ayah Arsilin's sister. At that time, Ayah Arsilin had not inherited land because his share had been used for expenditure on a funeral ceremony for his son, Arman's brother. This account is strongly rejected by Arman's family, who claim that the land must be divided into 5, one part for his father, Ayah Arsilin, and four parts for Ayah Arsilin's sisters: Ambu Samah, Ambu Arnem, Ambu Daman and Ambu Narce. Because an agreement between the two families could not be reached, the final decision was made by Jaro Pulung, who decided that the land could not be cultivated by anyone, after the harvest in 1995. This land can now only be recultivated if the two families agree to an arrangement.

Another meeting concerning inherited commercial trees took place in the house of the **jaro** in 1995.

> Two Outer Baduy families Ayah Sa, and Ayah Cais, from Kaduketer hamlet were in conflict over claims to a **kiray** (Metroxylon sagu) tree located on the boundary between their two swiddens. They came to Jaro Pulung to solve the problem and a special meeting was held in Jaro Pulung's house. According to Ayah Sa, his **kiray** tree had often

been harvested for its leaves by Ayah Cais. He claimed that this tree belonged by him and that he had inherited it from his parents. According to Ayah Cais the tree belonged to him, inherited from his father. Three alternative solutions were offered by Jaro Pulung. Firstly, that they should agree that the tree should be given to one or the other of them. Secondly, that they should share the yield of the tree. Thirdly, that the tree be given to the village leader to use for communal purpose. This proposal was rejected by the two families. Eventually, Jaro Pulung decided that the tree did not belong to anyone and should be cut down. The two families agreed to this decision, as did participants, and the meeting was closed by Jaro Pulung.

Since the 1960s, buying, selling and leasing land in Outer Baduy has involved registration through the village secretary (**carik desa**) of Kanekes (see Appendix 4). The aim of this has been to reduce land claim conflicts (**pakuaku garapan**).

Although some crops are prohibited in the Baduy area, a few commercial crops such as clove and coffee have been introduced to Outer Baduy. Seedlings have usually been obtained from neighbouring non-Baduy areas. Since 1986, however, clove trees have been abandoned or cut down due to the low price of cloves. Albizzia, on the other hand, has been intensively planted in Outer Baduy since the 1970s. As a result, secondary growth (**reuma**), has commonly consisted of Albizzia trees mixed with other perennial crops. In addition, Outer Baduy people have continued to buy land in their designated area as well as in neighbouring non-Baduy areas. Thus the land has been cultivated with upland rice (**huma**) or mixed perennial crops, such as coconut, coffee, locus bean and durian.

During the last decade, some Outer Baduy have increased swidden cultivation of rice in non-Baduy areas. However, this is becoming more difficult due to the conversion of village communal land, including some **dangka** areas located in non-Baduy areas, into private land belonging to non-Baduy (**urang landeuh**). As a result, such land is commonly cultivated by renting, share cropping or by providing labour to the land owner. Some dangka areas have been gradually taken over by non-Baduy since Indonesian independence. For example, in the 1960s the Dangka Kamancing was abolished by the village leader of Cisimeut and the communal land was certificated by non-Banduy. Five hectares of this was given to Jaro Ubs (a pseudonym), village leader of the new village, Margawangi, which developed from Cisimeut village. According to him, he received dangka land from his father who was regarded as the **jaro dangka** by descent (**turunan jaro dangka**) of Kamancing, Ki Arpan.

Another dangka area, Dangka Garehong located in Nayagati village was reduced in size during the 1980s. In 1983 the Baduy delegation complained to Jaro S, the Nayagati village leader, because Baduy dangka Garehong was being annexed and planted with cash crop (viz clove) by non-Baduy. They asked Jaro S to help them to take back the dangka land which was annexed and to measure the total land. This complaint was responded to by Jaro S by conducting a land survey and measuring the total size of the dangka land. Based on this new survey, the total dangka

area was recorded at 5 hectares instead of the 2 hectares formally recorded in 'The Letter C Book'. This is not surprising because in the past, during the **zaman kalasiran**, the total **dangka** land was recorded in 'The letter C Book' based on an estimate only. However, the outcome was used by Jaro S to pressure Baduy People to transfer 3 hectares of **dangka** area to Nayagati village, as according to 'The Letter C Book', this dangka area was registered as a village communal land block (**geblogan desa**) with a total of only 2 hectares. Accordingly, Jaro S returned the annexed Baduy dangka land, 3 hectares of which was claimed by Nayagati village. As a result, some Baduy religious leaders reported this case to the sub-district officer (camat), the district officer (bupati), and the resident (residen) in Leuwidamar, Rangkasbitung and Serang, respectively. However, because the official record in the village office was for only 2 hectares, the Baduy were defeated by the village leader of Nayagati and 3 ha of their land was transferred to non-Baduy.

In addition, the **dangka** area of Cihandam was abolished and the land transferred to the village administration and certificated by the village leader (Jaro Sur) and other non-Baduy. In the 1990s this same land was sold by Jaro Sur to an NGO called Yayasan Cinta Alam (a pseudonym) (see chapter 1, pp. 9-10). In 1995, 12 hectares of this land was used to establish a training centre for young (urban) people to encourage an interest in and respect for nature. It was opened with a special ceremony by the local

representative of the Ministry of Environment. The forest has now been planted with various local and introduced plants. In addition, several semipermanent buildings have been constructed to enable the training of participants. By establishing this conservation forest, it is hoped that tourists who want to visit Baduy will be 'filtered' as mentioned by the leader of the Yayasan Cinta Alam:

> Dengan adanya hutan pendidikan lingkungan mungkin arus wisata bisa ditahan sebagian besar. Hutan Pendidikan digunakan untuk pendidikan pemuda bidang lingkungan hidup. Pesertanya disaring dan ditempa, diberi pelajaran mengenai lingkungan (Kompas, August 7, 1995).

Which can be translated as:

> By establishing the protected forest for educating youth, to enhance the love of nature, some tourists (visiting Baduy) may be accommodated. The protected forest is used for educating the young generation in the love of the natural environment. Participants are selected and trained in environmental matters.

Inner Baduy, unlike Outer Baduy, are unable to sell and to lease land. Like neighbouring non-Baduy land in the 1930s, Inner Baduy agricultural land is devoted to communally owned upland rice (**huma**). Certain blocks of fallow which have been cultivated by one household can be recultivated by the same owner or by another household in the next season. If the land is cultivated by a new person, however, special permission must be sought by the new cultivator. Some perennial crops planted by the former cultivator cannot be transferred to the new cultivator, and are inherited equally through the male and female line,

after the funeral costs have been deducted (see chapter 5 pp. 230-231). Only crops such as banana, can be transferred. It is usual, however, for new cultivators to be given a share in the yields of rambutan (Nephelium lappaceum), durian (Durio zibethinus), locus bean (Parkia speciosa), and other perennial fruits, in order to maintain good relationships between the previous and the new cultivators.

As a result of population growth and economic development, the area allocated to swidden has decreased in recent years, as has the length of the fallow. Nowadays, it is more difficult to find mature secondary forest (**reuma kolot**) more than 5 years old. To compensate for this land shortage, non rice products, such as pepper (**rinu**), banana, durian, and petai have been grown for sale. These products are usually sold directly to small stalls (**warung**) in neighbouring areas. The cash so obtained is used to buy various market products, such as salted fish (**lauk asin**), salt (**uyah**), and sawah rice (**beas**).

In the past, commercially valuable crops such as durian, petai, **asam ranji** (Dialium indum) grew in the mature forests (**hutan titipan**) of Cibeo and Cikeusik, and were considered to belong to the community. During the fruiting season, each tree could be claimed by anyone by simply clearing surrounding weeds (**ngabobokor**) or putting leaves and branches around the tree (**nyangreb**). Trees so marked could not be claimed by other people. However, today this practise has practically disappeared because the trees

are claimed as the permanent property of individual households and considered the inheritance of descendants of the first planter.

Currently, some mature **asam ranji** (Dialium indum) trees growing in **leuweung kolot** around Cibeo and Cikeusik have been claimed by individuals and are a source of conflict among Inner Baduy during the fruiting season. The yields of such trees can be sold to middlemen for a high price. They usually produce fruits every 7 years because the branches are cut during each harvesting season.

5. Summary and conclusion

From the historical data it can be seen that Baduy swidden cultivation has been strongly influenced by external factors. By the early sixteenth century the Banten area had been penetrated by an irrigated paddy fields system linked to the establishment of the sultanate of Banten in 1520. Swidden farming was disliked by the sultanate because collecting taxes (land tax and bondsmen) was difficult. For about 40 years, between 1830 and 1870, swidden farming in the Banten area was influenced by implementation of the cultivation system introduced by the Dutch government. Swidden farming was discouraged by the Dutch government, as it was considered to destroy both soil and forest (**roofbouw**). However, the main objection (as during Sultanate) was difficulty of collecting land tax. The uplands and farmers were required by the government to

implement the cultivation system. Since the 1870, and with the introduction of the agrarian law, communal swidden lands were increasingly converted to private household land. At the same time, much communal land was also converted to commercial plantations, such as rubber. Officially, swidden farming in Banten has been banned since 1896 and **sawah** promoted through various incentives.

Since Indonesian independence, the promotion of **sawah** has continued particularly since the introduction of the green revolution in Java. Conversely, swidden farming has been portrayed through various negative images and the swiddeners themselves are commonly accorded a negative stereotype, such as 'masyarakat terasing' (isolated community), 'masyarakat terbelakang' (the most backward community), and 'hidup berpindah-pindah dan terpencar-pencar' (in a nomadic and scattered manner) [Dove, 1985a:2].

However, Baduy swidden cultivation has adapted to changes in the physical as well as the socio-economic and cultural environments. This is in large part due to swidden farming being so closely tied to their identity through **pikukuh**.

CHAPTER 5

LAND AND LABOUR

As has already been demonstrated, the Baduy area comprises two parts: a special reserved territory called **tanah adat Baduy** (traditional Baduy land), and a buffer zone, the **dangka** area. Within the reserved area can be distinguished:'inner' and 'outer' Baduy zones, the boundaries of which are indicated only by natural markers, such as rivers and hills. However, the boundary between the Baduy area as whole and neighbouring Sundanese Moslems was clarified in 1985 by the erection of 540 permanent concrete markers.

There is intensive social contact between Inner and Outer Baduy, and together they consider themselves to be a cultural unity, even though they live with no physical overlap. Most sacred land in the Inner Baduy area cannot be cultivated by Outer Baduy, and conversely Inner Baduy never cultivate outside their territory. On the other hand, Outer Baduy not only cultivate swiddens on their own designated territory, but also on neighbouring Sundanese Moslem land as well. As a result, there is close social interaction between Outer Baduy and Sundanese Moslems, even though Outer Baduy are able to maintain a distinctive way of life.

In this chapter I shall discuss social access to agricultural land for annual farming and forms of labour organisation, but first it is necessary to describe the pressures on traditional Baduy land.

1. Pressures on Traditional Baduy land

Traditional Baduy land cultivated by Baduy alone is described as **tanah Baduy, tanah adat** or **hak ulayat. Tanah adat** has been recognised as such since the Dutch colonial period. According to Van Vollenhoven (1925), the characteristics of traditional land (**tanah adat**) are that: (a) the community and its members are free to use uncultivated land within the **hak adat**, for example to cultivate it and to establish a hamlet on it; and (b) the **hak adat** cannot be transferred permanently.

However, most **tanah adat**, since land privatisation in 1870 has disappeared through the conversion of communal lands to commercial private plantations. Also, since Indonesian Independence, traditional land has been continuously under pressure. **Hak adat** is now rarely found in Java due to high population pressure, during the post colonial period.

Under current Indonesian law, 'traditional land' is explicitly recognised, as described in article 3 of the Basic Agrarian Law or Undang-undang Pokok Agraria (UUPA) of 1960 (law No.5/1960):

> the implementation of communal property of the **hak adat** (the communal rights of an **adat** community), and rights similar to that of adat community, in so far as they exist, shall be adjusted as such to fit in the national and state's interest, based on the unity of the nation and shall not be in conflict with the acts and other regulation of high level.

However, although the **hak ulayat** has been acknowledged, it conflicts with article 33 of the Indonesian constitution of 1945 (Undang Undang Dasar 1945), which states that:

> Land and water, and the natural resources contained there in, shall be controlled by the state and used for the maximum benefit of the people.

Thus, the Indonesian constitution of 1945 provides a means by which the government can intervene and overrule **hak adat** by arguing that such rights challenge the national interest, or are a danger to the unity of the nation (Soetrisno cited by Kustiati, 1996:31). In addition, even today there is no government act which states the criteria for recognising **hak adat** (Erman Radjagukguk cited ibid, 1996: 31). However, according to Maria Soemardjono (Kustiati, 1996: 31) three criteria can be used to recognise **hak adat** : (1) the existence of a traditional leader (**kepala adat**) with strong family ties, (2) the existence of special traditional land (**tanah adat**) with clear boundaries, and (3) a real autonomy on the part of a local community in implementing customary law. Using these criteria, particularly the third, it is clear that **hak ulayat** has been dramatically eroded, because the autonomy of traditional leaders has since the colonial period been replaced by official government appointees (Jaro Pamarentah, Lurah or Kepala Desa).

There are three main factors causing the erosion of

access to traditional land: internal pressure, state land policy, and confiscation (Evers, 1995: 12-13). Internal factors include the weakening of cultural, social and family ties. The genealogical basis of much **hak adat** is being replaced by more emphasis on territory. State land policy affects access by increasing the amount of legislation which stresses that the state controls all land, that the communal rights of traditional communities have been absorbed into the national community, and that the public or state interest overrides all interests of individual or communities. Finally, confiscation of traditional land occurs because of government policy and the inability of the original land holders to obtain secure, registered title to traditional land and to prevent the incursion of migrants.

Baduy territory as well as traditions are under pressure from internal as well as external forces. As discussed in chapter 4, some Baduy Dangka areas have been taken over by non-Baduy. In addition, Baduy land in desa Kanekes is under strong pressure from neighbouring Sundanese. This was particularly so before the establishment of the permanent border in 1985. In 1957 and 1958, for example, some Inner Baduy land was annexed by neighbouring people from Sobang and Karangcombong village, in Muncang district. As a result, Baduy petitioned the government for protection by sending a delegation of **Puun** to meet President Soekarno in Jakarta (Pemda DT II Lebak, 1985: 5). Before the Indonesian communist Party Revolt in

1965, some traditional Baduy land had been taken over by the Indonesian Farmers Association (Barisan Tani Indonesia=BTI), a mass organisation affiliated to the PKI (Pikiran Rakyat 1984a: 11) which aggressively promoted the PKI's land reform campaign to distribute village land to poor Javanese farmers[1] (Pikiran Rakyat, 1984a: 11). In 1968/1969, 1972, 1980, 1982 and 1985, traditional Baduy land was also annexed by neighbouring non-Baduy. In 1972, about 300 hectares of Inner Baduy land in block Muara, Ciputat, Kadusireum, Cirawing, Ciburalang and Gunung Lemok were taken over for wet rice and coffee plantations by non-Baduy people from Muncang sub-district to the east (Map 5.1). At the same time, bamboo growing on Gunung Bulangit, Binong, Cijahe and Cipinang Ading was illegally extracted by people from Bojongmanik sub-district to the west (Garna cited by Pikiran Rakyat, 1984a: 11). Moreover, in 1978, some protected forest land close to a sacred place, Arca Domas, at Gunung Kendeng, was illegally accessed by neighbouring non-Baduy (Ibid, 1984a: 11). These cases of violating Baduy land were taken to the district criminal court. Seven people in 1980, and six people in 1982 who annexed Baduy traditional land were prosecuted and jailed in Rangkasbitung, for about 15 days (Pemda DT II Lebak, 1985: 6-7).

More recently, in 1985, a few hundred hectares of traditional Baduy land located on Gunung Tungtu Kole,

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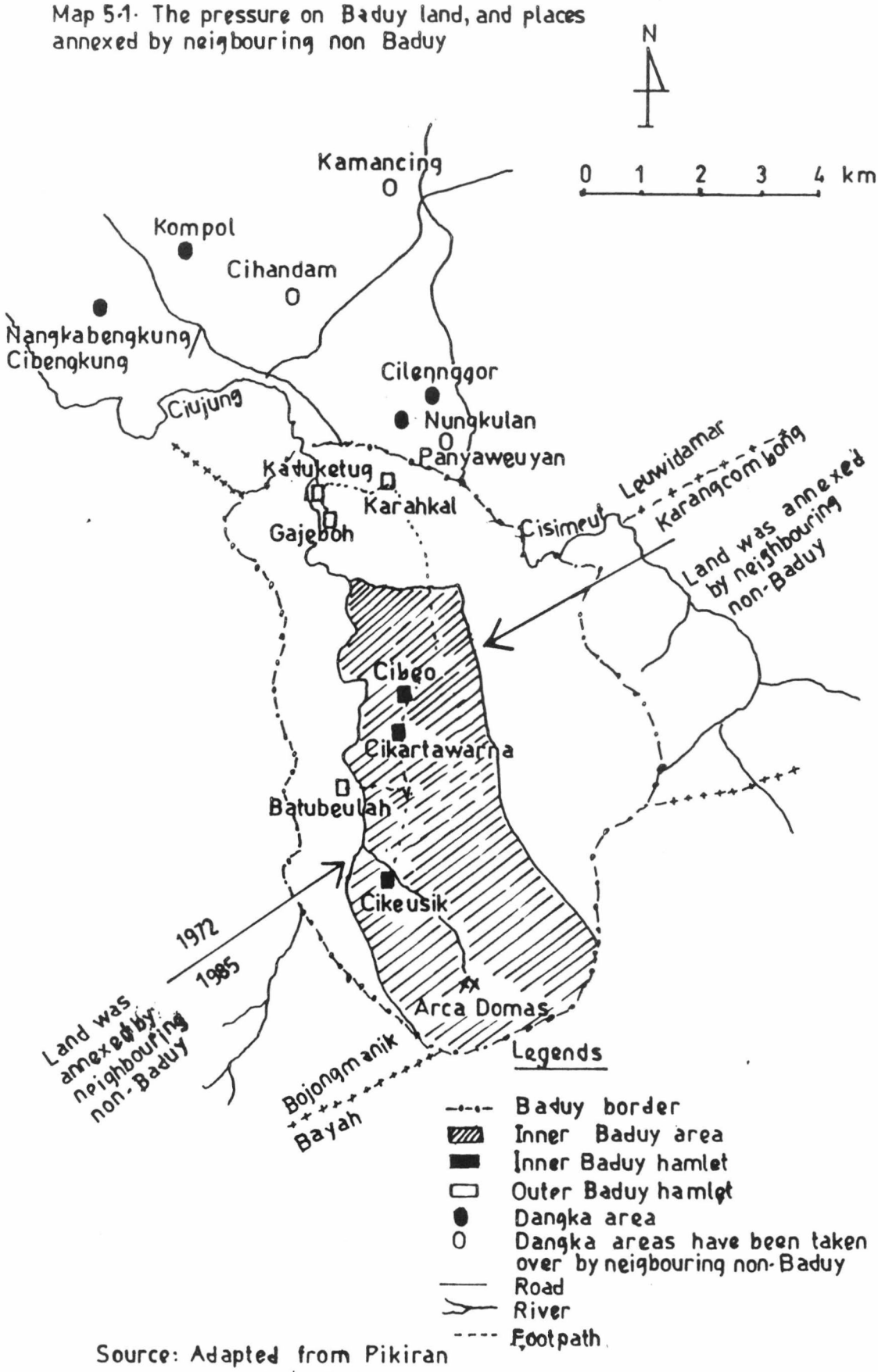
[1]). For an account of the PKI land reform campaign in East Java see Hefner (1990:203).

Map 5.1· The pressure on Baduy land, and places annexed by neighbouring non Baduy



Source: Adapted from Pikiran Rakyat (1984:11)

Gunung Sedegor, Gunung Wawangunan, Gunung Bukit Damar, Gunung Bukit Bala, Gunung Ki Bangkong, Gunung Lemo, Gunung Sagersit and Gunung Hoe valley were annexed by neighbouring non-Baduy and reported by puun staff to the Governor of West Java. As a consequence, this land annexation was widely reported by local and national newspapers (Pikiran Rakyat, 1984b: 1).

Traditional Baduy land is under pressure not only from outsiders but from Baduy people themselves, particularly from Outer Baduy. For example, although according to traditional law (**pikukuh**) Baduy land should not be used for wet rice or perennial commercial crops, in places, such as block Ciawi Leah located to the west of Gajeboh hamlet, land has been converted to sawah by a former village leader living in a non-Baduy village. And in Cicakal Girang, populated by an enclave moslem group, some swidden land has been used to erect masonry houses with roof-tiles (**genteng**), a permanent mosque (**masjid**) and for wet rice fields. In addition, when the price of cloves was high in the 1980s, some Outer Baduy land was planted with cloves. Today, coffee gardens are still found in some Outer Baduy areas.

2. Access to land

In many ways the Inner Baduy community is different from the Outer Baduy community; access to land is a case in point. Inner Baduy agricultural land is divided into sub-

territories: Cikeusik, Cikartawarna and Cibeo. Four types of swidden field are found in each of these sub-territories: (1) **huma puun** (fields belonging to a **puun** family), (2) **huma serang** (sacred fields belonging to the entire community, both Inner and Outer Baduy), (3) **huma girang seurat** (fields belonging to a **girang seurat** family), and (4) **huma tangtu** (fields belonging to separate Inner Baduy households). In each swidden, that part closest to the mountains (that is in this case to the south)[2] is considered to be the most sacred, being nearest in particular to the sacred places of **Sasaka Pusaka Buana** or **Arca Domas** in Gunung Kendeng forest. Using the same orientational framework, the **huma puun** is usually located in the southernmost part of the hamlet (see Figure 5.1). To the north of the **huma puun** are the **huma serang** and the huma **girang seurat**, both types being managed by the **girang seurat**. These three types of fields are usually separated with the **huma tangtu**, as well as being mainly located in the north of the hamlet territory.

The size of **huma serang** in Cikeusik, Cikartawarna and Cibeo, is usually fixed annually at 7, 3 and 5 rice bundle seeds (**jumlah binihan**), respectively. The **huma serang** is established by cutting mature forest which has been fallowed for 7 years, and each plot must be farmed for one

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[2]). This form of orientation is common in Indonesia. For example, the Balinese recognise an antithesis between the direction of the interior, **kaja**, and the sea, **kelod**, where the mountains are identified with the sacred, purity and goodness, in opposition to the pollution and evil of the sea (Hobart, 1978a: 6).

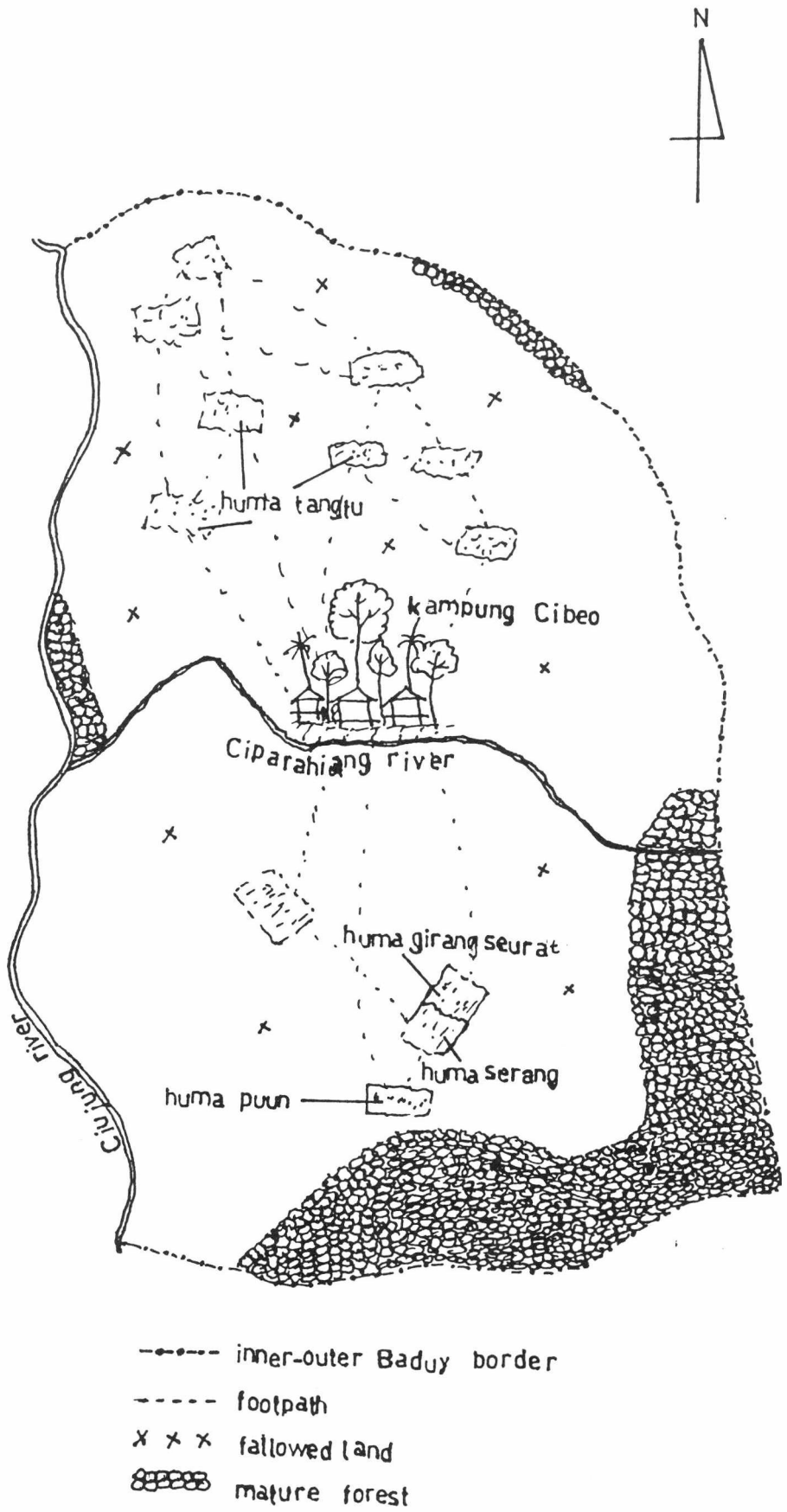


Figure 5.1. Agricultural land use in Cibeo, Inner Baduy (not to scale)

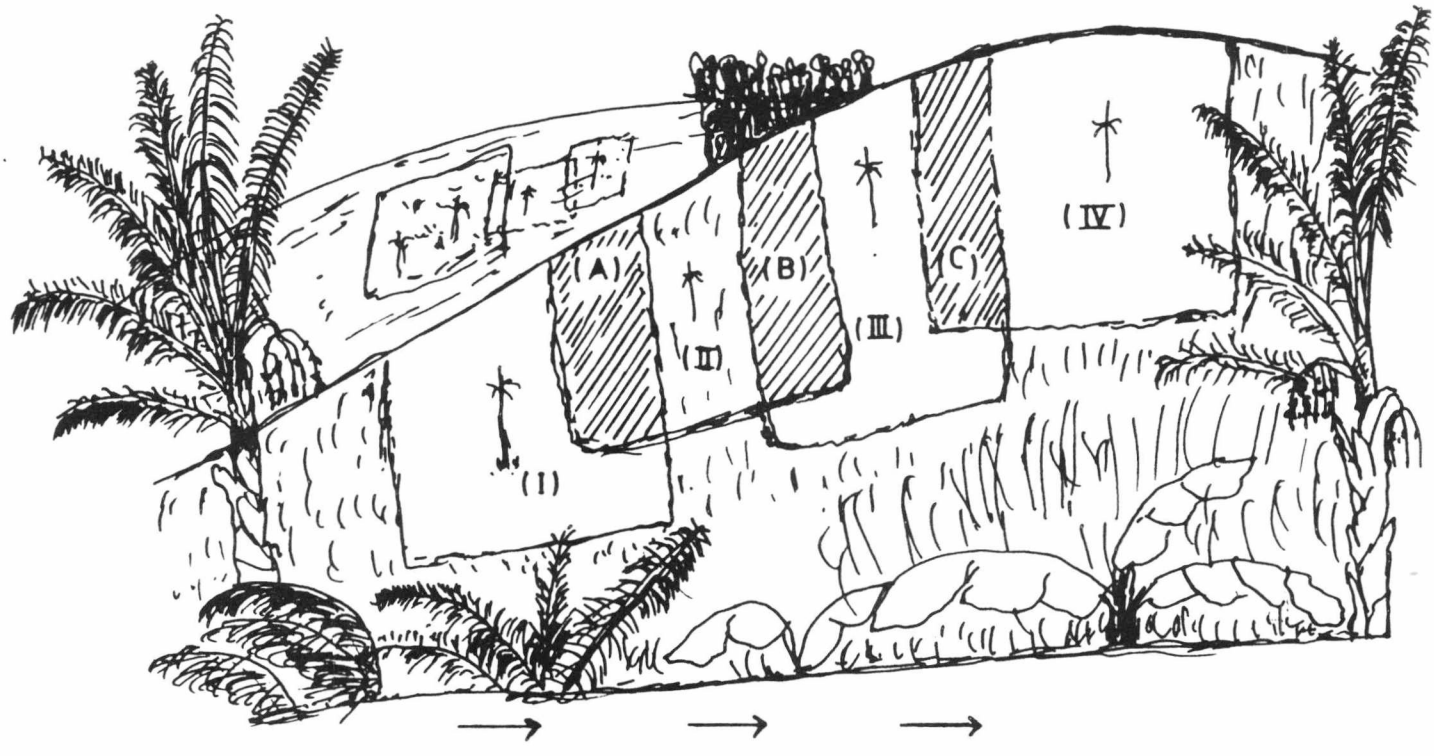
year only. As a result, 7 plots of secondary forest at different stages of regrowth must be available in each Inner Baduy hamlet. According to one informant, however, today land used for **huma Serang** in Cibeo is not obtained from secondary forest which has been fallowed 7 years, but rather is a mixture, including plots which have been fallowed for less than 7 years. This is because fallowing land for 7 years is difficult in this area. Similarly, it is difficult to obtain mature forest for **huma tangtu** needed by each Inner Baduy household. As they commonly say, **kiwari mah pihumaeun gati, reuma kolot gati jasa, pasini reuma sering jasa** ('today, it is not easy to find fallowed lands for swiddening, because of lack of mature forest, while conflicting claims (**pasini**) between farmers to fallowed land are common').

Unlike the three **huma** types located in fixed places, each Inner Baduy household also has rights to cultivate upland rice (**huma**) by felling mature secondary forest (**reuma kolot**) in different places, and by planting in one or two successive years. Moreover, fallow land is not owned permanently and only perennial crops are inherited. Land is considered to be a 'deposited good' (**barang titipan**) from their ancestors. As a result, land must be carefully managed without the use of hoes, chemical fertilizers, pesticides or commercial plantation crops. Originally, after harvesting rice and other annual crops, fallowed land could be cultivated by anyone, but with priority given to the previous users. Such rights disappear if rice is

harvested and the land returned to fallow. Therefore, each household usually moves from one hill to another to obtain fallowed land of sufficient maturity for swiddening. Certain hills can be cultivated with upland rice for between 3 and 5 years depending on the size of the hill (Figure 5.2).

At the beginning of the agricultural cycle, secondary forest is surveyed by each household to find an appropriate place for swiddening. Nowadays, however, many hills are unavailable because they are occupied by other households. When this is the case, a household wishing to farm in the area, has to obtain prior permission from the former cultivator. If such **reuma** are not being farmed in the next season, the land can be used by other farmers for one or two years. However, some perennial crops, such as fruits and others providing building materials, continue to be the property of the household which first cut the forest. But in many cases, in order to maintain a good relationship between the new and the former cultivator, the produce is commonly shared.

Historically, **reuma** belonging to or claimed by certain households had been continuously farmed for a long time by the same household and planted with various perennial crops. According to **pikukuh** such land cannot be inherited because it is communal and sacred (**tanah larangan**). Some perennial crops can be inherited equally among children irrespective of sex, once a payment has been made for the cost of the funeral.In many cases, however, it is the



I, II, III, IV, = First year, Second year, Third year, and Fourth year plot
A, B, C, = Annually recultivated land
→ → → = Direction of movement

Figure 5.2. Pattern of swidden use, showing arrangement of successive overlapping plots on a single hill

yields of perennial crops rather than the trees themselves which are divided between the children because the number of trees is too small.In addition, rice stored in barns for between 10 and 90 years, is also commonly inherited equally between children.

Today, most of the hills of Inner Baduy, in Cibeo, Cikartawarna and Cikeusik, have been claimed by households, and these households have priority in harvesting perennial crops and in their inheritance. Occasionally such land is loaned to close relatives or friends. Because of this close relationship between households and hills, toponyms often incorporate family names. For example, the hill of Blok Kaweni or Gunung Patikesur, in the northern part Cibeo, near the border between Inner and Outer Baduy, is also known as blok Kaweni of Ayah Antiwin, because this area is usually farmed by Ayah Antiwin and his family. Ayah Antiwin obtained the land from his parents, called **reuma ti wongatua**, and has rarely had to move to other hills. Only occasionally has he and his family moved to other hills or places, as when borrowing **reuma** from a close relative or friend, or conversely when his fallowed land has been borrowed. Ayah Antiwin returns to his own hill when his old swidden sites are again available. Through loan, therefore, households have access to other fallow land when they need it.

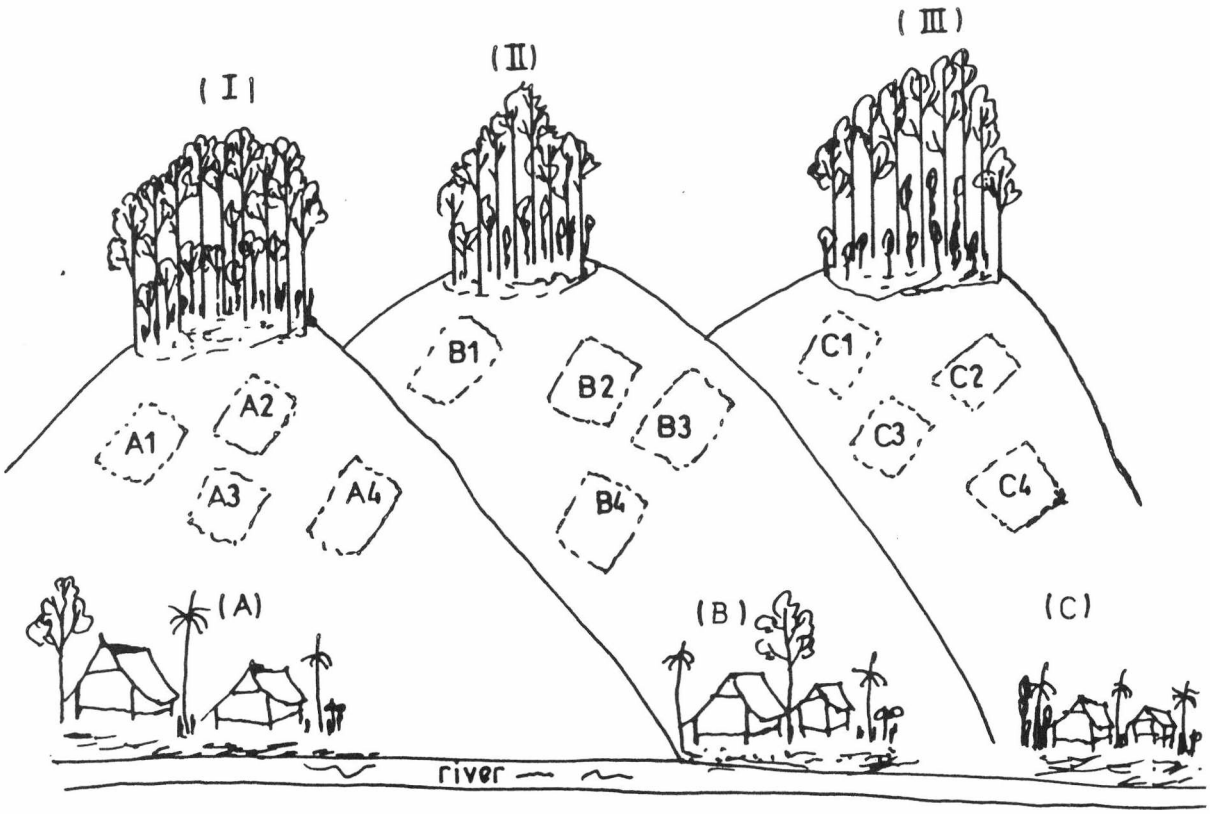
Access to land has tended to be a serious problem in Inner Baduy, now that land is no longer abundant in the area, and when practising swidden in other places in outer

Baduy or in the non Baduy area is prohibited by their **pikukuh**.

Unlike Inner Baduy, swidden lands in Outer Baduy are mainly of two types: (1) **huma jaro dangka**, also called **huma tauladan** (**tauladan**=exemplary; model swidden plots belonging to **Jaro Dangka** family), and **huma panamping** (swiddens belonging to each Outer Baduy household). The **huma jaro dangka** are considered to be sacred, and have a similar function to that of the **huma serang** in Inner Baduy. They are usually found only in hamlets where the Jaro Dangka live, such as Kaduketug. Most **huma jaro dangka** are located in **dangka** areas, such as in Cibengkung, Panyaweuyan and Garehong.

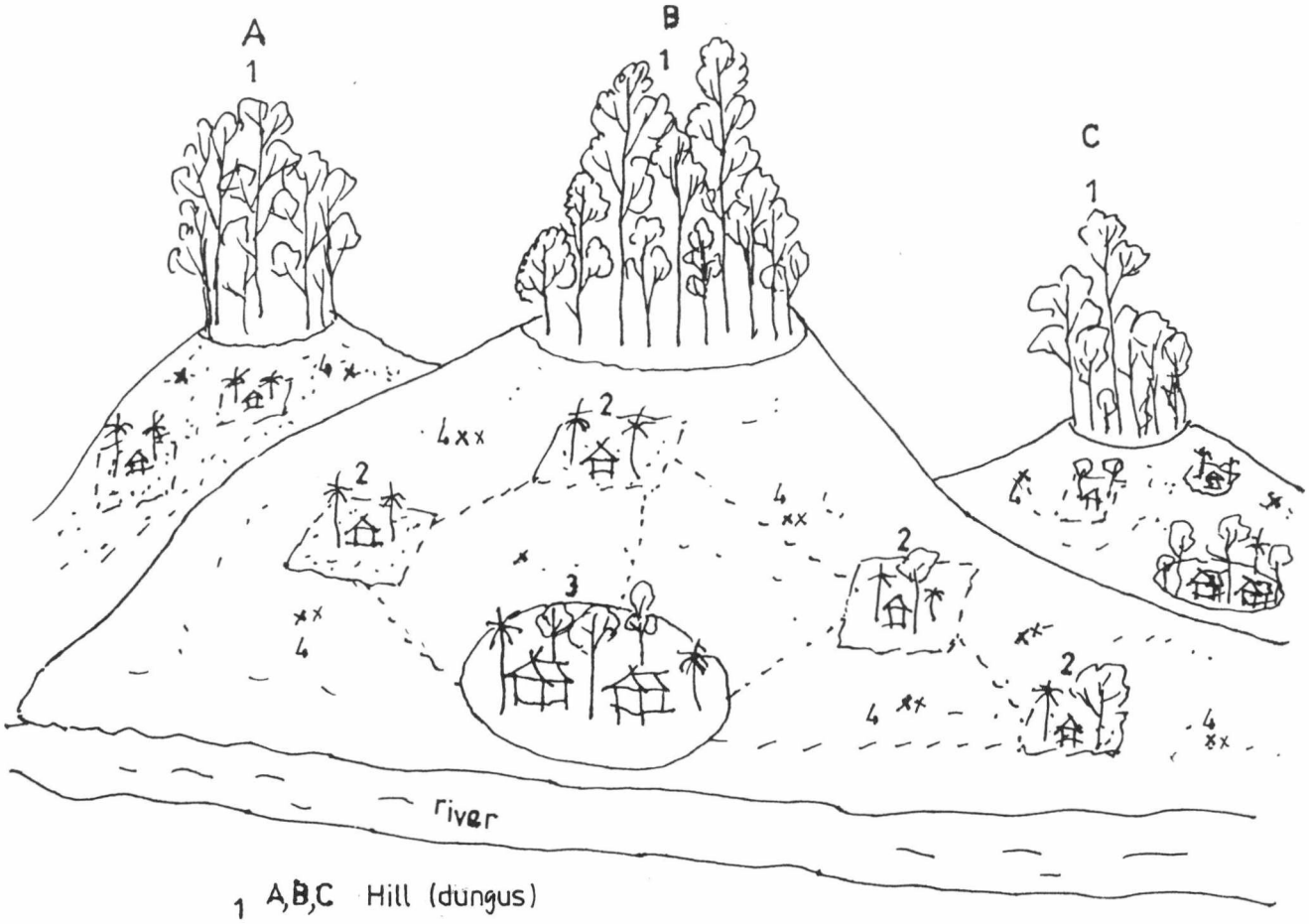
In the past, each swidden was owned by Outer Baduy living in the hamlet closest to the hill on which it was located. For instance, swidden fields on hill I, hill II and hill III, would mainly belong to people from hamlet A, hamlet B, and hamlet C, respectively (Figure 5.3). Each hill is usually divided into three zones. The valley is used for settlement encircled by **dukuh lembur**, near water sources, such as rivers. Above the settlement, are located swidden plots, **reuma** areas and mixed gardens, usually overlapping, while on the top of the hill, the protected mature forest is found (Figure 5.4).

When old Baduy hamlets become crowded they are usually extended into new small satellite hamlets (**babakan**), located near the old hamlet. For example, Gajeboh, Kaduketug, and Karahkal hamlets were divided into smaller



A1-A4, B1-B4, and C1-C4 indicate swidden plots owned by families living in hamlets A, B and C respectively

Figure 5.3. Pattern of swidden plots for three hypothetical hamlets



1 A,B,C Hill (dungus)

Mature Forest (leuweung kolot)

Swidden (huma)

Hamlet Forest (dukuh lembur)

Fallowed land (reuma)

---- Footpath (jalan satapak)

Figure 5.4. Agricultural land use in Outer Baduy (not to scale)

hamlets: Babakan Marengo and Babakan Balingbin; Babakan Kaduketug and Cigoel; and Kadujangkung, respectively (Figure 5.5). The new hamlets are usually occupied by one core family, accompanied by their close relatives, called **saboronjot** (see Figure 5.6). For example, Ayah Ailin and Jaro Samin, are recognised as two of the main core families in Babakan Marengo and Kadujangkung respectively. This core family has an important role in organising various social activities, such as cooperative labour (viz **rereongan**), labour exchange and collecting traditional agricultural land tax. In addition, Jaro Samin's family has been recognised as a main sponsor in moving from Kadujangkung to the Government Settlement at Gunung Tunggal (Proyek Pemukiman Masyarakat Terasing Baduy).

In the past it was not necessary to pay to obtain a plot of land to construct a house in a new settlement area. Land was considered to belong to the community. In the 1990s, however, when relatives of Ayah Ailin moved from Gajeboh to Babakan Marengo, each of the 17 households, had to pay Rp 25,000 (£ 7.1) to Ayah Ailin's family for a plot of land 8 m x 8 m. This was because the land was bought from a parent in-law of Ayah Ailin for 25 grams of gold. Thus, it can be seen that Outer Baduy land has been commoditised both with respect to acquiring swidden fields and for settlements.

Today, swidden fields on some hills are owned by households living both in nearby hamlets and in distant ones (Figure 5.7). This is because much swidden land has

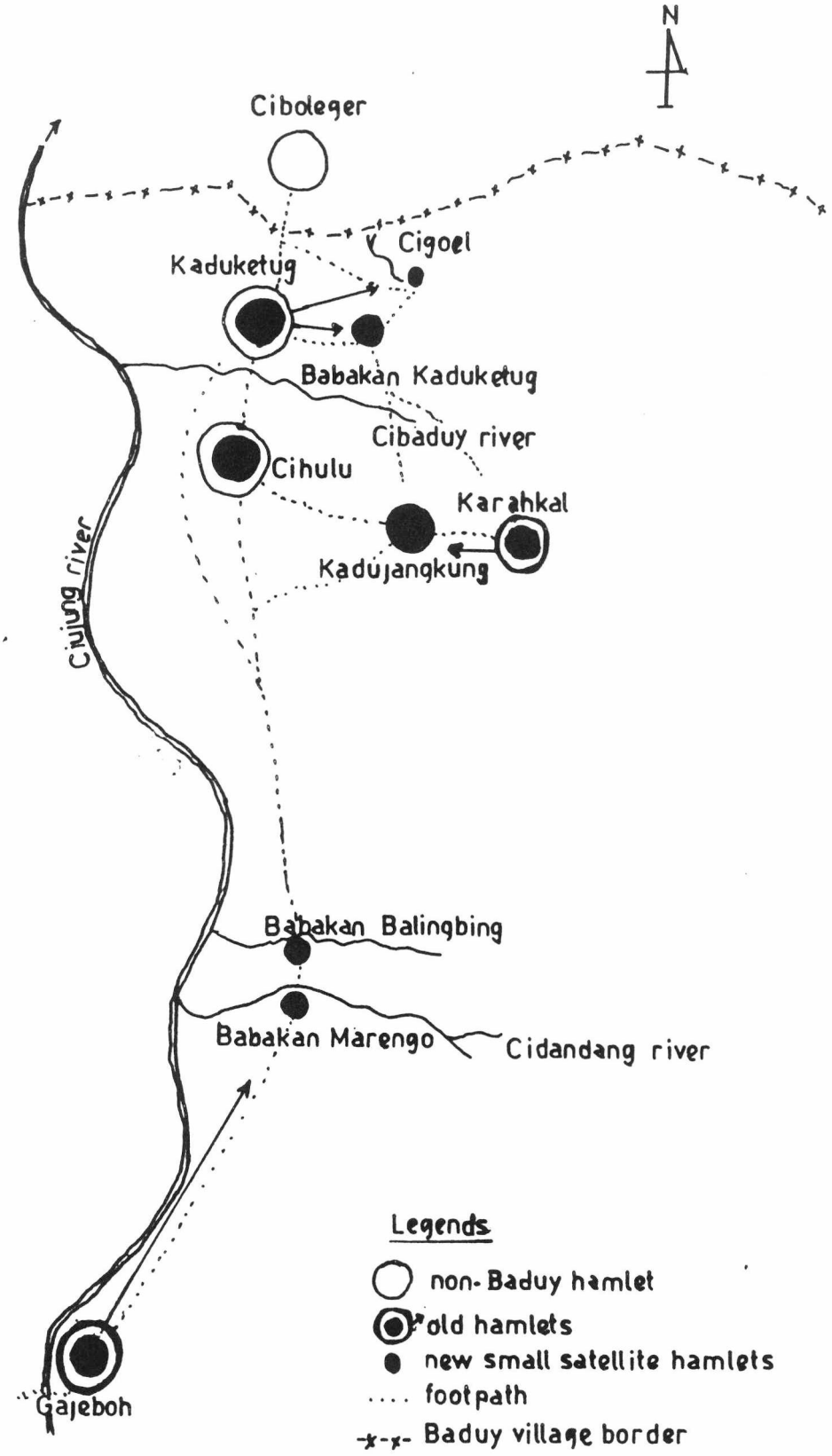


Figure 5.5. Development new small satellite hamlets in Outer Baduy (not to scale)

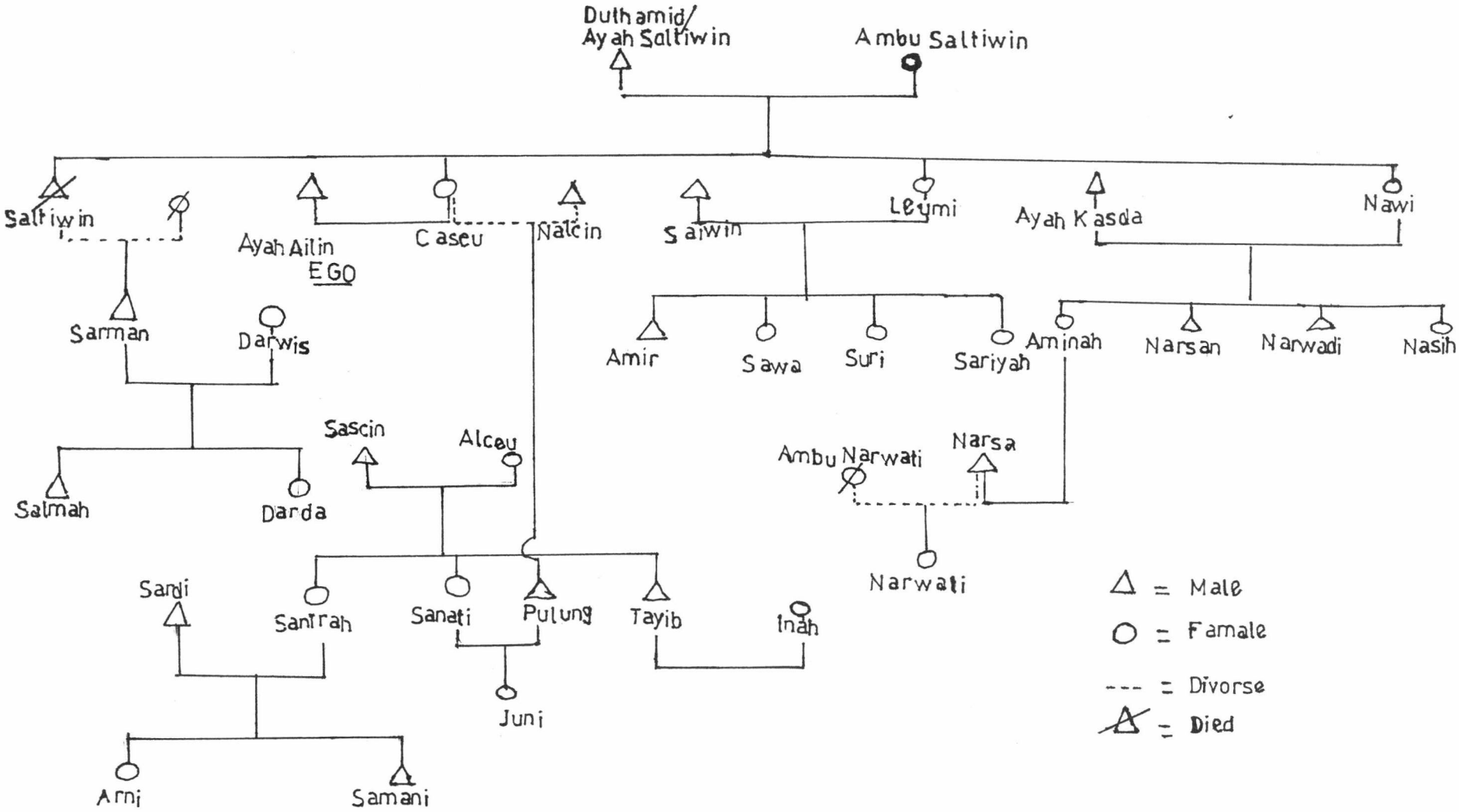
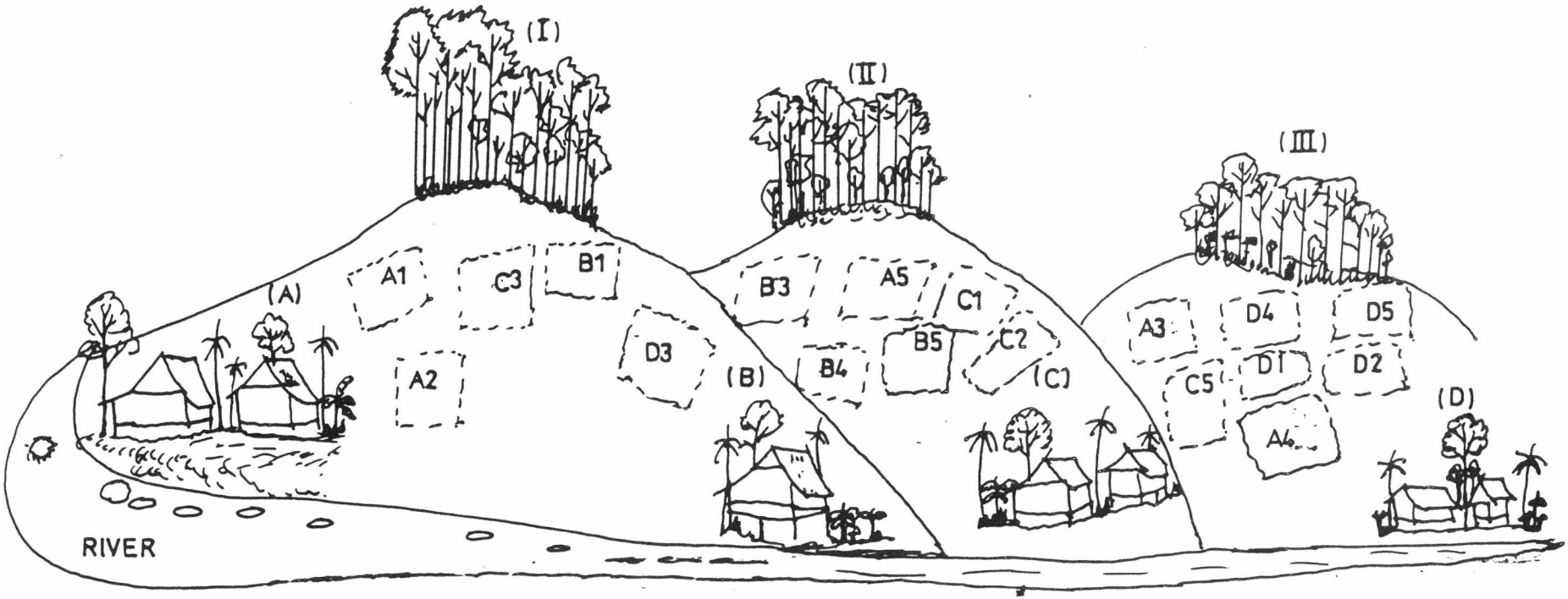


Figure 5.6. Genealogy of residents of a new satellite, Babakan Marengo, mainly a group of descendants (saboronjot) of Dulhamid



A1-A5, B1-B5, C1-C5, and D1-D5 indicate swidden plots owned by families living in hamlets A, B, C, and D respectively

Figure 5.7. Pattern of swidden plots for four hypothetical hamlets

been transferred through inheritance, sale or rent among Outer Baduy living in different hamlets. Thus, despite customary law which requires that land cannot be inherited or sold, land shortage means that it is, in fact, commonly sold. In certain respects, however, ownership rights to land (**hak garapan**) are still treated as if they have been transferred rather then sold, and land is still considered to belong to their ancestor and must be managed properly.

There are 4 ways of transferring land recognised in Outer Baduy: inheritance (**waris**), purchase (**beli**), loan (**pinjam**) and rent (**sewa**).

2.1. Inheritance

Baduy decisions about inheritance are usually taken at the time of death. Swidden rice, cloth, money, fruit trees and land obtained by a couple during marriage (**guna kaya**, or in Javanese, usually **harta gono-gini**) is divided into three: one part for the husband (**hak salaki**), one for a wife (**hak bikang**) and one for their children (**hak anak**). The part for the children is further divided equally, irrespective of sex. However, if the cost of the death rituals is less than one third of the total, the rest is redivided into two parts, for children and the surviving spouse. Similarly, if the funeral costs more than one third of the total, the cost is shared by a surviving spouse and the children. In some cases, if the amount put aside for the funeral is insufficient, fruit trees and swidden land

may have to be mortgaged (**gade**). Trees mortgaged in this way will return to the owner after having been harvested at least once. In addition, if the trees and swidden are insufficiently large to be divided for inheritance purposes, their products may be divided instead (**dibagi bukti**). The land not divided amongst the legitimate heirs (**ahli waris**) is called **gembulan reuma** (if **reuma**) or **gembulan dukuh lembur** (if **dukuh lembur**). Nowadays, because fruit trees and land have been sold or mortgaged in the past without a formal record, conflict has occurred among Outer Baduy.

In the event of a divorce, property, fruit trees and land acquired jointly (**guna kaya**), is usually divided by three: one part for the husband, one part for the wife and one part for the children. However, fruit trees and land inherited by individual parents (**harta bawaan**), still remains with the husband or wife, or returns to each parent.

2.2. Purchase

There are two ways of purchasing swidden land: **jual mutlak** (or **jual lepas**) and **jual gade** (or **gade**). **Jual lepas** means that a seller gives the purchaser absolute rights, while in **jual gade** or **gade** the usufruct right is given for a debt by a land owner and it must be redeemed within a fixed period. Land is usually first offered for sale to close relatives. But if there are no close relatives who want to buy the land it is then offered to other people.

Land is usually bought with cash or gold, and the area of the land is measured in numbers of rice seed bundles[3] (**pocong** or **beungkeut**). If cash is used, the price is fixed in relation to gold (**emas**). Thus buying one hectare of land (**binihan sapuluh** or 10 rice seed bundles) for 25 grams of gold, translates into 721,250 rupiah (£ 206.00 is equivalent to 25 grams of gold). In some cases gold is used directly to purchase land, the purchaser having to first buy the gold in Rangkasbitung.

In the event of a divorce each spouse retains his or her inherited property. If a husband divorces his wife, her father, particularly if his daughter has had no children, will take back any land he may have entrusted to the son in-law, and will take full responsibility for his daughter. If the divorced woman has had children and they want to stay with their mother[4], the land is usually given to his daughter and can be cultivated by his daughter and grand children. Her children will own separate swidden plots, if they marry. Today a formal letter from a village leader via his secretary (**carik**) is commonly provided when purchasing land by **jual mutlak** (see Chapter 4, p. 203). Mortgaging land (**gade**), however, is not usually accompanied by a letter, as it is considered a temporary transaction only. In this case mutual trust is emphasized. Purchase by both

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[3]). It has been estimated that one hectare of land is equivalent to 10 rice seed bundles.

[4]). There is no fixed rule of residence determining where unmarried children should live after their parents divorce. However, children tend to stay with their mother.

jual mutlak and **jual gade** of Baduy land is usually only found among Outer Baduy. Purchase of neighbouring non-Baduy land, however, is usually done by Baduy and non-Baduy.

2.3. Borrowing land

The borrowing of swidden land among Outer Baduy is also found. For example, if someone owns fallowed land (**rema**) in the Baduy area which is ready to be recultivated but at the same time, he is still renting swidden plot in the non-Baduy area. Therefore, his land in the Baduy area is normally borrowed by his close relative who more prefers to swidden in his village instead of renting land in non-Baduy, because it allows him to tap aren palms trees in his hamlet. This job cannot be abandoned as it provides considerable benefits. Therefore, he borrows a swidden plot from a relative who prefers swiddening in non Baduy area rather than in his own hamlet. This may be for one or two years and is without payment.

2.4. Renting

During the 1930s, sharecropping, rental and mortgaging agreements were not a recognised part of the swidden cultivation system (Kools, 1935; Soepomo, 1982 (1933); Scheltema 1985 (1931). According to A. Coarts, reporting in 1927 (Scheltema 1985 (1931): 189-190), each household of south Banten farmers owned swidden fields of between 1 and

2 **bau** (one bau 7097,5 sq metres or 0.7 hectare) and very commonly of only 0.5 **bau**. The land was usually farmed by household labour, the labour of persons living in the same house. Land rent and share cropping were not recognised, because each household could farm by itself. In this situation, there were no great extremes of wealth on poverty, each family owning the same (**sama rata sama rasa**). Most cultivation took place on the land of their own hamlet (**ampian**). Where it was conducted on the land of other hamlets, it was called **ngadon** or **nganjor**, and they were required to pay the village leader (**jaro**) 5 rice bundles (the **pakukusut**). Land rent and share cropping, however, were not recognised (Soepomo, 1982 (1933): 121-122).

Over the last two decades most Outer Baduy have practised swiddening in neighbouring non-Baduy areas because there was insufficient Baduy land to support the population. Many neighbouring non-Baduy uplands in the sub-district of Leuwidamar, Gunung Kancana, and Sajira have been used for swiddening by Outer Baduy (see Map 2.4). However, for cosmographic reasons, Outer Baduy have been prohibited from cultivating land to the south of the sacred land of Inner Baduy. Therefore, non-Baduy land in this area, such as the sub-districts of Malingping, Pangarangan, and Cikotok have never been used by Outer Baduy.

In the last two decades Outer Baduy have intensified their cultivation in neighbouring non-Baduy areas through tenancy agreements with non-Baduy. There are various ways of obtaining swidden fields in non-Baduy areas. Firstly,

the land owner may ask Outer Baduy who have already temporarily stayed (**nganjor**) in their hamlet whether they or their friend want to cultivate the land. In some cases, they also visit their friends in Outer Baduy hamlets to offer them land on leasehold. Secondly, Outer Baduy seek land in non-Baduy areas by asking their close relatives or friends who have already established temporary swiddens in such areas. Thirdly, Outer Baduy conduct their own surveys to find appropriate places for swiddening, and willing land owners. Kinship and friendship links play an important role in obtaining swidden land in non-Baduy areas. For instance, if an individual obtains a piece of land in a non-Baduy area that is too large for his own needs, that which is surplus will be offered to close relatives or friends. In addition, if they acquire information concerning available land, this is passed on to close relatives or friends. As a result, Baduy swidden plots and farmhouses in non-Baduy areas are usually clusters of between 3 and 5 plots belonging to close relatives and friends. This clustering is important, also, for maintaining security if any individual has problems, and this may include the loan of land.

There are three forms of tenancy for Outer Baduy in non-Baduy areas: they may contract to provide in payment for land, they may enter share-cropping arrangements, and they may rent in cash or gold.

2.5. Labour in payment for land

A land owner may allow Outer Baduy to cultivate upland rice (**ngahuma**) on his land in return for the use of his labour in planting perennial cash crops, such as clove (in 1980s or before), rubber and Albizzia.

As mentioned in Chapter 4 (see pp. 187-193) prior to the 1950s many uplands adjacent Baduy areas, such as Desa Cisimeut, Bojong Menteng and Parakanbeusi, were dominated by swidden agriculture, practised by a mixture of both Baduy and non-Baduy people. At that time, the uplands were freely accessible to Baduy. They practised swidden agriculture in widely-dispersed scattered plots. According to non-Baduy, Outer Baduy swidden agriculture was rather different from that of non-Baduy. It was noticeable that Outer Baduy swiddens produced good crops of rice, while non-Baduy swiddens produced poor crops of rice. As a result, the Baduy were sometimes accused of practising black magic, although some others acknowledged that Baduy success was a result of their industriousness, particularly in weeding. This industriousness is reflected in the comment of one non-Baduy resident: **Urang Baduy mah gati jasa di ngahuma** ('Baduy engage deeply in upland rice farming and it is done by working properly').

In the late 1950s, when rubber was freely planted in swidden fields, most uplands in the neighbouring non-Baduy area grew this crop. Rubber, however, is strongly prohibited in both Inner and Outer Baduy areas. Over the

last forty years most non-Baduy have stopped practising swidden cultivation and concentrated on the cultivation of rubber on old swidden lands, or have shifted to wet rice cultivation. However, planting rubber trees in swidden fields required labour which non-Baduy could not supply themselves. The situation was expressed as follows by an Outer Baduy informant:

> Baheula mah ngahuma pacorok bae jeung urang landeuh. Mimiti tahun akhir 1950an urang landeuh areureun ngahuma, ganti ngarebon. Pokna teh, kop tah harumaan, kami mah henteu butuh ku parena, tapi hayang nyieun kebon. Jadi sabenerna mah kebon-kebon urang landeuh teh meunang ngagarawean urang tonggoh.
>
> Which can be translated as:
>
> In the past swidden cultivation was practised by both Outer Baduy and lowlanders (**urang landeuh**). In the late 1950s the lowland people stopped swidden cultivation and began to garden (**ngebon**). Their land was usually offered to Outer Baduy, by saying 'please cultivate my land with rice (**pare**), and the yield can be harvested for yourself. I do not need the rice, but in return I wish to make a rubber garden (**kebon karet**)'. So, most lowlander gardens (**kebon urang landeuh**) were established using upland labour (i.e. that of Outer Baduy).

This established a kind of patron-client relationship with neighbouring non-Baduy, important in establishing rubber gardens. The land owner acquired cheap labour from Outer Baduy who in return acquired swidden land to cultivate upland rice.

One of my Outer Baduy informants, Jahim from Karahkal hamlet, mentioned that between the 1960s and the 1970s, he became a client to three non-Baduy patrons in Cisimeut. He spent about 7 years with each person, more than 20 years in

total providing labour. In the 1970s, for example, he was asked by the first patron, Jaro Sabet, to plant rubber trees on 3 hectares of secondary forest (**reuma**) which had been fallowed for 5 years. The land owner had acquired seeds from natural nursery-grown seedlings called **bibit karet jadah** from neighbouring gardens. This seed was sown along the rows of the rice about 2 m x 5 m or 10 m2 (Figure 5.8). The standard regulation for state rubber plantation seeds is that they must be grown further apart, namely 3 m x 6 m or 18 m2, to avoid tree competition. One hectare was planted with about 1000 rubber trees, although only about 600 trees per hectare survived.

Rubber gardens are harvested for the first time 7 years after planting, and produce latex for more than 40 years. According to Jaro Sabet, his garden provided him with a net profit of about 1,820,000 rupiah (£ 520.00) per hectare per year; 1 hectare producing 6 wet rubber sheets or about 12 kg per day. After drying the sheets, they weigh 6 kg on average. Rubber gardens are usually tapped for only 8 months a year due to difficulties of production during the rainy season and decreasing latex yield. In an 8 month period or 240 days can yield 6 kg/a day, or 1,440 kg of dry rubber sheets. These dry sheets are sold in Rangkasbitung for about 2,700 rupiah/kg, yielding 3,888,000 in total, less the costs (of fire wood for drying, vinegar used as a solidifying agent, transportation, weeding and tapping). Finally this profit must be divided into two parts to pay for labour at a rate of 182,000 rupiah per hectare per

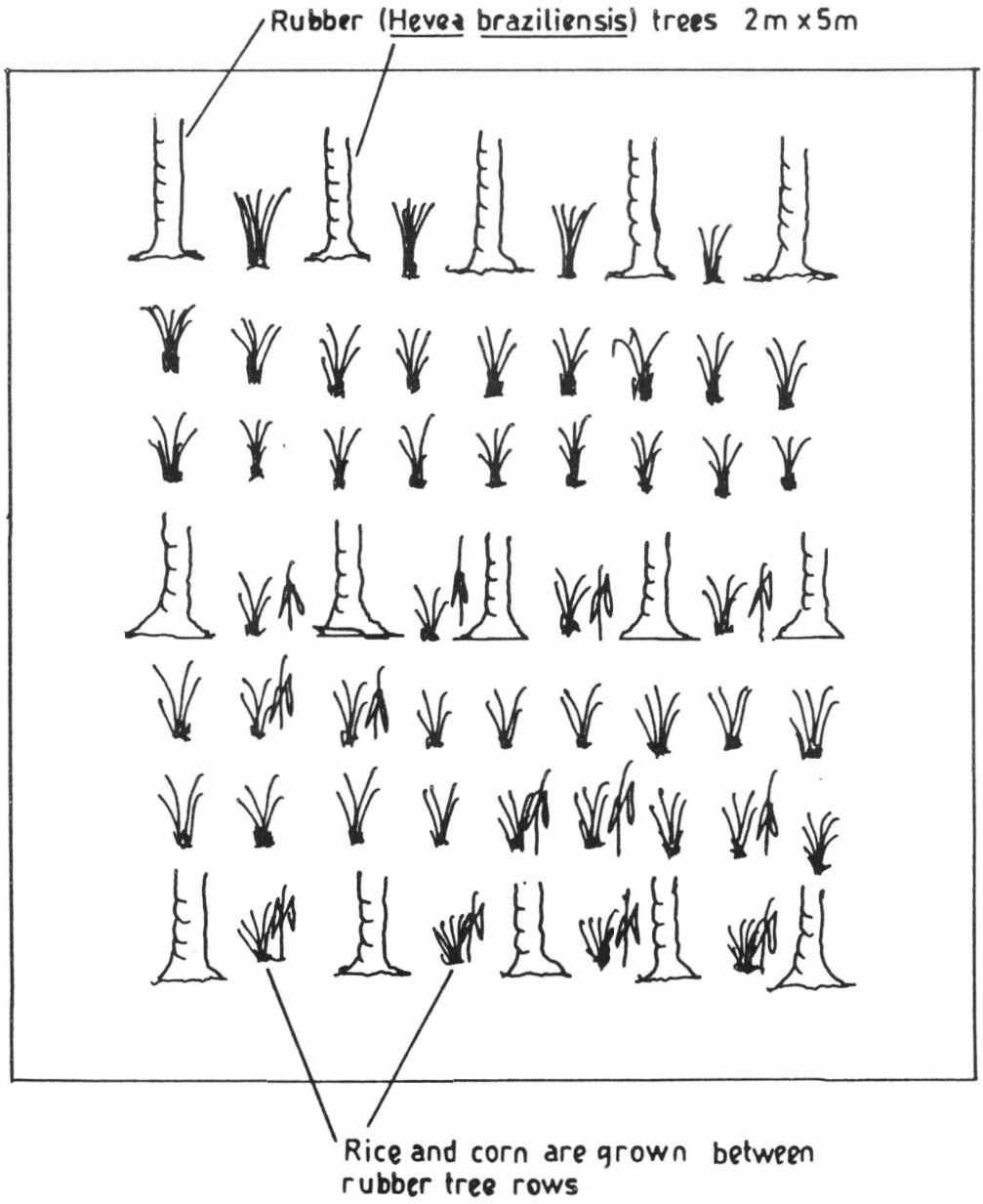

Figure 5·8· Swidden plot planted with rice mixed rubber trees (tumpang sari)

year. However, in the 1980s some rubber gardens were converted to clove because at that time the market price of clove was high. By comparison, a one hectare clove garden is usually planted with 8 m x 8 m = 64 m2 = 156 trees, or about 100 trees per hectare. After 7 years this yields about 10 kg/tree, namely 1,000. In 1985 cloves were usually sold at 8,000 rupiah per kg, 1,000 kg, therefore yielding 8,000,000 rupiah. The net profit must take into account the costs of weeding, harvesting, selecting and drying fruits over 7 years, approximately 4.064.000 rupiah. The net annual profit is, therefore, 8,000,000 rupiah - 4,064,000 rupiah = 3.936.000.00 rupiah (£ 1,125.00). However, the market price of clove decreased during the 1990s and this crop now provides poor profit compared with another new perennial crop, Albizzia or **kalabise** (Paraserianthes falcataria). Thus, in recent years many clove and rubber gardens have been converted to Albizzia. In establishing rubber, clove and Albizzia gardens in non-Baduy areas, Outer Baduy labour has mainly been used. For example, the rubber garden of Jaro Sabet was established by Jahim in the 1970s. By the end of 1995, some of the 300 or so rubber trees, or 1.4 hectares, were cut to plant Albizzia. The rubber trees were sold for 800,000 rupiah (£ 229.00) to a timber middleman in Cisimeut, who sold them on to the brick industry in Cikarang Bekasi, were they where used for fire wood.

This land has been cultivated by two Outer Baduy, Ayah Narti and his daughters family. They have been allowed to

cultivate upland rice without paying a cash rent, in return for providing labour to plant Albizzia trees. The land was first planted with rice, and after three or four weeks, 800 Albizzia seedlings were planted along the rows of the rice. Ayah Narti and his son in-law constructed a bamboo fence around the plot, planted Albizzia and weeded the field. In addition, after harvesting the rice they pay 5 rice bundles by ways of **pakukusut** to the village leaders. According to some informants, one hectare of Albizzia grown in this way yields a profit of about 7,053,000 rupiah (£ 20,515) over 5 years, based on the price of Albizzia wood at the end of 1995. One hectare is usually planted with 800 trees, and after 5 years each tree can be sold for 10,000 rupiah to local middlemen or 8,000,000 rupiah for all 800 trees. The cost of buying seeds and of weeding comes to about 947,000 rupiah, so the total net benefit to be achieved during 5-7 years is about 7,053,000 rupiah/hectare.

After harvesting the Albizzia this land is planted with rice by Ayah Narti and his son in-law for two years. After two years, before leaving this place, they have to weed the field which has been grown by young Albizzia trees. According to Jaro Sabet, he can get more profit by renting his land to Outer Baduy in return for labour, than by renting by cash or through share cropping. Jaro Sabet's statement is confirmed by another landlord, Ajum from Nayagati village, who has a garden in Cipeureu, Dangdang area. His garden of about 0.25 hectares is planted with various crops, such as durian (Durio zibethinus), **pisitan**

(Lansium domesticum), **kacapi** (Sandoricum koetjape), coconut (Cocos nusifera), clove (Syzigium aromaticum), locus bean (Parkia speciosa), rambutan (Nephelium lappaceum), **jengkol** (Pithecelloboium jeringa), coffee (Coffea arabica), jack-fruit (Artocarpus heterophylus), and banana (Musa paradisiaca), and was rented by Pulung from Batara hamlet, Outer Baduy during 1994/1995. Pulung rented land by providing labour for weeding the garden. The land was planted with about 3 rice seed bundles and yielded 60 rice bundles. Had he decided to sharecrop, the land owner would have received one fifth of 60 rice bundles (12 rice bundles) which is equal to 36 litres of unhusked rice or 36 litres x 600 rupiah= 21,600 rupiah. However, because he had agreed to weed the garden, the labour value was higher than that of sharecropping. He calculated that if the land was weeded by hired labour it would require 20 working days or 20 **jongjonan** (working only half day) and the provision of meals, coffee and cigarettes. For one man day working **jongjonan** the cost is usually 2000 rupiah without providing a meal, snacks, coffee and cigarettes. Therefore, 0.25 hectares would cost 20 days x 2,000 rupiahs=40,000 rupiahs, less food; that is more than the price of 12 rice bundles (21,600.00 rupiahs) for share cropping.

Renting land in return for labour is considered to provide more benefits for land owners. For Outer Baduy, although selling their labour and renting land are expensive, it cannot be avoided if they wish to rely on swidden cultivation as their main household income and

uphold their traditional Baduy identity.

Some Outer Baduy also obtain land by providing labour on state forestry land. For example, in 1995/1996, 26 households, mainly from Karahkal and Sorokokod, settled in 23 farm houses (**saung**) and cultivated upland rice on 50 hectares in Leuweung Podol belonging to Perum Perhutani (the state forestry corporation). They mainly provided labour for planting and looking after **mahoni** (Switenia mahagony). Mahoni trees were planted mixed with rice (**tumpang sari**), 6 m x 3 m apart. After two years, they are required to move on to other blocks. However, before leaving they must weed the plot which has been planted with mahoni trees.

2.6. Sharecropping

There are two distinctive types of sharecropping in Outer Baduy: **sapuluh hiji** and **sapuluh dua. Sapuluh hiji** derives from **sapuluh** and **hiji**, meaning ten and one; while **sapuluh dua** means ten and two. These kinds of sharecropping are called **merpuluh** (one tenth) and **merlima** (one fifth) in other West Javanese villages, but are not widely recognised in other areas. Other sharecropping arrangements which divide crop production by half between tenant and landlord (**nengah** in Sundanese or **maron** in Javanese), provide one quarter of the crop to the tenant (**mrapat**), or provide one-third of the crop for the tenant (**mertelu**), are more common in wet rice cultivating areas of West, Central and East

Java (Hardjono, 1993: 113-126; White and Wiradi, 1989: 282-291; Igarashi, 1985: 24-25; Scheltema, 1985 (1931): 143-196; van der Kroef, 1984: 156-157; Utami and Ihalauw, 1973: 51). Cultivation of annual non rice cultigens collectively called **palawija** in West Java is usually according to the **mertelu** arrangement (Hardjono, 1993: 121), while **maro** or **paron** are widely practised by more traditional people, such as the Tengger people or Wong Tengger, in the East Javanese uplands (Hefner, 1990: 130).

In Outer Baduy **sapuluh hiji** or **sapuluh dua** sharecropping, the non-Baduy land owner allows an Outer Baduy to cultivate his land in return for a share of swidden rice production calculated on the basis of the total harvested yield. In addition, for each swidden plot, a tenant has to give 5 rice bundles as **pakukusut** to a official leader. A simple calculation to divide the harvest involves setting aside one or two rice bundles for the landlord for every ten rice bundles for the tenant. Therefore, if a tenant harvests 100 rice bundles, 10 or 20 must be given to the landlord. All farm inputs, such as rice seeds and labour are provided by a tenant, the land owner only providing the land. In a few cases, the tenant may also provide bamboo and **kiray** leaves (Metroxylon sagu) to fence swidden fields and to build a farm house.

According to some informants, the **sapuluh hiji** arrangement is also used on abandoned rubber plantations, or on land belonging to the state forestry corporation, when a land owners share must be paid to the plantation or

forestry foreman (**mandor**). In addition, Outer Baduy sometimes sharecrop non-Baduy uplands using **sapuluh hiji**, where landlords are known as 'wisdom landlords' (**jelema bageur** or **bijaksana**) or where there has been a good relationship with a landlord. However, if Outer Baduy are unable to obtain land in this way, they rent by sharecropping **sapuluh dua**, paying with cash or gold.

2.7. Renting land with cash or gold

Today, a common form of tenancy in the Outer Baduy area involves paying rent in cash (**bayar ku duit**) or gold (**bayar ku emas**). In this form of tenure, the landowner allows an Outer Baduy tenant to use his land for swiddening for one or two years, and in return the tenant must pay rent in money or gold. The rental is usually paid before the land is cultivated, in exchange for a formal letter from an official village officer or from the land owner. In some cases informal rental agreements have been broken by landowners as well as tenants. For instance, according to one informant, a claimed 3 hectares (but more accurately 2 hectares) of former rubber plantation belonging to **Arsad**, in Kadukesur, Cisimeut village was rented for 250,000.00 rupiah (£71.00) for 3 years by Ayah Ailin from Babakan Marengo in 1994/1995. Because this land was considered too large for one household, it was sub-rented to another 2 households instead, Ayah Ailin's step son (Pulung) and his

younger brother in-law (Ayah Kasda) [see Figure 5.7], who paid him 80,000.00 and 90, 000.00 rupiah respectively. The land, however, was cultivated by them for only one year, and after the rice harvest the land was taken back by the owner, who planted manioc and sweet potatoes without returning the rent paid for the remaining two years.

Another example comes from the experience of a landlord from Cisimeut, Haji Sayuti, who owns an abandoned rubber garden in Cepak Ranji, Nayagati. He leased one hectare of abandoned rubber land to an Outer Baduy household from Gajeboh hamlet, who paid 10 grams of gold for one year in 1993/1994. Before the land was cultivated the tenant paid 5 grams of gold and promised that another 5 grams would be paid after the rice harvest. However, when the swidden had been planted with rice, the tenant went to Indramayu to find an off-farm job selling precious stones (**batu perhiasan**) with a friend from town. In his absence, the swidden was managed by his wife and children. After the rice harvest, although the entire rice production was brought to her hamlet in Gajeboh, the rent owed was not paid.

3. Household and exchange labour

In farming upland swidden rice Baduy rely on household, exchange, cooperative and wage labour. Of these, the most common involves the use of household labour, namely the labour of husbands, wives and children, and in

a few cases also extended family members, such as daughters and sons in-law. Sons and daughters over the age of 5 years are intensively involved, since unlike most other Sundanese, they do not attend formal school.

The division of labour follows age and sex: jobs requiring physical strength are done by men, whereas some jobs needing less physical strength but requiring conscientiousness are done by women and old people. Female labour is linked to veneration of the rice goddess, Nyi Pohaci, who demands female handling. Male hands are regarded as 'hot', and believed to make the rice goddess unfavourably disposed. On the whole, site selection (**narawas**), reconfirmation of site (**nukuh**), pest control (**ngubaran pare**), and construction of the farm house (**saung**) are undertaken by husband and sons, whereas selecting rice seed (**milih binih**), sowing (**minih**), transporting the rice to and from the rice barn (**nguyang**), and pounding (**nutu**), are undertaken by wives and daughters.

The size of Inner Baduy swidden plots is influenced mostly by size of the labour force available and the requirements of the family. As a result, larger plots tend to be cultivated by big families and small plots by small families. In Outer Baduy, however, the size of plots is influenced by household labour and capital available, because purchase, renting and sharecropping of land are common.

Of all farming practices, most time and effort is invested in swiddening. Working hours are usually from

early morning, between 6.00 and 7.00 hours to between 17.00 and 18.00 hours, with a special break for lunch about midday (between 12.00 and 13.00 hours). This period is called **gawe sapoe** (the labour of one day). At other times the working day may only last half a day, from early morning to midday, about 12.00 o'clock. This is called **gawe sajongjonan**. On Sundays, Tuesdays, Fridays and at the end of each month, on **tanggal tilupuluhna** (the 30th day of the Baduy calendar month), Baduy are prohibited from working in swiddens. These customs are upheld most strictly in Inner Baduy.

The nuclear family (**keluarga**) is the most important unit in socioeconomic terms. Outside the nuclear family, the Baduy household attaches considerable importance to close relatives within an ego-centred bilateral group, and to other people who trace common descent in the same hamlet (**saboronjot**) [Figure 5.6). Within these groups labour is exchanged freely, particularly during the peaks of the labour cycle, such as when cutting shrubby vegetation (**nyacar**), felling trees (**nuar**), planting rice (**ngaseuk**), weeding (**ngored**) and harvesting rice (**dibuat** or **panen**).

This kind of labour exchange is called **liliuran**, one household relying on the labour of other households during the peaks of its labour cycle, and in return supplying labour to those households when they require it. In this type of labour exchange, the value of men's, women's, and children's labour is considered the same. For instance, if a family planting rice are helped by a man from another

household, it is permissible to repay the labour with that of a woman or child. In this arrangement number of persons and days is more important than age and gender.

Households engaged in labour exchange are expected to provide lunch and supply other food for evening consumption, particularly for work ending late afternoon. In addition, when planting rice (**ngaseuk**), one of the close relatives who is assisting is usually also asked to help cook rice and provide fish. In return, he or she will be assisted to cook rice and provided with fish when on the receiving end of the labour exchange.

3.1. Labour cooperation

Cooperative labour is widely recognised in rice cultivation, particularly in wet rice cultivation (sawah), at times when there is a high demand for labour, such as when repairing irrigation works. For example, in the past, before beginning the annual round of wet rice cultivation in West Java, a special ritual called **sedekah** or **salametan** was performed by each household, or jointly with other households, at the **hulu wotan**[5] (sluice), under a big tree or by a grave considered to have propitious spiritual

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[5]). **Hulu wotan** refers to a place where water flow from a river joins wet rice plots. **Hulu** is usually called **sirah** (head) in polite Sundanese. Therefore, **hulu wotan** is also called **sirah cai** (**cai**=water; water head), the water being considered as a man who is sleeping with his feet laid in different directions, meaning water flowing in many directions. **Hulu** is cognate with **ulu**, hence, the specialist responsible for distributing water in the village is called **mantri ulu** (Mustapa, 1985 (1913): 84).

powers (Mustapa, 1985 (1913): 84-85). If a ritual was performed at the **hulu wotan**, a meal consisting of **nasi tumpeng** (a ceremonial dish of yellow rice served in a cone shape) and boiled vegetables, such as squash (**waluh**)[6], were brought in procession. Special prayers (**do'a**) were spoken to the spirit guarding (**nungguan**) the **hulu wotan**, the queen spirit (**ratu siluman**), the souls of their ancestor (**para arwah leluhur**), the pious leader (**parawali**) and the prophet Sulaeman. In addition, another prayer was said to ward off misfortune, **puter bumi** and **naktu dinur**, led by a ritual specialist. The ritual was usually closed by distributing food to each participant, which was consumed communally by the household members. Any household performing ritual in the house, had to first agree the time with others in the same or other hamlets. The time to begin wet rice cultivation was based on the appearance of the pleiades, **bentang wuluku**, at dawn, and once agreed by community members, the command (**perintah desa**) was given by a village leader. On this basis cooperative work described by Koentjaraningrat (1967b: 261) as **gotong royong**[7] began, involving preparation of wet rice fields, digging water

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[6]). **Waluh** (squash) were previously used out of respect for the prophet Sulaeman (Nabi Sulaeman), the seeds being considered to have originated from his teeth (Mustapa, 1985 (1913): 85).

[7]). According to Koentjaraningrat (1967b) **gotong royong** or 'mutual aid' refers to a complex of institutions that have been adopted by the Indonesian state as one of the basic features of its society. In addition to mutual aid, **gotong royong** also means 'rendering aid to the community for the common benefit'. It is now widely accepted that in adapting the concept of **gotong royong** in the service of the state, there has been a certain amount of what we would now describe as the 'invention of tradition'.

channels, repairing dykes, arranging water distribution to each plots, and so on. Once water had been distributed equally between each plots, the planting of rice for each household could begin, starting with land preparation such as hoeing, ploughing, and harrowing.

Like Sundanese farmers in the past, today, before starting to cultivate upland rice plots, Baduy perform a special ritual focused on communal swiddens (**huma serang**). Before performing this ritual, the new month and the starting point of the swidden cycle must be determined. The beginning of the swidden cycle as well as the new month of the Baduy calendar (**tunggul tahun**) is usually signalled by harvesting the **huma serang** and the first tasting (**nganyaran**) of the new rice in a special ceremony called **kawalu**, led by a **puun**.

All Inner and Outer Baduy cooperate in planting **huma serang**. This ritual is very important for them, symbolising solidarity between community members through synchronising the annual swidden cultivation cycle. Outer Baduy living in scattered hamlets usually come to an Inner Baduy hamlet to join in the ritual planting of **huma serang**. Each Outer Baduy hamlet is considered to be subordinate to the authority of a particular **puun**, and their members join the ritual organised by one of the three **puun** who is their traditional source of authority. Most Outer Baduy living in Kaduketug, Cihulu, Babakan Marengo and Gajeboh usually join with Puun Cibeo, because they recognise descent (**katurunan**) from Cibeo. Similarly, they join the annual planting of

huma jaro dangka in the Outer Baduy or in the non-Baduy area, coordinated by a **jaro dangka** under the authority of Cibeo (namely, Dangka Cihulu, Dangka Cihandam, and Dangka Kaduketug).

From the early morning of the day scheduled for planting rice in the **huma serang** (Cibeo), or one day before, Outer Baduy arrive from various hamlets subject to the authority of Puun Cibeo. They usually wear formal dress and bring food. The ritual begins in the evening around 19.00 hours and goes on until about 4.30 the following morning by performing **angklung**[8] music. During the evening an **angklung** group from Gajeboh, usually arrives and joins in. At that time, a basket of rice seed is carried from the Girang Seurat's house and placed in the open space. At about 6.00 o'clock in the morning both Inner and Outer Baduy participants come to the **huma serang**. Between 500 and 1000 men, women and children from both Cibeo and Outer Baduy were involved in the ritual conducted in 1995.

Around midday, ritual finishes and everyone goes home, except those religious leader performing the closing rituals. I shall return to this ritual in a more detail in chapter 6 pp. 281-294.

Further cooperative work in **huma serang** usually involves cutting shrubs and trees (**nyacar** and **nuar**), and second weeding (**ngored ngarambas**). However, because the

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[8]). **Angklung** music is generated by a set of bamboo idiophones played by shaking. An **angklung** group consists of 10 persons, each person playing a different type of instrument. For a more detailed discussion of traditional Baduy music see Suryadi (1974) and van Zanten (1995).

beginning the swiddening cycle is normally begun by planting rice of **huma serang** in which this ritual is considered most important. Less people are involved in cutting shrubs and trees, and second weeding than in planting rice, and it is mainly dominated by men.

Mutual cooperative labour is also involved in planting rice in **huma jaro dangka**. Organisation of this work is similar to that conducted in the **huma serang**, though involves those 50 to 150 Outer Baduy reckoned to share descent (**turunan**) from a particular **jaro dangka**. The ritual begins in the evening and continues until early morning the next day, and includes a performance of **angklung** music in the house of the **jaro dangka** (**imah kokolotan dangka**). In the morning of the day in which the ritual takes place, everyone comes to the **huma jaro dangka** and works as previously described for the planting of **huma serang**.

Finally, the planting of rice by each household is also done cooperatively, involving between 7 and 20 relatives. This work, however, is rather different from that in the **huma serang** and **huma jaro dangka**, where any person who was involved in cooperative working when he conducted planting rice in his swidden plot can be helped by people who had been helped by him before.

3.2. Rereongan

Another form of cooperative labour (**rereongan**) is very distinctive to the Baduy, particulary to the Outer Baduy.

Rereongan (literally 'mutual work') involves an informal group of close relatives and friends, numbering between 10 and 20 persons, who work together for cash. For example, the families of Ayah Ailin, Pulung and Ayah Kasda are recognised as the main members of a **rereongan** in Babakan Marengo, Outer Baduy (see Figure 5.6). This money, however, is not given to each person but collected and deposited with the group leader. It is usually collected by Ayah Ailin or his son-in-law, Pulung, for the **rereongan** group of Babakan Marengo.

Thus, if one household has a particularly heavy job connected with the swidden cycle, and needs help, people will be invited from the **rereongan** group to do this job. Anyone who participates will be paid in cash and provided with a meal and snacks. The money, however, will be collected and deposited with the group leader who, in this way, can accumulate a lot of money, amounting to some hundred thousand rupiah. This money will be used to buy household utensils needed by each individual household, or used for the hamlet **rereongan** group collectively, as in the purchase of a **seeng** (large metal vessel for steaming rice), a **lesung** (a wooden mortar for communal pounding rice in the hamlet), **kekenceng** (a big wok), or to pay communal land tax to a village leader. In addition, any member needing urgent money can ask the group leader. Various activities needing heavy labour, such as cutting shrubby vegetation, weeding, carrying rice from a farm house to hamlet, are usually done by a **rereongan**. The money paid is rather low compared to

that received in a normal labour wage.

In some Outer Baduy hamlets, **rereongan** is well established and a large amount of money has been accumulated. In other hamlets the organisation has disappeared because the group leader could no longer command the respect of the members, and has mis-managed the accounts, or taken the money.

3.3. Wage labour

Because of the increasing importance of the market, particulary in Outer Baduy, wage labour has grown rapidly in recent years. Households obtain cash from selling aren palm sugar (Outer Baduy only), bananas, **peuteuy** (locus bean), durian, **rinu** (a kind of pepper), Albizzia (woods), and from town friends (**kenalan di kota**), in return for traditional Baduy goods, such as honey (**madu**), chopping knives (**golok**), and traditional bags (**koja** and **jarog**). Some people prefer to pay wages for labour in their swiddens to relieve themselves of the hard work. As one informant who regularly employed wage labour in his swidden put it **Keun bae kempes kantong asal tanaga urang ulah cape teuing** ('I don't mind my pocket being empty but I don't want to exhaust myself working in my swidden').

In both Inner and Outer Baduy, men, women and children are usually paid at the same rate because they are thought to feel equally exhausted after working. Thus, all workers must be respected. However, in neighbouring non-Baduy areas

and among some Outer Baduy, women and children are paid less than men because they are considered less strong.

4.Summary and conclusion

In Inner Baduy access to land emphasizes community and is linked to the location of sacred **huma**, such as **huma puun, huma serang, huma girang seurat**, which are oriented in a way consistent with Baduy cosmology: a southerly direction being identified with purity and goodness. Conversely, access to land in Outer Baduy is more varied, and special orientation is not a strong factor. This is because these areas are considered less sacred and because market factors are much more important. More detail on the status of each kind of **huma** is provided in Table 5.1.

Table 5.1. Access to land in Baduy swidden cultivation

Swidden types	Access
1. **Huma puun**	Located in a special place in the southern most part of the hamlet, belonging to a **puun** family and managed by **puun** and his family members.
2. **Huma serang**	Located in a special, in the southern hamlet area and never overlapping with other swidden plots; belongs to entire community and is considered very sacred. Managed by **girang seurat**[9] but some jobs are done by the whole community.
3. **Huma girang seurat**	Located in a special place, attached to **huma serang**, managed by **girang seurat** family.
4. **Huma tangtu**	Located outside area of **huma** types 1-3, mostly located to the north of the hamlet, obtained by felling mature forest by their ancestors; perennial crops are owned permanently and inherited. The fallowed lands have been farmed by different families by borrowing.
5. **Huma Jaro Dangka**	Provided by community or obtained by individual effort, considered sacred but less so than **huma serang**; used as swidden model in Outer Baduy. Managed by **jaro dangka** but some activities, particularly planting rice, involve cooperation between Outer Baduy and performance of ritual.
6. **Huma panamping**	Obtained through: inheritance, purchase and lease; in non-Baduy area by purchase, renting and sharecropping.

[9]). Except in Cikartawarna, **huma serang** is directly managed by **puun** because there is no **girang seurat** in Cikartawarna.

Various forms of labour organisation found in Baduy swidden cultivation are summarised in Table 5.2. The main labour is provided by the household. However, each household interacts with other households in the same hamlet through cooperative labour and labour exchange (**liliuran**, **rereongan**), while wage labour has tended to become increasingly important in Outer Baduy. In addition to cooperative labour in all hamlets, and to synchronise the farming cycle, the planting of **huma serang** and **huma jaro dangka** are usually used as a timing and regulatory device. Thus, the various rituals both integrate Baduy socially and provide a framework for effective environmental and labour management. Because every one participates in annual communal rituals and works together, social cohesion is strengthened. In addition, rituals coordinate planting, harvesting and fallowing, with beneficial environmental consequences.

Table 5.2. Type of labour organisation involved in the Baduy swidden cultivation

Huma types	Owned by	Forms of labour
1. **Huma puun**	family of **puun**	Managed through **puun** household labour, helped by other households and wage labour.
2. **Huma serang**	entire community	Managed through cooperative labour but daily management by **girang seurat** and his family, except in Cikartawrna directly managed through **puun.**
3. **Huma girang seurat**	family of **girang seurat**	Managed through **girang seurat** labour, helped by other Inner Baduy households.
4. **Huma Jaro Dangka**	family of **jaro dangka**	Managed through **jaro dangka** family labour; planting involve cooperative labour.
5. **Huma tangtu**	each family of Inner Baduy	Managed through household labour, **liliuran**, and wage labour.
7. **Huma panamping**	each family of Outer Baduy	Managed through household labour, **liliuran**, **rereongan**, and wage labour.

CHAPTER 6

SWIDDEN CULTIVATION AS RITUAL PRACTICE

This chapter deals with swidden cultivation as an integrated way of life, articulated through constant ritual practice. It describes how cosmology, farming practices, and social organisation are connected.

1. Swidden cultivation as an obligation

Baduy life is regulated by many prohibitions locally called **buyut** or **teuwasa** which are related to their concept of sacred place. These are central to their belief that life should be conducted simply (**hidup sederhana**), should be in accordance with the wishes of their ancestors, and should be regulated by **tapa** (ascetic ritual). These principles are contrasted to the hectic lifestyle of the modern world (**ngaramekeun nagara**). Baduy value honesty (**bener**) to cleverness (**pinter henteu bener**), and seek to honour the memory of their ancestors in the things they do.

For Baduy, swidden cultivation (**huma**) is a necessary part of the annual obligation to perform **kawalu** and **ngalaksa** rituals. In other words, rituals such as **kawalu** and **ngalaksa** firmly unite the practice of swidden cultivation with their religion, **Sunda Wiwitan**. This unity between religion and economic production is reminiscent of what Malinowski described for the Trobriand islands (Malinowski, 1966) and Firth for Tikopia (Firth, 1967).

What we have here are ritual, as well as material, means of production. Each year new swidden rice must be offered to the ancestors (**karuhun**) for life to continue. Moreover, central to the practise of **huma** is belief in the rice goddess, **Pohaci Sanghyang Asri** or **Nyi Pohaci** (in Javanese, Dewi Sri). It is she who is seen as providing rice for daily consumption, a belief encompassed in the saying **hirup turun ti nu rahayu, hurip lalaran pohaci**, 'life is determined by god and the staple food is provided by **pohaci**'. Both swidden rice (**pare huma**) and the rice goddess, Pohaci **Sanghyang Asri**, who resides in **kahiyangan** (the place from which the human soul originates), are deeply respected. By respecting **Pohaci**, Baduy believe that their soul will return to **kahiangan** after death, the abode also of **Pohaci** (Danasasmita and Djatisunda, 1986: 78).

During field work informants explained to me that swidden cultivation should be undertaken by each person in order 'to maintain the old history', or the link with the past. They expressed this idea as follows:

> Ngahuma kudu digawean eukeur mapaykeun karabat kolot atawa mapaykeun lalakon baheula. Sanajan saeutik oge, ngahuma kudu dilakonan sabab hasil panen digunakeun eukeur ngalaksa, kawalu jeung seba[1].

Which can be translated as:

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[1]). The ceremonies of **kawalu**, **ngalaksa** and **seba** are conducted annually after harvesting rice or at the end of the Baduy calendar (**kasa**, **karo**, and **katiga**).

> Swidden cultivation must be undertaken to maintain and continue old history or old habitual kinship and ancestral links. Even if an individual has only a very small amount of land it must be done, because swidden rice is needed for various ceremonies: **kawalu**, **ngalaksa** and **seba**.

By contrast, planting rice in wetland (**sawah**) and the application of modern technologies[2], such as hoeing, use of pesticides and chemical fertilizers, as well as poisoning wildlife and fish are taboo (**buyut**), both because they are new, and because they are seen as destroying their environment. As we have seen, those who no longer practise swidden cultivation are no longer considered Baduy, and must go into exile outside the Baduy area.

Swidden cultivation is necessary, therefore, for the effective conduct of Baduy religion; it is not simply a matter of subsistence economics. Moreover, practising swidden cultivation is a religious obligation, even when it appears to be economically irrational.

2. The Rice Farming Cycle

The traditional Baduy calendar integrates social activities into the annual cycle of upland rice farming (**ngahuma**). The beginning of the cycle coincides with **tindak**

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[2]). Since the 1970s most villages in Java have adopted modern farming technology for **sawah** cultivation as part of 'the green revolution'. Various farming inputs, such as irrigation, cash loans, fertilizers and pesticides have been provided by the government (see Tjondronegoro, 1990:3-14; Soemardjan and Breazeale, 1993:81-86). However, these facilities have been rejected by the Baduy.

tahun or **tunggul tahun** (the first day of the new year, and of the month of **Sapar**). Originally, the Baduy calendar had 10 months and 300 days (10 x 30 days) [Danasasmita and Djatisunda, 1986: 38]. Baduy use the star constellation of **bentang kidang** (the belt of Orion) to determine key dates in their calendar, which usually disappears from view after the first two months of their year, or to be more precise, 59 days. It re-appears in the same position after 359 days (i.e 12 months=359 days). In order to synchronise with the 359 day calendar, the month of **Hapit**, meaning **kabisat** or 'long' (because it consists of 59 days) has been added. But because this additional month is considered rather long, it is further divided into two: **Hapit Lemah** and **Hapit Kayu.** In Javanese and Balinese, these months are given the Hindu names **Desta** and **Sada** (Ibid, 1986: 38). Because of the addition of the extra two months, today, the names of Baduy months are now rather confusing, because the original names have not been changed. The completed Baduy calendar can be seen in Table 6.1.

Table 6.1. The Baduy Calendar

Month:	Month name	:	Corresponds to
1	: **Sapar** or **Kapat**	:	April-May *)
2	: **Kalima**	:	May-June
3	: **Kanem**	:	June-July
4	: **Kapitu**	:	July-August
5	: **Kadalapan**	:	August-September
6	: **Kasalapan**	:	September-October
7	: **Kasapuluh**	:	October-November
8	: **Hapit Lemah**	:	November-December
9	: **Hapit Kayu**	:	December-January
10	: **Kasa**	:	January-February
11	: **Karo**	:	February-March
12	: **Katiga**	:	March-April

Source: Field research in 1985/1986 (Iskandar, 1992)
*) In the farming year 1995/1996, due to the failure of the rice harvest in **huma serang**, **tindak tahun** was delayed by about two months. The beginning of Sapar, therefore, coincided with June instead of April.

Various methods are used to determine **tindak tahun**, and the final decision is usually made by Puun Cikeusik. The **kolonyer**[3] is one device used. Arranging the annual calendar is usually done by expert, **dukun**. Today, however, there remain few **dukun** who are recognised as experts who can assist the **puun**. According to my informant **Jaro Dangka** Cihandam (**kokolotan** Cihandam), who has advised **Puun** Cikeusik in calculating calendar dates, since this the settlement at Cihandam has been evicted by non-Baduy and moved to Kaduketug hamlet, his job has been eroded. As a result, the task of the **puun** has become more difficult.

Environmental indicators, **kikandayan tani**, are also used to decide the beginning of the farming year. Both **bentang kidang** (the belt of Orion) and **bentang kartika** (the

[3]). On the **kolenyer** and **naptu** calculations see Chapter 2, pp: 70-71.

Pleiades) are usually observed on the horizon at dawn (Figure 6.1). These were described by one informant as follows:

> Bentang kidang jumlahna tilu
> Rupana mencos katukang aya tutumbakan nunjuk ka kidang
> Nepi katanggal 15 bentang anu hiji hurung masih leslesan, kadang leungit kadang timbul
> Mimiti tanggal 16 bentang hurung kabeh
> Muncul bentang kidang bulan sapar
> Marem bentang kidang dina bulan 3
> Dua bulan bentang kidang leungit
> Bintang kartika jumlahna 7 ngaronyok
> Muncul bentang kartika dua minggu leuwih awal ti kidang

Which can be translated as:

> **Bentang kidang** number is three
> It appears as the tip of a lance pointing to the main group
> Before the fifteenth day of **Sapar**, one of the **bentang kidang** group can be seen flickering
> After the sixteenth day of **Sapar**, none of the **bentang kidang** can be seen to flicker
> **Bentang kidang** appears in the month of **Sapar**
> **Bentang kidang** disappears in the **month** of **Katiga**
> For approximately two months each year **bentang kidang** cannot be seen
> **Bentang kartika** appears two weeks earlier than **bentang kidang.**

The first appearance of both **bentang kidang** and **bentang kartika** on the east horizon confirm the beginning of the annual farming year. **Bentang kartika** usually appears two weeks earlier than **Bentang kidang**, when the sun is in the northern hemisphere. According to the Baduy, at that time, the soil is considered to be 'cold'. Conversely, when **bentang kidang** disappears over the western horizon (**barat**), and for approximately two months cannot be seen, it is inappropriate to plant rice, because the soil is too 'hot'

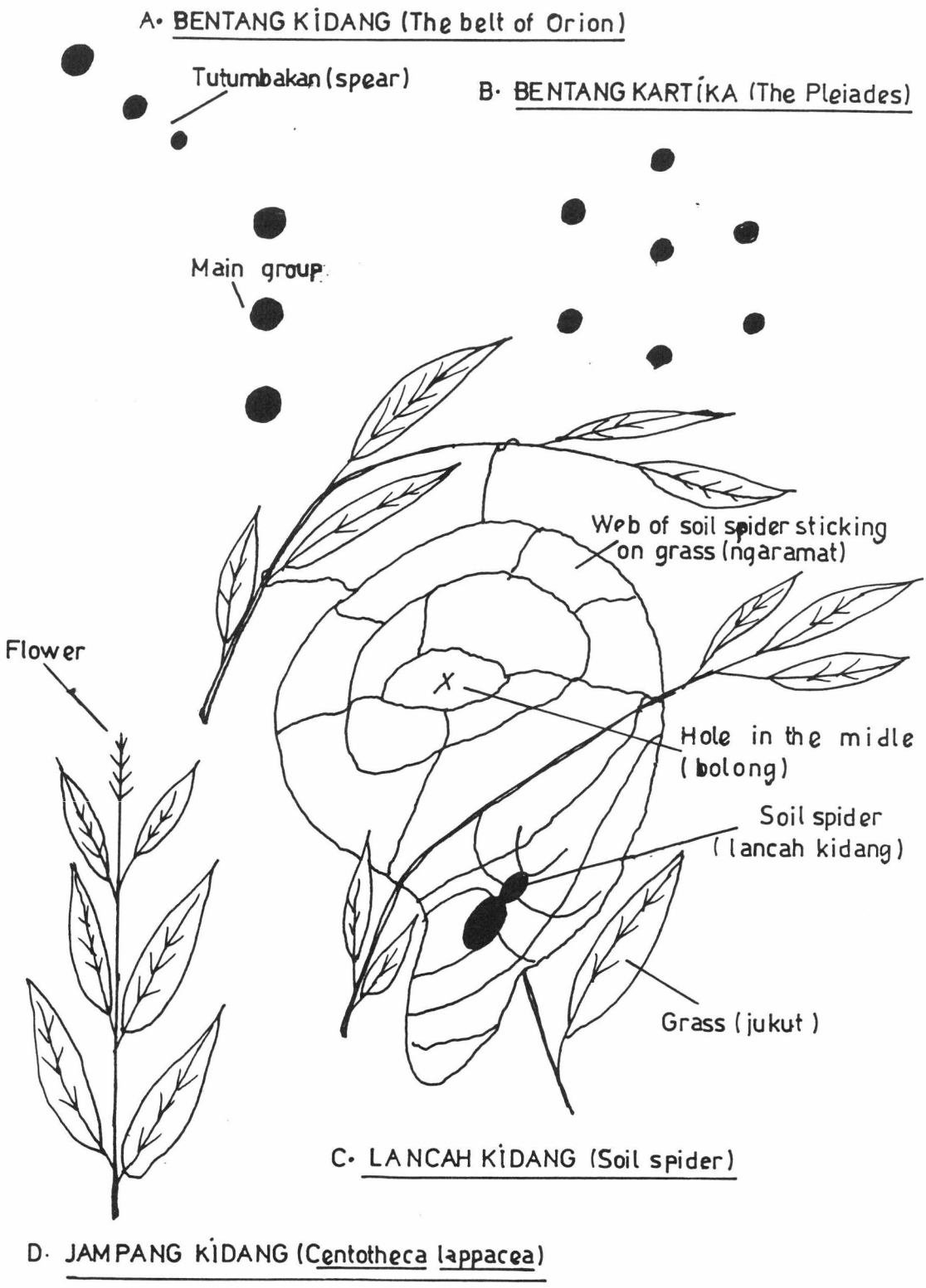

Figure 6.1. Various natural indicators used to decide the beginning of the farming cycle

and insect pests (**kungkang**) come to **buana tengah**[4]. The position of **bentang kidang** (the belt of Orion), in particular, is significant for deciding when to commence clearing, felling, burning and planting rice. Baduy explain this as follows:

> Tanggal kidang turun kujang
> Kidang ngarangsang kudu ngahuru
> Kidang nyuhun atawa condong ka barat kudu ngaseuk
> Kidang marem turun kungkang, ulah melak pare
>
> Which can be translated as:
>
> When **kidang** first appears on the horizon just before dawn, a chopping knife (**kujang**) should be used (clearing)
> When **kidang** appears in the east (**ngarangsang**), vegetation should be burned (**ngahuru**)
> When **kidang** appears overhead or sideways to the west, rice should planted (**ngaseuk**)
> When **kidang** disappears, insect pests (**kungkang**) will appear, and rice planting should stop

The flowering and fruiting times of certain perennial plants are also used as indicators to begin the farming year. Thus:

> Nyieun tanggalan di luar ngitung-ngitung, bisa oge tambuh ujian ngagunakeun tanda di alam, saperti:
> -Kanyere, jampang kidang jeung jampang kerti karembangan biasa bareng jeung tanggal kidang
> -Buah kanyere asak gumarang atawa halodo
> -Gharu kembangan osok kajadian halodo
>
> Which can be translated as:
>
> Besides traditional calculations, the times when plants flower and fruit can also be used to decide the beginning of the farming year, such

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[4]) According to Baduy cosmology, the world can be divided into three parts: **buana tengah** (the present world), **buana handap** (the world where the human body is buried after death), and **buana luhur** (the hereafter).

as:
-**Kanyere** (Bridelia monoica), **jampang kidang** (Centotheca lappacea) and **jampang kerti** (Centhotheca sp), the flowering and fruiting of which usually synchronises with the appearance of **bentang kidang**
-**Kanyere** (Bridelia monoica), the ripening of the fruit of which usually synchronises with **gumarang** or the **dry season**
-Gharu (Gonystyllus macrophyllus), the flowering of which usually synchronises with the dry season

In addition, **lancah kidang** (the soil spider) [Figure 6.1] indicates the time when people should start planting rice. The **lancah kidang** usually make its nest on grasses growing in swidden fields. If her web has a hole in the middle (**bolong tengahna**), and she stays most of the time on the edge of the nest, rice planting in the swidden should start.

However, the most important factor determining **tindak tahun** is the harvesting time of the **huma serang**, as 3 months before **tindak tahun**, the ritual **kawalu** must be performed (Figure 6.2). To perform this ritual new rice from the **huma serang** must be used. The new rice is also needed for other rituals, namely **ngalaksa** and **seba** in the month following **kawalu**. Therefore, if there is a delay in harvesting rice from the **huma serang**, the **kawalu**, **ngalaksa**, and **seba** will also be delayed, as will the next **tindak tahun**. The farming year 1995/1996 was a case in point. In normal circumstances, **huma serang** rice must be harvested during **Kasa** (January/February) [Table 6.1). However, because in 1994 there had been a drought, the **huma serang** rice was harvested during **Katiga** (March/April). As a

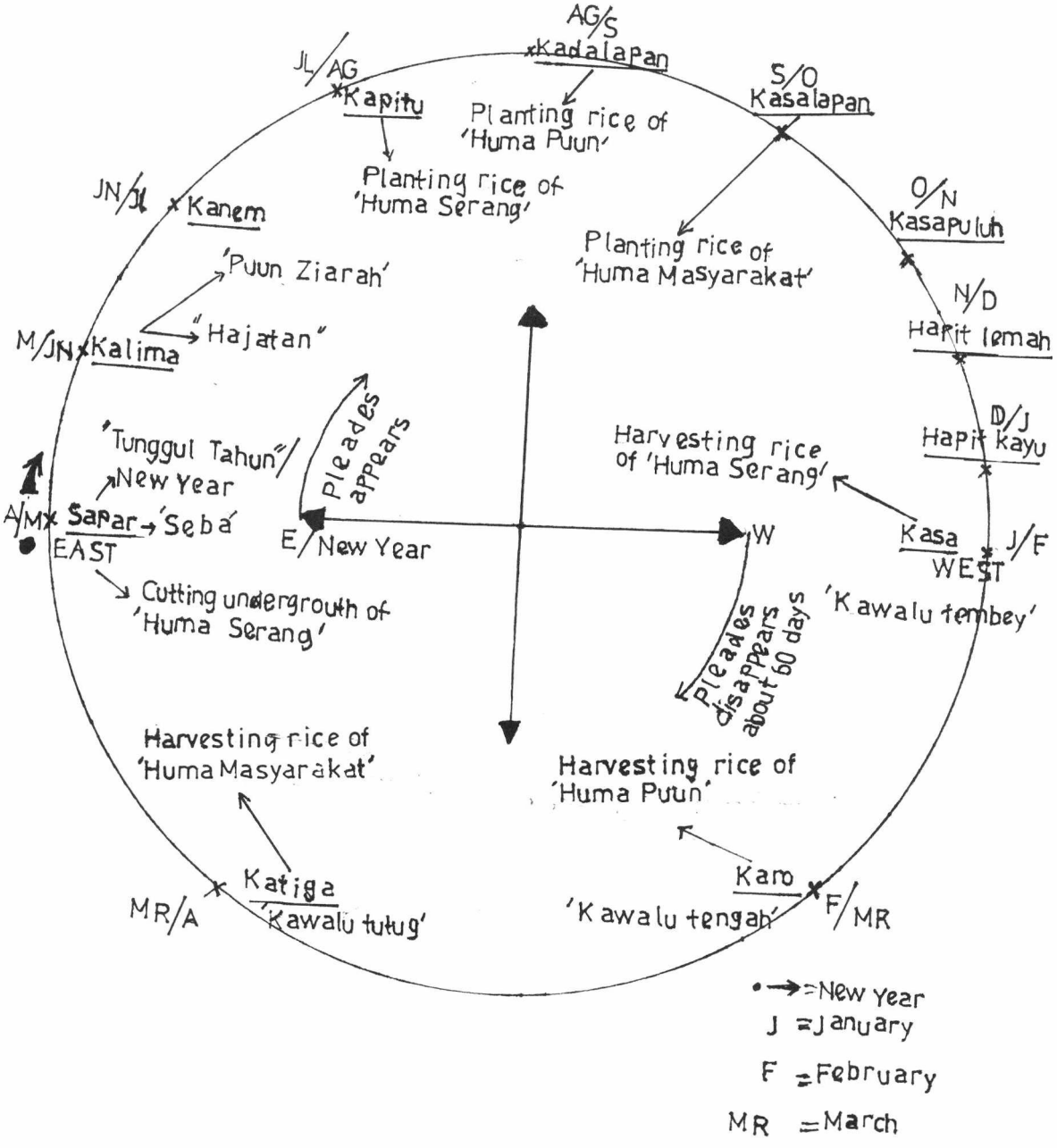


Figure 6.2· Baduy agricultural calendar

result, the first **kawalu** was performed during **Katiga** (March/April) instead of **Kasa** (January/February), the second **kawalu** during **Sapar** (April/May) instead of **Karo** (February/March), and the third **kawalu** during **Kalima** instead of **Katiga**. In addition, **tindak tahun** was fixed for **Kanem** (June/July) instead of **Sapar** (April/May). But in every month and each year this calendar is usually adjusted by the **puun** (viz **Puun** Cikeusik), which re-synchronizes the calendar with the rotation of the **bentang kidang**, and with the flowering and fruiting season of particular plant species. Thus, the role of the **puun** and their staff in calculating the times for planting rice in **huma serang** and deciding each monthly schedule is extremely important. Indeed, according to some informants, the main duty of the **puun** is to regulate the calendar for the entire Baduy community (**tugas puun ngitung waktu ngeja bulan keur sarerea**).

By arranging auspicious times, swidden cultivation is maintained on a sustainable basis, avoiding natural disasters (such as droughts and pests) and maintaining the strong cohesion of the Baduy community. This later is particularly expressed through the articulation of the agricultural calendar with major social events (Table 6.1). Evidence from elsewhere in Java and Bali (e.g. Lansing, 1991: 118) suggests that coordination of planting and harvesting times contributes towards the minimization of pest outbreaks. A Javanese saying enjoins farmers to plant rice at the same time: **ala ulu, becik keri, aja tuman**

(Sollewijn Gelpke, 1986:20), which can be translated as "cultivating rice earlier than other people is bad, it is better later, but not too late because there will have pests".

Early on in the Baduy agricultural year it is necessary to determine the timing of various activities. The slashing of **huma serang** vegetation is usually undertaken during **Sapar** (April/May), burning and rice planting in **Kapitu** (July/August), first weeding in **Kadalapan** (August/September), second weeding in **Kasalapan** (September/October), and rice harvesting in **Kasa** (January/February) [Table 6.1]. **Huma serang** tasks, such as slashing (**nyacar**), planting (**ngaseuk**) and second weeding (**ngored ngarambas**) are undertaken by as many as a hundred people working together, both Inner and Outer Baduy, and generally managed by **puun** staff (**girang seurat**), except in Cikartawarna where they are led directly by the **puun** because it has no **girang seurat**. Therefore, each stage of swidden activity can be undertaken rapidly due to the participation of many people. The **huma serang** is usually planted with rice for only one year, and fallowed land can be replanted with rice after 7 years. The rice of the **huma serang** is usually used for rituals and to provide meals for those involved in its production. At least 40 rice bundles are pounded each year for use in the ten main **huma serang** ritual activities: slashing vegetation (**nyacar**), cutting trees and pruning (**nuar**), burning (**ngahuru**), first weeding (**ngored kahiji**), second weeding (**ngored kadua**), harvesting

rice (**panen**), first kawalu (**kawalu kahiji**), second kawalu (**kawalu tengah**), third kawalu (**kawalu tutug**), and **ngalaksa**. If the amount of **huma serang** rice is insufficient, some extra rice will be supplied by **girang seurat**. Conversely, **huma serang** surpluses can be taken by 'girang seurat' for his family.

Approximately one month after **huma serang** activities have begun, the **huma puun** must be started. Various swiddening activities are conducted by members of **puun** families, helped by some Inner Baduy and wage labourers. The cutting of vegetation is usually undertaken during **Kanem** (July/August), rice is planted in **Kadalapan** (August/September) and harvested in **Karo** (February/March).

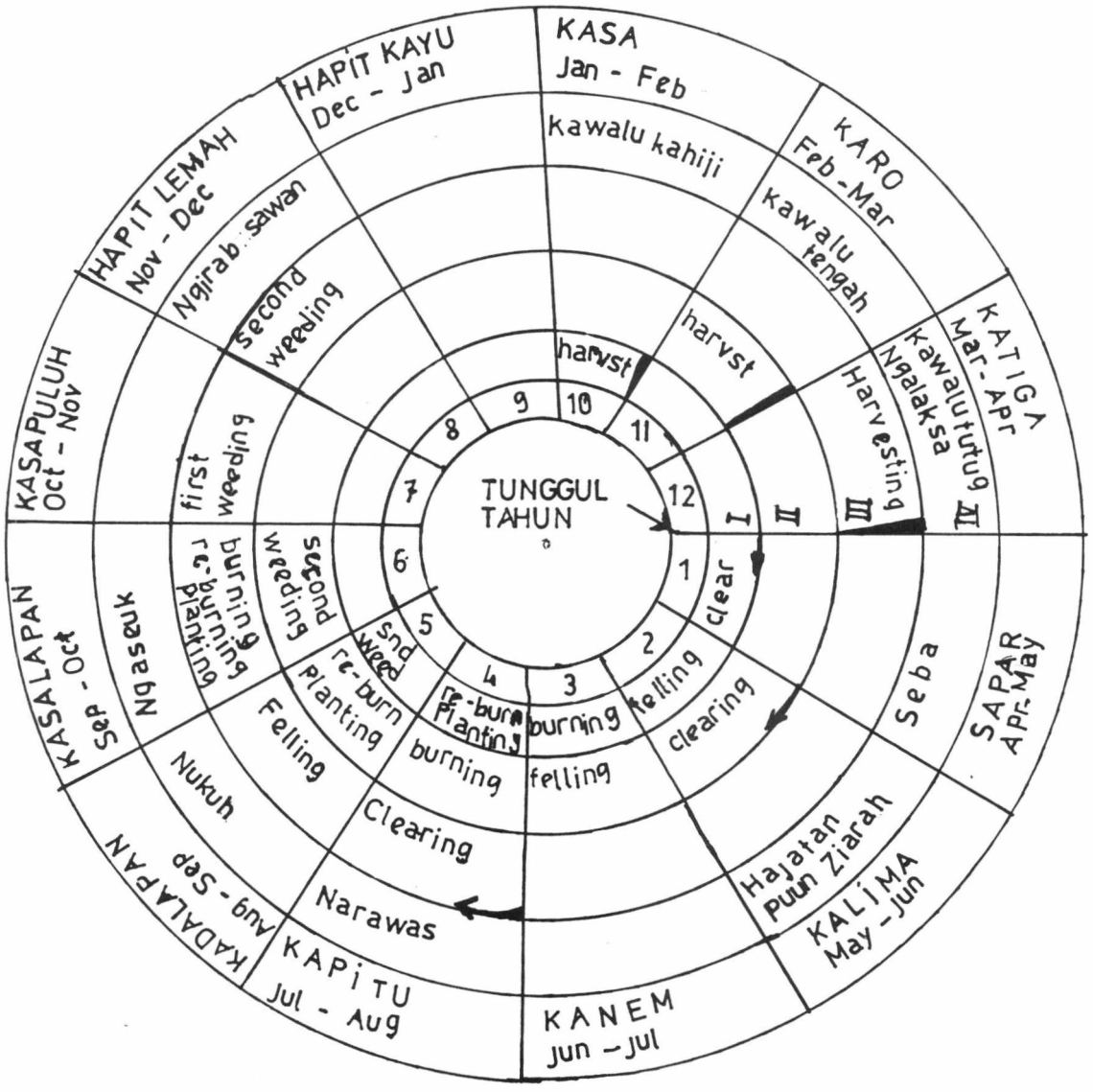
After rice has been planted in the **huma puun**, about one month later, during **Kasalapan** (September/October), all rice planting in **huma masyarakat** in both Inner and Outer Baduy must be complete. This is because harvesting must be take place before the third **kawalu** (**kawalu tutug**), during **Katiga** (March/ April)[Figure 6.2]. On the basis of this farming schedule, it can be seen that rice harvesting is arranged to synchronise with important rituals: **kawalu**, **ngalaksa** and **seba**, new rice being necessary for offerings to the ancestors and to secular leaders. After the rituals have been performed, **Puun** Cikeusik and **Puun** Cibeo take part in ascetic rituals (**ziarah**) during the month of **Kalima** (May/June). During the same month, follow village ceremonies (**hajatan**), such as for weeding (**kawinan**), while every two years is performed a ceremony of circumcision

(**sunatan** or **sudatan**).

A chronological and synoptic list of the various Baduy farming activities, calendar months and associated rituals is set out in Table 6.2; see also Figures 6.2 and Figure 6.3. Thus, the rice farming cycle is fixed annually, and Inner and Outer Baduy are considered to be united in their practise of swidden cultivation. The cycle begins in sacred places in Inner Baduy, followed by increasingly less sacred places, to Outer Baduy. In Inner Baduy, clearing starts in Cikeusik, considered the 'root' (**akar**) of rice, followed by Cikartawarna, the 'stalk' (**batang**) and Cibeo, the 'leaf'(**daun**) [Geise, 1952).

Table 6.2
Farming activities and associated rituals
in the Baduy agricultural calendar

Farming Activities	Ritual activities
SAPAR (APRIL-MAY) All **huma** types have been harvested (**panen**) and rice is brought (**nunjal**) to hamlets. Cutting vegetation (**nyacar**) is conducted in **huma serang**, Cikeukeusik and Cikartawarna on 18, Cibeo on 19. Cutting vegetation is done by some hundreds of Inner and Outer Baduy people, by working together for only a few minutes.	Ritual of storing rice in the rice barn (**ngadiukeun pare** and **ngapret**) performed by each household. Ritual of **Seba:** a delegation of between 50-100 persons consisting of Inner and Outer Baduy, and led by **jaro warega**, goes to see leader of district and resident in Rangkasbitung and Serang, respectively. They offer agricultural products and kitchen utensils as respect for the secular leaders; in return they request protection for their land and culture.



I SWIDDEN FIELD OF SERANG
II SWIDDEN FIELD OF PUUN HOUSEHOLD
III SWIDDEN FIELD OF ORDINARY BADUY HOUSEHOLD
IV RITUALS
▬ END OF ANNUAL CYCLE
← BEGINNING OF ANNUAL CYCLE:
TUNGGUL TAHUN/NEW YEAR OF BADUY CALENDAR

Sourse : Field Research (1995-1996)

Figure 6.3. Baduy agricultural calendar and associated ritual activities

KALIMA (MAY-JUNE) Cutting vegetation (**nyacar**) in **huma puun**, conducted by **puun** and his family, helped by Inner Baduy and wage labourers.	**Puun** Cikeusik and **Puun** Cibeo, respectively undertake ascetic rituals (**ziarah**) at **Sasaka Pusaka Buana**, upstream of Ciujung river, and at **Sasaka Domas** upstream of Ciparahiang river. Some Inner and Outer Baduy are permitted to join **Puun** Cikeusik. In Cikeusik it is conducted over three days: on 16, 17 and 18, while in Cibeo it intakes only one day, 7. Big ceremony (**hajatan**) is performed, such as weeding. Every two years, circumcision (**sunatan** or **sudatan**) is performed.
KANEM (JUNE-JULY) Felling trees (**nuar**) in **huma serang**, mainly done by Inner Baduy.	
KAPITU (JULY-AUGUST) Burning vegetation (**ngahuru** and **ngaduruk**) and planting rice (**ngaseuk**) in **huma serang**. Planting rice is done by thousands of Inner and Outer Baduy working together, conducted only for a few minutes.	Ritual of sowing rice (**ngaseuk**) conducted in **huma serang**, in which the rice goddess (**Nyi Sri Pohaci**) becomes engaged (**direremokeun**) to the earth, **Partiwi**. Between 900-1500 Inner and Outer Baduy attend this ritual for each **puun**.
KADALAPAN (AUGUST-SEPTEMBER) First weeding (**ngabadagan**) in **huma serang**, conducted by Inner Baduy. Burning vegetation (**ngahuru** and **ngaduruk**) and sowing rice (**ngaseuk**) in **huma puun**. Cutting vegetation (**nyacar**) and felling trees (**nuar**) in **huma masyarakat**.	Rituals of **narawas** and **nukuh** conducted by each household before cutting vegetation (**nyacar**) and felling trees (**nuar**), respectively. The purpose of these rituals is to get permission from the forest for swiddening, and to allow the Baduy to cultivate in peace (**ngadamaikeun nu boga leuweung**).
KASALAPAN (SEPTEMBER-OCTOBER) Second weeding (**ngored**) in **huma serang**, conducted by Inner and Outer Baduy. First weeding conducted in **huma puun**; Burning vegetation (**ngahuru** and **ngaduruk**) and sowing rice (**ngaseuk**) in **huma masyarakat**.	Only several Outer Baduy attend this ritual. Special ritual called **ngirab sawan** is performed before the second weeding.

KASAPULUH (OCTOBER-NOVEMBER) Second weeding (**ngored munggaran**) in **huma puun**; first weeding (**ngored ngarambas**) in **huma masyarakat.**	Approximately 40 days after sowing rice, with first weeding, the ritual of **ngirab sawan** is performed by each household. Water from a bamboo is sprayed over **pare indung** in the **pungpuhunan.**
HAPIT LEMAH (NOV-DECEMBER) Second weeding (**ngored ngarambas**) in **huma masyarakat.**	Ritual of **ngubaran pare** performed in each household. In this ritual rice is 'fed' with herbal medicines (**ubar pare**) between five and nine times, always using odd numbers (**angka gangsal**).
HAPIT KAYU (DEC-JANUARY) Harvesting rice (**panen** or **dibuat**) in **huma serang.**	Ritual of **mipit pare** (preparing for harvesting rice) in **huma serang** Cibeo on day 24; harvesting rice starts on day 28.
KASA (JANUARY-FEBRUARY) Harvesting rice (**dibuat** or **panen**) in **huma serang** continues.	First kawalu ritual (**kawalu kahiji**) performed in Cikeusik and Cikartwarna on day 17, in Cibeo on day 18. Outer Baduy choose one depending on the **puun** to which they are subordinate. The fast is broken (**buka puasa**) by the consumption of new **huma serang** rice, called **nganyaran** (the first tasting of new rice). Only a few Outer Baduy attend this ritual.
KARO (FEBRUARY-MARCH) Harvesting rice in **huma puun.**	Second **kawalu** ritual (**kawalu tengah**) performed in Cikeusik and Cikartawarna on day 18; in Cibeo on 19. Outer Baduy choose one or the other. Only a few Outer Baduy attend this ritual.

KATIGA (MARCH-APRIL) Harvesting rice (**dibuat** or **panen**) in **huma masyarakat.**	Ritual of **mipit** (preparing harvesting rice) performed by each household. Third **kawalu** (**kawalu tutug**) performed in Cikeusik and Cikartawarna on day 17; in Cibeo on day 18. Outer Baduy choose one or the other. Each Inner and Outer Baduy household must send a representative to the ritual and new rice from each **pungpuhunan** must be offered for **puun** and used in the ritual. It is also called the first tasting of new rice of each household (**nganyaran**). Ritual of **ngalaksa:** offering of new rice from the **pungpuhunan** to the ancestors in the form of rice noodles (**lakasa**), conducted by each **puun** in Inner Baduy and by each **jaro dangka** in Outer Baduy. The timetable is fixed annually: day 20 for **Puun** Cikeusik and **Puun** Cikartawarna; day 21 for **Puun** Cibeo, day 22 for **Jaro Dangka** Cihandam, day 23 **Jaro Dangka** Cibengkung, day 24 **Jaro Dangka** Cihulu and Garehong; day 25 **Jaro Dangka** Kaduketug; day 26 **Jaro Dangka** Nungkulan, and day 27 **Jaro Dangka** Kamancing.

Thus, work on the **huma masyarakat** is always preceded by work on the **huma serang** and **huma puun.** Therefore, before turning to a consideration of the various farming stages for the **huma masyarakat**, we shall discuss two phases of the **huma serang** cycle: cutting vegetation (**nyacar**) and sowing rice (**ngaseuk**); as these activities link Inner and Outer Baduy through ritual process. After describing each stage in the **huma masyarakat** cycle, I shall return to a discussion of various rituals conducted in Inner Baduy:

kawalu, **ngalaksa**, **seba**, and the ascetic rituals (**ziarah**) performed by **puun**.

2.1. Cutting huma serang vegetation (nyacar)

The main preparation for farming the **huma serang** involves clearing undergrowth (**nyacar**) with a special bush knife (**kujang**) [Figure 6.4]. This usually takes place during the month of **sapar**, on day 18 in Cikeusik and Cikartawarna, and on day 19 in Cibeo. As with sowing rice (**ngaseuk**), **nyacar** involves several hundred Inner and Outer Baduy. However, there is no compulsion for each household to send labour and this activity is mostly undertaken by men. Each man who joins this ritual must carry a **kujang** which before starting work is sharpened on a whetstone (**asahan**) located at the edge of the swidden plot. To maintain the purity of the **huma serang**, men are not allowed to spit (**nyiduh**) or urinate (**kiih**) during work.

After performing a ritual undertaken by one of the **puun**'s assistants (**baris kolot**), everyone enters the plot and starts cutting the undergrowth in front of him. The workers move forward together and those reaching the plot border must stop. Persons encountering heavy vegetation work more slowly, but nevertheless continue to work until they arrive at the edge of the plot. However, this work only takes a matter of minutes because it is conducted by so many people.

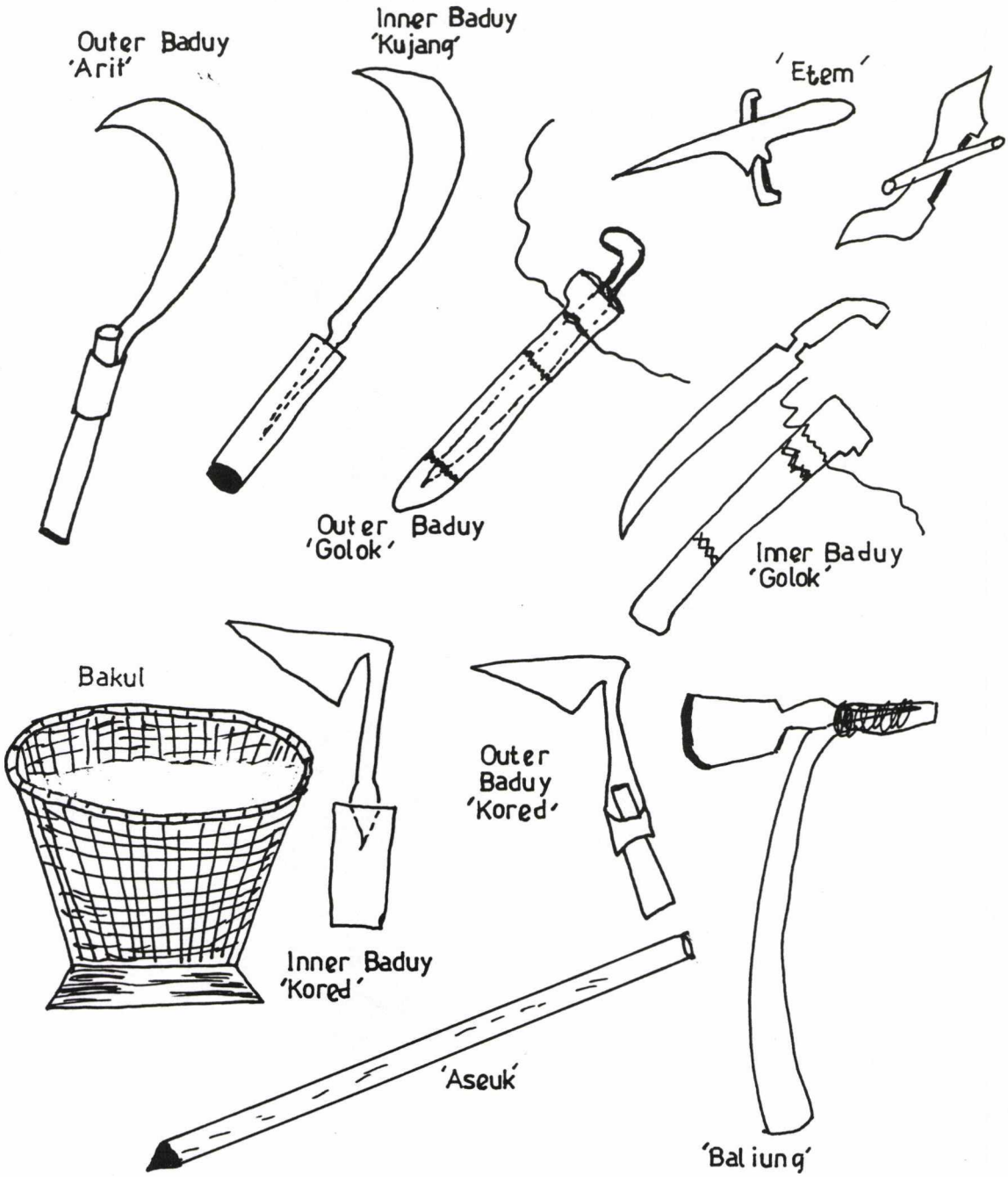


Figure 6.4. Various items of equipment used in Baduy

2.2. Sowing rice (ngaseuk) in the huma serang

Sowing rice in the **huma serang** commences during the month of **Kapitu**, on day 18 in Cibeo and Cikeusik and on day 19 in Cikartawarna (Table 6.1). Before sowing rice, a major ritual is held, to ensure successful farming. The period in which rice is sown is considered by the Baduy to be sacred; and it is accompanied by the playing of **angklung** music (a set of bamboo idiophones). I attended this ritual in Cibeo in 11-12 July 1985. One day before sowing rice, **jaro pamarentah** (Jaro Nakiwin), carik desa (Carik Ukang), and I went to Cibeo hamlet to attend the ritual of **ngaseuk huma serang**. We went to Cibeo from Kaduketug via kampung Gajeboh. In this hamlet, two persons, Ayah Ailin and his step son, Pulung, joined us. Their wives went ahead and joined a group of female friends and relatives. Everyone wore formal dress, men in white shirts covered by black jackets, with a cloth of printed **batik** and a blue sarong; women wore blue cloth of printed **batik** with white blouses. According to Bakels (1993: 351-352) white and black are symbolically linked by the Baduy to pure and dirty, soul and body, and Inner Baduy and Outer Baduy respectively. In addition, white is symbolically linked to 'water' and black to 'earth'. Therefore, wearing white and black dress when sowing rice brings water and coolness to the rice. We walked along footpaths through a succession of hills and valleys. When we arrived at Cikadu hamlet, near Cibeo, angklung music could be heard from **kampung** Cibeo. This was

played by Cibeo people, and had a monotonous intonation. It is different from Outer Baduy **angklung** music. Outer Baduy usually play **angklung** music more dynamically and with more tone variation. **Angklung** instrumentalists played around a basket of rice seed to prepare for the engagement of the rice with the earth. The seed rice had been previously removed from a rice barn by a woman. Her hair was put up in a neat bun called **gelung malang** or **gelung bapang** (see also Geise, 1952; Danasmita and Djatisunda, 1986: 46), and a white cloth covered her breast. She wore a white shawl (**selendang putih**). She was not allowed to talk, but pronounced incantations to awaken the rice goddess, Nyi Pohaci (**ngagugahkeun Nyi Pohaci**). A version of this incantation is reported by Danasmita and Djatisunda (1986: 43) as follows:

> Tabe, Nyi Pohaci Sang Hyang Asri
> Hayu urang ngalih ka weweg sampeg
> ka mandala pageuh
> mangka tetep mangka langgeng
> balik ka mandala pageuh
> maka tetep mangka langgeng
> balik ka imah beurang keneh
>
> Which can be translated as:
>
> Greetings, Nyi Pohaci Sang Hyang Asri
> Come on please move to a permanent place
> to a sturdy place
> It hoped that it permanent, hoped that it is
> long-lasting
> Go home as long as it is still day time

The rice bundle on a **nyiru** (a small flat bamboo basket) is put in an open place and threshed (**irik**) by stamping with the feet by men and woman. Their soles are

smeared with coconut oil, **jawer kotok** (Coleus galeatus), and orange juice. The good rice grain is selected and put in a **bakul** (a woven bamboo basket). This rice variety, called **pare koneng**, was mainly sown in a **pungpuhunan.**

At night time, a basket of rice is carried from the house of **girang seurat** and put on a mat in the open place called **nurunkeun binih tina imah** (carrying rice from house). It was surrounded by **baris kolot** and **angklung** players. The **baris kolot** recited the following incantation over the rice in the basket:

> Anten pihatureun ka baris kolot
> Nyi Pohaci Sang Hiyang Asri ndeuk direremokeun
> ku kami ka bumi
> isukan ndeuk dikawinkeun
> mangka langgeng mangka tetep huripna, jayana
> Nyi Pohaci Sang Hiyang Asri (ibid, 1986: 44).
>
> Which can be translated as:
>
> Something will be said to the **baris kolot**
> **Nyi Pohaci Hiyang Asri** will be engaged by us with
> the earth Tomorrow she will be married
> May it be for ever, may it be permanent, healthy
> and successful
> **Nyi Pohaci Sang Hiyang Asri**

The people attending the ritual replied in unison as follows:

> Nyakseni
> mangka lulus, mangka hurip
> mangka tetep, mangka langgeng huripna
> Nyi Pohaci Sang Hiyang Asri
> repok jeung bumi ti partiwi
>
> Which can be translated as:
>
> We join to be witnesses
> We hope to be successful, to be alive
> May it be permanent, may it be for ever
> **Nyi Pohaci Sang Hyang Asri**
> married with the earth from pertiwi

The **angklung** players walk around in a circle singing the **marengo** (engagement/marriage song), and the **bakul** of rice is carried to a house. In the evening of the ritual which I attended, an **angklung** group from Gajeboh joined us. The Gajeboh **angklung** consists of somewhat different bamboo instruments and a few drums (**bedug**). In decreasing size, the bamboo set of instruments are called: 1) **indung**, 2) **ringkung**, 3) **dong-dong**, 4) **gunjing**, 5) **engklok**, 6) **indung leutik**, **tarolok**, 8) **roel 1**, 9) **roel 2**, and 10) **talingting** and **ketuk** or big drum (**bedug**). The **angklung** music was continuously played until early next morning. The Gajeboh **angklung** group sometimes performed humorous songs accompanied by a dance (**ngalage**). However, the Cibeo **angklung** group places more emphasis on performing serious songs, and dancing is strictly prohibited, as Inner Baduy are prohibited from performing **pesta-ria** (too much cheerfulness).

Next day, in the early morning, the basket of rice is carried to the **huma serang**, guarded by women who wear white shawls and are accompanied by the **angklung** group. They play **pileuleuyan** (a farewell song). The top of the rice is covered with the so-called **cocoan** (toys) of **Nyi Sri Pohaci**, including **picung** seed (**siki picung**=Pangium edule), **muncang** seed (**siki muncang**, candle-nut seed= Aleurites moluccana), and **remis** (mussels). It is believed that by offering incantations and various articles, such as **cocoan** loved by **Nyi Sri Pohaci**, she will be made happy and her well-being will ensure farming success. When the people who have

carried rice arrive at the swidden plot, the **angklung** music and talking among the participants must stop. A rice basket is put in the **pungpuhunan**, a sacred place measuring about one square metre bordered by **barahulu** stems (Amomum sp). The root **puhun** means foundation (**pokok** in Indonesian), origin (**asal**, in Indonesian) [Soeganda, 1982: 150]. Surrounding the **pungpuhunan** are 4 wooden poles, and resting on top of the poles are 4 blades of split bamboo attached in the shape of a cone (Figure 6.5). Arenga palm leaves detached from the leaf ribs hang over the cone, while other Arenga leaves are tied each other to circle a **pungpuhunan**, which is normally called **ngider naga** (dragon going in circling). This typical **pungpuhunan** arrangement is called **sawer** or **sawen**, and is used only when sowing rice in the **huma serang** and **huma jaro dangka**. Surrounding the **pungpuhunan**, at each corner, is put a stem and midrib of Arenga.

Inside the **pungpuhunan**, various goods are placed. These include **hanjuang** (Cordyline fruticosa), **pacing tawa** (Costus speciosus), **tamiang** (Bambusa wrayi), **kihura** (Arenga porphyrocarpa), **bingbin** (Pinanga sp), **barahulu** (Amomom sp), **bangban** (Donax cannaeformis), **panglay** (Zingiber cassumunar), **rujak-rujakan** (sacrificial meals), **sisir kayu** (wooden combs), **eunteung** (mirrors), keris (wavy double-bladed daggers), **sirih** (betel leaves=Piper betel and **jambe** (areca nut=Areca catechu), **kalapa** (coconut=Cocos nucifera), **anak tangkal cau** (young banana plant=Musa paradisiaca), **menyan** (incense=**gharu**), **areuy geureung** (Stephania

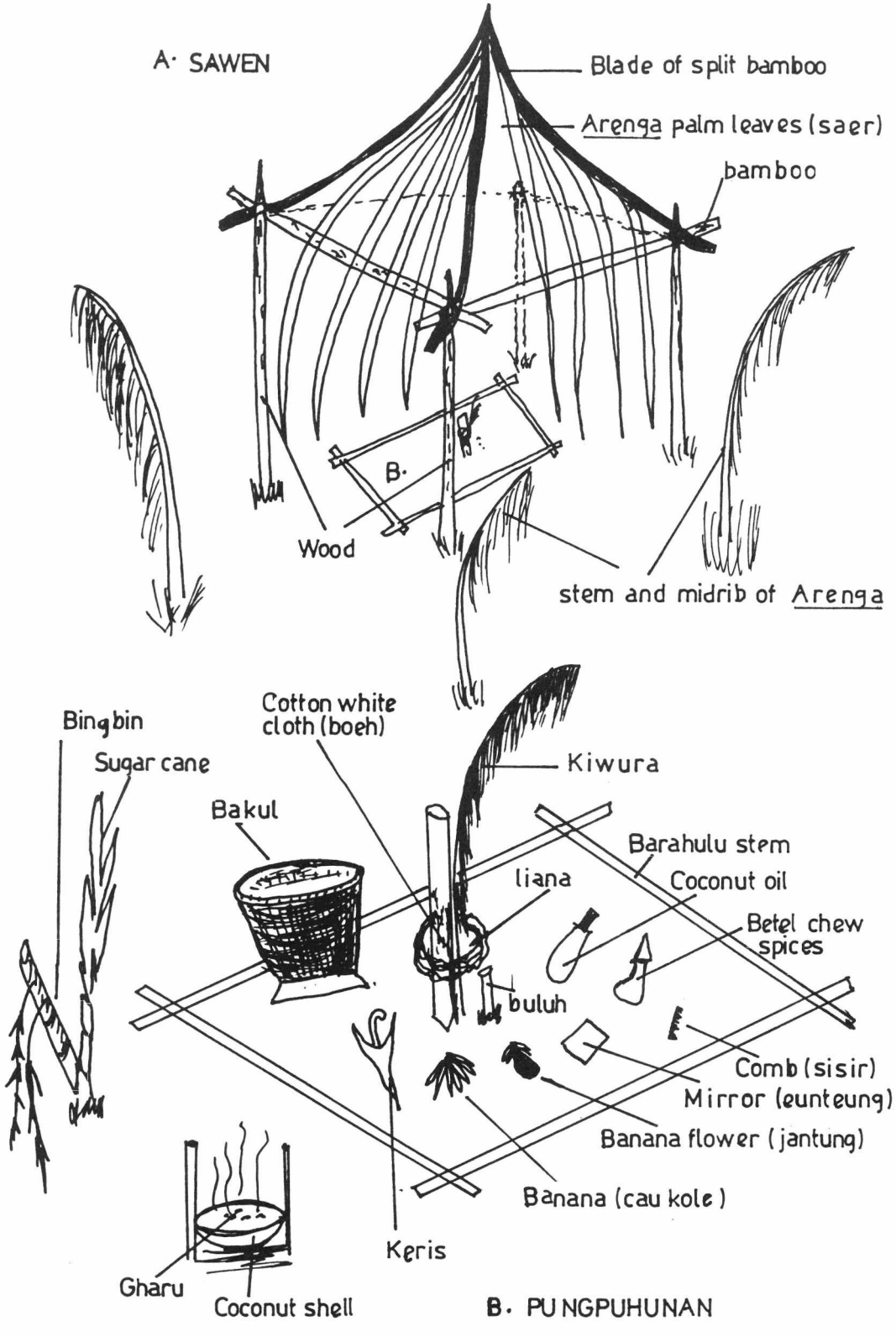


Figure 6.5. The structure and contents of the 'pungpuhunan'

javonica), **bintinu** (Kleinhovia hospita), **kapas** (cotton=Gossypium sp), **minyak kalapa** (coconut oil) and **boeh larang** (cotton white cloth). These materials are considered to be the **cocoan** (playthings) of **Nyi Sri**. Each has a different resonance. Thus, **hanjuang** has two colours, green and red, which link body (**lahir**) and soul (**batin**) [Soeganda, 1982: 135], the outer and inner worlds. It is believed that in sowing rice, body and soul are combined, the soul of the rice goddess, **Nyi Sri Pohaci** becoming engaged to the earth (**pertiwi**). **Kapas** or cotton (Gossypium sp) and white cotton cloth (**boeh rarang**) bring water and coolness to the rice, as signifying pure whiteness (**murni** or **batin** or body soul) and linked to water in cosmological schemes (Bakels, 1993: 352). **Cau**, banana, stands for new life (**kahirupan anyar**), and human prosperity.

A basket of rice is placed in the swidden plot surrounded by decorative Arenga on some of which hang **kupat** (rice cakes boiled in diamond shaped packets of young coconut leaves). More women and men gradually arrive at the swidden plot, carrying cooked rice and fresh water fish (**lauk tiis**). They are counted by **palawari** (assistants of the **puun**), who keep a record based on numbers of tears in a banana leaf. This is important as it is the basis for providing a meal. Guests are prohibited from wearing luxury items, such as rings, bracelets, and earrings. Black short Outer Baduy trousers (**calana pokek**) are also prohibited. Therefore, some Outer Baduy fold their short trousers up and cover them with a sarong. All Inner Baduy men usually

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wear white head-sashes, white shirts, and a dark sarong with white stripes (**kain aros**), while women wear a dark sarong with white stripes and white cotton cloth.

Most people stand on the edge of the swidden plot, except two **angklung** groups who stand in the middle of the plot. The ritual begins when rice seeds are put in the **pungpuhunan** and a **kokolot** (one of the **baris kolot** member) enters. He sits down in front of a woven bamboo basket containing sacred rice grains, his hands and hair smeared with coconut oil. **Gharu** incense is burned and incantations pronounced; the Cibeo **angklung** group plays and walks clockwise around the **pungpuhunan** where the **Marengo** (engagement/marriage) song is performed. One old man sits down outside the **pungpuhunan** and fans a basket of rice using a white shawl, his movements synchronised with the strains of the **angklung** music.

The incantations are as follows:

Amit kanu boga bumi
Amit kanu boga bale
Turun ka Sang Rumuhun menta-menta
Kami rek netepkeun Pohaci Sanghyang Asri
di buana panca tengah Pasar Allah
Pohaci Sanghyang Asri
Ku kami rek ditetepkeun
Ku kami rek direremokeun
di malam ahad
di bumi pertiwi
buana panca tengah

Ulah geder ulah reuwas
Mangka tetep mangka langgeng
Mangka hurip kajayana
Nu kosong pangeusiankeun
Nu celong pangminuhankeun
Pohaci Sanghyang Asri
Ulah geder ulah reuwas
Mangka tetep mangka langgeng

Cokot dua cokot tilu

Cokot tilu nungku-nungku
Datang opat jang ngajajar
Pohaci Sanghyang Asri
Ulah geder ulah reuwas
Mangka tetep mangka langgeng

Datang lima tanpa wilangan
Datang genep mangka ngariung mungpulung
Datang tujuh lilimbangan
Datang dalapan ngajajar
Datang salapan di buana panca tengah
Di bumi di pertiwi

Lumput tanggul Ki Maung
Limpas Cacang Ki Hara
Mangka hurip ka beutina
Mangka miakar kawat
Mangka montok ka borosna
Mangka hirup ka pucukna
(Geise, 1952; Garna 1987: appendix 8)

Which can be translated as:

Ask permission of the earth owner
Ask permission of the public hall owner
Coming to **Sang Rumuhun** to request
We will decide **Pohaci Sanghyang Asri**
in the centre world
Pohaci Sanghyang Asri
who will be put by us at a permanent place
who is greeted by us with festivities
who is married off by us
on the night of **ahad**
on the earth (**Pertiwi**)
the central world

Do not be afraid, do not be scared
May it be permanent, may it be forever
May her power enliven
The empty one (ears), please fill them
The lean ones, please make them full
Pohaci Sanghyang Asri
Do not be afraid, do not be scared
May it be permanent, may it be forever

Take two, take three
Take three '**nungku-nungku**'
Coming four in row
Pohaci Sanghyang Asri
Do not be afraid, do not be scared
May it be permanent, may it be forever

Coming five, without number
Coming six may it be gathering
Coming seven fly and swing
Coming eight in row

Coming nine in the central world
On the earth (**pertiwi**)
There is **Ki Maung** stump
There is **Ki Hara** stump
It hopes to have live and healthy young shoot
It hopes to have a root as strong as wire
It hopes that shoots to be healthy
It hopes that young shoot to be fast growing
It hopes that young leaves be healthy

After the incantations, a dibble (**aseuk**) [Figure 6.4] is made by shaping the lower end of a hard wood stick. Before using, this stick is smeared with coconut oil, and the white cotton cloth covering the rice seed in the woven bamboo basket is removed. Seven holes inside the **pungpuhunan** are then sown with sacred rice seeds of **pare koneng**, while 7 holes outside the **pungpuhunan** are sown with other sacred rice seeds of **pare siang.** A couple of sacred rice seeds (**sakuren**) of **pare langgasari**, also called **pare indung**, are additionally sown in the middle of the **pungpuhunan.** This symbolises the 'head' and 'neck' of **Nyi Pohaci.** The seven holes outside the **pungpuhunan** are represented as the 'arms' of **Nyi Pohaci. Pare indung** from the **pungpuhunan** is the first rice to be harvested, the whole stalk being pulled out intact and stored separately from the rest of the grain in the rice barn.

Immediately after the ritual, **angklung** players stop performing and go outside the swidden block, and place their instruments against tree in a roof-shaped pile. Women and girls then take rice seed to the **pungpuhunan.**

Sowing begins with men and boys standing in a row of more than 500 persons, and walking ahead of the women. Each has a long dibbling stick and makes holes (**ngaseuk**) in the

ground approximately 30 centimetres apart. Women and girls follow behind, holding the rice seeds in a small woven basket with their left hand, and dropping between 7 and 12 seeds into each hole using the right hand (**minih**). They walk quickly from the **pungpuhunan** in a certain direction. When they arrive at the edge of the plot rice sowing stops.

At least 5 rice varieties are planted in the **huma serang: pare siang, pare koneng, pare ketan langgasari, pare janah**, and **ketan peuceuk** (for further data on rice varieties see Appendix 2). Three of them, **pare siang, pare koneng**, and **pare ketan langgasari**, are considered sacred and must be planted in a separate block. These varieties are not permitted to be in contact with each other, **pare koneng, pare siang** and **pare ketan langgsari** being sown in the centre, east and west of the field, respectively (see Figure 6.9). To avoid mixing rice varieties, the swidden plot is divided into several sub-plots marked with Arenga leaf ribs (**nyere kawung**) placed by **palawari**.

In approximately three minutes the first stage of planting rice is finished. At about 9.00 o'clock work stops and everyone takes a rest under the trees. At the same time, **palawari** visit each person to collect cooked swidden rice and freshwater fish which is placed in a **baris** (small **bakul**). Special cooked swidden rice (**kejo huma**) and freshwater fish (**lauk tiis**) must be used for this meal, although for everyday consumption imported sawah rice (**kejo sawah**) and salted fish (**lauk asin**) are bought from a small neighbouring shop. The food is collected and put together

in a farm shelter (**saung**). The **baris** are returned to their owners.

Everyone waits for the meal to be offered by the **palawari** and the break is often a long one. On the occasion I witnessed, various **angklung** songs are performed by a group from Gajeboh. There are two kinds of **angklung** music: that used to address the rice goddess, **Nyi Pohaci** in her engagement ceremony, and songs play outside any ceremonial context (Zanten, 1995: 537). The main song in the first category is known as **marengo** (engagement/marriage song), while other songs outside the ceremonial context include **lutung kasarung, lalaela, lili-liang, jari dangdan, yandi bibi, cat arileu** or **ceuk arileu, ayun ambing, nganteh, gantung manggu, dadan kula, bibi lenjang, hiah-hiah panjang, keupat-reundang, oray-orayan,** and **pileuleuyan** (Danasasmita and Djatisunda, 1986: 45-46). The words of most these express humorous or erotic feelings, and are performed only by Outer Baduy **angklung** groups.

Two **angklung** texts, **marengo** and **ceuk arileu**, are given here for comparison:

1) **Marengo song** (engagement/marriage of rice)

Pohaci Sanghyang Asri	Pohaci Sanghyang Asri
Ku kami rek ditetepkeun	Who will be put by us at a permanent place
Ku kami diraramekeun	Who is greeted by us with festivities
Ku kami direremokeun	Who is married off by us
Dina malem ahad	On the night of **ahad**
Di bumi pertiwi	On the earth (**Pertiwi**)
Buana pancatengah	The central world
Ulah geder, ulah reuwas	Do not be afraid, do not be scared
Mangka tetep, mangka langgeng	May it be permanent, may it be forever
Mangka hurip kajayana	May her power live

Nu kosong pangeusiankeun	The empty one (ears), Please fill them
Nu celong pangminuhankeun	The lean ones, please make full them

(Zanten, 1995: 544)

2). **Ceuk Arileu** song (humorous or erotic songs)

Ceuk arileu, ceuk arileu	People say that there are many bends in the road (2x)
Samping poleng kahujanan	The plain (not **batiked**) cloth has become wet from the rain
Ceuk kadieu, ceuk kadieu	Sister, come here, sister, come here
Kami goreng kaedanan	I am really crazy about you
.....	
.....	

(ibid, 1995: 537)

After waiting about two hours, meals are offered by **palawari**. Some people are selected to come to a farm house. First of all, cone-shaped portions of cooked **huma serang** rice and various side dishes, such as meat of squirrel (**daging buut**), meat of a small bat (**lalay**) and fresh water fish (viz **paray**) are served to the **puun**. One portion is given to the **girang seurat**, while others are given to the **baris kolot**, **kokolot lembur/jaro dangka**, and **jaro pamarentah**. They eat together in the farm house. Before eating, a special prayer is said by the **puun**. **Gharu** incense is burned and betel, lime, and areca nut are chewed. Special portions are also given to the **angklung** players. Finally, portions are given to other people who participate in the ritual: one rice portion being placed on a piece of banana leaf and shared between three persons.

After the meal, rice sowing continues. As in the morning, a crowd of men and boys stand in a row holding

dibble sticks (**aseukan**); behind are a group of women and girls holding small woven bamboo baskets containing the rice seeds on their left hand side. They walk quickly in the opposite direction to that which they had walked in the morning. The men and boys make holes in the ground and women and girls drop several seeds into each hole. In less than 5 minutes they arrive at the edge of the field. The main work of sowing rice is now finished and some Outer Baduy go home. A **kokolot** (a **baris kolot**) goes into the **pungpuhunan** to perform a ritual called **mupu** ('collected'). He sits down in the **pungpuhunan** and pronounces incantations. The various articles, such as white cotton cloth, **keris**, **eunteung** and **bakul**, are collected and carried to a farm house. Some people remove the **kupat** hung in the Arenga fronds decorating the swidden plot. **Palawari** collect other materials used in the ritual. Gradually the remaining Outer Baduy go home. At the ritual which I witnessed in 1985, I counted 934 tears in the banana leaves used to reckon numbers of persons attending, the number of people involved in sowing rice in the **huma serang**.

The same procedure for sowing rice (**ngaseuk**) is followed for each swidden belonging to a **jaro dangka** in Outer Baduy, of which there are 7 in all. The rituals are attended by those Outer Baduy who are subordinate to each **jaro dangka**. The same procedure is adopted for sowing rice in each inner and Outer Baduy household plot (**huma masyarakat**), but is only attended by close relatives and friends.

dibble sticks (**aseukan**); behind are a group of women and girls holding small woven bamboo baskets containing the rice seeds on their left hand side. They walk quickly in the opposite direction to that which they had walked in the morning. The men and boys make holes in the ground and women and girls drop several seeds into each hole. In less than 5 minutes they arrive at the edge of the field. The main work of sowing rice is now finished and some Outer Baduy go home. A **kokolot** (a **baris kolot**) goes into the **pungpuhunan** to perform a ritual called **mupu** ('collected'). He sits down in the **pungpuhunan** and pronounces incantations. The various articles, such as white cotton cloth, **keris**, **eunteung** and **bakul**, are collected and carried to a farm house. Some people remove the **kupat** hung in the Arenga fronds decorating the swidden plot. **Palawari** collect other materials used in the ritual. Gradually the remaining Outer Baduy go home. At the ritual which I witnessed in 1985, I counted 934 tears in the banana leaves used to reckon numbers of persons attending, the number of people involved in sowing rice in the **huma serang**.

The some procedure for sowing rice (**ngaseuk**) is followed for each swidden belonging to a **jaro dangka** in Outer Baduy, of which there are 7 in all. The rituals are attended by those Outer Baduy who are subordinate to each **jaro dangka**. The some procedure is adopted for sowing rice in each inner and Outer Baduy household plot (**huma masyarakat**), but is only attended by close relatives and friends.

2.3. The swidden farming cycle in the huma masyarakat

The practise of swidden cultivation among all Inner and Outer Baduy follows basically the same pattern. However, **huma serang** and **huma puun** activities must always precede those in the **huma masyarakat** (Table 6.1; Table 6.2; Table 6.3, Figure 6.2; and Figure 6.3).

There are 7 main stages and nine additional sub-stages in the Baduy swidden cycle, each interspersed by ritual:

I. Site selection (**neangan pihumaeun**)
   Ritual: **Narawas**
II. Land preparation (**ngagawean pihumaeun**)
   Cutting underbrush (**nyacar**)
   Ritual: **nukuh**
   Felling and pruning trees (**nuar** and **nutuh**)
   Drying debris (**ngaganggang**)
   Burning debris (**ngahuru**)
   Reburning debris (**ngaduruk**) and weeding under piles of debris (**nyasap**)
III. Planting rice (**ngaseuk**)
   Ritual: **ngaseuk pare**
IV. Managing prepared swidden field (**ngarawat huma**)

First weeding (**ngored munggaran**)

Ritual: **ngirab sawan**

Second weeding (**ngored ngarambas**) and providing medicinal rice (**ngubaran pare**)

V. Harvesting rice (**dibuat** or **panen**)

Ritual: **mipit**

VI. Storing and consuming rice

Tasting new rice (**nganyaran**) and closing swidden cycle (**tutup taun ngahuma**) for entire community

Ritual: **Kawalu**

Ritual: **Ngalaksa**

Tasting new rice (**nganyaran**) and storing rice in barn (**ngaleuitkeun pare**) for each household

Ritual: **Nganyaran**

Ritual: **Ngadiukeun pare indung**

Offering swidden products to secular leaders

Ritual: **Seba**

Puun Cikeusik and **Puun** Cibeo undergo ascetic rituals

Ritual: **Ziarah** or **Tapa**

VII. Fallowing land

Table 6.3. Timetable of various activities in three main types of Baduy swidden cultivation

Main activities	Months										
	Sa	Ka	Kn	Kp	Kd	Ks	Kh	Hl	Hk	Ks	Kr	Kt
Cutting shrubs	hs	hp	hm									
Felling trees			hs	hp	hm							
Burning and sowing				hs	hp	hm						
First weeding					hs	hp	hm					
Second weeding						hs	hp	hm				
Harvesting rice										hs	hp	hm

Sa=**Safar** (April-May); Ka=**Kalima** (May-June); Kn=**Kanem** (June-July); Kp=**Kapitu** (July-August); Kd=**Kadalapan** (August-September); Ks=**Kasalapan** (September-October); Kh=**Kasapuluh** (October-November); Hl=**Hapit lemah** (November-December); Hk=**Hapit kayu** (December-January); Ks=**Kasa** (January-February); Kr=**Karo** (February-March); and Kt=**Katiga** (March-April).

hs = **huma serang**; hp = **huma puun**, and hm = **huma masyarakat**

2.3.1. Site selection

Inner Baduy differ from Outer Baduy in that they have access to swidden fields on their own territory. A swidden site is selected annually by each household. In selecting a site, the main concern is with soil fertility, which will influence land productivity. On the other hand, land productivity is a function of both the amount of biomass and inherent soil properties. The Baduy have several ways of recognising soil fertility (see Chapter 2, pp: 56-58). According to one informant, a piece of land is considered good for swidden cultivation if the forest is mature enough to support tall shrubs (**tangkalna jarangkung**), where there

is a moderately steep slope (**henteu gedeng**) and when the soil is black (**taneuh hideung**) with a high content of litter (**loba koleang**) and humus (**loba surubuk**). Some plants are considered good indicators of fertile soil (**taneuh subur**): **kiseureuh** (Piper aduncum), **kitambah** (Flemingia lineata), **kitepus** (Amomum coccineum), **kuray** (Tremna orientalis), **bintinu** (Kleinhovia hospita), and **maradelan** (Macaranga sp). Conversely, some plants such as **hamirung** (Vernonea arborea), **jirak** (Symplococus fasciculata), and **peuris** (Symplococus cochinchinensis) signify non-fertile soil (**taneuh anggar**).

Today, site selection is less important than it used to be, because mature fallowed secondary forest (**reuma kolot**) is difficult to find. Because of increasing population density, land fallowed for only three or four years is regularly used for farming rice, although such locations are not so fertile. According to informants from Cibeo, swidden land is obtained in different areas by moving gradually from one plot to another on the same hill block or between different hills. For instance, in 1995 the swidden plot of Ayah Antiwin and his family was located in the neighbourhood of last year's plot, and about one-fourth of the total land cultivated was re-cultivated (**nyami**) from the previous year. The remainder was newly opened land (**nyacar**), cut from mature secondary forest. This strategy of overlap helps to reduce work loads, recultivated land requiring only weeding rather than felling or pruning of trees. Thus, over the last few years Ayah Antiwin has

gradually moved from one plot to another on the same hill, Blok Monggor Kaweni, through a process of successive overlap.

Ayah Antiwin's neighbour, Ayah Kainte cultivated swiddens in Blok Cibadak during 1995. He recultivated from the previous year and on newly-opened land cut from mature secondary forest. However, before occupying this hill, he had cultivated land for two successive years in Cisawarna/Blok Paniga, about one kilometre from the present area. Like Ayah Kainte, Ayah Sarwati, father-in-law of Ayah Antiwin's son (Antiwin), who cultivated fields in Blok Cijerenong, had obtained swidden land in Blok Pasir Ipis the previous year, about a half kilometre from his present location, which he had occupied for two years.

Unlike Inner Baduy, Outer Baduy with little or no swidden land in their area, have commonly practised swidden farming in the neighbouring non-Baduy area. Ayah Ailin from Babakan Marengo has three swidden plots in his area. In 1995 most of those were in fallow. While waiting for this land to be recultivated, he rents land for a few years in the non-Baduy area. In 1994/1995 Ayah Ailin cultivated swiddens in Kadukesur, Cisimeut village. The following year he obtained land in Cibengkung from Haji Abdullah, a businessman who had bought land in the area. Like his step father, Pulung from Babakan Marengo, he has practised swidden cultivation in non-Baduy because he has cultivated land in Outer Baduy. When he has occasionally cultivated land in Outer Baduy he has done so with his step father. In

1995/1996 he obtained a plot in Cibengkung, next to that of his parents. He sharecropped land, on which he planted Albizzia (Paraserianthes falcataria), for a land owner who was also a tailor and who rented a stall in Ciboleger. Two other Outer Baduy, Sartam and Ayah Sartam (Jahim), have no land in their own area, Karahkal, because they lost their land due to pawning in the past and could not redeem it. Today, they cultivate non-Baduy land, and are the clients of some non-Baduy people. In 1995/1996, they became the client of Amir from Cimuntur, Cisimeut. They cultivate this land in return for planting fruit trees and sharecropping Albizzia.

Thus, after harvesting rice, unlike **huma serang** and **huma puun**, each swidden plot of **huma masyarakat** must be maintained by each household. Inner Baduy establish a swidden by opening inherited fallow land by borrowing from relatives and friends on different hills within their territory. After two or three years on a particular hill they will move to another. Outer Baduy, however, obtain land in more complex ways, and most cultivate swiddens on neighbouring non-Baduy land.

Although Inner and Outer Baduy families obtain land in different ways, it is farmed according to the same pattern. The next phase in the farming cycle, after site selection, is cutting underbrush (**nyacar**) and felling trees (**nuar**).

2.3.2. Cutting underbrush (nyacar).

The first main activity in preparing land for swiddens is to cut the underbrush (**nyacar**). Before this, however, the ritual of **narawas** must be performed. The word **narawas** or **narabas** is derived from **tarawas**, meaning 'clear away' or 'pioneering effort' (Danasasmita and Djatisunda, 1986: 4). **Tarawas** also means to make a mark or sign (**tanda**), indicating to cultivators that the field has been claimed (**diaku**) for cultivation (Soepomo, 1982 [1933]: 120-121).

In the **narawas** ritual, objects, such as a strong stone (**batu beuneur**), a whetstone (**batu asahan**), a bamboo internode containing water (**ruas bambu isi air**), incense in a coconut shell (**menyan di batok kalapa**), and a kind of ginger, **panglay** (Zingiber cassumunar), are placed in the centre of the field (Figure 6.6). Incense (**menyan gharu**) is burned and **panglay** is chewed and spat on the soil. In addition, some incantations (**jampe**) are uttered: such as for chasing away snakes (**ngusir oray**), and evil spirits such as a devil (**usir siluman**), **kunti anak**[5], and **kaliboro.** The ritual is performed by each male household head, or where a newly married man lacks experience, a widow, assisted by relatives.

According to one of my informants, the purpose of **narawas** is to get permission from the spirits of the forest

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[5]). **Kunti anak** is the malicious spirit of a woman who has died in childbirth and who appears as a beautiful young woman with a hole in her back. Similar beliefs are found widely in Indonesia (see e.g. Ellen, 1993, pp. 1-25).

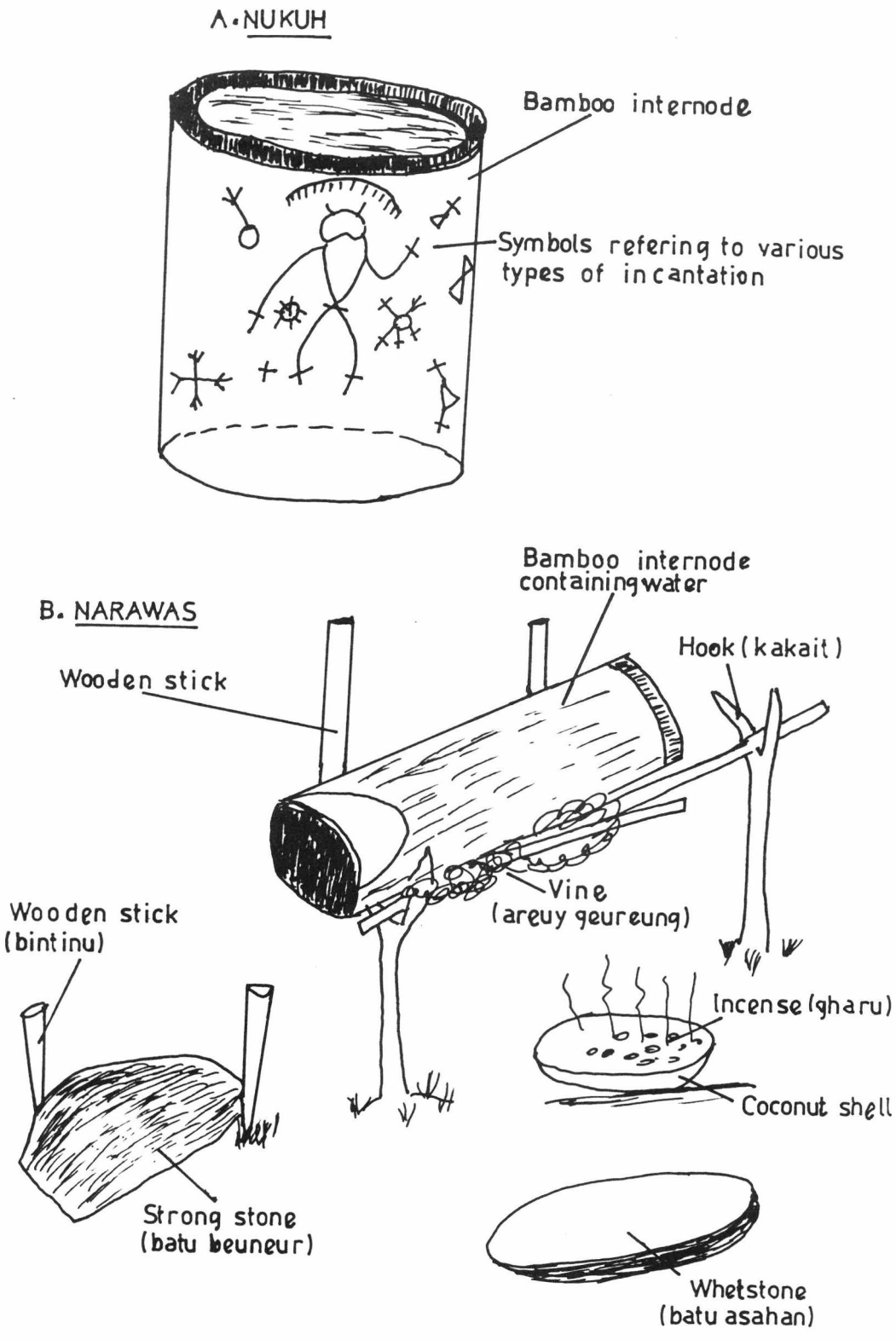


Figure 6.6. Various articles used in performing narawas and nukuh rituals

for swiddening, to allow the Baduy to cultivate in peace (**ngadamaikeun anu boga leuweung**). However, the ritual also serves a more pragmatic purpose: the articles left in the field mark it as land that has been claimed (**diaku**) for cultivation in the next farming season, while the aromatic **panglay** (Zingiber cassumunar) may also deter dangerous animals who are sensitive to the odour. Indeed, it is a common belief amongst rural Sundanese that this plant has power to chase evil spirits (**iblis** and **kunti anak**) [Soeganda, 1982: 21].

An appropriate day to hold the **narawas** ritual is calculated on the basis of location name (**naptu tempat**) and day (**naptu poe**), which are summed together (see chapter 3, pp. 122-124). The total number arrived at is divided by three. If the result can be exactly divided by three, e.g. 3, 6, 12, 9, 15 and so on, these days are considered to be auspicious (**untung** or **bagus**) for cultivation and, conversely, unauspicious (**naas**) for dangerous animals living in the forest. Consider, for instance, cultivation which will take place in Kaduheulang, and where **narawas** will be performed on wednesday (**rebo**). Firstly, the place **naptu** is calculated: Kaduheulang consists of **ka**=2, **du** (**da**)=3, **heu** (**ha**)=4, **lang** (**la**)=5, with a total of 2+3+4+5=15. Secondly, the day **naptu** is calculated: wednesday (**rebo**)=7. Thirdly, these numbers are summed (14+7=21), and divided by 3, giving 7, which is auspicious. Thus, wednesday can be considered an appropriate day to perform **narawas** in Kaduheulang. Moreover, the sunday must

be fixed with a date. Baduy believe that dangerous animals (especially poisonous snakes) in the forest stay in different places on different days. For example, on the first day (**satanggal**) from a given date dangerous animals are thought to be located towards the east (**kulon**), on the second (**dua tanggal**) towards the south (**kidul**), on the third (**tilu tanggal**) towards the west (**barat**), on the fourth (**opat tanggal**) towards the north (**kaler**), and on the fifth (**lima tanggal**) towards the above (**atas**) [see discussion on establishing new hamlet in chapter 3, pp.120-128]. Thus, if **narawas** and cutting underbrush take place on wednesday, **satanggal** (the first date), to avoid dangerous animals, work must move from east to west. In addition, in determining the date of **narawas**, odd-numbered dates (**digangsal**) are usually selected and dates with even numbers (**dijangkep**), that is Sunday (**Senen**), Thursday (**Kemis**) and Friday (**Jamahat**), are avoided. **Narawas** is also cancelled if some animals, such as snakes (**oray**), quail (**puyuh**), and jungle fowl (**kasintu**), are found when the cultivator goes to the field.

After **narawas**, cutting underbrush can begin (**bisa terus dicacar**), though it need not begin immediately (**diantepkeun heula**). Cutting underbrush in **huma masyarakat** usually takes place during **Kanem** (June-July). Vegetation is cut (**nyacar**) using a chopping knife called **kujang** by Inner Baduy and an **arit** by Outer Baduy (Figure 6.4). The underbrush is composed of species such as **kitambah** (Flemingia lineata), **harendong** (Melastoma malabatricum),

kanyere (Bridelia monoica), **kaso** (Sacharum spontaneum) and **kiseureuh** (Piper aduncum), which are completely removed, although timber and plants of economic value, such as those providing fruits and building materials are retained (Figure 6.7). These crops are protected, weeded and grass surrounding trees is cut (**dibobobokor**). This work is mainly that of men and boys, though they are sometimes helped by women and girls. In Inner Baduy, this work is usually done by household members (husband, wife and their children), sometimes supported their relatives. For instance in 1995/1996, in Ayah Antiwin's swidden plot in Cibeo work was conducted by Ayah Antiwin himself, Antiwin and Antiwin's younger brother, Sarman. They were sometimes helped by Ambu Antiwin, and Antiwin's friend, and the father-in-law of Ayah Antiwin. They were provided with meals, and in addition rice and food was brought by Antiwin's friend and father in-law. This job is finished in one month involving, on average about, five persons a day.

Like Ayah Antiwin, Ayah Sarwadi from Bababakan Balimbing, in Outer Baduy, relied only on his own labour and that of his son, sometimes supported by his wife. The work was finished in twenty working days. Unlike Ayah Sarwadi, Ayah Mai from Kaduketug, in clearing his swidden plot in Cepak Ranji, Cisimeut, employed non-Baduy labour for wages. By paying for the labour of 4 persons, this job was finished in about 15 working days. The labourers were paid 2,000 rupiah a day or a total of 120,000 rupiah (approx. £.34) for the entire swidden. By comparison, Ayah

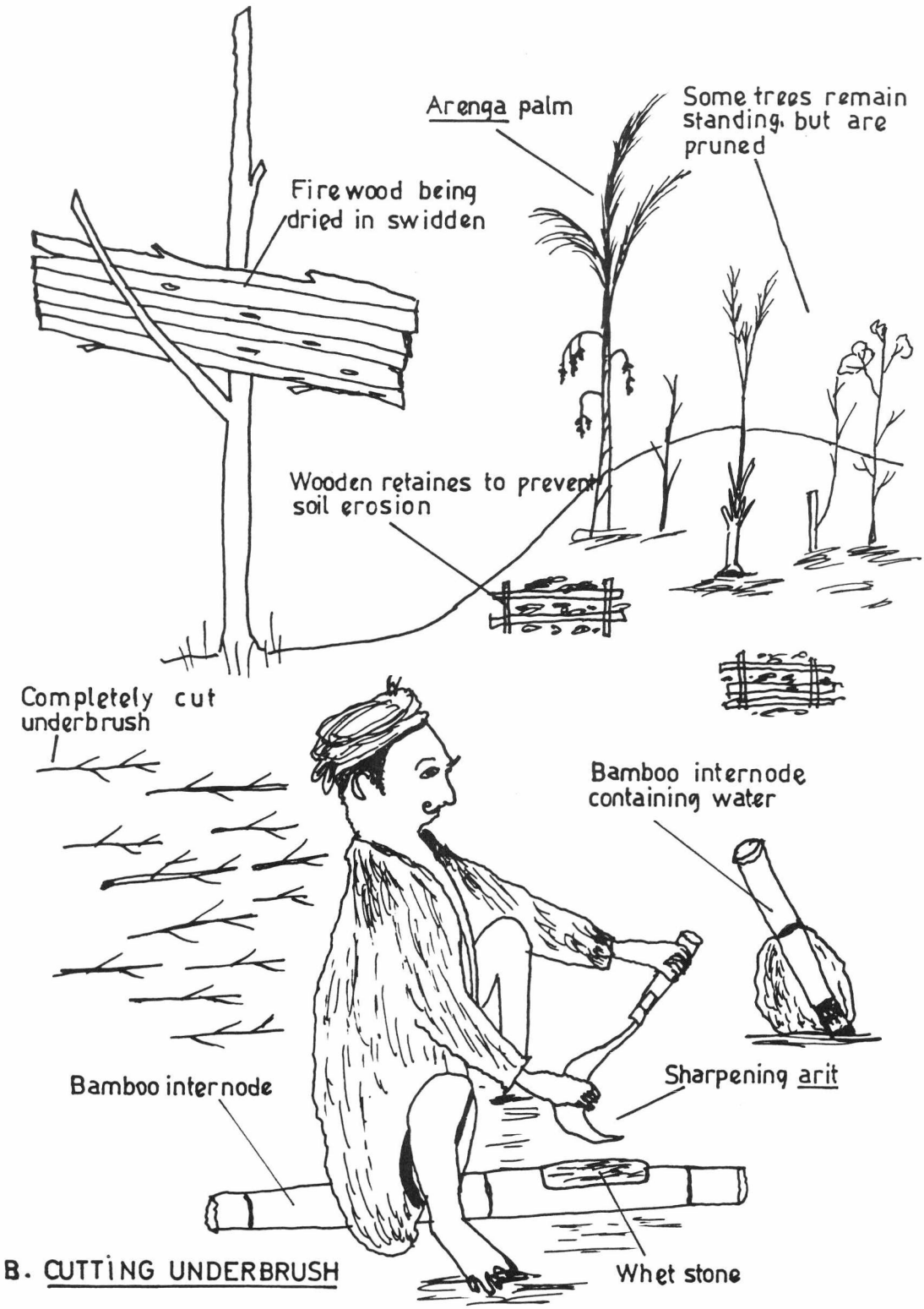


Figure 6.7. Cutting underbrush (nyacar) and felling trees (nuar)

Mai, Ayah Ailin from Babakan Marengo, using **rereongan** (see Chapter 5, section 3.2, pp:253-255) of 20 persons took only one day to cut his swidden in Cibengkung. The workers were paid 1,500 rupiah a person, or a total of 40,500 rupiah (£12). In addition, meals and cigarettes, coffee, and cakes were provided.

Cutting underbrush in Inner Baduy is, therefore, mostly done by household members, and non-household workers are rarely paid cash, but rather re-paid in kind on some subsequent occasion. Male and female labour is considered equivalent. By contrast, in Outer Baduy, besides the labour of household members, **rereongan** and wage labour are also used to cut underbrush.

3.3. Felling trees (nuar)

In the month of **Kadalapan**, selective felling and pruning (**nuar**) takes place. Three days before work begins a special ritual called **nukuh** is held. **Nukuh** is conducted on the same day as **narawas** and in the same place or nearby. Plants such as **rane** (Selaginella willdenowii), **sulangkar** (Leea indica), **areuy geureung** (Stephania javonica), **kapas** (Gossipium barbadense), **kunir** (Curcuma domestica), **daun kawung** (Arenga pinnata), **capeu** (Blumea balsamifera), **ilat mintul** (Scleria purpurascens), and **trumbueusi** (Phyllanthus niruri) are used in this ritual. As in **narawas**, incense is burned and **panglay** chewed and spat over the soil. Various incantations (**jampe**), such as **jampe tutulak cakra**, **tulak**

pangilang, tulak sangan jaya, tulak bangapah, tulak sungsung, tulak batara, and **tulak papadon opat** are made, symbolized graphically on a 20 cm bamboo tube called **waroge** (Figure 6.8). Of 31 possible incantations, five, namely **cacahan, tutulak, kapaliasan, paneda** and **jampe** are crucial, while the rest are considered supportive (Garna, 1987: 310).

One of the incantations usually performed to open the ritual is called **Allah Huma Du'a Paneda** (Garna, 1987: 310-311). It is as follow:

Ka saking Allah
Neda-neda kabul
Permentaan awaking

Kabul permentaan awaking
Kabul permentaan awaking
Kabul permentaan awaking

It continues:

Allah huma dua paneda
Dirahmat saking Allah
Ka Gusti ka Roma Suci
Ka Allah nu kawasa
Kami dek neundeun
Pohaci Sanghyang Asri
Menta aya kajujuranan
Kamanjuranan
Katut ka taun
Kalindeukan Sri
Hurip di bumi pertiwi

Which can be translated as:

To great Allah (God)
We wish to be granted
My wish to God

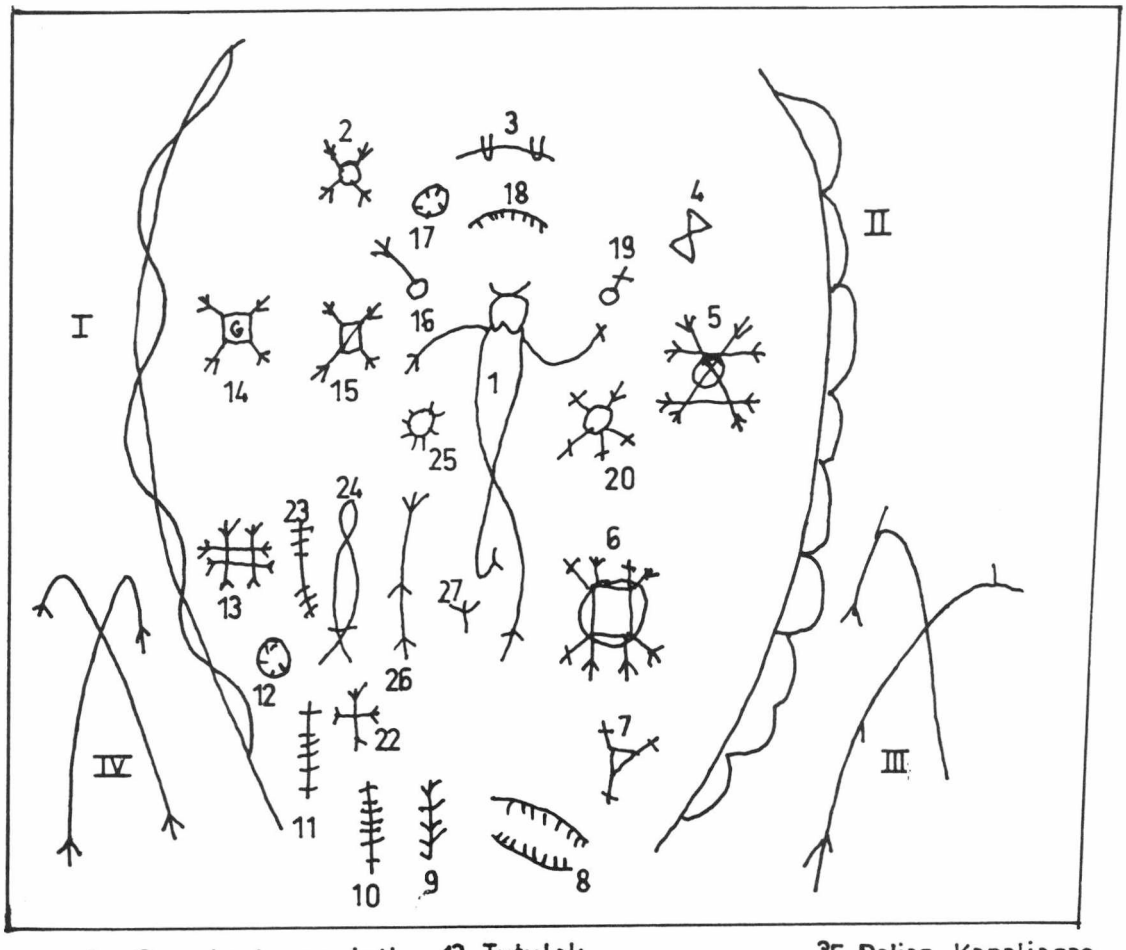
To be granted my wish
To be granted my wish
To be granted my wish

It continues:

Oh Allah (God) we request

Figure 6.8. Incantation symbols drawn on bamboo (waroge)





1 Sangdro koma jati
2 Tutulak Nabi Sulaiman
3 Pikulan
4 Paneda
5 Tutulak
6 Papadon opat
7 Gajah kunti anak
8 Jampe
9 Allah huma paneda
10 Cacahan
11 Palias, Kapaliasan
12 Cacahan
13 Tutulak
14 Tutulak jungjang
15 Tutulak harung hangsuan
16 Panglay
17 Tutulak
18 Sisir baheula
19 Panglay
20 Raja sangiang
21 Jampe
22 Tutulak papadon opat
23 Pikulan pare
24 Manusia saksi nukuh
25 Palias, Kapaliasan
26 Kindeuwan, hasil, padaringan
27 Palias, kapaliasan
I Wates huma
II Wates huma
III Jalan indit jeung balik
IV Jalan indit jeung balik

Source: Iskandar field notes (1995/1996); Garna (1987: 308-309)

Give mercy of Allah
For Allah the most holy
To the almighty power of Allah
We will put
Pohaci Sanghyang Asri
We request honesty
Efficacy
Katut to year
To be intimate to **Sri**
May her power live on the world (**pertiwi**)

(My translation after ibid, 1987: 310-311)

Tutulak is a special incantation used to avoid certain evil disturbances (**jurig**). Using **panglay** (Zingiber cassumunar) and **jampe kapalisan**, it aims to protect cultivators. The words of **tutulak** and **kapaliasan** are follow as:

Ngadangdeung di alam keueung
Ngacacang di alam mokaha
Hah, mokaha awahing
Hah, mokaha awahing

Sisingkah palias
Sisingkah palias tetepan jebray
Sumingkir kanang ka nabi
Sumingkah kaning ka Allah
Singkirkeun nu haradengki ka awaking

Palias istan
Palias istan
Palias istan

(ibid, 1987: 312)

Which can be translated as:

Living lonely in the world with worry
Living in **alam mokaha**
Hah, mokaha awahing
Hah, mokaha awahing

To avoid bad things
To avoid **palias tetepan jebray**
To wish of **nabi** (prophet)
To wish only of Allah (God)
Please help me oppose those who are invidious and
Spiteful

palias istan (God forbid?)
palias istan
palias istan

(my translation after ibid, 1987: 312)

Finally, the bamboo which has had inscribed on it the incantation symbols is buried in the soil.

Nukuh is aimed at completing a process which **narawas** began, obtaining permission from forest spirits so that land can be used for swiddening, and purifying land which has been disturbed by human movement and pollution, such as urine (**menta widi bisi kurang nyata tempat atawa leuweung arek dicicingan jeung kakotoran**). Using aromatic plants of family **Zingiberaceae**, this ritual also seeks protection from disturbances from dangerous animals, such as poisonous snakes and scorpions.

Felling trees (**nuar**) is selective. Useless vegetation is cut using a machete (**golok**), but economic plants, such as trees providing fruits and building materials, are only pruned (Figure 6.7). As a result, a canopy of these trees will grow densely after the rice harvest. Clearing is mostly undertaken by males with help from women, and mostly done by household members. In a couple days it is finished. Some branches and woody stems are collected by women to be used for firewood (**suluh**), and placed in a forking branch to dry quickly (Figure 6.7). Some fire wood is carried to the hamlet directly and piled in the space underneath a house or placed against the side or back house wall. The wood of Albizzia (Paraserianthes falcataria), **kihiang** (Albizia procera), **kiseureuh** (Piper aduncum), **harendong**

(Melastoma malabathricum), **laban** (Vitex trifolia), **kanyere** (Bridelia monoica), **hamirung** (Vernonea arborea), **seuhang** (Ficus grossularoides), **kaso** (Saccharum spontaneum), **babakoan** (Flemingia lineata), and **awi** (Gigantochloa spp) are the main source of fuel. The remaining biomass is left to dry (**ngaganggang**) before burning.

2.3.4. Burning (ngahuru) and re-burning (ngaduruk)

Between two weeks and a month after the trees have been felled (**nuar**), all cut organic matter will have dried. The trash is collected into piles and burned (**ngahuru**) to supplement nutrients in the soil. The first burn is usually incomplete, and unburned matter is re-collected into piles and, at the same time, patches under un-burned trash piles are weeded (**nyasap**). The remaining piles are then re-burned (**ngaduruk**).

Burning and re-burning are critical and must be done quickly. The work takes place during **Kasalapan**, the month specified for re-burning, weeding and planting. If the burn is attempted too early it will be poor, resulting in a reduction in the availability of nutrients for growing crops.

A combination of practical awareness of the consequences of over-intensive cultivation and cultural perceptions influence the practise of Baduy swiddening. For example, in order to minimise labour input and soil erosion, in order to maintain soil moisture and to reduce

soil disturbance and exposure, crop stubble is left, and mulches are applied to protect the soil. Hoeing the soil is forbidden, with the result that minimum or zero-tillage is applied.

Burning (**ngaduhuru**), weeding (**nyasap**) and re-burning (**ngaduruk**) are undertaken by both males and females. In both Inner Baduy and Outer Baduy, burning and re-burning are conducted using household labour alone. Rarely is the assistance of relatives or friends sought in Inner Baduy, or wage labour sought in Outer Baduy. These activities are completed in between two days and two weeks, depending on the history and location of the swidden plot: whether it is being opened from mature secondary forest fallow (**reuma kolot**), whether it is being recultivated (**nyami**), or whether (in the case of Outer Baduy only) it is an abandoned rubber plantation (**kebon karet**).

2.3.5. Planting (ngaseuk)

Following re-burning land is prepared for planting rice (**ngaseuk**) and other annual crops. The precise day for planting rice is based on the day of the cultivator's or his wife's birth day, or the day of their marriage, in relation to their past experience of the most auspicious days for planting. Special calculations are also used to determine an auspicious day for planting rice, mainly based on day **naptu** (**naptu poe**) and date **naptu** (**naptu tanggal**). Let us assume, for instance, that day 5 on a Sunday is

chosen for planting rice. The date of 5 (**lima tanggal**) is 8, while the day **naptu**, Sunday (**Ahad**) is 5. These are summed 8 + 5 = 13. This number must be fixed with 6 cropping production characters: 1) **jagu**, 2) **danuh**, 3) **gigi**, 4) **cari**, 5) **harungan**, and 6) **harangan**. Both **jagu** and **danuh** are considered to be good for planting rice, because these words have positive connotations e.g. **danuh** means 'plentiful production'. Conversely, other characters are considered negative, such as **harungan** and **harangan** which mean 'hindrance' (see also the discussion of the wedding ceremony in Chapter 3, pp. 154-157). Using such criteria, 13 is fixed with **dagu** which is calculated by 1) **jagu**, 2) **danuh**, 3) **gigi**, 4) **cari**, 5) **harungan**, 6) **harangan**, 7) **jagu**, 8) **danuh**, 9) **gigi**, 10) **cari**, 11) **harungan**, 12) **harangan**, and 13) **dagu**. Based on this calculation Sunday of date 5 is considered to be an auspicious day for planting rice. However, because the fixing of the new year day in each year by **puun** is sometimes considered misjudged (**henteu tepat**), calculations based on date **naptu** have been abandoned[6].

The various activities connected with planting are well-illustrated in a particular case, that of Juned. Juned was born in Kaduketer, Outer Baduy. In 1996 he was about 35

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[6]). In the past, similar calculations were also widely used by rural Javanese, though the name characters were different from those still used by the Baduy. For instance, to plant **gogo** (upland rice farming) a **naptu** fixed with **milya** (green), meaning rice will grow well with green, while to harvest the **naptu** was fixed with **sri** (rice). **Pokah** and **gono** were avoided because they mean 'broken' and 'rattan worm'; respectively (Sollewin Gelpke, 1986: 25).

years and his wife about 30 years. She is a daughter of a former **jaro tanggungan 12** (Ayah Caisah). They have two children. The oldest is female, called Samah, and is about 3 years. The second child is male, named Aceng, and is about 1 year. Juned has no living parents, both died when he was a boy. Since then, he has lived with close relatives. After marriage, he obtained his own swidden plot. In 1995/1996, he obtained a plot of about 0.5 ha in Nayagati from Kirman a non-Baduy, by agreeing to sharecrop Albizzia, and look after fruit trees in Kirman's plot.

Tuesday (**Salasa**) was chosen by Juned (Ayah Samah) for planting rice, as this was his birth day. One day before planting, Juned is very busy. Various plants, such as **pacing tawa** (Costus speciosus), **tamiang pugur** (Bambusa wrayi), **bingbin** (Pinanga sp), **barahulu** (Amomom sp), and **jawer kotok** (Coleus galeatus) are collected for use in the **pungpuhunan**. They are put under a bamboo frame located near a farm house. At the same time, he weeds patches under un-burned swidden trash (**nyasap**), while his wife, Ambu Samah, cooks in a farm shelter. Previously, six rice bundles, consisting of the named folk varieties **pare koneng**, **pare ketan langgasari**, **pare siang**, **pare tunggul**, and **pare pendok**, are prepared by his wife. These are threshed by stamping on each bundle in a big flat basket (**nyiru**). Rice from each bundle representing each variety (**huasan**) is put into a separate woven bamboo basket (**bakul**) or sack (**karung**).

Seed rice bundles are carefully selected by women after

the previous year's harvest, and are usually stored in a special place in the rice barn or house, separated from the rest of the rice. Three sacred rice varieties - **pare koneng**, **pare siang** and **pare ketan langgasari** - must be planted in swidden fields annually. These are complemented by other varieties, such as **pare tunggul**, **pare seungkeu**, and **pare pendok**.

The following day, at about 7.00 clock in the morning, Juned prepares the **pungpuhunan**. At the same time, his close relatives, his parents in-law and his neighbours who have swidden plots close to his farm come to help planting rice.

Like other Baduy, before sowing rice, a major ritual with offerings is held in the **pungpuhunan**. The ritual performance begins when Juned enters the **pungpuhunan** and sits down in front of a woven bamboo basket containing sacred grain. His hands and hair are smeared with coconut oil. **Gharu** incense is burned and incantations pronounced. As mentioned earlier, it is believed that in sowing rice **Nyi Pohaci** becomes engaged (**direremokeun**) to the earth, **Pertiwi**. The ritual is usually accompanied by the following incantation, which is slightly different from that used by Inner Baduy:

Ulah geder ulah reuwas
Pohaci Sanghyang Asri
Ieu deuk dititipkeun
Di bumi di paratiwi
Bi bagawa cacandayah

Lamun taun, taun tandunan
Lamun poe, poe hade, poe salasa
Ayeuna dek dipupuan

Ieu Pohaci simbutna ning jati
.....
.....
.....

Source: Garna (1987: append. 9)

Which can be translated as:

Do not be afraid, do not be scared
Pohaci Sanghyang Asri
This will be put
On the earth (**pertiwi**)
On **bagawa cacandayah**

If year, year **tandunan**
If day, good day, chosen at Tuesday
Now this will pick up
The rice is protected by **Pohaci**

(my translation, after Garna, 1987)

After the incantations, a couple of seeds (**sakuren**) of sacred rice, called the **pare indung** (rice mother), are sown in the middle of the **pungpuhunan**. In addition, 7 holes inside and 7 holes outside the **pungpuhunan** are sown.

Immediately after conducting the ritual, men walk ahead of the women, making holes in the ground (**ngaseuk**) while women place rice seed in the holes (**minih**). They first walk from the **pungpuhunan** towards the South-East (**timur-kidul**), because on this occasion sowing rice took place on a Tuesday[7]. After this, they walk back to the **pungpuhunan**, sow to the west, north and return to the **pungpuhunan**, sow to east, south and return to the **pungpuhunan**, and finally sow to north and east.

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[7]). It is common to start sowing rice on different days in different directions, namely: North-East (**nyela bumi**) on Sunday (**Ahad**), east (**nyepet timur**) on Monday (**Senen**), South-East (**timur-kidul**) on Tuesday (**Salasa**), South (**nyepet kidul**) on Wednesday, South West (**barat-kidul**) on Thursday (**Kemis**), West (**barat**) on Friday (**Jamahat**), and North (**nyepet kaler**) on Saturday (**Sabtu**).

Sacred rice seeds are placed in separate parts of the swidden: **pare koneng**, **pare siang**, and **ketan langgasari** being sowen at the centre, east, and west of the field, respectively. These different varieties are not permitted to be in contact with each other[8]. In order to ensure this, along the boundaries between them, other non-sacred rice varieties are planted (Figure 6.9). In **huma serang**, to avoid different rice varieties overlapping each other due to the involvement of several hundred people, the plot is first divided into six subplots marked by Arenga palm leaf ribs (**lidi kawung**).

Sacred rice is not permitted to come into contact with the farm house. This prohibition has an important practical function, in maintaining the genetic distinctiveness of the different varieties, by ensuring that each sacred variety can be harvested (**dibuat** or **dipanen**) and separated (**dipasing**) easily and its purity more easily guaranteed. In wet rice cultivation, because of the introduction of new high yielding varieties (HYV), the harvesting and selecting of seed of each variety is no longer undertaken properly, and after one year can no longer be used for planting in the next season, as the seed is not homogenous. If such seed is planted, rice will grow as a mixture of different

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[8]). Because sacred varieties must be planted in separate parts in the swidden, some households (particularly Outer Baduy who don't own enough land) are unable to plant some varieties. As a result, they don't have a **pungpuhunan**, and the associated rituals - **ngirab sawan**, **mipit**, **ngalaksa**, **kawalu**, and **nganyaran**- must undertaken by other households (close relatives and friends). Indeed, sacred rice seed for planting during the next farming season must be borrowed from other households.

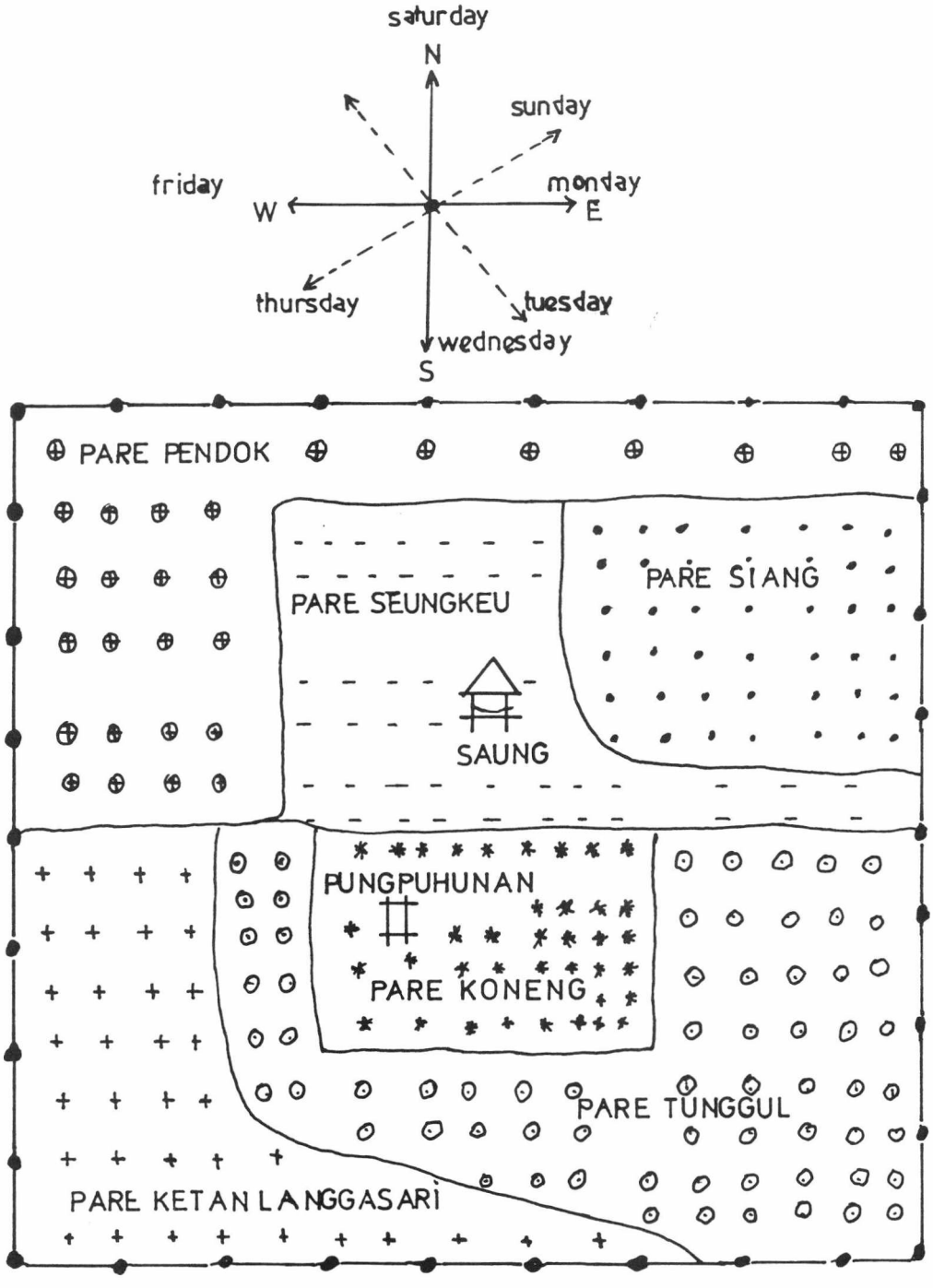

Figure 6·9· Planting pattern for different rice varieties in a swidden plot

heights and produce a low yield. As a result, today seeds are predominantly bought at farming shops (**kios pertanian**) instead of being homegrown. Moreover, such seed can be used only for one farming season, and for the following year new seed must be bought again. Farmer independence is therefore restricted and they became more dependent on market-led inputs and energy subsidies from outside, over which they have no control (see Chapter 7, pp:473-474).

Only a few Baduy rice varieties have disappeared because they were planted in contact with other varieties and during harvest could not be well separated. These varieties are generally those which have similarities in grain colour and shape. For example, if there is crop failure in a swidden, or the crop grows badly, **ketan kasumba**, **hawara koas**, **jalupang**, and **sereh** varieties will commonly be planted as a replacement (**pikeun ngayum**), mixed with other varieties. These varieties are recognised as maturing more quickly (**pare hawara**), and can be harvested in less than 5 months. However, apart from **ketan kasumba** which has a very distinctive bluish red seed colour (**warna kasumba**), these varieties have seeds of similar colour and shape. As during harvest they cannot be easily separated, they have tended to disappear.

The sexual division of labour in sowing is clear: men dibble (**ngaseuk**) and women sow (**minih**), except that occasionally sowing may be undertaken by boys. All work stops at about 11.30 a.m, and everyone takes a brief rest in a farm shelter. Some people buy **es mambo** (ice pop) and

rujak (fruit salad in a hot chili sauce) is sold by local non-Baduy. Some men bathe in the Cisimeut river. It is at this time that each person is provided with a meal. Each portion of cooked swidden rice (**kejo huma**) is placed on a piece of banana leaf shared between three persons. **Kejo huma** and freshwater fish (**lauk tiis**) must be used for this meal, although ordinarily people will consume sawah rice (**kejo sawah**) and salted fish (**lauk asin**) bought from small neighbourhood shops. Each rice portion is placed in a woven bamboo basket and distributed by Juned to all people who have participated in the sowing.

Of all swidden jobs, sowing rice, both in inner and Outer Baduy, is mostly usually undertaken through labour-exchange (**liliuran**) between kin and friends. Ten people, including men, women, and children, join together for the sowing. Each household which has participated must be later repaid by Juned's family.

After lunch, Juned goes to the **pungpuhunan** to perform a closing ritual, called **mupu** ('collected'). He sits down in front of the **pungpuhunan**, and pronounces incantations, collects the various articles, such as the white cotton cloth (**boeh**), mirror (**eunteung**) and **keris**, and returns them to the woven bamboo basket.

Some people have no **pungpuhunan**, because their swiddens are too small. To perform the full rituals, enough land for planting 5 rice varieties is necessary, and sufficient money for the cost involved in the various rituals. Performing several rituals in the **pungpuhunan** is

expensive, requiring the provision of swidden rice and the purchasing of freshwater fish for the people who join in planting and harvesting. In this situation, before sowing, those too poor to perform the rituals must carry rice seed to their close relatives, three rice varieties being placed together in their relative's **pungpuhunan**. If they are unable to do even this, they can just wrap **pare koneng** in banana leaves and place it on the seed rice of their relatives. After finishing performing the ritual, the seed is carried to their swidden plot and sown. Alternatively, they can take a handful of **pare koneng** from the relative's **pungpuhunan** and plant it in their swidden plot. After harvesting, this rice must be returned. Similar alternative procedures exist for other rituals, such as those which occur before second weeding (**ngirab sawan**), before harvesting (**mipit**), and at the first tasting of new rice (**nganyaran**). On these occasions they join (**ngaherokeun**) close relatives who have been asked to join in the ritual of planting rice.

2.3.6. Planting cultigens other than rice

Swidden are planted not only with rice, but also with other cultigens providing starchy food (banana, taro, maize, yams, job's tears), vegetables, spices, fruits, and traditional medicine (Figure 6.10).

Cau (banana= Musa paradisiaca) is planted by men during **nyacar**. Young plants are buried (**saeur**) when the

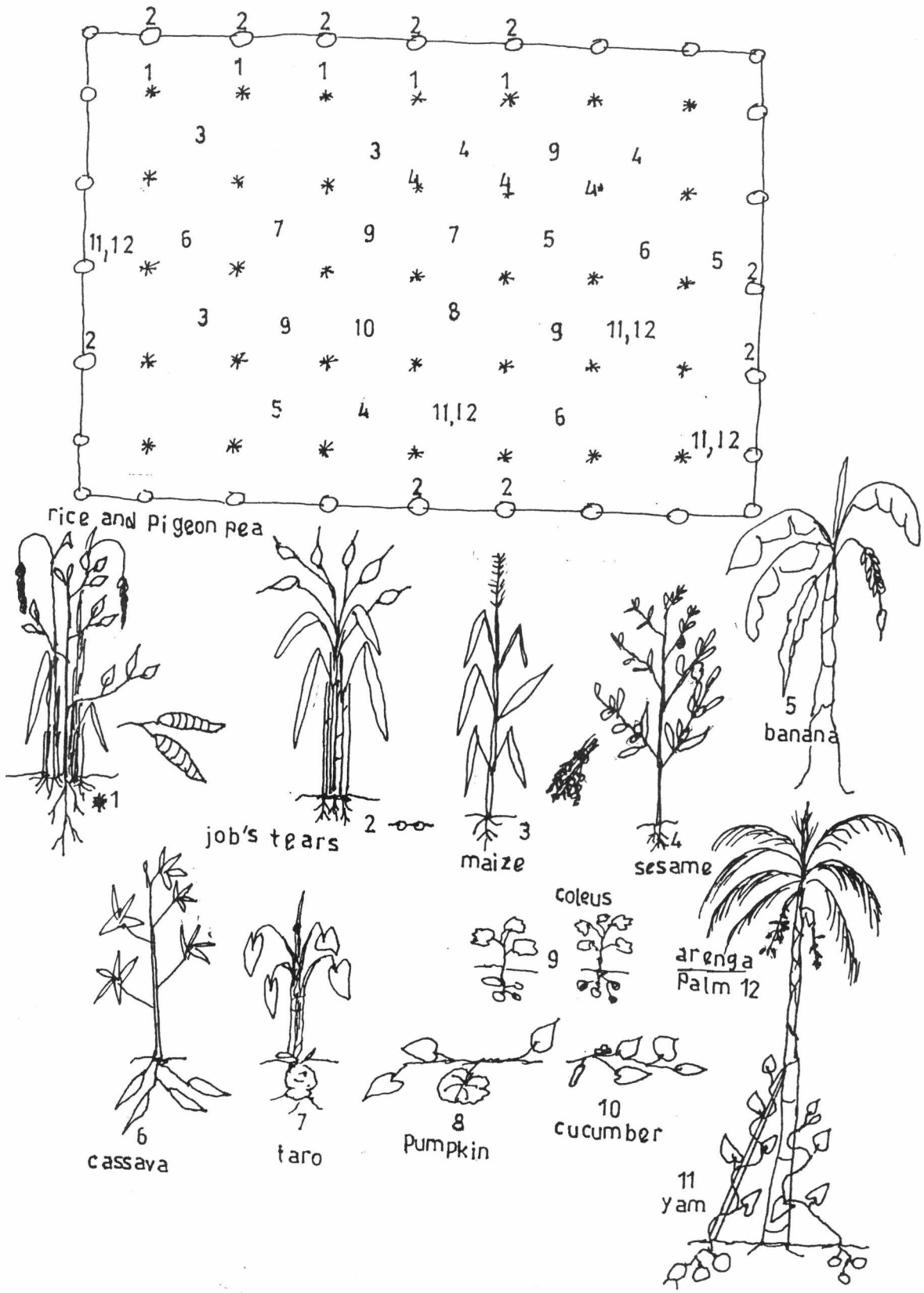

Figure 6.10. Planting pattern of non-rice cultigens in Baduy Swidden plot

vegetation is burned, and covered in soil and humus. Thus, although leaves are sometimes scorched, the plants will grow well because the root is encased in humus. **Hiris** (pigeon pea=Cajanus cajan) and **kacang penyut** (bean=Vigna sinensis) and **degeng** (Panicum viride) are planted by women in the same hole as rice. During weeding, however, the spacing of these crops is rearranged. For instance, those growing too close will be moved to other places where there is more space.

Hanjeli (Job's tears= Coix lacryma-jobi) and **jagong** (maize=Zea mays) are planted by dibble stick (**aseuk**) by both men and women. **Hanjeli** is planted about two weeks after sowing rice, arranged along the edge of the swidden, while **jagong** is scattered within the plot (Figure 6.10), a couple of days after sowing rice. **Waluh** (pumpkin= Cucurbita moschata), **bonteng** (cucumber= Cucumis sativus), **bonteng catang** (big cucumber= Cucumis sp), **kumili** (African tuber=Plecanthus rotundifolius), **kepes** (a kind of bean=Dolichos sp) and **tiwu** (sugar cane= Sacharum officinarum) are planted before sowing rice. **Tiwu** is mainly planted by stem propagation by men, placed near the farm shelter or on the edge of the swidden plot, while other cultigens are planted mixed with rice (**tumpang sari**) by women.

Sesawi (vegetables) and **senggang** (spinach= Amaranthus hybridus) are planted by broadcasting seed mixed with rice. This is done by women about ten days before sowing rice. **Terong** (eggplant= Solanum melongena) is also planted by

broadcasting by women, but after sowing rice. **Jaat** (wing bean= Psophocarpus tetragonolobus) is planted by women and men near special sticks placed by the farm shelter, between 15 days and 1 month after sowing rice.

Mantang (sweet potatoes= Ipomoea batatas) and **dangdeur** (cassava= Manihot esculenta) are propagated from vines and stem cuttings respectively, by men, about one month after sowing rice. Taro (Colocasia and Xanthosoma) are also propagated by tubers and cuttings, by men, both before and after sowing rice. Some vine crops, such as yams (**hui manis**=Dioscorea alata; **gadung**=Dioscorea hispida) and various beans (**kacang-kacangan**) are planted by women before or after sowing rice, near to trees up which they may climb. **Kiray** (sago=Metroxylon sagu) is planted by men in damp soil or near water by propagating suckers before or after sowing rice.

2.3.7. Weeding (ngored)

After planting, the next important task necessary to ensure a successful rice harvest is weeding. About two weeks after sowing, the swidden is already covered in weeds. Therefore, it is common that during the month of **Kasapuluh**, less than forty days after sowing, the swidden is completely weeded in order to minimize soil nutrient competition between rice and weeds.

During the weeding season, from early morning until late afternoon, both Inner and Outer Baduy work hard. At

about five o'clock in the morning, wives and daughters wake up to cook rice in a farm shelter. Outer Baduy men, in particular, go to swiddens or secondary forest (**reuma**) to tap Arenga palm (**nyadap kawung**) and Inner Baduy to find wood fibres which can be use to make traditional bags and nets. In Inner Baduy, before breakfast, baked banana and boiled water are provided. In Outer Baduy, however, coffee is usually provided. Breakfast usually consists of steamed rice, salt, baked salt fish, and vegetables. Rice is placed on a wooden plate and eaten with the fingers. Other food is laid out on banana leaves. Unlike Inner Baduy, plates, spoons and glasses are used in Outer Baduy. Food will be discussed in more detail in the section on household consumption.

Family members are helped by close relatives and friends, more so in Inner Baduy. Men and women work together in weeding, except for small girls (four year and younger) who stay in the farm shelter. In Outer Baduy, wage labour is also commonly engaged for weeding. For instance, in 1995/1996, Juned used both household labour and wage labour. Between 4 and 10 wage labourers over 16 working days were employed for the first weeding (**ngored munggagaran**). This work involved 10 people for 2 days, 9 people for 2 days, 8 people for 2 days, 7 people for 2 days, 5 people for 4 days, and 4 people for 1 day. In addition, 6 working days involved household labour.

Pulung, who had a swidden plot in Cibengkung, because he was involved in tapping Arenga palm daily in his hamlet,

devolved the first weeding to his wife, Sanati, who was engaged in this task for a total of 5 working days. She was helped by the exchange labour of her sister for 5 working days. In addition, Pulung employed one female non-Baduy wage labourer from Cibengkung for 7 **jongjonan** (half days). She was paid with 4 **hulu** (literally, 'head') of Arenga palm sugar (**gula kawung**) every day, and a mid-day meal (4 **hulu** of **gula kawung** is equivalent to 2.000 rupiah).

Crescent-shaped blades (**kored**, Figure 6.4) are used for weeding, held in the right hand. Among the most important of the weed species are **jukut bau** (Ageratum conizoides), **eurih** (Imperata cylindrica), **parered** (Chromolaena odorata), **ki tambah** (Flemingia lineata), **jotang** (Spilanthes sp), **teki** (Cyperus rotundus), **jampang** (Centhoteca lappacea) and **tumbueusi** (Phyllanthus niruri), and these are removed completely. Some weeds are pulled up by the root with the left hand. All weeds are collected into heaps and some put around banana plants as compost (**rabuk**).

The first weeding (**ngored munggaran**) is finished about forty days after planting. It was rather late in 1995/1996 due to heavy rain. A few weeks later the swidden is already regrown with weeds, and a second weeding (**ngored ngarambas**) must be undertaken. The second weeding (**ngored ngarambas**) is less intensive and is spread over a longer period, between finishing the first weeding and harvesting.

Before second weeding a ritual named **ngirab sawan** is conducted. This is performed by a man in the **pungpuhunan**.

It takes place on the same day as sowing. Articles such as **gharu** incense in a coconut shell, bamboo water (**tuak awi**) in a bamboo internode, and a stem of **bangban** wood (Donax canniformis) are placed in the **pungpuhunan** (Figure 6.11). The incense is burned and incantations pronounced. The spells (**tawa**) used are of various types: **tawa angin kidul** (southern wind), **tawa hujan poe** (day rain), **tawa getih** (blood), **tawa karang** (rock), **tawa apu** (lime rock), **tawa papadon opat**, **tawa cai** (water), **tawa cai beureum** (red water), **tawa sewu**, **tawa raga** (body), **tawa tutup tubang**, and so on. In addition, leaf of rice grown in the **pungpuhunan** (**pare indung**) is stroked from base to tip using a **kored** and the tip slightly cut. Water from the bamboo is sprayed over **pare indung** in the **pungpuhunan**. The purpose of this ritual is to ensure that the rice crop is healthy and to free of pests, but it also has another symbolic function[9].

Gaang (the mole cricket=Grylottalpa africana), **kungkang** (coreid bug= Leptocorisa acuta), **ganjur** (the wood-mason=Orseolia orizae), and **ongrek** or **kuuk** (the larva of insect found in the soil) are recognised as significant rice pests (**hama pare**) by Baduy (Figure 6.12). According to Grist (1953: 84,89), **kungkang** and **gaang** were widely associated in the past with wet rice farming in South-east Asia, and various methods employed to minimize their

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[9]). Forty days after sowing, rice is compared to a baby who is 40 days old. It is very common in Baduy, as well as among the Sundanese generally, to hold a ceremony 40 days after birth, when the baby's hair is slightly cut in order to ensure healthy hair. This ceremony is called **nyukur rambut**, 'cutting hair' (Soeganda, 1982: 55-56).

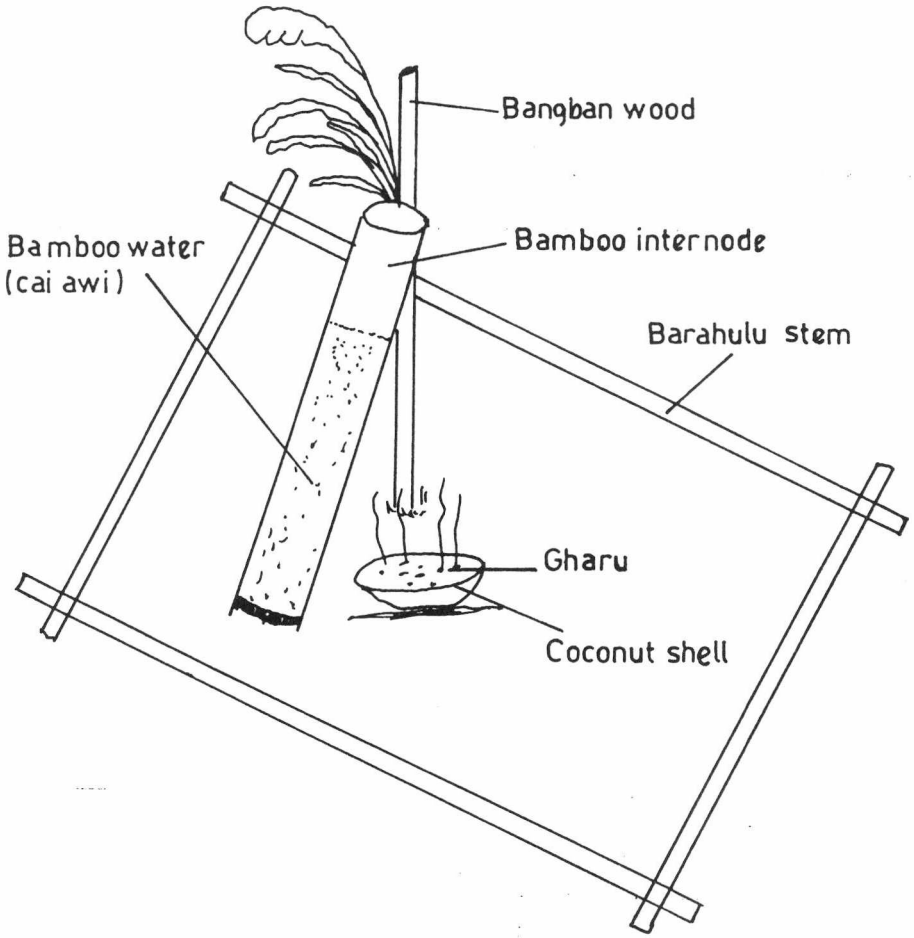

Figure 6.11. Various articles used in performing 'ngirab sawan' ritual

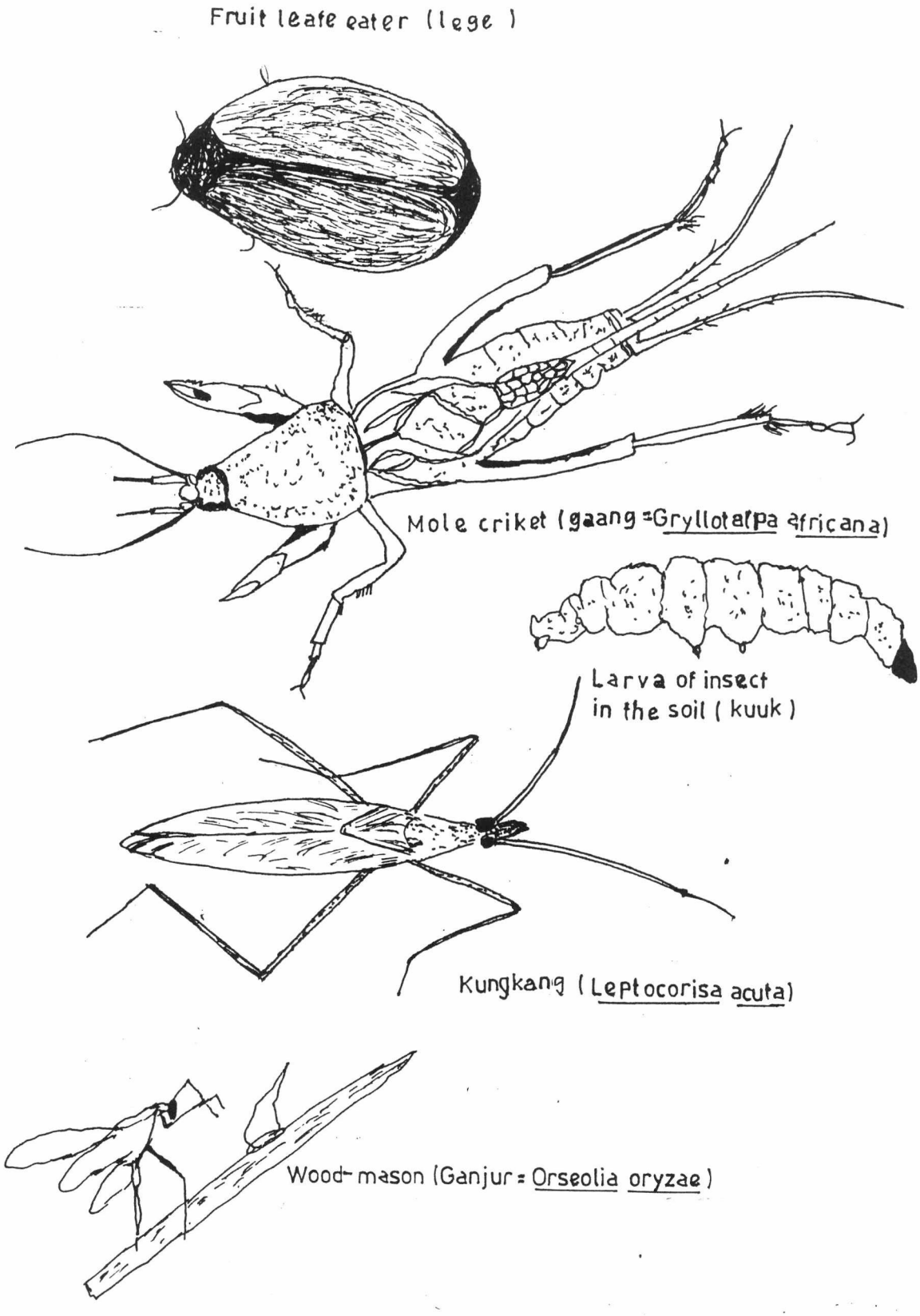

Figure 6.12. Some pests common in Baduy rice swiddens

depredations. To control the coreid bug (**kungkang**), for example, uniformity of planting rice had to maintained, and the mole cricket (**gaang**) was controlled by burying poison bait containing paris green or barium fluosilicate.

Gaang is usually found in swidden plots located in the valley bottoms, in damp habitats and containing water. Rice roots are damaged by **gaang** and to avoid this pest, **gaang** are caught by hand one-by-one during the night using **obor** (a paraffin lamp made by a bamboo internode). Rice seeds are also damaged by **kungkang**, which eat away the inside of seed until it becomes empty. To minimize the effect of this pest, **tawa kungkang** (traditional medicine resistant to **kungkang**) is made: **bingbin** fruits (**Pinanga sp**), **panglay** (Zingiber cassumunar) and **keusik** (water sand) are mixed and spells of **tawa kungkang** pronounced. Men spread the mixture by hand (**disampeukeun**) over the rice where **kungkang** are found.

Hama kuuk (**kuuk** pest, insect larva found in soil) usually attack rice roots. To avoid **kuuk**, this larva is taken out by hand one-by-one from the soil. A leaf and fruit eating insect, **lege**, is recognised by Baduy. This insect usually damages the leaves of fruits such as rambutan (Lappaceum napaceum), **cau** (banana=Musa paradisiaca), and **peutuey** (locus bean=Parkia speciosa). Its infestations are highly seasonal. Like **kuuk**, **lege** is removed by hand, or using a bamboo stick when found in trees.

As well as these special treatments, during the second

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As well as these special treatments, during the second

weeding, rice is 'fed' by men with herbal medicines (**ubar pare**) between five and nine times, always using an odd number. For example, **cangkudu** (Morinda citrifolia) fruits are mixed with **laja** (Languas galanga), green coconut milk (**cai kalapa hejo**=Cocos nucifera), orange peel (**kulit jeruk**=Citrus grandis), fermented palm sugar juice (Arenga pinnata), and kitchen ash (**lebu hawu**), and spread by hand over the swidden. The day before a **carita pantun** (sung verse) is usually performed from about 20.00 until 4.00 o'clock early next morning, in a hamlet or farm shelter. The **carita pantun** is an epic narrative sung by a male, who sometimes accompanies himself on a **kacapi** zither. The pantun contains myth (**lalakon kebudayaan**), for instance legends about the nobility of the old Sundanese kingdoms (**lalakon negara**), such as Padjadjaran and Galuh (Zanten, 1995: 529). The named **pantuns Lutung Kasarung, Langgasari Matang Jaya** and **Matang Wangi. Langgasari Matang Jaya** and **Matang Sari**, which concern rice, are those usually chosen to perform when performing this ritual.

Plants, including leaves of **kanyere** (Bridelia monoica), **bungur** (Lagerstromia sp), and **walang** (**Zingiberaceae**), are placed or burned twice a day in the farm shelter, and at various places in the swidden field. These poisons contain chemicals which together with the smoke from the burning are believed to deter insect pests.

2.3.8 Harvesting rice (panen or dibuat)

The growth of swidden rice is divided by Baduy into a number of stages, starting with **sumihung** (as between one and two weeks after sowing rice seedlings are thought to resemble sewing needles), and ending with **beurat sangga**, meaning that the rice panicle is homogenously ripe. Rice is ready to be harvested, between three and five days after **beurat sangga** (Table 6.4).

Table 6.4. The growth stages of swidden rice

Rice growth stage	Description
Sumihung	**sirung pare narongtot rarogok saperti jarum, 1-2 mingu saenggeus ngaseuk** (rice seedlings are thought to resemble sewing needles about 1-2 week after sowing)
Buni tikukur	**tangkal pare eunggeus daunan, rada hieum lamun tikukur leumpang di huma buni henteu katempo, kira-kira umur 1.5-2 bulan** (rice leaves grow densely; if **tikukur** bird (spotted dove=Streptopelia chinensis) walks in a swidden plot it cannot be seen after 1.5-2 months after sowing)
Gede pare	**tangkal pare enggeus garede kira-kira umur 3 bulan** (rice clumps grow rather high about 3 months after sowing)
Ngadiukeun	**tangkal pare mimiti aya bukuna parondok, buku lamun kadupak potong tangkal parena** (rice stalks have short internodes, which easily drop if they are stepped on)
Reuneuh laki	**tangkal pare enggeus aya bukuna 2-3, anu luhur reuneuh** (a few tall rice stalk are 'pregnant')
Reuneuh	**tangkal pare enggeus kabeh rareuneuhna beneran** (all rice stalks are 'pregnant')
Culcel	**tangka pare mimiti aya nu beukah aya parean**

	(a few rice panicles appear)
Rampak beukah	**tangkal pare enggeus kabeh beukahna** (panicles are seen on every rice stalk)
Beuneur hejo	**buah pare enggeus kaluar, eusina beuneur tapi hejo keneh umur 5 bulan** (rice panicles are filled with seeds; however they are still green, 5 months after sowing)
Koneng	**ranggeuyan pare karek asak sapotong tungtung katungtungna, lain poe kayaan pare rubah** (tip of rice panicles are ripe, appearance of rice panicle changes every day)
Beurat sangga	**ranggeuyan pare enggeus rata asakna, tapi pare encan asak bener, diengkeun 3 poe 3 peuting pare asak mimiti bisa dibuat umur leuwih 5 bulan** (all rice panicles are homogenously ripe, after 3 days and 3 nights, rice is ready to be harvested, 5 months after sowing)

About five months after sowing, or in month of **Katiga**, **huma masyarakat** rice matures and is ready to be harvested (**dibuat** or **panen**). Three days before harvesting a special ritual named **mipit** is performed. Let us examine this through the case of Ayah Caisah in 1996.

One day before the ritual, Ayah Caisah and his wife undertake **mutih**, a fast. They drink and eat just a little rice, but do not eat fish, salt, before sleeping, and fast until the afternoon of the following day. Before breaking **mutih**, all Ayah Caisah's family come to his farm shelter. His son (Satim) and son-in-law (Juned) are asked to catch fish using a net (**ngencrak**) in the Cisimeut river, while another of his sons (Sardi) is asked to find **bingbin** fruits (Pinanga sp) to use in the ritual.

Traditionally, over the next three days, special meals must be provided, such as steamed swidden rice (**kejo huma**),

glutinous rice (**kejo ketan**), freshwater fish (**paray**= Rasbora sp) and squirrel meat (**daging buut**=Calosciurus notatus). Salted fish is prohibited, as is harvesting other swidden crops, such as vegetables. Another of his sons and his wife bring some **peuteuy** which will be used for the **mipit** ritual. Satim and Juned come back from fishing, having caught **paray** and **hurang** (shrimps). **Bingbin** fruits are brought by Sardi to the farm shelter.

In the afternoon, a **juru pantun** (pantun story teller) from Cikartawarna comes to the farm shelter. He and Ayah Caisah break **mutih**. Firstly, a set of betel chewing requisites and incantation (**menyan**) are provided by Ayah Caisah. The incense is burned, spells are pronounced by Ayah Caisah and continued by the **juru pantun**. After the spells are pronounced; they chew betel quid consisting of two betel leaves, lime, and Areca nut. His sons are also invited to chew betel.

At night, a pantun is performed by the **juru pantun**. A part of a story concerning rice is chosen from the story of **Langgasari Matang Jaya**. This is shorter than that of **ngubaran pare**, because at this time, only half part of the story is given. Next morning, before going home, the **juru pantun** is given money, some betel chewing requisites, glutinous rice, and a ceremonial dish of rice served in the shape of cone (**kejo congcot**).

In the morning before performing the ritual, the stem and midrib of an immature sugar palm leaf (**pucuk**) is embedded in the ground of the **pungpuhunan**, and supported by

bamboo. Each pair of leaf midribs is woven to make an oval shape, and the leaves are tied together at the tip. A finger knife (**etem** or **ani-ani**) and plants, including **panglay** (Zingiber cassumunar), **tumbueusi** (Phyllanthus niruri), **kukuyaan** (Kibara coricaea), **kakandelan** (Hoya difersifolia), seureuh (Piper betel), **penuh** (Crinum **asiaticum**), **cariang asri** (Homalonema rubescens), and **bingbin** fruits (Pinanga sp) are hung on the midribs (Figure 6.13). These are said to be 'toys' (**cocoan**) for the enjoyment of **Nyi Pohaci**, but they also have individual symbolic meanings. For example, **penuh** means 'full', encouraging (as it were) the rice harvested to fill the rice barn. Similarly, **kakandelan** is derived from **kandel** meaning 'thick', encouraging the rice to be 'thick' and 'luxuriant'. This use of homonym is commonly found in Indonesia. For instance, **tebel-tebel** (related to **tebel** or 'thick'), **teteg** (meaning 'fixed' or 'substantial'), and **kayu sugih** (**sugih** meaning 'wealthy' or 'rich') are used in the Balinese ritual of **mantenin padi**, performed after the harvest and drying of the grain (Hobart, 1978b: 61).

The ritual performance begins when Ayah Caisah squats in the **pungpuhunan** in the front of the **pucuk. Gharu** incense is burned and incantations are pronounced; **panglay** is chewed and spat or sprayed. Eleven incantations are pronounced: **jampe kukus garu, jampe pertanian, jampe pangadeg, jampe kajayaan, jampe kagancangan, jampe angken, jampe ngaran pare, jampe sabawarna, jampe pamundutan, jampe**

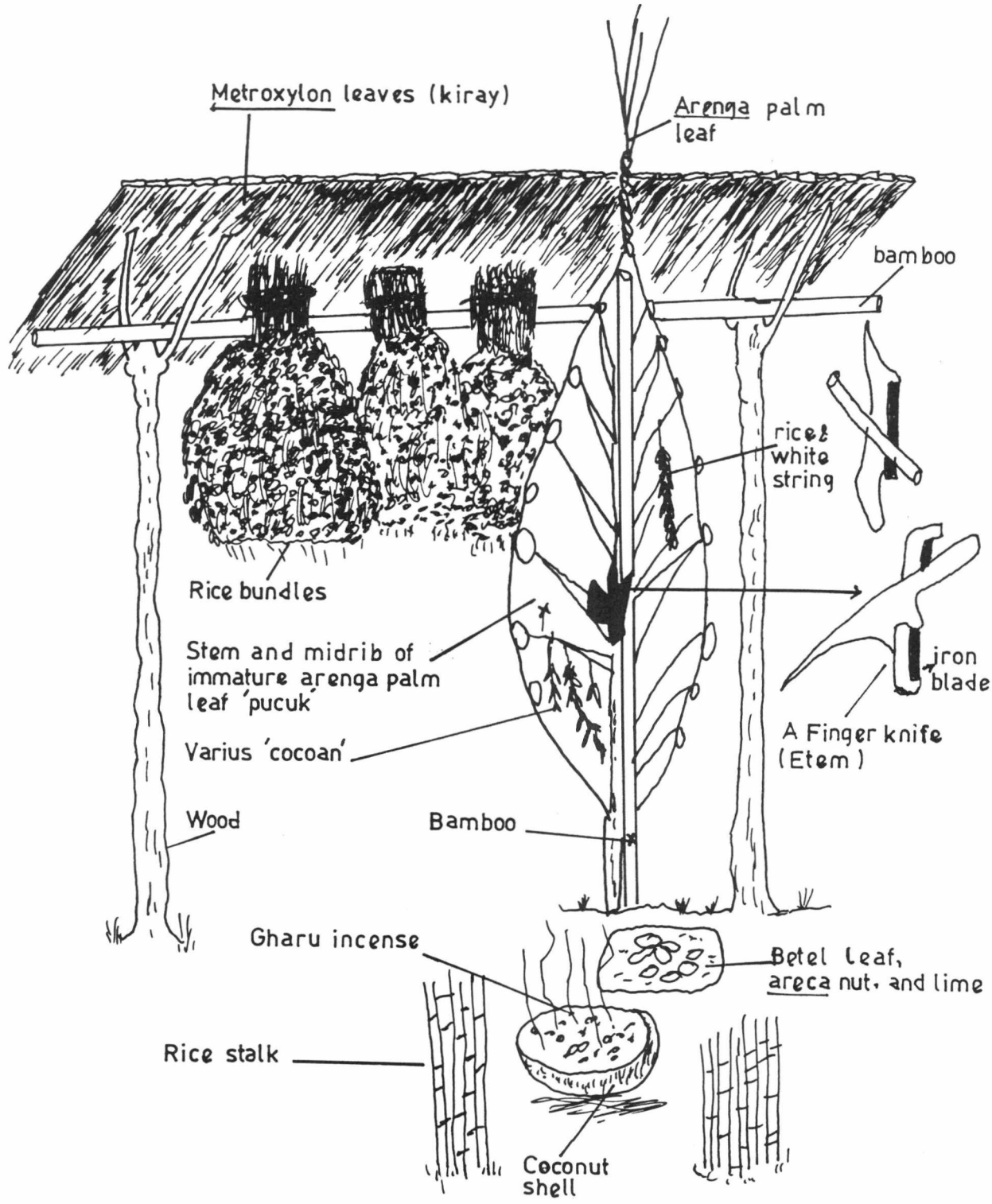

Figure 6.13. Pucuk for performing mipit ritual

kakandelan, and **jampe menta keupeul**. Seven rice panicles[10] are cut individually using a finger knife and put in the base of the **pucuk**. This is also done on the second and third day. All rice panicles are hung on a bamboo stick over the **pucuk** (Figure 6.13). They are later hung together with bundles of 'mother rice' (**pare indung**) until harvesting is finished.

Anyone who does not have a **pungpuhunan** must bring **etem**, bamboo strings (to use to tie rice bundles) and **panglay**, for the relative who he joined at the time when the rice was sown, and who will recite the necessary spells.

Ayah Caisah's rice is harvested by men, women and children working in groups consisting of husband, wife, sons, daughter, parents, parents in-law, and friends. totalling 10 persons. Harvesting rice is mostly achieved through labour-exchange between kin and friends. Each participating household must later be repaid by Ayah Caisah's family, sometimes in the form of rice.

Reaping is undertaken using a finger knife which consists of a thin iron blade, set into a small piece of bamboo, which is sometimes carved (Figure 6.4). Rice panicles are cut individually using the right hand and after cutting about five panicles, these are held in the

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[10]). Seven is a common ritually significant number amongst Baduy, as well as amongst other Sundanese. It indicates the following life characteristics: **hidup** (life), **kekuatan** (strength), **penglihatan** (sight), **pendengaran** (hearing), **perkataan** (speach), **perasaan** (feeling), and **kemauan** (desire) [Soeganda, 1982: 19].

left hand and each fistful put on the ground. About four fistfuls are tied together with bamboo, to form a **sapocong**. Fallen rice ears are collected and put in a small woven bamboo basket belted to the waist.

Rice is harvested separately for each variety (**tiap huasan**) in each block. After seven days all rice has been completely harvested. The rice bundles are carried by the men on their shoulders using a wooden or bamboo pole (**dipikul**), or carried by the women in the small of the back or at the hip with the help of a cloth sling (**ais**). The bundles are then hung on a bamboo pole (**lantayan**) supported by other bamboos to the height of about two metres, which is placed near the farm shelter. The upper surface of the rice bundles is covered by a piece of thatch of **kiray** leaves (Metroxylon sagu). Each **jajalon** (one meter piece of **kiray**) consists of two rows on which 20 **pocong** (rice bundles) are hung (Figure 6.14).

After drying, the rice bundles are carried by Ayah Caisah's sons to the settlements. Eighty **pocong** are carried by Asra. He is paid 20,000 rupiah (£ 6) to subsidize his income, because his swidden yielded only 12 rice bundles. In addition, he is given 10 rice bundles by his father and 8 by his younger brothers. The remaining rice is carried by the other sons without payment.

Like other people, Ayah Caisah's rice production in 1995/1996 was considered to be poor, due to heavy rain. He obtained about 120 bundles of rice from seeds of 8 bundles (about 0.8 ha), equivalent to about 480 litres of un-husked

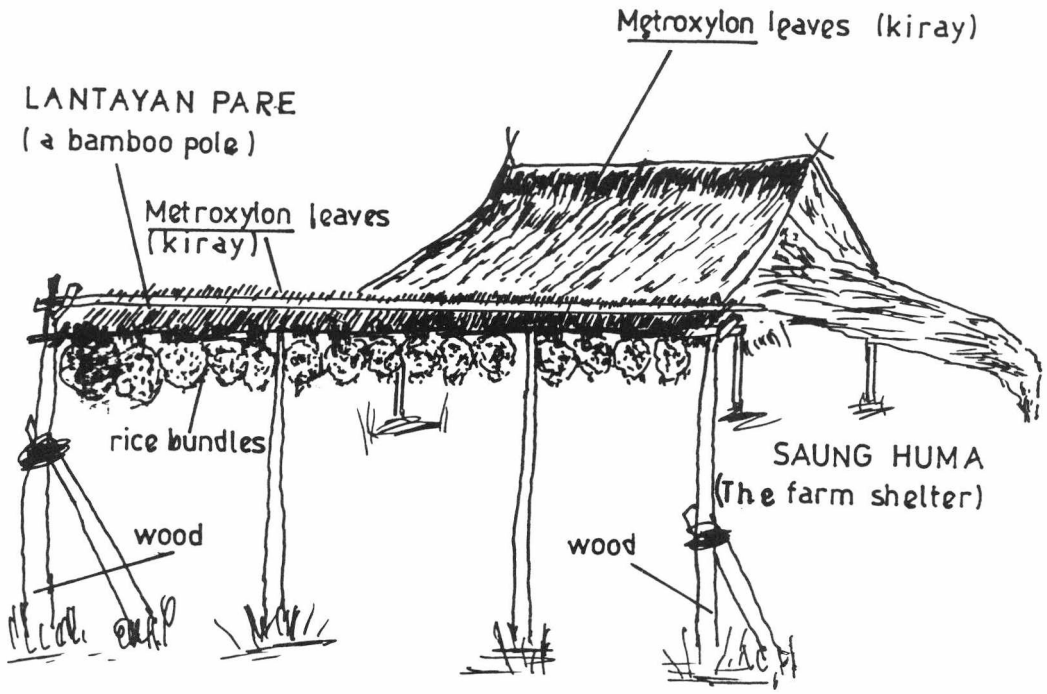


Figure 6.14.The rice bundles hung on a bamboo pole placed near a farm shelter

rice (**beas**). Ayah Antiwin from Cibeo had a better harvest: also from 0.8 hectare (8 rice seed bundles) he gets 300 rice bundles, equivalent to about 1,200 litres of un-husked rice. Another farmer, Ayah Ailin from Marengo, planted 5 rice bundles (about 0.5 hectare), and harvested 150 bundles of rice. Non rice cultigen production was also poor. For instance, maize production after halving for home consumption, sold for 70,000 rupiah (£ 20)[one item sold for 50 rupiah] in Cibengkung. About fifty litres of pigeon pea were sold of 50,000 rupiah (£ 14); and 10 litres of hot chili (Capsicum frutescens) and 30 kilograms of sesame (**wijen**=Sesamum orientale) are sold of 10,000 rupiah (£ 3) and 90,000 (£ 26) respectively.

2.3.9. Harvesting non rice cultigens

Unlike harvesting rice, harvesting other cultigens is undertaken at different times. **Terong** (egg plant=Solanum melongena) and **jagong** (maize= Zea mays) are harvested first, by women and men, about 3 months after planting. This is followed by the harvesting of **tiwu endog/trubus** (Sacharum edule) and **bonteng gede** (big cucumber =Cucumis sp) during the month of **kasa**, by both women and men. During the month of **Karo**, **wijen** (Sesame orientale) and **waluh** (pumpkin =Cucurbita moschata) are harvested.

At the same time as the rice harvest, in the month of **Katiga**, **kacang penyut** (long bean=Vigna sinensis), **hanjeli** (job's teras = Coix lacryma jobi), **degeng/kunyit** (Panicum

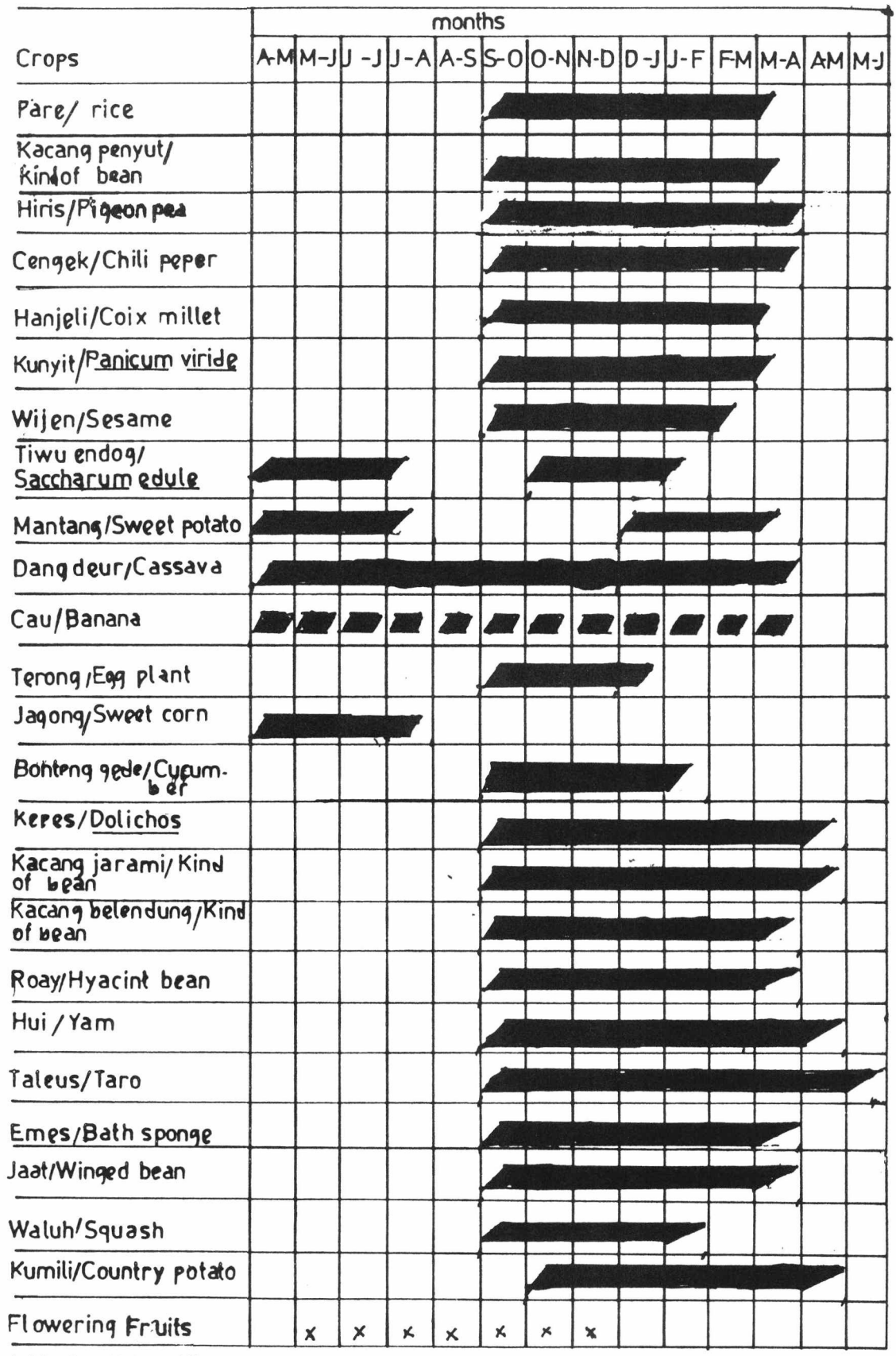
viride), **ubi jalar** (sweet potato =Ipomoea batatas), **kacang belendung** (bean=Vigna sp), **roay** (hyacinth bean =Dolichos lablab), **emes** (Luffa acutangula), and **jaat** (wing bean =Psopocarpus tetragonolobus) are harvested. However, bananas are harvested by men whenever the fruits are ripe (Table 6.5)

2.4. Productivity

It can be seen from the cases described above that swidden rice yields vary, depending on plot, location and year. As chemical fertilizers are prohibited swidden productivity is mainly determined by natural soil fertility, which in turn is determined by soil quality and forest fallow relative to cropping time. Thus, the long term success of swidden cultivation depends on how well the fallow period restores or maintains soil fertility. If the fallow period is shortened, the annual addition of organic material will be reduced, leading to soil fertility deterioration (Ruthenberg 1980). The laboratory soil analysis reported in chapter 2 (pp.56-65) has demonstrated that by increasing fallowing period various chemical and physical components of the soil are improved. Land productivity can also be affected by rainfall patterns ('long dry'/**halodo panjang** and 'heavy wet'/**loba hujan**), and the occurrence of pests (**loba hama**).

During the 1995/1996 farming season heavy rain led to poor rice and non rice production. Fruit yields, mainly of durian and **puteuy**/locus bean, were also considered low, as

Table 6.5. Cropping calendar of huma masyarakat



A-M: April-May (Sapar) → The first month of Baduy calendar

the main fruiting phase had already occurred the year before (1994/1995). In general, good fruiting seasons occur every two years.

In 1995/1996 there was a major failure of the harvest and of the fruit season, and so production levels are not representative. However, to obtain a general picture of non rice cultigen production, I present data collected for 1985/1986 for Ayah Sadi from Kaduketug, who at that time practised swiddening in the non-Baduy area. Ayah Sadi owned a swidden plot of about 0.6 hectares (equivalent to about six bundles of rice bundle of seeds) and harvested 210 rice bundles. Production levels for other cultigens, such as fruits, vegetables, and spices from 3 main land types, swidden (**huma**), fallowed land (**reuma**), and hamlet forest (**leuweung lembur**) were harvested (Table 6.6). These products were mostly consumed directly by households, though some surpluses were sold, such as **gula kawung** (Arenga palm sugar), banana and durian. In addition, although coffee is prohibited by **adat**, about 0.1 ha of swidden was planted with this crop, most of the yield being consumed by the household.

Table 6.6. Productivity of swidden, fallowed land, mixed garden and hamlet forest belonging to Ayah Sadi of Kaduketug (1985/1986)

(I) Swidden plot (about 0.6 ha)

PRODUCTS	YIELD	MARKET VALUE (RUPIAH)	AMOUNT SOLD (RUPIAH)	HOUSEHOLD CONSUMPTION (RUPIAH)
Pare (rice)	210 pocong/bundles	200/litre		168,000
Hiris (pigeon pea)	100 trees/25 litres	400/litre	4,000	6,000
Jagong/Maize	200 trees/400 heads	20/head	2,000	6,000
Watu/Sesame	200 trees/4 litres	300/litre rupiah)	300	900
Waluh/pumpkin	5 trees/5 items	200/item		1,000
Kunyit(Panicum viride)	120 trees/12 bundles	500/bundle		6,000
Kacang kenyut (Vigna sinensis)	4 trees/6 litres	300/litre		1,800
Kacang jarami (Phaseolus vulgaris)	10 trees/10 bundles	100/bundle		1,000
TOTAL			6,300	190,700

(II). Fallowed land/reuma (A) about 0.8 ha

PRODUCTS	YIELD	MARKET VALUE (RUPIAH)	AMOUNT SOLD (RUPIAH)	HOUSEHOLD CONSUMPTION (RUPIAH)
Kawung/Arenga palm	25 trees/2 trees tapped	200/head	6,000	69,000
Dangdeur/	45 trees	40/tree		1,800
Tiwu endog/ Sacharum edule	75 trees	150/tree		11,250
Total			6,000	82,050

(III) Coffee garden (kebon kopi) about 0.1 ha

PRODUCTS	YIELD	MARKET VALUE (RUPIAH)	AMOUNT SOLD (RUPIAH)	HOUSEHOLD CONSUMPTION (RUPIAH)
Coffee trees	50 trees/25 kg	1,000/kg		25,000

(IV). Fallowed land/reuma (B) about 0.8 ha

PRODUCTS	YIELD	MARKET VALUE (RUPIAH)	AMOUNT SOLD (RUPIAH)	HOUSEHOLD CONSUMPTION (RUPIAH)
Jeungjing/ Albizzia chinensis	5 trees	4,000/tree		20,000
Kadu/Durian	2 trees/ 100 fruits	350/fruit		35,000
Kawung/Arenga palm	15 trees/1 tee tapped	200/head		77,000
Kiray/ Metroxylon sagu	6 trees/30 jajalon	150/jaja-lon		4,500
Randu/kapok	7 trees/ 3500 items	5/item		17,500
Rambutan	1 tree/ 45 bundles	50/bundle		2,250
Cau/banana	40 trees/ 240 bunches/ 120 apus	250/apus	27,000	3,000
Gintung	1 tree	2,000/tree		2,000
Taleus/taro	15 tubers	100/tuber		1,500
Total			27,000	162,750

(V) Hamlet forest (leuweung lembur)

PRODUCTS	YIELD	MARKET VALUE (RUPIAH)	AMOUNT SOLD (RUPIAH)	HOUSEHOLD CONSUMPTION (RUPIAH)
Kacapi/ Sandoricum koetjape	1 tree/200 fruits	5/fruit		1,000
Rambutan	2 trees/90 bundles	50/bundle		4,500
Kadu/Durian	2 trees/ 1 production/ 50 fruits	350/fruit	17,000	500
Kalapa/coconut	1 tree/60 fruits	30/fruit		1,800
Total			17,000	7,800

2.5. Household consumption

Baduy usually eat three times a day: **dahar** or **madang isuk** (breakfast), **dahar** or **madang siang** (lunch) and **dahar** or **madang sore** (dinner). **Dahar isuk** and **dahar sore** consist of rice (**kejo**) and a side dish. For lunch (**dahar siang**), however, the residue from breakfast is commonly served.

Most food consumed consists of non swidden rice (**kejo beas sawah**), salted fish (**lauk asin**), salt (**uyah**), and vegetables (**lalab**) [see Appendix 5]. Rice, salted fish, salt, and cooking oil are usually bought from neighbouring shops, while vegetables are harvested from swiddens. Snacks, **ngopi isuk** (morning snack), **ngopi siang** (midday snack), and **ngopi sore** (afternoon snack), are also provided every day. In Inner Baduy these consist of boiled water (**cai asak herang**), baked banana (**beuleum cau**) and the betel chewing quid (**seupaheun**): betel leaves, lime, gambier and Areca nut), this latter particularly for old men and women. There is a special variety of banana which is baked daily in the fireplace called **cau beuleum**. This variety can be harvested almost continuously, from both swiddens and fallowed land. In addition, some snacks - boiled water and boiled or baked cassava (**beuleum sampeu** or **seupan sampeu**), boiled or baked sweet potatoes (**beuleum mantang** or **seupan mantang**), steamed taro (**seupan taleus**), and steamed yams (**seupan hui**) - are consumed. These crops, however, are available only seasonally, particularly during the cropping time. These snacks are provided in a house during a slack

time or in a farm shelter, particularly during the peak period in swidden farming (some sample menus are provided in Appendix 5).

Unlike Inner Baduy, Outer Baduy generally buy snacks from small shops (**warung**) in the neighbouring non-Baduy area, including coffee, milk, cigarettes, biscuits, and bread. Offering an expensive cigarette tends to increase status. Thus, a cheap cigarette is commonly smoked by ordinary people, while expensive cigarettes are smoked by Outer Baduy who have additional jobs as local middlemen or by non religious leaders, **jaro pamarentah**. If there is a meeting in the house of a **jaro pamarentah**, cigarettes will be on offer: those made with palm leaf wrappers (**roko daun kawung**), and various brands of purchased cigarettes smoked by different distinctive groups of Outer Baduy. For example, **Cap Gentong** is smoked by anyone, while **Dji Sam Soe** is smoked only by a few. In addition, Arenga palm sugar, taro, cassava, sweet potato, yams are also provided as snacks in Outer Baduy.

2.6. Storing rice (ngaleuitkeun pare)

After the harvest, the final stage of swidden farming is to carry rice to the settlement and to place it in a rice barn. Most Inner Baduy rice is carried by household members. In Outer Baduy, besides household labour, wage labour and **rereongan** are also used. For instance, all rice from Ayah Ailin's swidden plot in Cibengung was carried,

using **rereongan** of 20 men and boys, to Babakan Marengo. For each rice bundle a labourer is paid 250 rupiah, giving a total cost of 37,500 rupiah (£ 11), to Ayah Ailin for carrying (**nunjal**) rice to settlement. In addition, when they arrive at the house of Ayah Ailin, these **rereongan** group members are provided with snacks totalling twenty glasses of coffee and milk at a cost of 4,000 rupiah, 3 packs of local cigarette, **Cap Gentong** at 1,500 rupiah, and cakes (1,000, rupiah), giving a total cost of about 6,500 rupiah (f 2). After resting, they are provided with a meal of steamed rice (about ten litres or 7,000 rupiah), pigeon pea soup (called **ceungceum**, cost equivalent to 3,000 rupiah) and salted fish (**ikan asin layur**/ 1 kg or 2,500 rupiah), costing the equivalent of 12,500 rupiah (£ 6). Therefore, the total cost of transporting rice from swidden plot to settlement comes to about 56,500 rupiah (£ 16).

At the hamlet, rice is selected (**dipasing**). Six rice seed bundles (**pocong**) of good quality (**beuneur**) from different varieties (**huasan**) are separated for planting the following year. In addition, 30 rice bundles are selected for use in various rituals, such as **ngadiukeun pare**, the ritual associated with putting rice in a barn. This requires several bundles of **pare indung**, 'rice mother', **pasangan indung**, 'rice couple' and **panganteur**, 'companion', **nganyaran**, the ritual for tasting new rice (one or two rice bundles), **ngalaksa** (one or two rice bundles), and **kawalu** (one or two rice bundles). These last two are described in more detail below.

Before rice is stored in a barn (**leuit**), the ritual of **nganyaran**, 'first tasting rice' is performed. This is usually undertaken on day 25 or 27 of the third **kawalu** (**kawalu tutug**), after each household has finished performing **kawalu** in Inner Baduy and before undertaking **ngalaksa** in **jaro dangka**. A special meal of steamed glutinous rice (**kejo ketan**), steamed swidden rice (**kejo huma**) and freshwater fish (**lauk tiis** or **lauk cai**) is provided and the new rice tasted. At this time, each household sends a meal of new rice to close relatives and friends, and in return, will receive new rice meals from others. This is called **silih asaan kejo**, 'first tasting the rice of each other'. From this point onwards new rice is permitted to be consumed by each household.

Another ritual involves placing the 'rice mother' (**pare indung**) in a barn: **ngadiukeun pare indung**, 'to place mother rice'. This is performed on the same day as planting rice. The performance begins with the upper part of the rice panicles harvested from the **pungpuhunan** and **mupuan** or **mipit** being cut to flatten the upper part of the panicles. This rice is divided into three bundles (**ranggeong**): 'the rice couple', 'male and female' (**bikang jeung salaki**), and one bundle of 'companion' (**saranggeong panganteur**). The 'rice couple' is tied with various plants, such as leaves of **kukuyaan** (Kibara coricea), **kakandelan** (Hoya difesifolia), **ilat mintul** (Scleria purpurascens), **tumbueusi** (Phyllantus niruri), **mara asri** (Macaranga triloba), **areuy geureung** (Stephania javonica), **pacing** (Costus speciosus)

and **teureup** (Ficus elasticus). Some of these plants are placed on the woven bamboo wall of the rice barn. As mentioned earlier, these plants are considered to be those loved by Nyi Pohaci and to have symbolic functions, such as **pacing** (derived from **cicing** meaning 'to stay' or 'stable'), **teureup** (**teureup** meaning 'alert', encouraging the guarding rice not to sleep), and **kukuyan** (derived from **dikukuy ayaan**, meaning if the rice barn is dug, it is always available).

The rice is wrapped in white cotton cloth (**boeh**) and carried in the cloth by a woman (**bikang**) to the rice barn. In the barn the rice is put (**dielep**) in the middle by a man, and other rice bundles placed by it. Over three days and three nights, **gharu** incense (Gonystylus macrothyllus), **pisitan** peel (Lansium domesticum), and the root of **jambaka** (Dianella nemorosa) are burned by a man in the afternoon. Moreover, **ngapret** (the spreading of liquid) is performed, in which **jaringao** (Acorus calamus), **cikur** (Kaemferia galanga), **panglay** (Zingiber cassumunar) and water are spread inside and outside the rice barn. Moreover, every time rice is taken (**nguyang**) for pounding, betel leaves, lime, gambier, Areca nut, and **panglay** are chewed and spread on the rice barn to 'wake up' the rice (**ngahudangkeun pare**) called **ngocek**. In addition, after all the rice has been stored, and between two and five times a week, rituals are performed to respect **Nyi Pohaci**. These involve the burning of plant medicines such as **gharu** (Gonystylus macrothyllus), **pisitan** peel (Lansium domesticum), **nangka beurit** peel

(Artocarpus champeden), and **jambaka** root (Dianella nemorosa).

Most of the plant medicines used in swiddening and in the rice barn are typified by their strong aromas, and some have long been recognised as traditional insecticides in some Asian countries. For example, the fruit peel of **pisitan** (Lansium domesticum) when burned, gives an aromatic smell and in the past was used by the Javanese to drive away mosquitos (Burkill, 1935: 1316). Similarly, **jaringao** (Acorus calamus) was used in China and India to control fleas and lice (ibid, 1935: 37). Since Baduy rice is not contaminated with chemical fertilizers and pesticides, I would suggest that this is the reason why rice can be stored in the rice barns for between 10 and 90 years.

At the same time, besides various rituals being performed for each household, communal rituals, namely **kawalu**, **ngalaksa**, and **seba**, must be undertaken by Inner and Outer Baduy.

2.7. Kawalu ritual

Baduy have a religious obligation to fast (**puasa**) during the month called **kawalu**[11]. However, unlike the

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[11]). **Kawalu** derives from **walu** meaning **bali**, **balik**, **kabali** or **kembali** (comeback).This ritual is undertaken after harvesting rice and other rice has been carried back to the hamlet and placed in the rice barn (**leuit**). At that time, rice is considered to have 'comeback' to the rice barn after staying with her husband on earth (**bumi=pertiwi** or swidden plot). As mentioned earlier it is believed that in sowing rice, Nyi Pohaci becomes engaged (**direremokeun**) to the earth, **pertiwi** (Danasasmita and Djatisunda, 1986:32).

Muslim fast during **Ramadan**, the Baduy is embedded strongly in the practise of swidden cultivation. Baduy fast for only 3 days, after the harvesting of rice, rather than for the full month of the Muslim fast. The first, second and third **kawalu** are called **kawalu kahiji/kawalu tembey**, **kawalu tengah** and **kawalu tutug**, respectively. These are undertaken on fixed dates: the first **kawalu** in Cikeusik and Cikartawarna on day 17 and on Cibeo of day 18 of the month of **Kasa**; the second **kawalu** in Cikeusik and Cikartawarna on day 18 and Cibeo on day 19 of **Karo**, while the third **kawalu** is performed in Cikeusik and Cikartawarna on day 17 and in Cibeo on day 19 of the month of **Katiga** (see Table 6.1).

According to Baduy belief, the fast must be conducted during **kawalu** to fulfil an obligation and continue the ritual work of their ancestors. A Baduy quoted by J.C. Geise (1952) explained this as follows:

> We fast in the month of **kawalu** to continue what our ancestors used to do in the past, because they are not able to conduct this duty any more today; it must be done by all of us. If we do not perform this duty our ancestors will get angry, because we have not helped them, neither ordinary human beings nor the community of **puun** who are always loyal to Nabi Adam (my translation, after Geise, 1952).

Kawalu ritual is considered highly sacred and deeply embedded in the practise of swidden cultivation. Any Baduy who fails to conduct this ritual is considered **lain jelema Baduy deui** ('not Baduy any more').

During **kawalu** time, tourists are not usually allowed to visit the area. Two days before **upacara kawalu** in Outer

Baduy, there are various preparatory activities for the ritual. For example, all family members in each hamlet work together to clean their houses, as well as underneath the houses. This is called **beberesih kampung**. Rubbish and dust are swept using rice stalk brooms (**sapu pare**) and a rag. Weed growth surrounding the house is removed using a bush knife (**arit**). All the rubbish is collected and thrown into a special place at the back of the house (**kolomberan**). In addition, the communal bathing place (**pancuran**) is also repaired: old bamboo pipes are replaced with new ones, and footpaths leading to the **pancuran** improved and terraced using river stones. The rice barns are also improved in a similar way.

The cleaning is not restricted to the physical house and village, human bodies must also be cleaned, **beberesih awak** 'taking a bath'. As a result, the following day, anyone who goes to a swidden or to the forest, must pick **kicaang** leaves[12] (Radernachera sp) to use as a shampoo, while anyone who cannot obtain these leaves will ask friends for them. The leaves are pounded with a stone in the bathing place and used as a shampoo when they take their afternoon bath.

After taking a bath, each household member has an evening meal. Unlike moslems, who eat a special meal before day break (**makan sahur**), before the fast, Baduy start

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[12]). **Kicaang** is derived from **caang**, meaning 'bright' or 'clear', perhaps alluding to both physical and mental preparation for the ritual.

fasting when they go to bed and continue until the next day. Breaking the fast (**buka puasa**) takes place in the afternoon with a special ritual led by **puun**. Outer Baduy who do not attend this ritual in Inner Baduy, break the fast simply by taking a bath, 'washing their hair' (**beberesih awak**), in each household.

As mentioned earlier, in Inner Baduy this ritual is considered very sacred and cannot be attended by outsiders. Thus, my information about this ritual comes from my informants who attended the ritual in Cibeo. Ayah Ailin from Babakan Marengo attended the ritual in Cibeo to follow the tradition of his forefathers. He put it this way:

> Kami ngilu kawalu jeung ngalaksa kumaha lulungguhan, kumaha bagusna ka urang. Baheula kolot kami ngilu kawalu ka puun Cibeo, ngalaksa ka Cihulu jadi kami ayeuna neruskeun kabiasaan kolot, ngilu ka Puun Cibeo jeung kokoltan Cihulu.
>
> Which can be translated as:
>
> We join **kawalu** and **ngalaksa** as we feel this will provide us with good fortune. In the past, our forefathers used to participate in **kawalu** in Cibeo and **ngalaksa** in Cihulu. Today, we also join the ritual of **Puun** Cibeo and **ngalaksa** in **kokolotan/ Jaro Dangka** Cihulu, in order to follow this ancestral tradition.

A similar sentiment is expressed by Ambu Nasinah from Gajeboh who usually joins the **kawalu** in Cikeusik:

> Pangalaman kami, ngilu kawalu biasa ka Cikeusik, ngalaksa ka dangka Cibengkung. Pernah pindah ngilu ngalaksa ka Garehong sabab loba babaturan eukeur titip lamun urang henteu bisa datang. Tapi hasil pare huma kami henteu endah, jadi kami pindah deui bae ngalaksa ka Cibengkung ngilu kolot baheula.

Which can be translated as:

> We usually join the **kawalu** in Cikeusik and **ngalaksa** in **dangka** Cibengkung. We have tried to join **ngalaska** in **dangka** Garehong instead of Cibengkung because many of my friends join the ritual for this **dangka**. So, if I am unable to attend the ritual, I can ask my friend to carry my rice for the offering instead. But we were unlucky, and I had a poor rice harvest. We, therefore, rejoined **ngalaksa** in **dangka** Cibengkung, following ancestral tradition.

The first and second **kawalu** are attended only by a few Outer Baduy. However, for the third **kawalu** (**kawalu tutug**), all Outer Baduy household representatives must participate because at this time their new rice must be offered to a **puun** and used in 'the first tasting ritual', **nganyaran**. About one litre of new rice must be brought to Inner Baduy, a handful of which (**sacawuk**) is taken by the **puun**, and the rest is cooked jointly with an Inner Baduy household. Outer Baduy who cannot attend this ritual ask their close relatives or friends to bring their new rice, offer it to a **puun** and cook the rest for the ritual. Each woman is entrusted (**dititipan**) by a maximum of three persons/households, because only about 4 litres of rice can carried and cooked properly, given the need to have the correct utensils, particularly the **seeng**, a large metal vessel for steaming rice, and an **aseupan**, a cone of woven bamboo for steaming rice.

For the third Outer Baduy **kawalu**, the various preparations undertaken are similar to these undertaken for the first and second **kawalu**. However, in this event, a representative of each household must attend ritual. By

this time, **huma masyarakat** rice has been harvested and brought to the hamlet. Some rice bundles from the **pungpuhunan** have been selected to be used for various rituals: for **kawalu**, **ngalaksa**, and for the first tasting in each household (**nganyaran**).

Two days before the third **kawalu**, rice is selected by women helped by their husband. White rice (**pare bodas**) of **pare koneng**, in particular, is chosen. One rice bundle is pounded by women in a rice pounding shelter (**saung lisung**). The rice must be pounded by women who wear the traditional costume of bluish-black cloth with a white belt (**lelemonan bodas**). It must be conducted before eating breakfast. Another rice bundle is pounded (**nutu kaduakalian**, 'the second pounding') after breakfast when it is not necessary to wear traditional dress. Rice is used for **ngalaksa** and the 'first tasting in the household' (**nganyaran**), after **kawalu**.

In Inner Baduy ten days before **kawalu** various preparations are conducted. Hunting animals by net is carried out three times. In Cibeo, for instance, on days 8, 9, and 10 of the month of **kawalu** men hunt **peucang** (mouse deer= Tragulus javanicus) and **buut** (squirrel=Callosciurus notatus) under the direction of a **puun**, and using a special tightly woven bark cloth net (**lanjak kerep**). On day 11, hunting these animals ceases, and instead there is a survey of secondary forest (**ngalasan**) for the footprints of **mencek** (the barking deer=Muntiacus muntjak). On days 12, 13, and 14 **mencek** is hunted using a larger net (**lanjak carang**) than

that of use in hunting **buut** and **peucang**. For the final hunt, on days 15 and 16, **buut** and **peucang** are hunted again. In addition, various river fish: **sosoro**, **kancra** (Labeobarbus douronensis), **paray** (Rasbora sp) and **hurang** (shrimp) are also caught for ritual purposes.

In the past, when the Outer Baduy and neighbouring areas were still predominantly forest, hunting also took place in Outer Baduy and the **dangka** areas. According to Ayah Ailin, who had been told by his parents, when the **jaro pamarentah** was Jaro Karcin, sometime before 1939[13], a group of Cibeo people led by **Puun** Jenggot hunted animals for **kawalu** rituals in **dangka** Cihandam. To express their happy feeling caused of getting some **mencek**, when they came back to Inner Baduy, from Cihandam to Cibeo, **Puun** Jenggot was carried by some people. Today, however, **mencek** is rarely caught because of its decreasing population. More recently, for instance in the 1996 **kawalu tutug**, only 40 **buut** and 5 **peucang** were caught by **Puun** Cikeusik and his group, while no **mencek** were caught at all.

Hunting animals for **kawalu** is usually undertaken only by the people of Cibeo and Cikeusik helped by Cikartarwna and Outer Baduy groups, but some meat is normally given to the **puun** of Cikartawarna. Outer Baduy **kokolotan kampung** (hamlet religious leaders) come to Inner Baduy two days before **kawalu**, and join in preparing for the **kawalu** by collecting firewood (**suluh**).

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[13]). See list of names of 'jaro pamarentah' in Chapter 3, pp: 135.

The preparation of **huma serang** rice is described by some informants quoted by Geise (1952). According to Geise, before upacara **kawalu**, five rice bundles are brought to a farm shelter (**saung**) and a panicle placed up side down. The bamboo string tying each rice bundle is replaced by bark cloth (**tali teureup**). This rice is not hung on the bamboo pole together with ordinary rice, but is brought directly to the **saung**. After burning incense (**menyan**), 5 rice bundles are put on the floor of the **saung** and spells uttered as follows:

> Come **Pohaci Sanghyang Asri**, come and stay on the earth.
> We hope that you will stay on the earth in perpetuity (my translation, after Geise, 1952).

Five rice bundles (**beungkeut** or **pocong**) of 5 different varieties are dried: **pare janah**, **pare siang**, **pare ketan putri**, **pare ketan huis**, and **pare ketan peuceuk** (**pare ketan hideumg**). After drying, these bundles are stacked in the required way and covered by **mara asri** leaves (Macaranga sp). The rice is brought to the hamlet to be pounded at which time incense is burned and the following incantation is sung:

> Please come here, Pohaci Sanghyang Asri
> I think you have already enough taken rest
> The string rice and all bundled were replaced
> Pease you come back to permanent place
> (my translation, after Geise, 1952)

The rice must be carried by hand and it is prohibited to carry it on the shoulder. The bundles are put in the

house of the **girang seurat**, covered by a sacred cloth and given perfume. At night, **pantun** are performed (a **pantun** is an epic narrative sung by a male which can take place only within a ritual context). On the following day, in the early morning, the bundles are brought to a pounding shelter (**saung lisung**) by a group comprising 5 women: **pare janah** is brought by the **puun**'s wife (**ambu nini girang**) walking in the front, followed by **ambu seurat** carrying **ketan siang**, and **ketan putri** and **ketan huis** are carried by **ambu parekan** and the wife of a former **puun** (**ambu nini puun**).

Each bundle is divided into two parts and pounded by women in a wooden mortar with wooden pounders. Before pounding, the tips of the pounders are rubbed with saliva and **panglay** (Zingiber cassumunar) juice. This work is supported by about 50 women from Outer Baduy. Rice is pounded in two stages: firstly, in the main hole of the mortar, where the rice separated from the panicles; secondly, the rice hulls are pounded in another hole at the top of the mortar. Finally, the rice is winnowed using a **nyiru** (winnowing tray). All hulled rice (**beas**) is put in a **bakul** (woven bamboo basket) and brought to the house of the **girang seurat**, where it is stored for one day and one night.

The following day, the rice is put into 5 **baris** (big woven bamboo baskets) and washed in water. Washed hulled rice is then brought to the house of the **puun**, where it is steamed in large metal vessels (**seeng**). **Beas janah** is

cooked separately as a ritual offering (**saran**). Cooking this rice is called **ngejo nasi bongkok** ('to cook **bongkok** rice'). The cooked rice is shaped like a cone and put on a **nyiru** (winnowing tray) covered by **cau kole** leaves (Musa sp) which are collected from plants surrounding the house of the **puun**. In addition, other rice is stirred and fanned in a big wooden container (**dulang**).

In Outer Baduy, one day before **kawalu**, a group of between 3 and 10 women from the same hamlet go to Inner Baduy. Each woman wears traditional dress and carries about one litre of rice wrapped in a cloth. When they arrive at the Inner Baduy hamlet, they are welcomed into houses of friends and asked to help pound new rice, because two bundles (2 **eundan**) of new rice must be pounded for each Inner Baduy household. In Cibeo, for instance, 158 rice bundles (78 households x 2 rice bundles) must be pounded in one pounding shelter in one day. This starts early morning, about 6.00 o'clock, and finishes about 6.00 o'clock in the afternoon.

Rice from each household is carried to the **girang seurat**, a handful of which (**sacawuk**) is taken to the **puun**. The following day, the rest of the rice (that is the mixture of Inner and Outer Baduy rice) is cooked from early morning till afternoon in each Inner Baduy house. Before cooking the rice, all those attending ritual are counted by **palawari**. In **kawalu tutug**, for instance, about 11,185 people were recorded as attending **kawalu** in Cibeo. This meant that 395 portions (1185 divided by 3) of cooked rice

wrapped in leaves of **cau kole** (Musa sp) had to be provided. All the wrapped portions are carried to the house of the **girang seurat** and blessed with spells from the **puun**. At the same time as women are cooking rice, sets of betel chewing requisites (betel leaves, Areca nut, and artificial lime made by burning the shells of river snails) are prepared by the men.

The rice portion consists of **nasi janah** surrounded by four other varieties of glutinous rice. A special portion consists of squirrel meat (**buut**), mouse deer meat (**peucang**) (mouse deer), scorpion (**kalajengking**), cricket (**jangkrik**), spider (**lancah**), freshwater fish (**ikan tambera**) and edible bitter palm shoot (**humut pait seuti**). All the rice put in to several **bakul**, and a special portion on a small plate for the **puun**.

After preparations in the hamlet have finished, each man goes to the river and bathes. At the same time heirloom goods are also washed by the men, after which the **puun** is asked come to the **bale** (guest house) by the **girang seurat**. He says: "honourable **puun** should come. The **puun** answers, 'where should I go ?'. 'Go to **bale**. 'Have people finished making cones of rice?' (my translation, following Geise, 1952). He goes to the **bale** followed by the **parekan**, who carries a big **nasi tumpeng** (cone of rice) on a tray. The **puun** enters the **bale** and sits to the south side.

The cone of rice is served to **parekan**, **barisan**, and **girang seurat**, while the rest of the rice is shared among the rest of those present. Before eating rice, a betel

wrapped in leaves of **cau kole** (Musa sp) had to be provided. All the wrapped portions are carried to the house of the **girang seurat** and blessed with spells from the **puun**. At the same time as women are cooking rice, sets of betel chewing requisites (betel leaves, Areca nut, and artificial lime made by burning the shells of river snails) are prepared by the men.

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The cone of rice is served to **parekan**, **barisan**, and **girang seurat**, while the rest of the rice is shared among the rest of those present. Before eating rice, a betel

chewing set is served, offered first to the **puun**. Before breaking the fast, all cooked rice is wrapped and distributed to those who have attended the ritual and to people whose rice was carried a close relatives. However, this rice cannot be consumed until after the ceremony. After each person has received their wrapped portion of rice, and has eaten a little rice in order to break the fast, all Outer Baduy go home to their hamlet. The remaining rice is consumed in their houses. Those who have not attended the ritual consume their rice for breakfast, after fasting again.

2.8. Ngalaksa ritual

The ritual of **ngalaksa** is also called **seren tahun** (annual offering). **Ngalaksa** means 'making **laksa**'; **laksa** being a noodle made from flour of **huma serang** rice (in Inner Baduy) or of **huma jaro dangka** rice (in Outer Baduy). The rice used must have been taken from 7 rice stalks of the **pungpuhunan** rice. The **pungpuhunan** -as we have seen-is the most sacred place in the swidden plot, regarded by Baduy as the essence of the earth, and this essence is believed to be absorbed by rice grown within it. As an expression of gratitude, **laksa** must be offered to both the secular power (**pamarentah**=the government), by undertaking **seba**, and to the ancestors, by performing **ngalaksa**.

Ngalaksa is performed in the month of **Katiga**, after completing the third **kawalu**. A date is fixed each year: day

20 in Cikeusik and Cikartawarna, day 21 in Cibeo, day 22 in Dangka Cihandam, day 23 in Dangka Cibengkung, day 24 in Dangka Cihulu and Garehong, day 25 in Dangka Kaduketug, day 26 in Dangka Nungkulan, and day 27 in Dangka Kamancing. Each Outer Baduy household representative attends the ritual in one of the seven **dangka**, depending on local tradition.

I observed this ritual in full for Dangka Cihandam (today, located in Kaduketug) in 1995-1996. The ritual is spread over 3 days. The first day, **ngababay** is the responsibility of each household. In the early morning bundles of Arenga palm leaves (**daun kawung**), comprised of odd numbers, such as 1, 3, and 5, are put in special places, such as the house (**imah**), rice barn (**leuit**), farm shelter (**saung**), water spout (**tampian**), rice pounding shelter (**saung lisung**), and on footpaths (**jalan satapak**). In the house, bundles of **daun kawung** are put in the wall of the upper section of each door. This is a sign that the household is conducting the **ngalaksa** ritual and is to deter interference from supernatural creatures.

After **ngababay**, Outer Baduy from different hamlets, consisting of men, women, boys and girls, go to the house of the **jaro dangka**. Groups of between 5 and 20 pass along the footpath in succession. Each household representative carries about half a litre of new rice from the **pungpuhunan**, in a piece of cloth by women and girls and in a plastic bag by men and boys. Some households who had no **pungphunan** in the last rice planting season, offer only a

little rice for the **ngalaksa** ritual. Some **patat** leaves (Marantha sp) are also carried by men and boys. Some people living in Kaduketug carry a bundle of rice (**beungkeut pare**) instead of hulled rice (**beas**). These rice bundles are mixed with 4 rice bundles from the swidden of the **jaro dangka**, and stored (**didiukeun**) for one night in his house. Early next morning, the rice bundles are pounded by selected women in the **saung lisung**. They wear the traditional bluish sarong. Other rice bundles collected from each household are also pounded. When the rice has been winnowed, the pestles and long wooden mortar are made into a musical instrument called **ngagandek**.

After pounding, the hulled rice is carried back to the house of the **jaro dangka**. The hulled rice is then mixed with other hulled rice carried by each household from non Kaduketug hamlets and stored for one night in the house of **jaro dangka**. This hulled rice is protected with a magic spell uttered by the **jaro dangka**.

The following day, all of the hulled rice is carried from the house of the **jaro dangka** to the pounding shelter, and pounded to flour by seven women selected by the **jaro dangka**. These women must be experienced and honest (**jujur**). **Ngagandek** is also performed when the finely pounded are separated from coarse using **sair** (see Figure 6.15). After performing **ngagandek** several times, the rice pounding stops. The rice flour is brought to the house of the **jaro dangka** where it is stored for one night.

The following day further preparations are undertaken

by women. In the house, the flour rice is mixed with water and kneaded several times. At the same time, various articles used in making **laksa**, such as a wok (**kekenceng**), a large metal vessel for steaming rice (**seeng**), a woven bamboo filter (**ayakan**) are cleaned. The copper articles - **kekenceng** and **seeng** - are cleaned with a stem of **honje** (**tangkal honje** =Nicolaea hemispherica).

While this is happening men are busy collecting fire wood and **patat** leaves from secondary forest (**reuma**). In addition, a **saung laksa**, or small shelter, is constructed (Figure 6.15). It is located outside the hamlet area, to the south, parallel to the location of the pounding shelter. The **saung laksa** is a simple structure, made of four wooden poles and a roof of Metroxylon (**kiray**) leaves. This place is used to press steamed rice flour to make **laksa**. Various goods, such as a small metal vessel (**sangku**) with small holes underneath, a wok (**seeng**), a woven bamboo filter (**ayakan**), a piece of wood for pressing (**paninggur**) and **jambangan** are put in the **saung** laksa (Figure 6.15).

Once in the house, the rice flour is put in a bamboo winnowing tray (**nyiru**), mixed with water (**ngalomay**), and kneaded several times. The resulting dough is divided and the portions wrapped with **patat** leaves. These are about 10 centimetres long with a radius of about 5 centimetres. Between 7 and 15 pieces are made, but the number must always be an odd one. The wrapped rice flour portions are put into a large metal vessel (**seeng**) containing water and put on a firewood stove (**hawu**) for a couple of hours. The

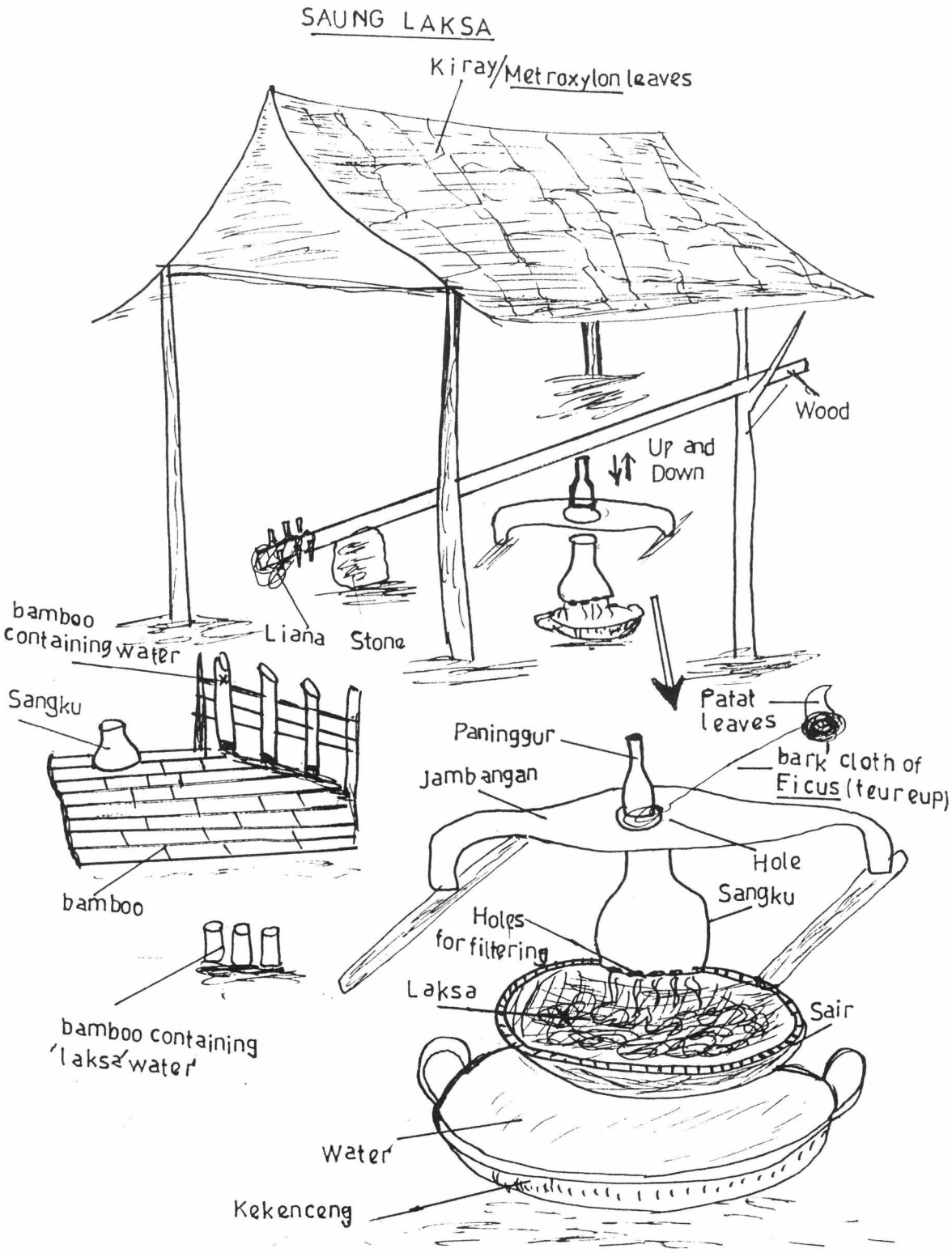


Figure 6.15. Various articles used in performing the ngalaksa ritual

steamed rice flour portions are taken out from the **seeng** and unwrapped. The cooked portions are called **orok** (babies), and are carried into the **saung laksa** by women and put into a **sangku**. Each **orok** in the **sangku** is pressed using a **paninggur**. To exert strong pressure, a wooden is attached to the upper part of the **paninggur**, operated by men and boys (see Figure 6.15). This presses the **orok** against the inside of the **sangku** and dough extrudes through holes on the base of the **sangku** to form noodles. The noodles are collected in the **sair** which sits over the **kekenceng** containing water. The **laksa** are put on a **baris** covered with **patat** leaves. A little **laksa** is taken and put on the bottom tip of a wooden pole used for pressing the **paninggur**. The **sangku** and **paninggur** are washed with water from the bamboo internodes provided, and rubbed with **honje** stems in a wooden container (**dulang**). The liquid residue of the **laksa** is taken by men, women, boys and girls who snatch from each other pour it into bottles and bamboo internodes. This is used for washing hair and for fertilising various fruit crops. Baduy believe the residue has restorative powers for hair and crops because it is considered to be the essence of the earth.

After the **sangku** and **paninggur** have been washed, another **orok** is put into the **sangku** and the same procedure repeated. The formed **laksa** are collected and put together on a **baris**. Some of the **laksa** is carried by women to the house of the **jaro dangka**, while new **orok** are brought from the house to the **saung laksa**. The pressing of **orok**

alternates several times with the washing of the **sangku** and **paninggur**, until it is thought that enough has been made.

While this is happening **teke**, **tutumbakan**, and **anak-anakan** are being made by men and boys. **Teke** is made of Arenga palm leaves (**daun kawung**) to form tiny oval bowls threaded on a bamboo stick. **Tutumbakan** is made of Arenga leaf ribs shaped to form a spear (**tumbak**) by splitting and crumpling, while **anak-anakan** (**anak**=child) are made of Arenga palm leaves of about 30 cm long, folded in two using bamboo pins and shaped to form a female doll. The upper part is made into a head and under part shaped into feet. A small hole made in the 'face' represents the mouth and a hole between the 'legs' the female sexual organ (Figure 6.16). **Teke** are used as receptacles for the **laksa**, and the **tutumbakan** and **anak-anakan** symbolise male and female. Each household must make as many **teke** as it has household members and as many **tutumbakan** and **anak-anakan** as it has male and female members respectively. Thus, if one household has 5 members, say, a father (male), mother (female), two sons (male), and a daughter (female), then there should be: 5 **teke** (total number of household member), 3 **tutumbakan**, and 2 **anak-anakan**. To aid the calculation for each **dangka**, **teke**, **tutumbakan**, and **anak-anakan** are pinned together in tens using a piece of bamboo (Figure 6.16). Some Baduy who have moved to a non-Baduy area, but who have maintained their kinship links have **teke** made for them by their relatives. In each **ngalaksa** several special **teke** are made for various state officials, such as the president,

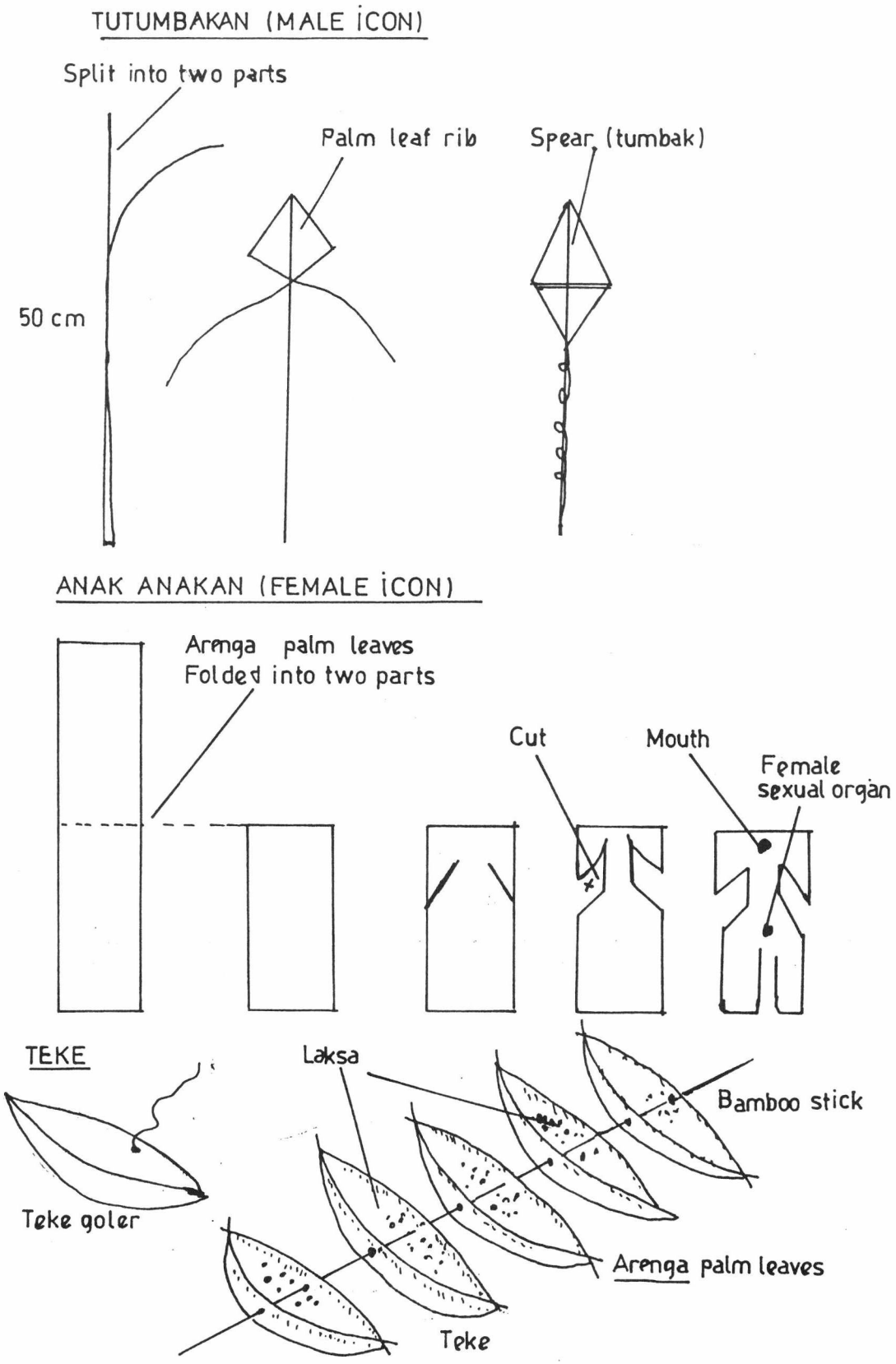


Figure 6.16. Tutumbakan, anak anakan and teke used used in ngalaksa ritual

governor, resident, and **bupati** (a district leader). These are called **teke goler**, and are different from ordinary **teke** in being slightly longer, empty and hung by tying. The **teke goler** also have no **laksa** inside, because - Baduy say - state officials have neither practised swidden cultivation nor do they have **pungpuhunan**. In Inner Baduy, **teke goler** are also made for the foetuses of pregnant mothers. This custom is not present in Outer Baduy. Instead, yarn is coiled on **pajal** (traditional woven cloth material, see Figure 3.19, in chapter 3), the number of coils indicating the age of the foetus.

All **teke**, **tutumbakan**, and **anak-anakan** are collected and carried to the house of the **jaro dangka**. Each **teke**, except the **teke goler**, is filled with **laksa**. **Puputrian** (**putri**=girl) are also made from steamed rice flour. The **laksa** remaining is distributed to all those who have attended the ritual, and some will be used for the ritual of **seba**.

The **jaro dangka** and his staff break the fast when betel is offered to them. All **teke**, **tutumbakan**, and **anak-anakan** are blessed by the **jaro dangka**, and carried by a group of men to the forest outside the hamlet, located near the pounding shelter. The materials are carried by a man on his head accompanied by seven men walking in a line. They wear traditional dress, bluish trousers and bluish **batik** printed cloth headdress, and are bare breasted. They are followed by a group of nine women.

Once at the forest shelter, the leader of the group

utters an invocation. **Tutumbakan** are stuck in the ground surrounded by offerings of **laksa**, and two symbolic doors are constructed: one in the west and one in the east. **Puputrian** is put on Arenga leave, rolled up and surrounded by **teke**. The head of the **puputrian** is placed towards the east and surrounded by a fence of small spears. According to Geise (1952), the leader of the group sits down cross-legged, and makes an invocation to the ancestral invisible tiger (**maung**):

> We wish to throw away that which causes itching and scorching, that which is rude and unrefined, chicken diseases, buffalo diseases, and human diseases
> We avoid anything that is not desirable
> We wish to be protected by the kingdom of ancestors
> Since this night we offer all to kingdom of ancestors, to indicate that we throw away the year
> The group leader asks ritual participant: how many people our members ?, This is answered by all participant; we have total member of three hundred people.
> The leader replays, oh, oh, I know, our member is three hundred people. I hope they avoid any disturbance, they will be protected, we offer people and animals to indicate since tonight, this year, we are offered to the sacred kingdom of ancestors.
>
> (my translation, after Geise, 1952).

After this invocation has been made the leader clears his throat (**dehem**) three times. This indicates that the ritual offering of **laksa** is complete. The group in the pounding shelter make music rhythmically 7 times using pestles and long wooden mortars, called **ngagandek**. **Ngagandek** is supposed to escort the ancestral tigers home

after having received their offering of **laksa**.

The male group returns to the house of the **jaro dangka**, the leader carrying the **panglay** (Zingiber cassumunar) in a **nyiru** basket. The **panglay** is distributed to everyone who has attended the ritual, and who also received steamed **orok-orokan** wrapped in **patat** leaves. Little pieces of **orok-orokan** are placed on the ears, as it is believed that this will maintain their sense of hearing. Everyone goes home except some women who help to clear up in the house of the **jaro dangka**.

After arriving home, and after sunset, the **panglay** is chewed and spat, once inside, and once outside, the house. At that time, the household members must be at home, however, guests are not allowed to stay and must go out.

2.9. Seba ritual

Baduy are considered by some scholars to be the descendants of an ascetic group, a **mandala** community, which owes a special obligation to share power which has brought harmony within their own community but also in the realm of their king (Bakels, 1993: 349). Baduy consider themselves to be the guardians of the original Sundanese tradition and their environment. In addition, they are obliged to care for the king and to guide royal and noble families. For instance, the secular power which resided on the north

plains, at Pakuan during the Hindu kingdom, and at Serang during the Sultanate, colonial and post colonial period, is given annual respect by performing a ritual called the **seba laksa** or **seba**.

In the past, the **seba laksa** had an important role in channelling spiritual power from an ascetic group (namely, Baduy) to the king. It is significant that the main sacred food offered to the king in this ritual is **laksa**, which as we have seen, represents the sacred power of the earth. **Laksa** is made from sacred rice harvested from the **pungpuhunan** of the **huma serang** in the most sacred part of West Java. It is considered to be the essence of the earth, **aci bumi**, which has become a centre of power, **pertiwi** (Danasasmita and Djatisunda, 1986: 35). In Sundanese mythology, **pertiwi** (the earth) is considered male, while in Baduy, **pertiwi** is considered to be the husband of the rice goddess, **Nyi Pohaci Hiyang Asri**. According to the old Sundanese text, kropak 630, **pertiwi** was considered to be **Sang Mangukuhan**, eldest brother of **Wretikandayun**, recognised as an expert in swidden farming (**pahuma=petani**, farmer) [ibid, 1986: 35].

Today, the ritual of **seba** is performed annually in the month of Sapar, after harvesting all the swidden rice, and after performing **kawalu** and **ngalaksa**. A delegation of between 40 and 60 Baduy, consisting of the **jaro dangka**, **jaro tanggungan 12**, **puun** staff from Inner Baduy, **jaro pamarentah**, some Outer and Inner Baduy led by **jaro warega** (**Jaro Dangka Kamancing** as a coordinator of **jaro dangka**)

perform the **seba** ritual in the **pendopo** (audience hall) of the **kabupaten** in Rangkasbitung, and of the resident in Serang. Besides **laksa**, various agricultural products, such as **beas ketan** (sticky rice), **taleus** (taro = Collocasia and Xanthosoma), **gula kawung** (Arenga sugar palm), **cau** (banana=Musa paradisiaca) and **jaat** (wing bean=Psopocarphus tetragonolobus) are presented. Every two years, some traditional household utensils, such as **hihid** (woven bamboo fan), **aseupan** (conical bamboo rice steamer), **gayung** (bamboo water dipper), **kuluwung** (woven bamboo food steamer), **nyiru** (bamboo winnowing tray), **dulang** (wood containers for stirring steamed rice), **bakul** (woven bamboo basket), **sahid** (big bakul), and **ayakan** (bamboo sieve for separating rice hulls) are offered to the **Bupati** and **Residen**, in a ritual called **seba gede** (great seba). The ritual synchronizes with a successful rice harvest, and their experience tell them that every two years there will be a 'good rice harvest' (**panen gede**=great harvest). In other words, approximately every two years, swidden farming is thought to provide high yields. This is probably because the fruiting of various perennial crops, such as **kadu** (durian=Durio zibetinus) and vegetables such as **peuteuy** (locus bean= Parkia speciosa) and **jengkol** (jering=Pithecellobium jeringa) fluctuate their seed production over a two year cycle, yields peaking after particularly long dry seasons (**halodo panjang**). This phenomenon has been observed widely in different parts of South East Asia where swidden cultivation is practised, and local people take advantage of this fluctuation in the mass

fruiting of trees (Dove and Kammen, 1997: 92).

Household utensils and agricultural products are collected by the **jaro dangka** in Outer Baduy and by the **jaro tangtu** in Inner Baduy, particularly in Cibeo. Each jaro dangka hamlet, in Outer Baduy and Cibeo, provide special materials, such as **gayung** (Kaduketug), **nyiru** (Garehong), **sair** (Panyaweuyan), **hihid** (Nungkulan), **dulang** (Cihulu), **sahid** (Cibengkung), **beas ketan** and **cau golek** (Cibeo), while **laksa** is provided by all **jaro dangka**.

In the past, all Baduy participating in **seba** gathered in **Dangka** Kamancing, Cisimeut, because the ritual was led by **Jaro Dangka** Kamancing, recognised as the coordinator of **jaro dangka** (**jaro warega**). However, since **Jaro Dangka** Kamancing was moved to Kaduketug in the 1960s, participants gather in Kaduketug while waiting to leave for Rangkasbitung.

A large group of Inner Baduy travel along the main road between Kanekes-Rangkasbitung and Serang. They are prohibited from travelling by vehicles and sacred rice noodles (**laksa**) from the **pungpuhunan** and **beas ketan** (glutinous rice) are also prohibited to be transported on vehicles. These must be wrapped with midrib of areca nut (**palapah jambe**) and carried on the hip (**direndang**). These prohibitions do not apply to Outer Baduy. In Leuwidamar (the administrative centre of sub-district, **kecamatan**) an offering of agricultural produce is made to the **Camat** (sub-district leader), but no ritual is performed.

In the afternoon, the Baduy group arrive at the

pendopo (audience hall) in Rangkasbitung and are received by the **bupati** and his staff. A special ceremony is performed. In this ceremony, the Baduy delegation leader, **jaro warega**, or sometimes the **jaro tanggungan 12** (Jaro Saidi), offers the agricultural produce and other goods to the **bupati**, who is addressed as **bapak gede** (great leader). In return the **jaro warega** a request protection of Baduy culture and land. An annual declaration is pronounced by **jaro tanggungan 12** as follows:

> Nyalindung lain ka gunung, ngarendang lain ka gedeng nyaeta baktina meureun ka puun, badagna ka nagara nagara ka bapak gede (Bupati), ka dieu di Menak Parahiang kami menta dipinpin, diraksa, dipangjagakeun.
>
> Source: Surachdin (1985)
>
> Which can be translated as:
>
> Do not ask protection to the mountain, do not ask protection to the hill
> but it must dedicate to **puun** in our village, and to the government in outside.
> respect to **bapak gede** great leader (**Bupati**), come here to the aristocracy of Parahiang
> we request guidance, care and protection.

This ceremony is also an occasion when Baduy can communicate with the government, and when a special **puun** message is given. This message mainly concerns current problems experienced by the Baduy. For instance, when the Baduy area was annexed by neighbouring villagers, they asked for the protection of **bapak gede** (Bupati) against outside invaders. Such concerns are generally expressed in allusive poetic form, as follows (Surachdin, 1985):

Bisi aya anu paleuwih leuwih tangtung, paleuwih leuwih calik pagirang-girang tampian, menta dipangjagakeun ku bapak gede basa keur eta aya anu nyerobot ti kalerna, ti kidulna aya popohna, aya cabokna, aya teunggeulna, aya kadekna menta dipangjagakeun, dipangrasakeun ku bapak gede.
Kami ge cicing di leuweung lain jelema kabangkung nya jelema pamarentah keneh, hayang menta dipingpin dipangrasakeun, dipangjagakeun

Which can be translated as:

We worry that there may be people who desire to be higher in standing, to be lower in sitting, and to be too upstream in bathing than others.
We request protection from **bapak gede**
For instance, at that time of land annexation from north, south, and its slap, smack, and slash were found
We request protection and care from **bapak gede**
We reside in the forest and are not to be enslaved
We are citizens as well, we wish to be guided to be guarded, to be protected

(My translation, following Surachdin, 1985).

To solve conflict with their neighbours, Baduy always seek peaceful agreement as requested by a delegation leader:

Ayeunamah urang silih asuh, silih asih
lamun kasereg silih hudangkeun, lamun leueur silih ngeukeupan, lamun poek silih damar

Which can be translated as:

Now we need care and love
if we make a mistake, we would be happy if it was corrected.

(My translation, following Surachdin, 1985).

At the closing ceremony, the Baduy delegation is served by the **Bupati** with food (**parasmanan**). They spend the night in the **pendopo** and the following morning, the Inner Baduy group continue to process on foot to Serang, while the Outer Baduy travel by vehicles. When they arrive at the

pendopo of the Resident in the afternoon, a **seba** ceremony is performed similar to that in Rangkasbitung, where agricultural produce and other goods are offered by the Baduy delegation leader. In return, they ask **bapak gede Residen** (Great Leader of Residency) to protect their culture and their land. It is customary for them to be provided with goods, such as salted fish (viz **ikan asin pepetek**), and various betel chewing ingredients (betel leaves, gambier, lime and Areca nut), in return.

Next morning the Inner Baduy process home along the main train track and road from Serang to Rangkasbitung, and on to Leuwidamar and Kanekes. In total, in 4 days they walk about 150 km. Outer Baduy, however, travel home by a vehicle, sometimes provided by **bapak gede.**

2.10. Ziarah or Muja

Every year during the month of **Kalima**, Baduy traditional leaders (**puun**) visit sacred places to undergo ascetic rituals, called **ziarah** or **muja. Ziarah** can be described as devotional visits to sacred places, while **muja** means a respectful greeting. Two sacred places are visited annually by **puun. Sasaka Pusaka Buana** or **Sasaka Pada Ageung** located in sacred forest upstream of Ciujung is visited annually by **Puun** Cikeusik and his group. The other place is **Sasaka Domas** or **Sasaka Parahiyang** located in the sacred forest upstream of Ciparahiang, which is regularly visited by Puun Cibeo. People from Cikartawarna and some Outer

Baduy may participate. Because **Sasaka Domas** is located near Cibeo hamlet, **ziarah** undertaken by Puun Cibeo and his staff (**baris kolot**) usually requires only one day, day 7 of the month of **Kalima**.

Unlike Cibeo, **ziarah** at **Sasaka Pusaka Buana** requires three days, on days 16, 17, and 18 of the month of **Kalima**, as it is located some distance from Cikeusik hamlet. Two days are needed for travelling in the forest and one day for the ritual itself.

This ritual cannot be attended by Non Baduy, only Inner and Outer Baduy can join **puun** and their staff (**baris kolot** and **palawari**) by asking permission directly from a **puun**. Ayah Ailin, from Babakan Marengo, who has always attended the ritual at **Sasaka Pusaka Buana**, told me of an occasion when he joined with a group of 95 persons led by Puun Cikeusik.

Before leaving, they had to bathe (**beberesih awak**), dress in clean clothes (**baju bersih**) and fast (**puasa**). During their stay in the forest, they were prohibited to pollute (**ngotoran**) the forest environment. No spitting is allowed, and urine and excrement must be collected in bamboo internodes. Only rice and salt are brought for eating in the forest.

When they arrived in the vicinity of **Sasaka Pusaka** Buana, a shelter (**talahab**) was constructed by **palawari**, helped by other people. The shelter was of bamboo, with a roof of split bamboo poles (**beulahan awi**) attached to each other, while the floor was covered by **ngenge** leaves. **Ngenge**

is a kind of palm with a leaf similar to that of **pinang rende**, soft and pleasantly cool.

During the 3 days in the forest, they cooked and ate **luluy**. **Luluy** is made of rice, mainly rice from **huma serang**. It is washed in water and wrapped in **patat** leaves. These are put into a bamboo internode (**ruas awi**) and filled with water. The bamboo is placed upright and cooked in a special fireplace. When the bamboo is seen to have some scorch marks (**tutung**), it is removed and the rice taken out from inside. As much **luluy** is made as possible, because after completing the **ziarah** and returning to Cikeusik hamlet, **luluy** is in much demand as a means of obtaining spiritual power for **puun** and their descendants. One litre of rice can make about 20 portion of **luluy**.

The main activity in sacred places is the ascetic ritual undertaken by **puun**, while other participants clear up about 20 heaps of stones. They are not allowed to talk to each other. The ritual starts on the first terrace. According to Danasamita and Djatisunda (1986: 85-86), the main sacred place consists of 7 terraces resembling those of sawah (**kotakan sawah**) [see Figure 3.3. in chapter 3). However, in some places these terraces are no longer in place due to land slides and are densely overgrown with **patat** (Marantha sp), **pacar hutan** (**Lytheraceae**), and moss. The stone heaps resemble graves and are found on each terrace. On the seventh terrace is a stone vessel containing water, called **Sanghyang Pangumbahan** (literally **pangumbahan** means 'washer'), while the southern aspect of

the second terrace is called **Sanghyang Gerit.** On the seventh terrace, the ritual is finished. Participants wash their face, hands and feet with water taken from **Sanghyang Pangumbahan.** They believe the vessel never empties of water, and serves as a means of divination. Thus, if the water is found to be full and clean, it can be predicted that the year will be good, with a good rice harvest. Conversely, if the water in **Sanghyang Pangumbahan** is found to be diminished and muddy (**kiruh**), it indicates a bad year, lack of rainfall or drought, and a poor rice harvest. If a lot of fresh moss called **komala** or **permata** ('jewel') is growing on stones found on the seventh terrace, it is predicted that the year will bring prosperity and peace. But if the stones are not covered with fresh moss, being **Batara Sataranjang** (**sataranjang** literally meaning 'naked'), the year will be difficult and disturbed (ibid, 1986: 86). It is possible that there might be an ecological rationalisation of the use of water quantity and quality change in stone vessel and dryness of mosses found in the sacred place forest for foretelling the future, particularly climatic change. It has been suggested by me that water and moss conditions will change if there has been a long dry spell, as the micro climate in this place is very sensitive to climatic change having never been disturbed by human activity.

Before returning home, **taneuh bodas** (clay) and **lukut komala** (moss) are collected to be given to people who gather in Cikeusik hamlet and who respect their restorative

powers. When **puun** arrive back in Cikeusik hamlet, a special ritual offering of **taneuh bodas** and **lukut komala** to all people gathering in the hamlet is performed, called **upacara mere berkah** (ritual of offering a blessing).

3. Summary and conclusion

Conklin (1957: 3) has distinguished two types of swidden farming: 'partial' and 'integrated' systems. Baduy swidden cultivation, in these terms, is an 'integrated' system, since swiddening is strongly embedded in Baduy culture. Baduy are devout **Sunda Wiwitan** and swiddening is considered to be the main obligation of their religion, focused on the veneration of **Nyi Pohaci**, the rice goddess. Sowing rice, for example, is seen as the marriage of **Nyi Pohaci** with the earth (**pertiwi**). As a result, the rice goddess is usually entertained by music **angklung** and offered various toys in a sacred place, the **pungpuhunan** to make her happy. Moreover, forty days after sowing rice (but in practise this depends on when the first weeding is finished), **ngirab sawan** must be performed. This ritual is similar to the **upacara cukuran rambut**, a ritual normally performed by Baduy as well as many Sundanese when cutting the hair of 40 day old babies.

In addition, before harvesting rice, the ritual of **mipit** must be performed in which rice must be asked to go home to 'her house' in a rice barn after staying in her husbands place, the earth (**pertiwi**) or swidden plot.

Various articles are usually offered as toys for **Nyi Pohaci**. The names of plants used also symbolic function, encouraging rice to be plentiful, fixed or substantial and not quickly finished sparingly taken.

After rice has been carried to the settlement, the rice mother (**pare indung**) together with the rice couple, accompanied by a special rice companion, carried by women, is placed in 'their home', the rice barn. They are surrounded by other rice as 'guardian', and some 'guardian' rice is placed near the door, in the ritual of **ngadiukeun pare indung** (to sit mother rice). This is followed by the ritual of **ngapret** in which rice are sprayed with various odorous plants (**jaringao**, **cikur** and **panglay**), mixed with a little water. It is considered that the rice like human beings, now gathered, have come back to their house, and some of them have sprained an ankle, wrist, and knee, due to travelling from the swidden plot to the rice barn. Therefore, traditional medicines composing of various odour plants are given. Among rural Sundanese, it is widely believed that if someone who has sprained an ankle, wrist, or knee, then various gingers such as **cikur** and **jahe**, glutinous rice, and little water, if pounded and massaged into the sprain will be of benefit. An ecological rationalisation of this practise is that the odours protect rice against insect pests in the rice barn.

In addition, if at any time women take rice from the rice barn, it is considered to 'wake the rice up' (**ngahudangkeun pare**). Therefore, the ritual of **ngocek** is

performed by offering betel leaves, limes, gambier, Areca nut and **panglay** for **Nyi Pohaci**, to console her.

To respect **Nyi Pohaci**, swidden rice may not be sold. Rice harvested in the course of swidden farming is nowadays mainly used for rituals which are themselves part of an annual agricultural cycle: **kawalu**, which acknowledges the role of the **puun**; offering rice to their ancestors by performing the ritual of **ngalaksa**, and to their secular leaders or government in performing the ritual of **seba**.

To sum up, the interrelationship between Baduy and their environment in practising swidden farming is always guided by their traditional law, **pikukuh** inherited from their ancestors. In other words, the Baduy 'moral economy' is constituted through **pikukuh**, in a way which maintains the sustainability of their culture as well as of their environment.





Burning vegetation (**ngahuru** and **ngaduruk**) and clearing weeds grown after burning vegetation (**nyasap**).
Photo: J. Iskandar 1996





Pungpuhunan (**sawen**) in the swidden plot of a **jaro dangka** being prepared by men, and rice planting undertaken by men and women.
Photo: J. Iskandar 1996





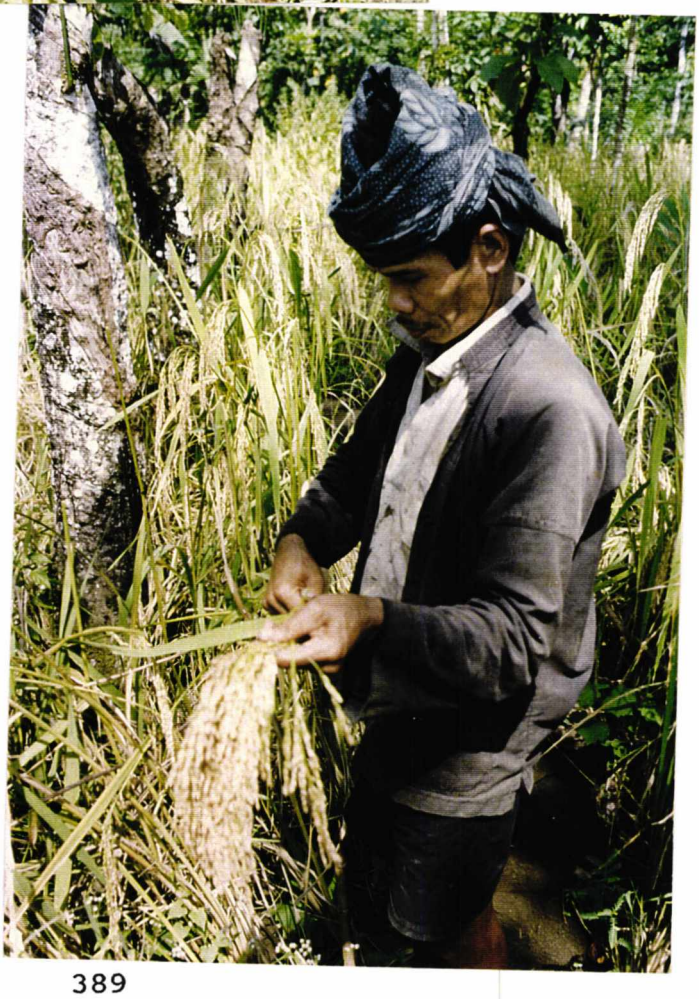
Man and woman weeding a swidden, and various articles used for performing **ngirab sawan** ritual.
Photo: J. Iskandar 1996.





Thatched roof of **kiray** palm leaves is being made by man and woman for roofing rice hung in the swidden plot (**lantayan**), and rice bundles harvested from the **pungpuhunan** and hung up on the **pucuk** used in ritual of **mipit**.
Photo: J. Iskandar 1996





Harvesting rice (**dibuat**)
Photo: J. Iskandar 1996





Carrying rice and pounding rice bundles
Photo: J. Iskandar 1996





Traditional Baduy cloth commonly used in various village ceremonies.
Photo: J. Iskandar 1996.

CHAPTER 7

DIVERSIFICATION OF ECONOMIC ACTIVITIES AND MOVEMENT TO THE 'LANDEUH'

Various strategies have been developed by Baduy to maintain the sustainability of their swidden system. For example, to cope with the shortage of swidden land in Outer Baduy, adjacent non-Baduy land has been rented and share-cropped from **urang landeuh**, 'lowland moslem people'. In addition, to obtain a cash income to buy daily needs through the market, a number of cash crops have been selected and introduced, including some crops prohibited by their traditional law (**pikukuh**). Cash has also led to the purchase of various prohibited luxury goods. As a result, these goods and crops have been periodically destroyed by puun staff during rituals of cultural purification, the **pembersihan adat.**

Baduy are increasingly engaged in the sale of non rice crops, traditional clothes and handicrafts. Moreover, some Outer Baduy wishing to raise more cash through their farming, have moved to the **landeuh**, the lowland moslem area, either independently, or with government assistance through an official resettlement programme in the non-Baduy area.

In this chapter I will first discuss the purification rituals, and the ritual involved in asking permission to move to the non-Baduy area (**ngabokoran** or **undur rahayu**). This is followed by a discussion of the diversification of

economic activities and the government resettlement project.

1. The purification of tradition (pembersihan adat)

Rituals for purification of tradition (**pikukuh**) are usually undertaken every two years, led by **puun** staff, particularly the **jaro tangtu**, assisted by hamlet religious leaders (**kokolotan lembur**).

On these occasions, various prohibited luxury and 'modern' goods and prohibited cash crops, such as clove[1] and coffee trees, are destroyed. Normally, before undertaking raids, a special ritual is performed in Inner Baduy, where it is called **parawali ulin**, the ancestors judgment on the daily practise of **pikukuh**, or a relinquishment of all responsibility to Baduy ancestors.

The ritual of **parawali ulin** is performed every 7 years, alternately in Cibeo and Cikeusik, and attended by both Inner and Outer Baduy. Two ears (**dua ranggeuy pare**) of a white rice variety harvested from the **pungpuhunan** (see chapter 6, pp. 285-291), and 40 varieties of boiled vegetable (**seuseupanan**) must be brought by each household attending the ritual.

Before performing the ritual, the **tangkesan** (a member of the puun staff) bathes in the river to cleanse his body

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[1]). Cloves were important until the 1990s. This crop has since disappeared in Baduy, partly because trees were destroyed by religious leaders, but also due to the low market price for the product.

sufficiently to receive the ancestral spirit (**karuhun**). For the duration of the ritual puun staff are not allowed to sleep, although other attenders may do so. To invite the **karuhun**, **pantun** (epic narratives sung by an adult male) are performed which tell of the origin of Cikeusik, Cibeo and Cikartawarna. At about 3.00 o'clock in the morning, those who are asleep are woken to witness the **karuhun** being invited by the **tangkesan**. A special offering called **parawanten**, consisting of banana, sugar cane, green coconut, and a kris are coiled in weaving yarn (**benang tinun**) and put in a wooden container for stirring steaming rice (**dulang**). In addition, a set of betel chewing requisites, consisting of betel leaves, gambier, lime and Areca nut is put in a copper bowl (**bokor**).

The ritual begins with the burning of incense (**menyan**) and with incantations (**jampe**) pronounced by the **tangkesan**, inviting the **karuhun**. He is surrounded by other participants. One of the **kokolotan** possessed (**kasumpingan**) by a spirit (**karuhun**), walks around, followed by a witness (**saksi**) who is selected by **puun** staff. He has a special duty to hear everything said by the man possessed by the spirit, particularly what is said in whispers. After closing the ritual, boiled vegetables are consumed and two rice ears from each household are carried back to the hamlet: one ear is stored in the rice barn (**leuit**), while the other must be planted in the **pungpuhunan**.

To interpret the ancestral messages, a special meeting is conducted by **puun** and his staff. In this meeting, a

witness is invited and all **karuhun** messages and expressions are collected. They normally concern violations of **pikukuh**, and result in the undertaking of special raids to remove the impurity. However, before conducting these raids, another meeting must be held, usually led by the **jaro tangtu** (particularly Jaro Tangtu Cikeusik, who has a special duty to maintain **pikukuh**). On this occasion, violations of **pikukuh** are discussed and must be put in order by all community members. In Outer Baduy, a meeting is usually conducted in the house of a village leader (**imah jaro pamarentah**). Finally, after a maximum of about seven meetings, and if people do not desist from violations of **pikukuh**, special raids are undertaken. For instance, before conducting raids in 1995/1996, a special meeting was conducted in the house of a village leader in Babakan Cigoel, Outer Baduy, at the end of November 1995. This meeting had been previously planned by **puun** staff in the house of a **tangkesan** in Cicatang a few days before.

The meeting in the house of a **jaro pamarentah** was attended by staff of the puun and of the **jaro pamarentah**. One day, before such a meeting, **jaro tangtu** of Cibeo had come to the house of Jaro Pulung, while others, such as the jaro tangtu of Cikeusik and Cikartawarna came early next morning, followed by seven jaro dangka, hamlet religious leaders (**kokolot kampung**), hamlet administrative leaders (**kokolot desa**), and a village secretary (**carik desa**).

The meeting was chaired by a village leader, Jaro Pulung. First of all, **jaro tangtu** of Cibeo spoke, followed

by jaro tangtu of Cikartawarna and Cikeusik. But the speeches were dominated by the **jaro tangtu** of Cikeusik, as this was considered to be his duty. Various violations of **pikukuh** were discussed at this meeting. These were expressed by Ayah Tati, **jaro tangtu** of Cikeusik, as follows:

> Nowadays, our religion is destroyed and ragged, because it has not been practised by us properly and consistently. If we would like to improve it, this must be undertaken by ourselves. Unlike **urang landeuh** (low land moslems) who have a holy book, we have only oral traditions. Today, a lot of **pikukuh** are violated, because people seek money influenced by rapid development. Please don't try to get benefits only by less work. For instance, please don't use herbicides instead of manual weeding in swiddening, because it will spread poisons on our fields. Also please don't use luxury goods, such as wrist watches, shoes, sandals, Levi jeans, glasses and thermos flasks to imitate lowland people.

After the meeting, these messages are announced by **kokolot kampung** (the staff of village religious leaders) and **kokolot desa** (the staff of the jaro pamarentah) to all Outer Baduy in each hamlet. If, after several repeated announcements, violations of **pikukuh** continue, raids are instigated by **puun** staff. This was described by one informant as follows:

> Today, at a **baris kolot** (puun staff) meeting, it has been decided that a serious violation of **pikukuh** has occurred, such as owning Levi jeans (**calana jin**), radio (**radio**), and wrist watches (**jam tangan**). Unlike in the past, today, the jeans in Outer Baduy are worn not only by men but also women. Therefore, the raids are undertaken. Before undertaking raids, Outer Baduy are informed by village leaders, such as the **carik desa**. He said that all Outer Baduy must make

preparations, because raids will be conducted on a particular day. In conducting raids, hamlet religious leaders (**kokolot lembur**) are picked by **jaro tangtu** and a village leader (**jaro pamarentah**) who witness destruction of the various prohibited goods. The raids start in hamlets located near Inner Baduy. Normally, on one day, about 4-5 hamlets are raided. If raids are not finished in a particular hamlet, **puun** staff spend the night in the hamlet.

People residing in Outer Baduy hamlets nearest Inner Baduy make preparations by hiding items, such as glasses and thermos bottles in a farm house or rice barn. However, if people who are temporarily staying in a farm house in a non Baduy area, they cannot be informed and their goods are taken or destroyed.

Prohibited goods in each household are seized and brought to the house of the **jaro pamarentah**, and then must be sold by the owners. The exception are sandals, which are cut using a **golok** and abandoned in each hamlet. If the prohibited goods are not sold by the owners within two months, they will be given to non-Baduy or destroyed. At the same time, some coffee trees are cut directly by **puun** staff, or trees planted in hiding places are sometimes cut by **kokolot lembur**. For instance, the coffee trees of Ayah Mai in Kaduketug were destroyed by **kokolot lembur** instead of puun staff. As a result, since that time, the **kokolot lembur** has not been offered coffee to drink when a guest in Ayah Mai's house.

Let us examine the various comments on these raids given by Ayah Mai (65 year old) from Kaduketug. Interestingly, he approves of the raids, but says that they must be undertaken without violence. He put it this way to me.

If **puun** staff undertake raids, of course I must agree. However, based on my experience, present conditions are different from those of the last time, because today people are strongly influenced by rapid development. It would be

better if raids were undertaken without violence. Otherwise, they will be punished by our ancestors. For instance, in the past, at the time of raids, some **puun** staff had accidents or were wounded, when they destroyed the house with brutality. These houses were destroyed because the wood used had been planed instead of being prepared with a **baliung** (kind of axe).

Coffee trees owned by my son, located west of Kaduketug, were also destroyed. However, because the soil is fertile, new stems have grown from the old tree stumps.

According to Ayah Ailin (57 year old) from Babakan Marengo, the raids are considered to have an important role in maintaining **pikukuh**:

Raids are important to maintain **pikukuh**. However, raids do not guarantee that violations of **pikukuh** will stop. Although various prohibited goods are destroyed, new goods will be bought by the people. For me, I have tried to follow the religious obligations, however orderliness is not guaranteed because of the influence of rapid modernisation.

Like Ayah Ailin, although Asmin (48 year old) from Cisaban, sees raids as an important means of purifying **pikukuh**, they are not guaranteed to stop violations. The puun should rather be encouraged to seek a spiritual remedy instead of destroying people's physical property:

Raids do have their positive aspects, as means for compelling people to maintain **pikukuh**. Consequently, although there have been many raids, I do not reject them. This is considered that a particular bad luck must be threw away. However, raids are also disadvantageous for me and other people because various goods bought and obtained through hard work are destroyed by **baris kolot**. For instance, I had two air rifles bought for 125,000 rupiah, a radio, and non-Baduy

> dresses, which were taken and destroyed by puun staff. My view is that a lot of people violate **pikukuh** because they have been tempted. Therefore, a spiritual remedy must be found, instead of destroying the physical property of the people.

Another opinion was provided by Ayah Arji (60 year old) from Kaduketug, who is recognised as jaro dangka of Cihandam. For him, raids place him in a dilemma, being torn between official religious duty and maintaining harmonious relations with his neighbours:

> If raids are taking place, I usually hide in my home. If I participate I will destroy other people goods. My opinion is that it would be better if all people being active come to a realization by themselves, because we reside in Kanekes village, embrace **sunda wiwitan**, please don't manipulate our identity to imitate the lowland people. My status means that included in the **baris kolot** for this work. However, if I join raids and destroy the goods of other people, when I retire as jaro dangka I may be hated by my neighbours. Therefore, I am in a dilemma regarding these raids.

In Inner Baduy, anyone involved in violating **pikukuh** is exiled to the **dangka** areas in Outer Baduy or to non-Baduy areas. After 40 days, they may return to Inner Baduy, and a ritual of sending a copper bowl (**bokor**) to the puun (**ngabokoran**), the **upacara panyapuan** ('to sweep dirt'), must be undertaken. Similarly, anyone who decides to move to a non-Baduy area ceases to be a Baduy, and a **bokor** (**ngabokoran**) must be sent, and a ritual called **undur rahayu** undertaken.

2. Ritual of ngabokoran or undur rahayu

Like **panyapuan**, **undur rahayu** or **menta suka** or **ngabokoran**, is a ritual for people who decide to move to non-Baduy areas, to help them avoid the curse (**disapa**) of puun, by seeking special permission and asking for blessing.

For this purpose, various articles, such as a set of betel chewing requisites, a kris, a shroud of unbleached cotton (**boeh**), rice, and money, are placed in a **bokor** (a copper bowel with a wide rim) and sent to a puun. For this reason the ritual is popularly call **ngabokoran**, 'to send a **bokor**'.

For Outer Baduy who intend to perform **ngabokoran**, the **bokor** is initially sent to the **jaro pamarentah** through the jaro dangka. It is then sent to the **tangkesan** in Kampung Cicatang who then carries it to Inner Baduy. In Inner Baduy, the **bokor** is circulated among the **puun**; initially being received by Puun Cibeo, then sent to Puun Cikartawarna, then to Puun Cikeusik, and finally returned to **Puun** Cibeo. From here the **bokor** circulates among puun staff in Inner Baduy. It is given by Puun Cibeo to **jaro tanggungan 12** in Kaduketer, and circulated to the **tangkesan** and **dukun pangasuh** in Cikartawarna. From here it is sent to **panengan**[2] in Cikeusik. In the final stage, the **bokor** is circulated among the seven jaro dangka, sent by the

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[2]). On the names of various **puun** staff, such as **tangkesan**, **jaro tanggungan 12**, **dukun pangasuh** and **panengen** see chapter 3, pp. 131-135.

panengen to the **jaro dangka** of Cibengkung, then to **jaro dangka** of Kompol, Kamancing, Panyaweuyan, Cilenggor, Nungkulan, and to the jaro dangka of Cihandam. It then goes to the jaro dangka of Kaduketug, then to Cihulu and finally back to Puun Cibeo. In each house the **bokor** receives incantations and if the betel leaves and Areca nuts are dry, these are replaced by fresh ones. In Cibeo, these articles are always replaced by fresh ones.

If we were to plot this route on a map we would see that it has a special symbolic significance, in that the **bokor** moves from a less sacred or profane area (**dangka area**) to increasing more sacred places, ultimately Cikeusik. It also moves from the youngest (**jaro dangka**) to the oldest generation (the Puun Cikeusik) [see figure 3.1 and figure 3.2 in chapter 3, showing the sacred and profane area, and the mythical genealogy of Baduy religious leaders).

Every three months, the ritual of **ngabokoran** is performed in the **bale kapuunan** of Cibeo led by the puun of Cikeusik. This special ritual is called **muka bokor** (to open the **bokor**). The ritual is attended by **puun** and their staff, such as jaro tangtu, tangkesan, tanggungan 12, and the people who propose **panyapuan** or **undur rahayu**. Today, in many cases where Outer Baduy send **bokor**, they are represented by **jaro tanggungan 12** instead of attending the ritual themselves. On behalf of his applicants, the **jaro tanggungan 12**, asks for the formal permission of **puun** and their staff as follows:

Tabe ka kolot
ampun-ampun sadamuhun
kapangaping sarangenge
ucang-ucang mata poe
ka pangaping rembulan
menta suka menta caang
caang padang kanu ngahening
ka jalan-jalan urut leumpang
ka cai ka leuwi urut mandi
kasawarga ka sucian

Tabe kolot
kami ndeuk ngaturkeun pertobat
kasalahan kami sakitu
hayang menta suka
ngaturkeun ka para baresan
ditarima teu ditarima
kawaruratan kami
kami jelema miskin
ulah kasaba deui ku bentet perecet
kapanggih ku anak baraya

(Source: Danasasmita and Djatisunda, 1986: 100)

Which can be translated as:

Peace be to you, puun and staff
proposing forgiveness to the ancestors
to supervise the sun
who lives in the sun
to supervise the moon
proposing willingness and clarity
brightness is provided to people who live in peace
very bright people who own a clarity of thinking
on the roads which have been passed
on the deep pools in the river which have been used to take bath
on the sacred heaven

Peace be with you, puun and staff
I ask forgiveness
for my mistakes
I offer my willingness
I offer it to all **puun** and staff
It will be received or not
My mistakes
I am not a well-off person
I hope these mistakes will be avoided by my children and relatives

This request is relayed by Puun Cikeusik, who asks for agreement from all the staff, as expressed as follows

(ibid, 1986: 101):

Datang wayah datang basa
datang cara datang sabda
rungukeun ndeuk mihatur
carana ndeuk dilisankeun
widian pikeun si x
ninggalkeun mandala katut agamana

Which can be translated as:

It is a good time to speak
to come to speak
please listen properly, I will make an announcement
by giving into words
please give permission to x
to leave the **mandala** area and his/her religion

The **bokor** is circulated to everyone and incantations are made as follows:

Aing turun suka turun suka bungah
ari endeuk indit mah los
jurung rahayu parek rejeki
salamet diri ulah aya pancabaya
bijil ti kungkungan tangtu
ti jaro tujuh ti mandala

Which can be translated as:

I leave happily
If you will leave, please go
I hope you will have a prosperous and fortunate life
That you will be safe, avoiding disaster
Going out from **tangtu**
From the seven jaro and the **mandala** area

After the **bokor** has been distributed to each person, the ritual closes and everybody goes home. The senders of the **bokor** (applicants) are informed by **puun** staff that their proposal has been received and that blessings have been given by the **puun** to achieve happiness and prosperity

in their new life.

3. The introduction of cash crops

Some crops have been introduced into the Baduy area as a means of raising cash. One of the most important is the indigenous sugar palm (Indonesian: **aren** or Sundanese: **kawung**), but in addition, clove, coffee, and Albizzia (**kalabise**), have been introduced, particularly to Outer Baduy. In this section, I examine the making of palm sugar (**gula kawung**), and the introduction of clove (**cengkeh**), coffee (**kopi**), and Albizzia (**kalabise**) into Outer Baduy.

3.1. Palm sugar (gula kawung)

Sugar palms (**kawung**=Arenga pinnata) are found in various biotopes: hamlet forest (**dukuh lembur**), fallowed secondary forest (**reuma**), protected mature forest (**leuweung titipan**), and swidden land (**huma**). Most sugar palms grow naturally. Normally when a swidden plot is burned some palm seed germinates. These palms are not given special treatment, but when the seedlings are found, the surrounding area is usually kept weeded.

Sugar palms have many uses. The young leaves are used to wrap cigarettes (in Outer Baduy only); leaves are used in decorating the **pungpuhunan** during rice planting rituals for **huma serang** and **huma jaro dangka**, the leaves are used

to make male and female icons when offering new rice to the ancestors during the performance of **ngalaksa**; and the long black-grey fibres of the trunk and leaf stalks (**injuk**) are used as cordage for tying bamboo bridges and in house construction.

However, the main product of the sugar palm is derived from tapping the inflorescence stalks for the sweet aromatic syrup which is fermented and stored in a bamboo internode (**ruas**). This is called **wayu** or **tuak** and is widely drunk in Inner Baduy. The **wayu** is also mixed with other crops to make an insect pesticide used to treat rice during the second weeding. In addition, in Outer Baduy the syrup is widely used to produce brown palm sugar (**gula kawung**). More than 80 per cent of Outer Baduy households produce palm sugar which is used for both home consumption and for sale. This sugar is also used to pay wage labourers engaged in swidden work, such as weeding.

Historically, the sugar palm must be considered an indigenous crop, as it has an established place in Baduy mythology and folklore. Consider, for example, the following story[3]:

> Once upon time, there were two children who were asked by their parents to guard the swiddens, when the rice came to maturity. Many birds, called **piit** (Lonchura leucogastroides) were eating rice from the swidden. These birds were chased and perched on the inflorescence stalk of a sugar palm (**leungeun kawung**). Whenever these birds were chased always they came back. As a result, the children got angry (**mamarahan**) and

[3]). A rather similar story can be found in Sollewijn Gelpke (1986: 9) and Soeganda (1982: 172-173).

> the **leungeun kawung** was cut (**dipagas**) with a chopping knife (**golok**). Juice came out and was tasted by the children. It was sweet. Therefore, the juice was collected in a bamboo internode (**ruas awi**). However, the fresh juice would not keep for long and its taste became bitter and sour (**haseum**). The children then heard the voice of a **kurah** bird (Megalaema sp), which seemed to say **kurah, kurah, kurah, kurah**, repeated many times. They interpreted this to mean that a bamboo internode should be cleaned with water properly first, called **kungkurahan** derived from **kurah**. Later, it was decided that before collecting the juice, the bamboo should be cleaned with water and smoked. Therefore, the juice can be kept by making it into palm sugar (**gula kawung**).

Since that time it is believed that the inflorescence stalks of the sugar palm have been tapped and made into sugar by the Baduy. According to one informant, in the past, when **nini hideung** (an old woman) practised swidden farming in **serang lumayung** (before there were many people in the world), the palm was used for sugar in Inner Baduy. However, when a woman helping her husband to boil the juice in a kettle (**kekenceng**) burned her breast with boiling juice, making sugar in this way was prohibited in Inner Baduy.

For a more detailed account of making sugar, let us examine the activity of Pulung, a 36 year old man from Babakan Marengo who specialises in tapping sugar palm. He has some sugar palms growing in the **reuma** of his mother, Ambu Ailin, and his grandfather, Saltiwin, located near Cihulu hamlet and near his house in Babakan Marengo. Palms aged between 5-10 years are ready to be tapped. These particular palms have normally between 6 and 10 stalks.

Each stalk has special name. The top is called **gelap**, while the other stalks descending from the **gelap** are called: **adi gelap**, **caruluk**, **jenah**, **bulu kelek**, and **bengkel**, respectively (Figure 7.1).

Before tapping, one or two of the inflorescence stalks are prepared by Pulung. The peduncle of the inflorescence is beaten with a big wooden stick (**paninggur**) [Figure 7.1]. The **paninggur** is made of **meuhmal** wood (**kai meuhmal**=Litsea noronhac) which is soft and elastic. As a result, the peduncle is not broken when it is beaten. Every two weeks, the peduncle is beaten with a **paninggur** for between 15-25 minutes, to obtain plenty of juice. This is accompanied by a special incantation:

Bismillah
Duk dung asal sia kawung
Duk dang asal sia Sumedanglarang
Dangdayang tresnawati
Waluranca, Waluranca
Pangnyuuhkeun aing cai kawung
Ti luhur ti sangrumuhun
Ti handap pada muhara
Duk iwur leuwih
Cai kurang leungeun
Bismillah
Ku ayuh ayuh Nyi Ayuh
Pangayuhkeun aing cai kawung
Ti luhur ti tungtung pucuk
Ti tengah ti saguna, ti ruyukna
Ti timur ti tungtung palapah
Ti barat ti tungtung palapah
Ti kaler ti tungtung palapah
Ti kidul ti tungtung palapah
Ti saguna ti ruyuk
Duk nyiur pangyuguhkeun aing caing kawung

Which can be translated as:

In the name of Allah, the all loving and the all merciful lord
Duk dung your original sugar palm
Duk dang your original **Sumedang larang**
Dangdayang tresnawati (**tresnawati**=Nyi Sri)

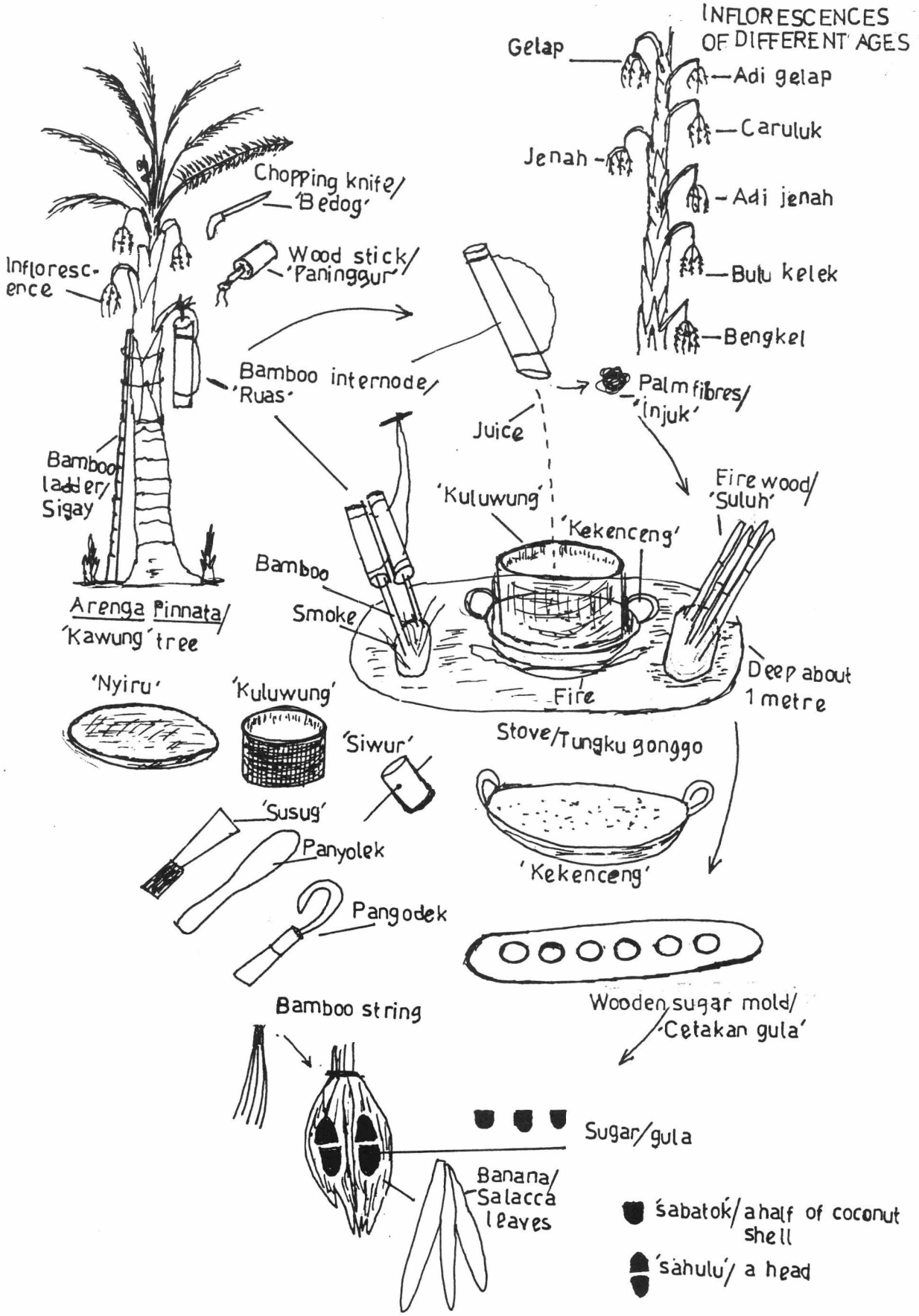

Figure 7.1. Steps in the preparation of palm sugar among the Outer Baduy

Waluranca, waluranca
Give me plenty of sugar palm juice
From the above of our ancestors
From the below of **muhara** (deep water)
Duk iwur give me plenty
Of juice from the peduncle
In the name of Allah
By ayuh ayuh nyi ayuh
Please give me palm sugar juice
From the above on the tip of young leaves
From the middle in its starchy trunk
From east on the tip of the stalk
From west on the tip of the stalk
From north on the tip of the stalk
From south on the tip of the stalk
From its starchy trunk
Duk iyur, please give me sugar palm juice

This process is undertaken every two weeks, and after about six weeks a very thin slice of inflorescence stalk is cut to test the production of juice. If plenty of juice comes out, the inflorescence stalk, about 25 centimetres length from the trunk, is cut with a **golok**. The next day it is ready to be tapped, after which it is examined every few days.

Tapping is undertaken twice a day: in the morning, between 5.00 and 6.00 o'clock and in the afternoon about 4.00-5.00 o'clock. In the morning, Pulung usually takes three bamboo internodes (**ruas**) with him. About 20 minutes walk from his house Pulung is in the **reuma** containing the palms. He climbs a palm using a long bamboo ladder (**sigay**), in each internode of which is a hole which can be used as a foot hold (Figure 7.1). The peduncle is beaten with the **paningur** a few times and a very thin slice is cut from the peduncle. Juice is collected in a bamboo internode (**ruas**), hung over the peduncle, and to avoid dirt falling into the

ruas, the peduncle and upper **ruas** are covered with a cloth. Common sources of contamination are sugar palm flowers (**kembang kawung**), bees, and water, particularly during the rainy season.

In the afternoon the **ruas** is removed. The peduncle is beaten and a very thin slice is cut, the resulting juice being collected in a new **ruas**. The full **ruas** are carried to a farm shelter located near the hamlet of Babakan Marengo, where the juice is emptied into a big kettle (**kekenceng**). To avoid fermentation, the juice is boiled for a short time on a stove called **tungku gonggo**. The **ruas** are washed with clear water and smoked (**dipuput**), by placing them upside down on small bamboo sticks above a stove (Figure 7.1). Before leaving the shelter, the rest of the fire wood in the stove is removed and the kettle covered with a **nyiru** (a flat woven bamboo cover) to avoid insects being trapped in the liquid. The smoked **ruas** are taken from the stove and hung on the wall. Fire accidents are commonly caused in Outer Baduy by forgetting these two latter tasks.

The stove (**tungku gonggo**) is made by digging a pit about 1 meter deep and 0.5 metres wide. The walls of the stove are cemented with a semi clay soil and mixed with palm fibre (**injuk kawung**). Three holes are made on the upper part. The main hole in the middle is for the **kekenceng**, while those at the front and back are used for adding fire wood and as smoke vents (Figure 7.1). Before tapping, the **ruas** are normally smoked and a little **mara** leaf (Macaranga tanarius) placed inside to maintain the

freshness of the juice.

After collecting juice for a few days, the **kekenceng** is full of liquid. The liquid is now ready to be processed through boiling and evaporation. The juice is boiled for several hours (**nyaahkeun wedang**). During boiling, the liquid is sometimes stirred, and residues such as bees are taken out with a wooden spoon. To prevent the liquid spilling over, a **kekenceng** is covered by a **kuluwung** and some bees wax (**malam nyiruan**) is put in the liquid, now called **mepes**, to prevent boiling over. To maintain the freshness of the juice and to produce good quality sugar, selected additives (**raru**), such as **mardelan** leaves (Macaranga tanarius), **hiris** leaves (Cajanus cajan), **mara gede** fruits (Macaranga sp), and **areuy kawao** (a kind of vine) are put in the liquid.

If the liquid has been crystallised it is called **gula ngora** (immature sugar). In this case vigorous stirring is necessary and removal from the heat. To stir the liquid, a wooden spoon (**panyodek**) and iron spoon (**susuk**) are used (Figure 7.1).

As soon as the liquid crystallises further, turns a dark red colour and begins to set, it is called **gula kolot** (mature sugar), and at this point the sugar is poured into a wooden mould which has 6 or 7 shapes made from half coconut shells. The resulting hard block sugar is therefore called **sabatok** (a half coconut shell), and a pair of **sabatok** called **sahulu** (a head), while every ten **batok** is called a **sakojor**.

After drying, sugar is taken out of the wooden mould, and collected in **nyiru** and bought home. At night, sugar is wrapped in dry banana or **salak** (Salaca edulis) leaves. This sugar is now ready to be sold and some is used for household purposes. In some cases, sugar blocks are stored on a dry shelf above the stove (**parako**). When a sufficient number have accumulated they are taken, wrapped, and sold to middlemen in the same or other hamlets.

According to Pulung, 3 peduncles over three days yield about 10-20 **batok** or 5-10 **hulu**, or 1-2 **kojor** of sugar. Normally, one tree has between 4-8 peduncles (**leungeun kawung**) and from one in every 3 peduncles can be tapped 10 **hulu** in each three days, giving an average of 100 **hulu** each month. In other words, sugar production each month averages 10 times the produce of one session (**nyaahkeun**), or 10x10 **hulu**= 100 **hulu**, which is equivalent to 40,000-50,000 rupiah. In one year, representing about 6-8 months of active tapping, or from 4-8 peduncles only, with one peduncle considered to produce juice, 6-8 x 100 **hulu** or the equivalent of 600-800 **hulu** x (400-500 rupiah)=240,000-400,000 rupiah (£ 69-£ 114) are produced.

Thus, at least 240,000-400,000 rupiah per household per annum can be raised from making palm sugar. Moreover, if we assume that at least 50 per cent of Outer Baduy households are involved in tapping and making palm sugar (about 697 households) this equates with 167,280,000-278,800,000 rupiah (£47,794-£79,657) per annum. No wonder then that Baduy (and therefore Lebak District, and south

Banten) has long been known as a palm sugar production centre. Approximately one truck of palm sugar is carried monthly from the Baduy area (Ciboleger) to towns such as Rangkasbitung, Pandeglang, Bekasi and Jakarta.

3.2. Clove

It is prohibited to plant clove (Syzigium aromaticum) trees in Baduy. However, clove trees were introduced by some Outer Baduy in the 1960s to increase their cash income. For instance, in Kampung Gajeboh, clove trees were first introduced by Jaro Saltiwin, village leader of desa Kanekes at that time.

He obtained seeds from a sub-district leader (**camat**) of Leuwidamar. However, when the trees started to produce fruit in 1965 they were destroyed by **puun** staff during a periodic raid. As a result, Saltiwin planted new seedlings on land located in a non-Baduy area, in Legok Pedes, Gunung Talaga, instead of Gajeboh (see Map 7.1). Since that time, the relationship between Jaro Saltiwin and the religious leaders has not been harmonious. He reports how clove grown in Outer Baduy were selectively destroyed by **puun** staff. For instance, while most of his trees in Kampung Gajeboh were destroyed, other trees in Cisaban and Kampung Cicakal Girang were not destroyed. According to puun staff, on the other hand, Jaro Saltiwin was planting prohibited clove instead of cooperating with religious leaders to maintain **pikukuh**. Thus, his clove trees had to be destroyed, before



Map 7.1.

Subdistrict of Leuwidamar, District of Lebak

other clove trees could be destroyed.

Because of the high market price of clove, from 1985 onwards, clove trees were widely planted in Outer Baduy hamlets, such as Cicakal Girang, Gajeboh, Kaduketug, Kadujangkung, Karahkal, and Cisaban. In addition, Outer Baduy who practised swidden farming in non Baduy areas, sharecropped clove instead of renting land (Iskandar, 1992: 114). They were asked by lowland moslem farmers if they could create swiddens on neighbouring Baduy land, in return for which they would plant clove trees on the land. It was at this time that many rubber plantations in adjacent areas, such as in Desa Cisimeut, were converted to clove gardens (see also Chapter 4, pp. 197-198). In the 1990s, however, clove trees disappeared from Outer Baduy, as a result of many raids by puun staff, but more importantly because the market price of clove fell. The national clove production supply was higher than demand, since cloves were now widely planted in homegardens, mono-gardens, and mixed-gardens in many Indonesian villages.

With the fall in the clove price, the economy of many villages collapsed also, particularly those who had relied on planting clove to monetise their economy, as in North Sulawesi (Maruli and Rizal, 1996: 1). In Baduy, the fact that they were not entirely dependent on the market economy provided them with an economic buffer. Instead of socio-economic collapse, they changed and adapted by introducing other crops, such as Albizzia (**kalabise**). Today, clove has almost totally disappeared in Baduy, except in Kampung

Cicakal Girang (a moslem enclave) and neighbouring areas.

Another crop, coffee, although also destroyed in **puun** raids, has re-established itself from old stumps. In addition, although the market price of coffee has been low, the beans could also be used for household consumption.

3.3. Coffee

Historically, coffee trees were introduced in South Banten, before clove. According to Williams (1990: 6), coffee trees were first introduced in Banten at the beginning of the cultivation system (**cultur stelsel**) in Java during the 1830s, grown on **tegalan** (dry land), in fruit gardens, and on waste land. Unlike other crops, such as indigo, sugar cane, tobacco, and cinnamon, coffee trees were relatively successfully introduced into the area and production peaked in the years 1863-1865 (ibid, 1990: 6). These trees were planted in swiddens as well, particularly on hill sides, because small gardens could be cared for with less pressure on subsistence cultivation (Geertz, 1963: 59).

In the area neighbouring Baduy area, coffee trees have been recorded since the 1830s, for example, in Kosala (Van Tricht, 1928: 55; Forbes, 1945: 16). Van Tricht, who surveyed the Baduy area, mentions that in the north of this area, were to be found horse tracks, from Citujah, through the upper Cisimeut area to Bogor, through Sajira and Cipanas, and along this path was to be found abandoned

coffee gardens overgrown with **alang-alang** grass (Van Tricht (1928: 55).

According to Baduy informants, Ki Ompong is recognised as the pioneer who introduced coffee trees to Outer Baduy. Followed, by other people from the same or other hamlets, such as Samin. In order to understand the introduction and planting of coffee trees, it is instructive to examine the stories of Ki Ompong and Samin, and those who followed them.

3.3.1. Ki Ompong

Ki Ompong originally came from Gajeboh. In the past, he was recognised as a master of fighting (**jawara**). He married Ambu Ahmad from Cibengkung who bore him a son, named Ahmad. In the 1950s he left Baduy and travelled in the Banten area, for example to Malingping and Pandeglang. He divorced Ambu Ahmad and eloped with Siti, a traditional dancer (**penari topeng**) from Langkap Karang, Pagelaran, Gunung Karang. He temporarily lived in Lampung, Sumatra for several years. In the 1960s Ki Ompong and his wife came back to Gajeboh and made a house on the land of a village leader, Jaro Saltiwin. He had a swidden plot in Panyosogan west of Gajeboh, inherited from his parents. This land was planted with coffee trees, seedlings (**petetan**) of which were obtained from neighbouring non-Baduy areas, such as Bojongmenteng. At that time, coffee was widely found in adjacent Baduy areas.

After his wife died in the 1980s, he stayed with his grand daughter Alba, since her father, Ahmad, had gone to Panembong, Labuan and never returned to his original hamlet. Moreover, Alba had married Jamin from Gajeboh. In the 1990s Ki Ompong died and his land was inherited by his grand daughter, while his house was sold for 25 grams of gold to a village leader, Jaro Asrap.

Today, coffee gardens usually yield about 2-2.5 quintals annually. Most production is sold to a local middleman, Aja, from Babakan Marengo and the rest is used for home consumption. The coffee trees have been cut down many times by **puun** but have regrown from the old stumps.

3.3.2. Samin

In the 1960s Samin was recognised as a **pangiwa** (an assistant to a village leader) in Desa Kanekes, when the village leader was Jaro Saltiwin. Jaro Saltiwin had introduced clove trees, and Samin introduced coffee trees in his swidden in Cicakal Muhara. These trees were raided many times by puun, but, unlike clove, the new trees grew from the old stumps.

Jaro Saltiwin was replaced as village leader by Samin at the end of 1965, because Jaro Saltiwin had a disagreement with the religious leaders and moved to a non-Baduy area. This case will be discussed later. As a village leader, Jaro Samin, had never previously planted coffee trees, but in the 1978 he moved to the government

resettlement project at Gunung Tunggal. This will also be discussed later. As a result, his coffee garden was sold to his son's father in-law (**warang**), Ayah Jamidi. Today, the coffee garden belongs to Jamidi who inherited land from his parents. The coffee trees have been raided many times by puun staff, but the old tree stumps have always regrown into new coffee trees.

3.3.3. Other coffee planters

Dascin, who lives in Babakan Marengo, has a coffee garden of about 100 trees in his swidden plot in Panyosogan. It was planted in 1989 with seedlings (**petetan**) obtained from neighbouring non-Baduy areas. Recently, these coffee trees have been harvested 3 times with a total production of 50 kilograms and sold to his neighbour, a local middleman, Aja at 4,000 rupiah per kilogram.

Like Dascin, Ayah Ailin from Babakan Marengo, planted coffee trees in 1985. However, a few years later, the young trees were pulled out by **puun** staff during a raid. As a result, all trees disappeared. Because young trees were pulled up instead older trees being just cut, there was no regrown from the old stumps.

In 1990, about 100 new coffee trees were planted. The seedlings were collected from a neighbouring non-Baduy areas, such as Parakanbeusi of Desa Cibungur (see Map 7.1). Today, some of these trees yield about 100 kilograms annually, and are mainly used for home consumption. Only

small surpluses have been sold to local middlemen. At almost every raid time, coffee trees have been cut, but young trees have regrown from the stumps.

Thus, although a lot of coffee trees in Outer Baduy have been raided many times, Outer Baduy have never stopped planting because of the benefits for home consumption and cash income. For example, according to Ayah Cayut (a man from Karahkal hamlet), a plot of land with coffee trees can be harvested annually, while if this land is used for swidden fields, rice can only be replanted after a 3 years fallow.

Ayah Cayut has planted coffee for more than 3 years and has a total of 80-120 trees. Before they were raided, the trees had yielded about 3 **deka** or 30 litres, about 24 kilograms or 12,000 rupiah. One kilogram of coffee is sold 5,000 rupiah; compared to the price of 1 litre of rice which is 600-700 rupiah. At the moment, however, because Ayah Cayut's trees have been recently raided, the regrown trees yield only one **deka** or 10 litres (about 8 kilograms or 40,000 rupiah).

Today, coffee trees in Outer Baduy are normally grown in black and stony soil, in the shade provided by the canopy of other plants, such as **dadap** (Erythrina variegata). Coffee production is mainly used for home consumption and only occasional surpluses are sold to local middlemen, in home hamlets or in other hamlets. The price of coffee was 4,000 rupiah per kilogram in 1995/1996. The shade trees are normally a kind of pepper vine (**rinu**=Piper

rindu) [Figure 7.2]. The **rinu** is grown as a propagate, and one individual vine will yield about 4-5 kilograms, normally sold for 3,000-4,000 rupiah per kilogram in neighbouring small shops.

3.4. Albizzia (kalabise)

Albizzia or **kalabise** (Paraserianthes falcataria) was mainly planted in areas adjacent Baduy in the 1980s, to replace clove trees following the collapse in the market price of cloves. However, at that time, this crop was also prohibited by **puun**, because it was assumed that new crops could not be integrated into swiddens. Five year later, in the 1985, Albizzia was allowed to be planted by puun. This crop was selected because it was fast growing, required less labour, improved soil fertility, could be used for household purposes, such as for firewood and for building materials; could be integrated easily into the swidden system, and provided cash income. Conversely, other commercial crops, particularly clove, have a low market price, need more labour, cannot be consumed domestically, and are rather difficult to integrate into swidden farming. The main advantage of the crop was that it facilitated rapid monetisation.

Today, Albizzia is predominantly found in the fallowed secondary forest (**reuma**), particularly in Outer Baduy. These trees, however, are not allowed to be cut using a chain saw (**gergaji mesin**). In Inner Baduy, and in some

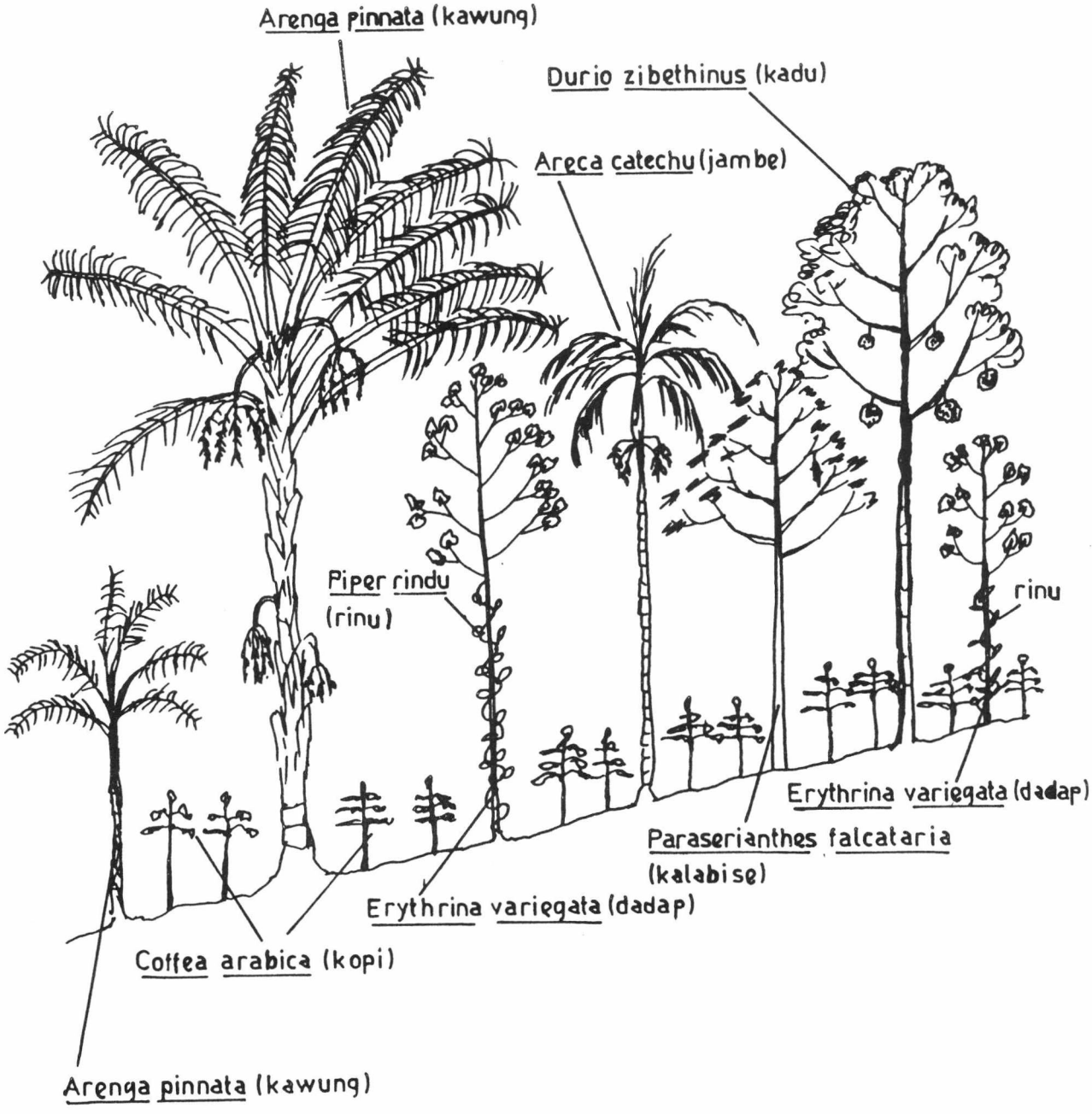

Figure 7.2. Coffee (Coffea arabica) plants in a mixed garden under the shading canopy of other plants, such as Erythrina variegata (dadap) and the vine Piper rindu (rinu)

Outer Baduy hamlets located near Inner Baduy, the traditional saw (**gergaji biasa**) is also prohibited. Thus, these trees are usually cut using an adze (**baliung**).

3.5. Albizzia planting

Albizzia (**kalabise**) trees were planted by Ayah Ailin from Babakan Marengo in fallowed secondary forest (reuma) in 1985. Originally, only a few trees matured, but when the secondary forest was cut and burned, the dormant seeds were broken and spontaneously grew among the rice in the swidden plot. During weeding, the spacing of trees was adjusted. For instance, some trees had grown too close and had to be thinned-out or moved. After harvesting the rice, the young trees continued to grow in the fallowed secondary forest (**reuma**). After 3 years of fallow, 30 trees were harvested and sold to a timber merchant (**bandar kayu**), a middleman from a neighbouring non-Baduy area. Each tree was sold for 1,000 rupiah, a or total of 30,000 rupiah.

In 1992, the same plot was planted with new seedlings. The seeds were bought at 5,000 rupiah per kilogram from an agricultural supplier (**kios pertanian**) in Rangkasbitung. During field research in 1996 seeds were priced at 12,000 rupiah per kilogram in Rangkasbitung. These trees are expected to be cut and sold after 4 or 5 years growth. At the same time, the land will be planted with rice. Thus, before the trees are harvested, Ayah Ailin will have

practised swidden farming in the neighbouring non-Baduy area by share cropping or renting land.

Like Ayah Ailin, Ayah Katirah from Babakan Balimbing planted **kalabise** trees at Panyosogan during 1985. Initially, only seven seeds were collected from a demonstration plot at an Agricultural Extension centre (**penyuluh pertanian**) at Bojongmanik (see Map 7.1). After 5 years, the trees were cut to use for house building and firewood. Later, when the plot was cleared, burned and planted with rice, 100 Albizzia trees matured among the rice. After 4 years, when the **reuma** was recultivated with rice, kalabise trees were sold to a timber merchant from a neighbouring non-Baduy area. The trees yielded 150,000 rupiah or 1,500 rupiah per tree. Ayah Katirah considered this price low, because the trees were insufficiently mature, and because of his own poor market information.

Unlike Ayah Katirah, Outer Baduy receiving information from a neighbouring non-Baduy area, were able to sell at a higher price. For instance, Ayah Rojak from Kampung Kaduketug planted 500 trees in his **reuma** at Kadujangkung 3 years ago. In the 1996 these trees were exchanged with Kace, from a non-Baduy area, for 1 hectare of dry land or the equivalent of 100 grams of gold or 2,885,000 rupiah. Therefore, each tree had been valued at 5,770 rupiah.

Another Outer Baduy, Jaro Asrap, a former village leader of Desa Kanekes, planted 400 Albizzia trees in 1990. Seeds were collected from Gunung Tunggal, where he had practised swidden farming. In 1995 the trees were sold for

120,000 rupiah to a non-Baduy timber merchant. Today, young trees have regrown from the tree stumps and after 4 years it will be possible to harvest again.

Unlike other Outer Baduy who plant kalabise, Jaro Pulung, a present village leader (**jaro pamarentah**) of Desa Kanekes, has two plots of fallowed land (**reuma**) in a non-Baduy area, at Cibengkung in Desa Cibungur (see Map 7.1). Initially, he planted Albizzia mixed with rice. Before planting, seeds were soaked in warm water for about 5 minutes to break their dormancy. The warm water was then replaced by cold water, several times. The seeds were put in a nursery for some days, and seedling which reached a height of about 20 centimetres were planted in rows in swiddens mixed with rice. Before the seedlings were planted, the main long root was cut, and a hole dug. A seedling was put in the hole and buried with soil as protection against termite (**rinyuh**) destruction. During swidden weeding small branches and some leaves of the Albizzia were pruned using a bamboo stick. Biomass was used as humus and the seedlings were not planted densely, to allow sunshine to penetrate to the growing rice.

One of these plots had 300 trees of Albizzia in 1992. After 3 years, in the 1995, a timber merchant offered to buy the trees for 1.5 million rupiah, or 500 rupiah per tree. This was because only some trees were ready to be harvested. According to Jaro Pulung, the trees will be sold after 4 years, when almost all the trees will be ready for harvesting, after which the land will be recultivated with

rice.

More recently, in 1994, Ayah Rawi from Gajeboh, also planted 50 kalabise trees in his swidden at Panyosogan. These trees were mixed with rice and planted in rows separated by about 1.5 metres. Seeds were obtained from his landlord when swiddening in the non-Baduy area of Cileles, where be had share cropped Albizzia.

In addition, today, Outer Baduy are involved not only in planting Albizzia, but also in trading the crop as middlemen. Among them are Idik from Gajeboh and Ayah Katirah from Babakan Balimbing. The increase in the planting and trading of Albizzia timber, has led some Baduy to become labourers. They are employed to carry the wood from the **reuma** to the Ciujung river, or to raft timber down the river (particularly during the wet season) to a timber yard near Cibengkung (see Map 7.1). They are usually paid at least 3,000 rupiah per day and provided with meals, coffee and cigarettes (for Outer Baduy only).

4. Trading non rice crops

To obtain household income, in the last two decades, various non rice products, such as **gula kawung** (palm sugar), **cau** (banana), **rinu** (pepper), **peuteuy**, **picung** (Pangium edule) and **kadu** (durian) have been sold to outsiders. In Inner Baduy, for instance, in the last farming season (1995), **peuteuy** (about 300 **papan**/pods), **picung** (100 **biji**/fruits) and **rinu** (3 kilograms dry seeds)

were sold by Ayah Antiwin for 30, 000; 500; and 9,000, respectively, to an itinerant middleman. In addition, about five **apus** (15 bunches) of banana have been carried by his son, Antiwin, each week to Ciboleger. These were sold for 800 rupiah per **apus**, or for a total of 4,000 rupiah (1.1 pounds). Such cash income has usually been spent buying food, mainly rice and salted fish. Five **apus** of banana in one trip is sufficient to obtain about 6 litres (4,8 kilograms) of rice or about 2 kilograms of salted fish.

Antiwin has also been a part-time middlemen himself. For instance, in the 1994, three durian trees in Outer Baduy, and in the non-Baduy areas of Dangdang, Cihulu, and Ciboleger, were bought by pawning (**beli gadaian**) 5 grams, 6 grams, and 10 grams of gold, respectively. In 1995, the fruits of these durian trees were sold of 50,000; 60,000; and 100,000 rupiah, respectively, to middlemen from Kaduketug.

Today, Outer Baduy are familiar as middlemen involved in trading non rice crops and traditional clothes and handicrafts. Asmin and Ayah Ailin are cases in point.

Case history 1: Asmin

Asmin is 48 year old, has 3 children and lives in Cisaban hamlet. He is the son of the former jaro dangka of Cihandam, and is well known as a middleman in Outer Baduy. Various agricultural products such as banana, **peuteuy** (locus bean), durian and palm sugar are commonly traded by

him. To collect such products from Baduy, he is assisted by 20 persons. They are usually provided with an advance, **uang muka**, which discourages his assistants from working for other middlemen.

When he was boy, Asmin was employed as a wage labourer in Karang Combong, a neighbouring non-Baduy area. He was employed to hoe, weed, fell trees, burn and carry goods. He started trading as a bachelor, selling, for example, cakes (**sukro; suuk di jero**, or peanuts covered in flow) and peanuts in his hamlet.

He was married off by his parents to a girl from the same hamlet when he was about 16 years old. However, it was not a happy marriage. His wife returned many times to her parents. However, he didn't want to divorce to avoid upsetting his parents, while his parents-in-law recognised him as diligent and hard working.

He is now one of the most successful middleman in Outer Baduy. Each month bananas from different Baduy hamlets are bought by Asmin and his assistants. These bananas are usually bought by paying an advance to the owner before harvesting. They are then cut by his assistants when they get a message that a truck will be sent to take them to the town. Thus, bananas are carried from different hamlets and collected in Ciboleger. Although each banana variety, such as **cau ambon**, **cau nangka**, **cau emas** and **cau panggalek** has a different price, they are bought at the same price of 1,100 rupiah per **apus** (three bunches; one banana tree normally producing 2 bunches or 6

apus). The fruit is then carried by truck to towns such as Rangkasbitung, Pandeglang and Serang. The transportation cost is normally about 300 rupiah per **apus**, while each **apus** sold to middlemen in the market for an average price of about 1,500 rupiah. Thus, Asmin makes a profit of about 100 rupiah per **apus** and in one trip about 1000-2000 **apus** of banana are carried by truck, yielding a total profit of about 100,000-200,000 rupiah per trip.

Another important trade product is palm sugar, as **gula kawung**. The **gula kawung** is bought by his assistants from tappers and collected in Ciboleger. He pays 375 rupiah per **hulu** or 3,750 rupiah per **sakojor** or ten **hulu**), and the palm sugar is then taken by truck to towns such as Rangkasbitung, Jakarta, Bandung and Sumedang. Although Sumedang (north east of Bandung; see Map 2.1) is far from the Baduy area and the transport cost is high, the profit obtained is also high. **Gula kawung** is in much demand in this area as an ingredient in traditional medicine (**jamu**). The transportation cost from Ciboleger to Sumedang is about 850 rupiah per **sakojor**, and Asmin makes a surplus of about 400,000 rupiah per truck.

According to Asmin, trading agricultural products are more profitable than farming. In addition, he has opportunities to visit towns. However, he sometimes faces difficulties in collecting the money he is owed by middle men in towns as well as by his assistants. As a result, his capital has disappeared and he is in debt to people in the village. He says this causes him mental stress (**cape**

pikiran), in contrast to the physical stress (**cape tanaga**) he would get from farming.

Case history 2: Ayah Ailin

Ayah Ailin is 57 years old, and originally from Gajeboh. However, in the 1990s he and his wife moved to Babakan Marengo because his house in Gajeboh was frequently flooded by water from the Ciujung river, particularly during the rainy season. In addition, this hamlet was considered to be too crowded.

Today, his house is used as a stop over, and many guests from places, such as Jakarta, Bandung, Bekasi, Bogor, Semarang, Surabaya, Yogyakarta, and Lampung spend the night with him, on visits to both Inner and Outer Baduy. He also entertains visitors from abroad, who come to visit Outer Baduy. His house is convenient, being located near the Ciujung river, with the Cidandang tributary flowing through the hamlet, and thus well supplied with water for bathing. Because his house has been used as a lodging place for both domestic and international tourists, various Baduy handicrafts and traditional cloth, such as woven bags made of barkcloth, woven cloth, printed **batik** head clothes, and black male shirts are offered for sale. These products are supplied by his neighbours or bought from towns. For instance, traditional woven bags are bought from

his neighbour, Daisan (36 year old), who makes various handicrafts; Daisan's sister, Karisah (31 year old), supplies woven cloth (**lamak suat** or **suat songket**), while Ambu Narbah (36 years old) is given yarn with which she makes a traditional woven cloth called **samping kacang herang**. She supplies two pieces of this every two weeks. Some goods are also bought in the towns, such as printed **batik** head clothes head (**iket** or **lomar**), from the **Batik** Fabric centre in Pekalongan, Central Java, while female sarongs of printed **batik**, such as **samping merong**, **samping merek Top pin** and **Tip top** are bought from two Chinese wholesalers: **Toko Hejo** and **Toko Sekawan** in Rangkasbitung.

To fulfil consumer demand for black cloth for men (**baju kampret hideung**), black short trousers with pockets (**calana pokek**), black shorts without pockets (**calana kolor**), and white women's blouses (**kabaya bodas**), material is bought in Rangkasbitung and sewn in a small sewing shop (**tukang jahit**) in Ciboloeger, just outside the Baduy area.

During slack periods during the swidden cycle Ayah Ailin also becomes a hawker. He travels from one hamlet to another in Outer Baduy selling various traditional clothes. He normally does this on Sunday (**poe Ahad**), because Baduy **pikukuh** prohibits swidden farming on this day of the week.

Ayah Ailin says that he engages in trading cloth only to supplement the household income, and undertakes it only in the slack period of the swidden cycle. His main objective is not to be rich (**sugih**), but to provide enough cash to buy rice, side fish and cloth. An analysis in his

transactions can be seen in Table 7.1.

Table 7.1. Cost benefit analysis of Ayah Ailin's cloth trading

1). black shorts without draw string (**calana kolor**)

-Buying material cloth	2,000	rupiah
-Sewing cost	500	rupiah
Total cost	2,500	rupiah
The **kokolor** is sold	4,000	rupiah per one short
Profit	1,500	rupiah per one short.

2). black shorts with pocket (**calana pokek**)

-Buying 0.5 metre of cloth material for one shorts	2,500	rupiah
-Sewing cost	1,500	rupiah
Total cost is	4,000	rupiah
The **pokek** is sold	6,500	rupiah
Profit	2,500	per one short

3). black men's cloth (**baju kampret hideung**)

-Buying 2 metres of cloth material	3,500	rupiah
-Sewing cost	1,500	rupiah
Total cost	5,000	rupiah
The black blouse is sold	6,500	rupiah
Profit	1,500	rupiah

4). white women's blouse (**kabaya bodas**)

-Buying material cloth	2,250	per 1.25 metres
-Sewing cost	500	per one blouse
Total cost	2,750	rupiah
The white blouse is sold	4,000	rupiah per blouse
Profit	1,250	rupiah per blouse

5). Coloured women's blouse (**kabaya warna**)

-Buying material cloth	3,500	rupiah
-Sewing cost	600	rupiah
Total cost	4,100	rupiah
The colour blouse is sold	7,000	rupiah
Profit for one blouse	2,900	rupiah

6). Sarong (**sarung merong**)

-Buying for 20 pieces (**sakodi**) is 100,000 rupiah or 5,000

rupiah per one piece

Total cost per piece 5,000
Sarong is sold 6,500-7.000 rupiah per piece

==========

Profit 1,500-2,000 rupiah per piece

7). Majalaya woven cloth (**kain tinun** Majalaya)
-Cost of one piece cloth 7,500 rupiah in Majalaya
-Selling for one piece cloth 12,500 rupiah

==========

Profit 5,000 rupiah not taking into account transport cost

8). Top Pin sarong (**sarung cap Top Pin**)
-Cost of 20 pieces 110,000 rupiah or 5,500 rupiah piece in Rangkasbitung
-Selling for one piece 7,500 rupiah

==========

Profit 7,000 per piece not taking into account transportation cost

9). Tip Top sarong (**sarung cap tip top**)
-Cost of 20 pieces is 100,000 rupiah or, 5,000 rupiah per piece
-Sale price for one piece is 7,000 rupiah

==========

Profit is 2,000 rupiah per piece not taking into account transportation cost

10). Printed batik head cloth from Pekalongan (**lomar** or **iket**)
-Cost of 20 pieces is 50,000 rupiah or 2,500 rupiah per piece
-Selling per one piece is 4,000-4,250 rupiah per one piece

==========

Profit is 1,500-1,750 rupiah per piece, with transport cost Ciboleger-Pekalongan-Ciboleger about 28.000 rupiah. Therefore, profit per 20 pieces is 30,000-35,000 rupiah reduced of 28.000 rupiah or 2,000-7,000 rupiah.

Case history 3: Daisan and Karisah

Daisan, or Ican, is 36 year old and comes from Babakan Marengo. He specialises in making handicrafts, such as **jarog**, **koja**, and fishing nets (**encrak**).

Traditional bags (**jarog** and **koja**) are made from **teureup** bark (Ficus elasticus) or from wool yarn (**benang**

wol), while fishing nets are made from nylon. **Koja** is slightly different from **jarog**, in particular the sling of the **koja** is woven (**hasil nyuluk**) to the shape of a little finger, while the sling of the **jarog** is woven to the shape of a net (**jaring** or **ranjak**) (see Figure 3.21).

Materials needed to make **jarog** and **koja**, particularly the woollen yarns, are bought by Daisan from his friend, Ayah Nasinah, a 50 year old man from Gajeboh. He has been known as a seller of traditional cloth who regularly goes to towns, such as Jakarta, to sell his goods to acquaintances, particularly people who have already visited the Baduy area. It is in the towns also that he usually buys the woollen yarns which are demanded by craftsman in his or in other Baduy hamlets.

Various woollen yarns are used to make **jarog** and **koja**: white, brown, red, and black. However, white yarn is predominantly used. One bag requires about 2 skeins of wool (**kerentil** or **gulung**) bought at 3,500-4,000 per skein, making a total of 7,000-8,000 rupiah. The bags are sold for 8,000-10,000 rupiah each to neighbours, such as Ayah Ailin. He, thus, makes a profit of about 1,000-2,000 rupiah per bag.

A **koja** or **jarog** of 50 cm x 30 cm is finished in about a week. About four **koja** or **jarog** can be made each month, or 48 bags in a year. However, taking into account rest periods this is more realistically put at 30 bags annually. The average total income from making 30 bags is therefore 30 x 1,000 - 2,000 rupiah = 30,000-60,000 rupiah per year.

Making an **encrak** of about 1.5 m in length normally takes one and a half months, working every day from morning to afternoon, with a break for breakfast and dinner. However, only two fishing nets are normally made each year. The main material, nylon yarn, is usually bought in Rangkasbitung by a neighbour. The mesh of the net is tightly woven, because it is used to catch small fish such as **beunteur** (Puntius javanicus), **paray** (Rosbora sp), **hurang** (shrimp), **hurang mungkuy** (shrimp), **kehkel**, and **salusur** (Homalotra sp) in Ciujung river and its tributaries. The materials required are approximately, 200 rolls or 4 kilograms of nylon yarn bought at 25 rupiah per roll (a total of 5,000 rupiah) and 4 kilograms of tin for weights costing 350 rupiah per kilogram, or a total of 14,000 rupiah.

The **encrak** is sold for 20,000 rupiah without tin weights. Subtracting the cost of the nylon (5,000 rupiah) this yields a profit of about 15,000 rupiah. The nets are normally bought by the people in the same hamlet or in other Baduy hamlets, who place a special order. An **encrak** is sometimes lent by the owner to a friend, and any fish caught are divided equally between them. Thus, the income Daisan obtains from making **encrak** is about 2x 15,000-30,000 rupiah, or 30,000-60,000 rupiah per year.

Daisan's sister, Harisah, is 31 years old, and makes traditional woven cloth, such as **lamak suat** or **suat songket**. One piece of cloth is made every 10 days or so. The main materials needed are 5 rolls of green, red, and

black yarn, which are usually bought from Jaro Pulung in Babakan Cigoel or Ayah Nasinah in Gajeboh. These persons usually visit towns, such as Jakarta and Majalaya (south of Bandung) to buy the yarns.

One roll of yarn is bought for 1,000 rupiah or 5,000 rupiah for five rolls. The piece of cloth is usually sold for between 7,000 and 10,000 rupiah to a neighbour, Ayah Ailin. The average profit is therefore about 2,000-5,000 per piece. About three pieces are made every month, 35 pieces per year. The total income obtained in this way is therefore about 50,000-125,000 rupiah per year.

5. Moving to the lowlands (landeuh)

As mentioned earlier, some Outer Baduy seek to expand their involvement in commercial crops, and to avoid the raids of Baduy religious leaders, by moving to the lowlands (**landeuh**) outside the Baduy area. In general, the people who move can be divided into two groups: spontaneous migrants, and those who join a government scheme. Among those who have moved spontaneously to the **landeuh** is Jaro Saltiwin; among those who have joined the government resettlement project are Jaro Samin and his close relatives. I shall use these two cases to illustrate the factors involved in migration.

5.1. Jaro Saltiwin

For a long time, since the 1940s, Jaro Saltiwin has practised swidden farming in the non-Baduy area at Legok Pedes, Gunung Talaga, west of Gajeboh (see Map 7.1), particularly when secondary forest land around Gajeboh was fallowed. He farmed in a non-Baduy area for a few years, returning home when fallow was ready to be recultivated. At Legok Pedes he usually rented land by shared cropping, paying one fifth of the rice harvest to the land owner.

Due to his frequent stays in Legok Pedes, in the 1940s Jaro Saltiwin bought land there from Haji Himan's son. In the 1950s he was appointed by puun as the headman of Desa Kanekes, supported by a village secretary from Bandung, Umar Effendi, and a general assistant (**pangiwa**), Samin from Kadujangkung.

However, his relationship with the puun staff began to deteriorate, particularly when they destroyed his clove crop (see earlier section on the introduction of clove) and when his son was arrested by sub-district police for fighting with non-Baduy. This happened when Jaro Saltiwin's son Kasan was asked by his father to arrest non-Baduy people from Karangcombong who had poisoned fish (**nua**) in the Ciujung river. However, they opposed the arrest and fought with Kasan. To defend himself, Kasan used a machete (**golok**), and hit one of them. As a result, a non-Baduy man was injured and Kasan was arrested by the police. Jaro Saltiwin was blamed for this by the **puun**, considering that

although Kasan had acted in his own defence, injuring another person was prohibited. The puun expressed it as follows:

> Eta mah akibat tindakanana, sabodo bae, bongan legok kutapakna, genteng ku kadekna. Henteu kudu dikadek, sabodo bae kami mah.
>
> Which can be translated as:
>
> This accident was caused by his act; a good and a bad thing resulted from the act itself. To defend himself there was no need to injure another person. I cannot protect him.

Indeed, he most disappointed the religious leaders when he was accused of being a member of the Indonesian Communist Party (**PKI=Partai Komunis Indonesia**), which he strongly denied. However, another version of the story is that he became a PKI member because he was influenced by the village secretary (**carik desa**), Umar Effendi, who came from Bandung. Effendi was killed in Malingping in the violence that swept across West Java following the **PKI** coup in Jakarta on the night of September 30, 1965. Saltiwin, however, was not arrested because he had hidden in his rice barn. Later, he was arrested and jailed in Rangkasbitung for several months, but because of lack of evidence on **PKI** membership he was released.

Saltiwin was discharged as a village leader by puun and replaced by his assistant, Samin. After being released from jail, he came back to Legok Pedes on Gunung Talaga instead of to his original hamlet, Gajeboh. In Legok Pedes a more permanent house and rice barn were constructed called a **umbulan** (see the process of settlement growth, in

chapter 3, figure 3.5), where he stayed with his wife and three children, although another 4 children decided to live in Gajeboh.

In Legok Pedes he practised swidden farming and also planted clove. In addition, he established sawah and bought water buffaloes (**munding** or **kebo**). In 1985 he bought another 1.5 hectares of land for 1.5 million rupiah. This was planted with durian, **peuteuy** (Parkia speciosa), coffee, and coconut. At the same time, further sawah was established, converted from a swidden plot located in the ravines. This swidden plot was hoed and forked by himself, and sometimes with the help of one or two wage labourers from Kiaradastar.

He has since spent most of his time at Legok Pedes, his house and land in Gajeboh being inherited by his children who lived there. The swidden land located in Ciawi Leah, west of Gajeboh, was converted into sawah, but has already been destroyed many times by puun staff, particularly during the annual raid on Outer Baduy. For instance, in 1994 Saltiwin was using his sawah to raise common carp (**lauk emas**= Cyprinus carpio), when its dykes were destroyed by puun staff. As a result, the common carp either escaped or died. However, he repaired the damage. He has always argued that he will destroy his own sawah, only if sawah established by moslems in the Baduy enclave area of Cicakal Girang is destroyed first.

In the 1990s Saltiwin made the pilgrimage to Mecca financed by a branch of the **Muhamadiyah** from Serang, as he

was considered to be a **mualaf** (a recent convert to Islam). He changed his name to Haji Dulhamid, and today at Legok Pedes there are three permanent houses made of brick. Haji Dulhamid lives in the main house with his wife and his youngest son, Asid and his wife. Asid graduated from Rangkasbitung Senior High School (**STM=Sekolah Menengah Atas**) in technology. He began work in a private timber company in Bekasi near Jakarta. However, when he was required to move to another office branch in outer Java, he decided to resign and return to Legok Pedes, where he joined his parents in farming wet rice. From the harvest he hopes to sell rice, and would like to establish himself as an entrepreneur.

By the side of this house, higher up the hill, another house was built in which another of Haji Hamid's sons, Jaya and his wife lives, at the back of which is another house in which his main labourer and family lives. In front of the house two rice barns (**leuit**) have been constructed and a bathhouse on the wet rice field where water comes out of the hill, channelled through bamboo pipes. In addition, water buffalo and chicken cages have been established around the house.

Lower down, sawah has been established. On the dykes are grown perennials, such as kapok (Ceiba petandra), coconut, and clove, while in the homegarden, coconut, banana, durian, coffee, and jering (Pithecellobium jeringa) predominate.

The hill on which Haji Dulhamid's shelter, Gunung

Talaga, is covered by mature forest, in which trees such as **dahu**, **saninten** (Castanea argentea), **kiara** (Ficus annulata), **cangcaratan** (Nasturtium excelsa), **kicalung** (Dyopyros sp), and **kapinago** are found, and in which bird species such as **kores** (Criniger bres), **kurah** (Megalaema sp), **tulungtumpuk** (Megalaema javensis), and **heulang ruyuk** (Spilornis cheela) are commonly found. Gunung Talaga is also the location of a sacred place, commonly visited by people from the towns who wish to obtain good fortune by venerating the grave of a noble ancestor. The visitors are usually accompanied by Haji Dulhamid, who is the **kuncen**[4] (caretaker) of the sacred place.

5.2. Jaro Samin and his group

Like Jaro Saltiwin, Jaro Samin and other outer Baduy, particularly Jaro Samin's relatives from Kampung Kadujangkung and Kampung Karahkal have also established swiddens in the non-Baduy area (**nganjor**), such as in the abandoned Dutch rubber plantation at Gunung Tunggal. In this area, farm shelters (**saung**) and more permanent substantial structures called **umbulan** have been established. Some people have also been involved in off-farm jobs, such as cutting old rubber trees (**mopongkol**) and collecting firewood by the cubic metre (**ngubikan**) for domestic and industrial use. Such people return to their

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[4]). For a more detailed discussion of the role of guardians of a graves or spirit places (**kuncen**) in Sundanese society see Wessing (1978: 90-106).

hamlets only for occasional checks and to attend rituals.

In the 1970s, Jaro Samin was given a subsidy by the district government to build a village leader's house in Outer Baduy. However, the **puun** ruled that **pikukuh** prohibited the receiving of such a subsidy. As a result, Jaro Samin was arrested by police and accused of corruptly using a government subsidy. He was jailed for several months, and after returning, his relationship with the **puun** was no longer harmonious. He spent most of his time at his **umbulan** at Gunung Tunggal rather than in Kanekes, while his role as village leader in Kanekes was undertaken by his assistant, Pangiwa Japar.

Jaro Samin sometimes visited friends in towns such as Bandung, a few of whom were officials in the Governor's office. As Samin and his relatives were spending most of their time at Gunung Tunggal, his friends proposed to the Governor of West Java, Gubernur Solihin, that a Baduy resettlement project be established at Gunung Tunggal. This program was supported by the Dirjen Pembinaan Kesejahteraan Masyarakat Terasing (The Directorate General for promoting the well-being of Isolated Communities), and the Indonesian Department of Social Welfare. Thus, in 1977 a Baduy resettlement area was established at Gunung Tunggal, **PMKT Baduy** (Pemukiman Masyarakat Terasing Suku Baduy). It occupies an area of about 90 hectares on an abandoned Dutch rubber plantation, and on it was built 80 houses for resettling about 298 people at the total cost of 40 million rupiah (Padmi, 1978). This area was chosen because the land

was considered to be government land (**tanah negara**) and had already been intensively used for swiddening by some Outer Baduy.

The main purpose of the 'pembinaan masyarakat terasing' (the promotion of isolated communities), programme of the central government was to impose a 'top down' uniform model for resettlement throughout Indonesia, and to develop communities where this had been hitherto prevented by isolation and backwardness, by creating more secure social conditions which enable real participation in development programmes (Suparlan, 1995: 457). Therefore, one of the goals of PMKT Baduy is to promote more social interaction between Baduy and outsiders (Tim IPB, 1985: 38). By doing so, the Government hopes to enhance Baduy prosperity in the new area (PEMDA II, Lebak, 1985).

PMKT Baduy at Gunung Tunggal was conceived along lines similar to those of transmigration resettlement project in outer Indonesia. Each household is provided with a house of 4 m x 7 m, with a homegarden of about 20 m x 25 m (Figure 7.3), and together with agricultural land (**tegalan**) outside the settlement of about 1-1,5 hectare. In addition, they are provided with 10,000 rupiah a month for food over the first 6 months (Tempo, 1981: 81).

Because this programme was designed for **orang terasing** it has been criticised by many people as inappropriate. Certain scholars argued that the Baduy were not an isolated people (**suku terasing**) in this sense, that they have been in contact with outsiders for a very long time and have a

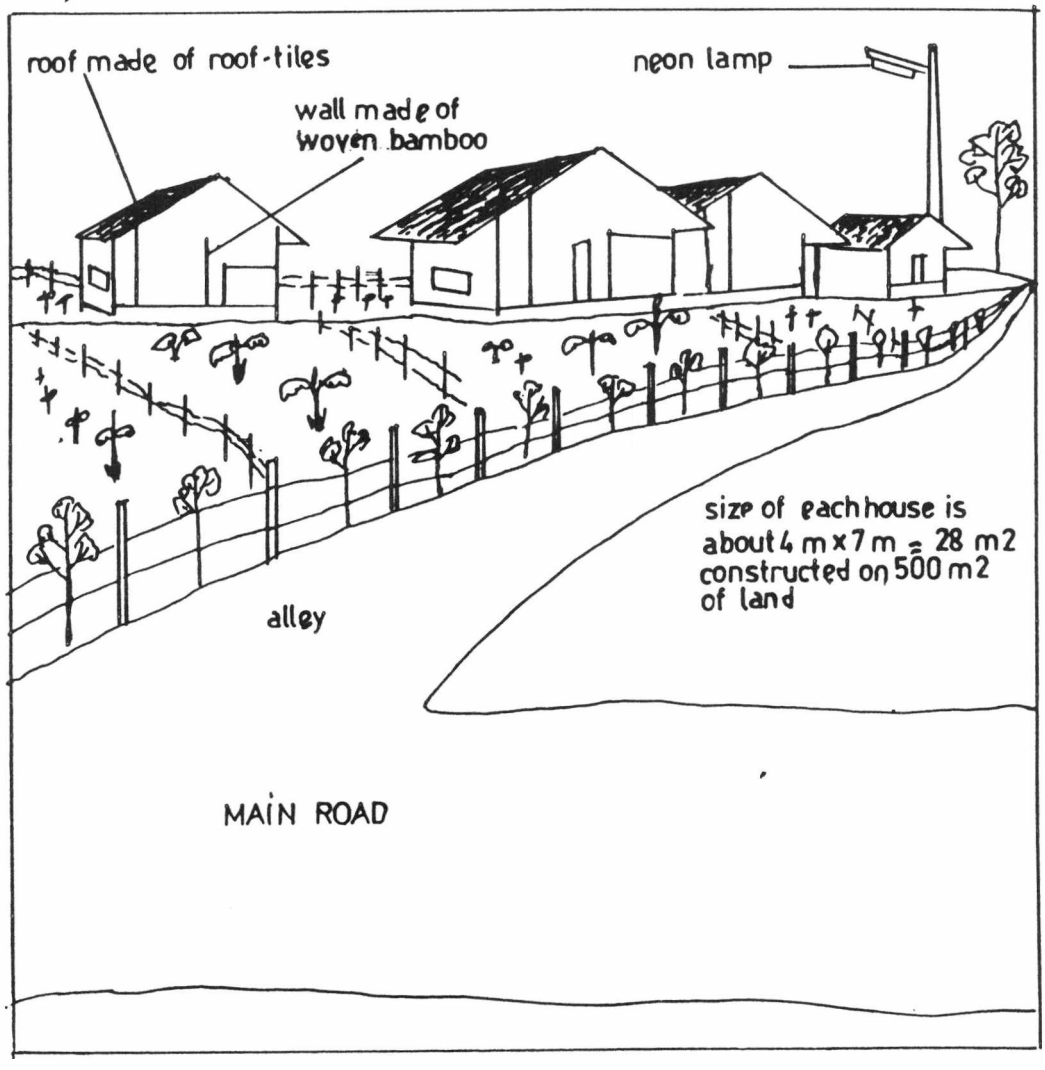

Figure 7.3. General features of Baduy resettlement at Kopo

complex and stable social organisation. Thus, it was argued that the programme was not needed, and that money might better be spent on improving other aspects of Baduy infrastructure which was urgently needed (ibid, 1981: 81).

Mohammad Muksin, the PPL (Petugas Penyuluh Lapangan; Field Extension Official) and Jaro Samin tried to persuade Outer Baduy, particularly those already involved in swiddening at Gunung Tunggal, to join the resettlement scheme. In order to attract people, Jaro Saltiwin emphasized that in the past this area, particularly 'blok' Cilutung, was Baduy land (Tim IPB, 1985). Therefore, Outer Baduy moving to this area were moving into land which was already Baduy territory. In addition, he argued that historically Kampung Kadujangkung was **babakan**, or a satellite of Kampung Karahkal (see Figure 5.5 in chapter 5). Kampung Kadujangkung had been established because the old hamlet was over crowded. Indeed, he persuaded people that instead of living on crowded land, the people of Kadujangkung would be better off if they moved to Gunung Tunggal (Bakels and Boevink, 1988: 70).

As a result of much hard work, Jaro Samin and Muksin managed to persuade about 38 households, mainly relatives and close friends from Kampung Kadujangkung and Karahkal, to move to the settlement project. There were also 13 non-Baduy households, mainly retired local people who had formerly worked on the rubber plantation.

Since Jaro Samin now spent most of the time in the resettlement instead in his home hamlet, he was discharged

as **Jaro Pamarentah** during the 1980s and replaced by a new village leader, Jaro Marsinun, and later by Jaro Nakiwin. In the new area, Jaro Samin was still a respected person. He alone owned certain items of furniture, such as table, chairs, and iron bed with mosquito net. His house was often used as an informal meeting place for residents and people needing help, e.g. concerning rituals and traditional medicines (ibid, 1985: 70).

Although Jaro Samin and his group had moved to the new resettlement, swidden land in the original hamlet was not sold, but instead farmed by relatives and close friends. From time-to-time they would return to harvest fruit or to attend ceremonial feasts (**hajatan**). They continued to swidden farming on the dry land provided by the project. The techniques and ritual used was similar to that used in their original hamlet, and after harvesting rice they normally joined rituals of **kawalu** and **ngalaksa** in Baduy. Gradually, however, as a result of government influence, such as through agricultural extension agents (**penyuluh pertanian**), settlers adopted new farming technologies, such as chemical fertilisers and pesticides; and dry land was planted with cash crops, such as clove, coffee, and rubber. The dry land (**tegalan**) located in gullies was converted to wet rice terraces (Figure 7.4). In addition to raising chickens, they began to keep sheep and goats which came with a government subsidy. Because of all this, when they brought their rice to mix with other Baduy rice at the **kawalu** in Inner Baduy (see ritual of **Kawalu** described in

Chapter 6, pp.352-363), it was rejected by the **puun**. According to **puun**, this rice was considered contaminated by the poison of chemical fertilizers and pesticides. **Puun** suggested that since they had received government subsidies, it would be appropriate if they moved completely to the resettlement area, noting that 'Blok' Cilutung claimed by Jaro Samin as Baduy land had been given years previously.

Having been rejected by the puun some feared they would be islamised by the government, and returned to their hamlets in Baduy. Others remained in the resettlement area, but spent most of the time in their farm shelters (**saung**) or **umbulan**, instead of in their resettlement project houses, which became abandoned and damaged. For instance, a journalist reported in 1981 that about 50 percent of the houses had been damaged and abandoned by their owners (Tempo, 1981: 81), and in 1983 about 44 houses were unoccupied (Bakels and Boeving, 1988: 67).

6. The current condition of the resettlement scheme

In 1995/1996, when I was conducting field research in the Baduy area, I visited the resettlement area located about 12-17 kilometres to the north of Desa Kanekes many times. Each visit involved more than 1 hour's walk from Kaduketug to Kampung Bantarnaga, near the Cisimeut river (about 5-7 kilometres). From Bantarnaga public transport is available to the resettlement area at Gunung Tunggal (about

7-10 kilometres). This takes less than 30 minutes. The walk is along a non metalled road passing abandoned clove gardens, rubber plantations, Albizzia gardens, fallowed secondary forest (**reuma**), and swidden plots belonging to temporary Outer Baduy residents. After about 1 hour, we arrive in Cihandam, where protected forest belonging to Yayasan Cinta Alam is found (see chapter 4, pp.205-206). This forest is guarded daily by Harun and his son who live nearby in Kampung Kipar, which consists of a small shop (**warung**), mosque and some houses.

From Cihandam the route continues to Bantarnaga, passing through similar land use types and through Kampung Bulakan and Kampung Cibunut. Before arriving in Kampung Bantarnaga, we must cross the Cisimeut river, passing a wooden suspension bridge (**jembatan gatung**), at the end of which is a public transport terminal and some **warung** located on the bank of the Cisimeut river. In the morning, several **colts** (Japanese small buses) are usually waiting to take passengers from here to Rangkasbitung, and in the afternoon these return. Here it is also possible to hire passenger-carrying motor bikes (**ojeg**) which go to Lewidamar, Muncang and adjacent places, particularly after the **colts** have left for Rangkasbitung.

To visit the Baduy resettlement area at Gunung Tunggal it is necessary to continue by **colt** or **ojeg** from Bantarnaga, along a steep and winding asphalt road. This road is predominantly bordered by swidden plots and **reuma**. At the conjunction of the roads to Muncang and Leuwidamar

(see Map 7.1), every driver must pay a road toll (**portal**) or road tax (**uang jalan**), because this road has been constructed by the community group sponsored by a respected person, a retired master fighter (**jawara**) called Jaro Karis from Cisimeut. The colt continues to Leuwidamar, and before arriving in Kampung Jati, we arrive at the PMKT Gunung Tunggal, now renamed Kampung Margahayu. The site is located on the edge of an oil palm plantation and the main road is connected to the settlement area by a path. At the main gate is the BBP (Balai Penyuluhan Pertanian= Agricultural extension), and about 500 metres further on are the house of Jaro Samin's children and close relatives.

Jaro Samin died about ten years ago. He was replaced as hamlet leader by his son, Haji Nalim. As a **mualaf** (recent convert to Islam), he was able to make the pilgrimage to Mecca financed by the government. Today most Outer Baduy at Gunung Tunggal, popularly called Cipangembar, have moved nearer to the main road, to a new place called Margahayu. Haji Nalim was the first to move, and constructed a brick house (**imah gedong**) on his dry land in 1984. The following year, but mainly in 1995, he was joined by his relatives. Almost all residents have now moved, except the households of Narja, Usman, Sarun, Sapri, Sarunda, Sapei, and Asan, which still remain at the original location at Cipangembar, Gunung Tunggal. Apparently, Usman and Narja the brothers of Haji Nalim, have not moved to Margahayu because they have been in conflict with their brothers, since they converted to

Christianity instead of Islam[5]. Instead, they decided to stay at Cipangembar, rather isolated from the main road.

The Margahayu houses are all constructed of brick or are semi-brick, and most roofs are of tile (**genteng**). In the front of Haji Nalim house is a mosque (**masjid**).

In the neighbourhood of the resettlement site is a private oil palm plantation, established in the 1980s. A few kilometres further to the south is the abandoned rubber plantation of Kopo, the site of two resettlement projects called PMK Kopo I and PMKT Kopo II (see Map 7.1). PMKT Kopo I comprises 90 hectares, and was established in 1981. It contains 52 Baduy households and 23 non-Baduy households. PKMKT Kopo II comprises 115 hectares, was established 1982, and contains 14 Baduy households and 32 non-Baduy households (Tim IPB, 1985: 37-38). However, like PMKT Gunung Tunggal, some houses have been abandoned. Overall, by 1985, 122 Outer Baduy households in the three resettlement areas (PMKT Gunggung Tunggal, Kopo I and Kopo II) had returned to their home villages (Pemda DT II, Lebak, 1985: 41).

Unlike Margahayu at Gunung Tunggal, which is part of Desa Leuwidamar, Kopo I and Kopo II are managed through Desa Jalupang Mulya. The village office is located about 1 kilometre from Kopo I, next to the **kantor Dan Ramil** (the sub-district military office). Opposite is the primary

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[5]). Since the beginning of Baduy movement to the resettlement area, they have been persuaded by the local moslem leaders to convert to Islam. In addition, a missionary from Bandung has been active in persuading them to convert to christianity.

school (**Sekolah Dasar**), and a few metres further on, a **pesantren** (religious school) called Pesantren Hassanudin. This place is also well known as **daerah pal 4** (**pal** 4 area)[6].

After 15 years, the physical, social and economic environment of Outer Baduy living in the resettlement area has changed. The former Dutch rubber plantation at Pasir Kopo has been converted to a settlement, and monocultural gardens, mixed gardens and **sawah** have all been established (Figure 7.4). Like PMKT Gunung Tungggal (Margaluyu), the original houses of PMKT Kopo I, have been replaced with new brick houses, located along a path, with several other houses bordered by hedges. Sheep, goat stalls, and a few old rice barns are found in the homegardens. Homegardens are planted with flowers, fruits, spices, vegetables, and cash crops. My own survey conducted on 8 households, in 1995/1996, records a total of 56 plant species, of which the following 11 were easily the most common: **randu** (kapok= Ceiba petandra), **kadu** (durian=Durio zibethinus), banana, **peuteuy** (locus bean=Parkia speciosa), **kacapi** (Sandoricum koetjape), **jengkol** (jering=Pithecellobium jeringa), **danas** (pineapple=Ananas comosus), **awi mayan** (Bambusa sp), **taleus** (taro=Xanthosoma sp), and **cengkeh** (clove= Syzigium aromaticum) [see Appendix 1]. Away from the settlement, on dry land (**tegalan**), are grown monocultural crops, such as rubber (**kebon karet**), galangal (Languas galanga, **kebon**

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[6]. **Pal** is derived from **paal** (Dutch) meaning unit of 1,506.943 metres, indicating that this place is located about 4 **paal** from the old sub-district centre.

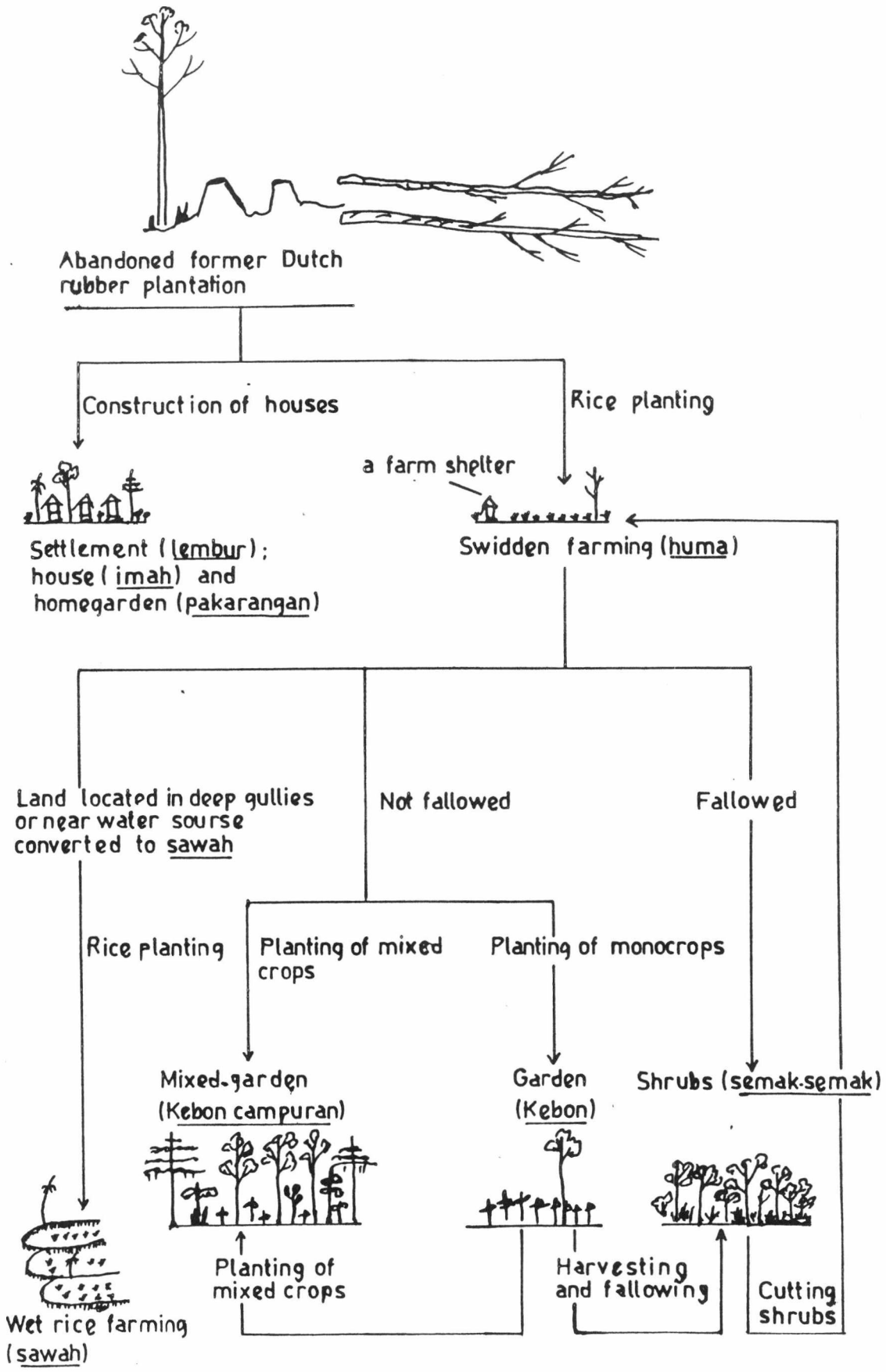

Figure 74. Land use development in the Baduy resettlement project at Kopo

laja), as well as mixed-gardens (**kebon campuran**). In some places, **tegalan** located in gullies have been converted into wet rice fields (**sawah**), and planted with both local and new varieties. I shall return to this aspect later.

The social and economic life of Baduy living in these settlements has changed considerably. Today, taboos on dress colour, rimless caps (**kopeah**), sandals, shoes, and wrist watches are ignored; people do not show the obvious outward signs of being Baduy any more. Prohibited luxuries, such as radios, televisions, glass, plates, and thermos flasks are common, while prohibited crops, such as clove, rubber and coffee are widely planted. In addition, wet rice farming has been adopted together with modern inputs, such as chemical fertilizers and pesticides. Farming is more directed towards a monetised economy and energy subsidies from outside markets, while children are allowed to attend school and there are some who have gone through the primary, junior and senior high levels.

Outer Baduy who moved to PMKT Kopo I were close kin, being related to Jaro Samin. We can understand more of the process by which Outer Baduy moved to the government resettlement project, particularly PKMT Kopo I, by examining the cases of two relations of Jaro Samin, Ayah Sardaya and Pangiwa Japar.

6.1. Ayah Sardaya

Ayah Sardaya was 70 years old in 1996, and originally

came from Kampung Karahkal. He is a cousin of Jaro Samin, and they share the same grandfather on their father's side, Ki Tasceumi, from Kampung Karahkal. Ayah Sardaya moved to Cipangembar, Gunung Tunggal, to join Jaro Samin in 1977/1978, because he wanted land on which to plant cash crops such as clove, and to establish **sawah**. However, when he was asked by Jaro Samin to be part of the leadership team of the new hamlet, he declined and moved to a neighbouring area, Pasir Kopo. He built a semi-permanent house (**umbulan**) in an abandoned rubber plantation, and in 1981/1982, when this area was established as a resettlement location (PMKT Kopo I and PMKT Kopo II), he joined the project, and his house in Cipangembar was given to his oldest son.

He acquired a new house and about 1.5 hectares of dry land. The dry land was used for swiddening and for an **umbulan**, while land located in gullies (**cucurah**) was converted to **sawah** called **ngabedah sawah**. Water entering the gully was dammed with an earth dyke and gradually the land was prepared using a fork and hoe (Figure 7.5). This work was undertaken by himself, sometimes with the help of 4-5 wage labourers. To pay for the labourers, he sold his swidden land in Kampung Karahkal to a close relative for a million rupiah. After one year, he had established about 1 hectare of **sawah** planted with local and new rice varieties.

Because he had established **sawah**, planted clove and coffee, and received various subsidies from the project, when the time came for him to bring his rice offering

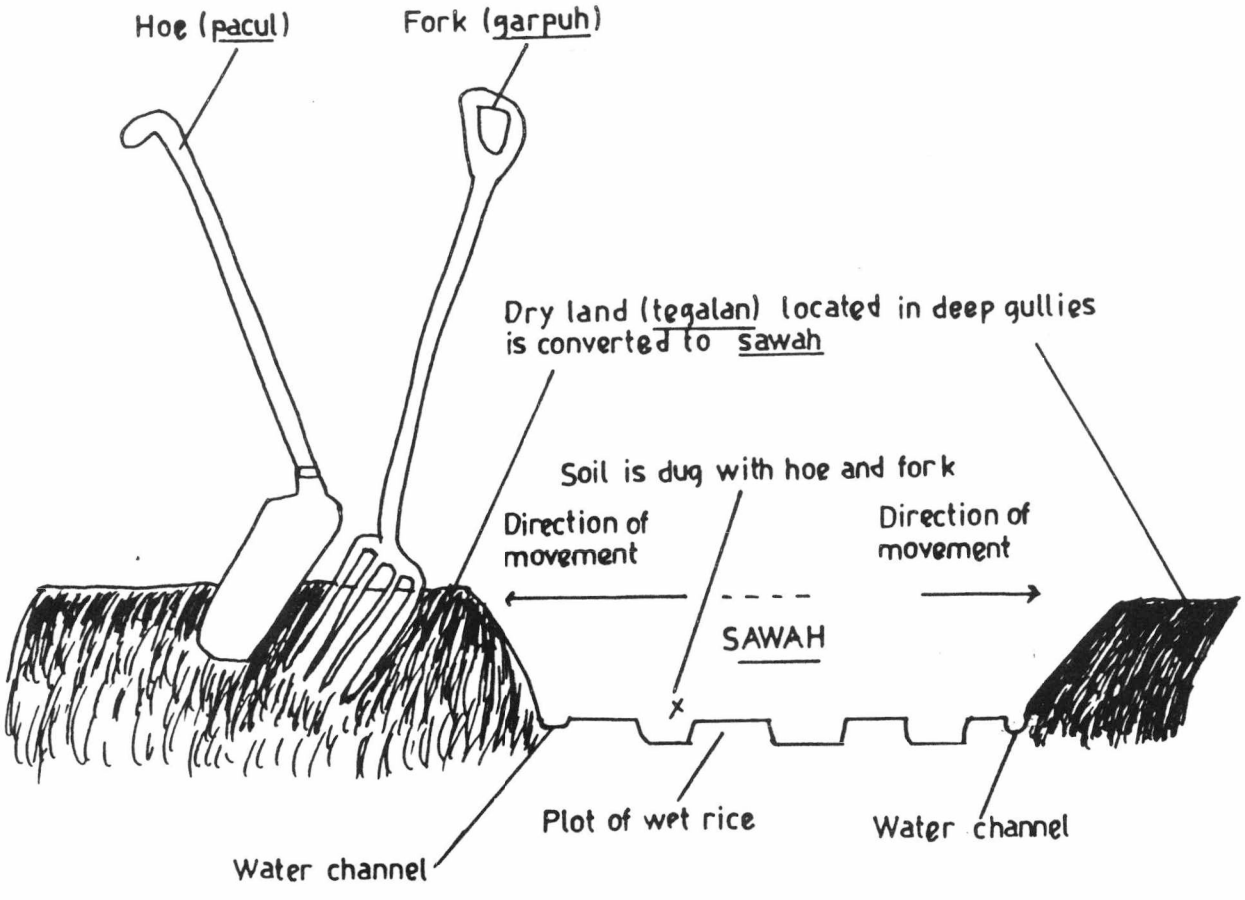

Figure 7.5. Constructing sawah in the Baduy resettlement area of Kopo

(**mauran**) for the **kawalu** ritual in Inner Baduy, it was rejected by the **puun**. To avoid being cursed (**disapa**), he asked his friends to seek special permission to move to the resettlement site at PMKT Kopo I. As a result, 306 people sought permission to move from Baduy by sending a **bokor** (copper bowl) to the **puun** called **ngabokoran** to perform the ritual of **undur rahayu** (see earlier discussion on **undur rahayu** in the section 2 in this chapter, pp. 400-404). His proposal was accepted by the **puun**, and in 1990 he became a moslem in a ritual called **ngislamkeun** (to islamise). Since then, he has never participated in Baduy rituals.

Sapin, one of Ayah Sardaya sons, was born in the 1965. In 1977/1978, he moved to the resettlement site at Cipangembar, Gunung Tunggal with his father, but in 1981/1982 he and his parents moved to PMKT Kopo I.
He was enrolled at the primary school in Leuwidamar by his father, entering year 3 because he was already 11 years old. Everyday, he walked to school, a journey of about 1 hour. In less than a year, he was upgraded to year 5 and the following year he was allowed to take his final examination. He passed and continued his studies at the junior high school (SMP1) in Leuwidamar. In 1985 he received a scholarship of 30,000 rupiah per semester from the Indonesian Department of Social Welfare.

After finishing his studies at the SMP, Sapin continued on at Senior High School (SMA) in Rangkasbitung. However, he was able to pay tuition fees only for 6 months. Having been given a warning by the head teacher that he

might have to quit the school, he came back to his village and asked for a letter from a village leader confirming that he was from a poor family and would like to apply a scholarship. This was successful, but he had to pay for his own living expenses in Rangkasbitung and for the final examination fees. He completed his studies successfully.

After finishing at the SMA, Sapin would have liked to have continued his studies at the Agricultural Institute in Bogor (IPB), but he failed his entry test. He returned to his village and applied to be a teacher in the primary school. He failed to get this job also and worked instead for a private company selling timber to **PERUMNAS** (Perumahan nasional, the national housing programme) for few months in 1988. After this he joined the government literacy programme called **Kejar Paket A**, to teach reading in his own village. The course was attended by 10 Outer Baduy men and women living at the PMKT Kopo I. He was paid 50,000 rupiah only for this job.

Finally, in 1992, he became interested in becoming a village secretary (**carik**) with his uncle, Jaro Asrap, who was a village leader in Desa Kanekes. Therefore, there are now two **carik desa**, Cari Ukang and Sapin. Recently, however, he has also joined with Jaro Samin's son-in-law, Haji Kasmin, as middleman in Haji Kasmin's firm trading non rice crops in Baduy, which is also a building contractor for the government at sub-district level, repairing offices and the primary school in Malingping. He and his wife are now living with their daughter in neighbouring Kopo I,

having established a house near the office of Desa Jalupang Mulya. His wife comes from Ciamis and moved with her family to PKMT Kopo II when their village was destroyed by the eruption of the Galunggung volcano in the 1980s.

6.2. Pangiwa Japar

Pangiwa Japar is 65 year old and originally came from Kampung Karahkal. In the past, like his friends, he used to swidden in the abandoned rubber plantation at Pasir Kopo. After Jaro Samin moved to PMKT Gunung Tunggal, he became an acting village leader in Desa Kanekes. Later on, he followed Jaro Samin to Pasir Kopo where he established an **umbulan**. He eventually joined PMKT Kopo I after some hesitation. He received a house plot and home garden of about 350 m2, and **tegalan** of about 1.5 hectare. Because he was a latecomer, he obtained **tegalan** on the hill which cannot be converted to **sawah**. After living for a few months in the resettlement, he and his friends returned home because they had heard that they would be forced to convert to Islam and transmigrate to Lampung in Sumatra.

However, life in the hamlet was difficult. For example, when staying with his family in a farm shelter (**saung**), Pangiwa Japar's luxuries, such as glasses, plates, thermos flasks, and mattresses were destroyed by **puun** staff. After only 2 years, he and his family returned to PKMT Kopo I, where he could plant commercial crops, such as clove, which were prohibited in his home hamlet.

In addition to his house in the settlement area, Pangiwa Japar built **umbulan** and a rice barn (**leuit**) on his dry land. In the first year, about 0.5 hectares was turned over to swidden. In the second year, he farmed the same plot and also opened new plots overlapping the land already cultivated. In the third year a neighbouring plot was cultivated overlapping with the second year plot. After 5 years, the first plot was recultivated. However, after 7 years, this land was densely planted with fruit trees, cash crops and timber trees, and was unavailable for rice. A field survey in 1995/1996, in which I inventoried cultigens on 7 blocks of mixed-garden in Japar and surrounding areas, indicates a total of 79 plant species, the six most important of which were: **cau** (banana=Musa paradisiaca), **danas** (pineapple= Ananas comosus), **awi mayan** (bamboo=Bambusa sp), **kalabise** (albizzia=Paraserianthes falcataria), **karet** (para rubber=Hevea brasiliensis), **laja** (galingale=Alpinia galanga), and **kacang panjang** (long bean= Vigna sinensis) (Appendix 1).

Now, to practise swidden farming, following the pattern of Outer Baduy who have never lived in a resettlement area, Japar rented land from non-Baduy in a neighbouring area by share cropping on 10:2 basis rice and **kalabise**. Others have also rented land in oil palm plantation areas. However, he has rejected this option because of the technical difficulties (**hulap**). For example, burning must be done carefully to avoid destroying oil palms.

The activities involved in swiddening in the resettlement area are essentially the same as those in Baduy, and which have been described in Chapter 6. However, swidden farming here also involves modern inputs, such as chemical fertilizers (e.g. UREA, TSP, and KCL). He has also planted **sawah**. However, because he does not own sawah, he normally obtains it in a neighbouring area from non-Baduy. He has raised the money for this by pawning. For instance, he recently acquired under 0.5 hectares of **sawah** by pawning 55 grams of gold or the equivalent of 137,500 rupiah (price of gold 2500 rupiah per gram). About 200-300 bundles of local rice or 1.5-2 tons of new rice varieties are normally harvested in each season (see wet rice farming, later in this chapter).

Initially, although Pangiwa Japar had moved to PKMT Kopo I, he frequently visited his hamlet in Karahkal to see his relatives and to harvest fruits from his land. In addition, each year, after harvesting rice, he usually joined **kawalu** in Inner Baduy. Later on, however, this was prohibited by **puun**, because his rice was considered contaminated due to his use of chemical fertilizers and pesticides. In order to resolve his status, he and his family sought permission from **puun** to move from Baduy, by 'sending a **bokor**'(**ngabokoran**). His proposal was accepted by the **puun**, but he still has problems with other people, particularly non-Baduy, former rubber plantation labourers who joined PKMT Kopo I. According to Pangiwa Japar, Baduy are considered to be inferior. However, although many non-

Baduy have treated Baduy as inferiors, they have themselves sometimes manipulated Baduy identity to their advantage. For example, they have worn the traditional Baduy dress, pretending to be Baduy people, particularly when the Baduy have been invited by the government to obtain various subsidies, such as clothes, seedlings and cattle.

In addition, Outer Baduy were commonly deceived. For instance, almost all agrarian land certificates were collected by Jaro Is, a former village leader of Jalupang Mulya, who promised to raise an investment which would provide income of between 50,000-100,000 rupiah per month. Much later it was discovered that these certificates were used as collateral by Jaro Is and his friends to borrow money from a bank in Jakarta. This was discovered when the bank sought to take over the land because the borrowed money had never been repaid. The certificates have never been returned to Baduy living in the resettlement, because to redeem them is very expensive, including accumulated interest over many years. Until now, this mismanagement has not been solved, although it was reported to the DPR (Dewan Perwakilan Rakyat= Indonesian Legislative Assembly) by some of Pangiwa Japar's friends.

In order to harmonise his relationship with others[7], Pangiwa Japar and his family finally decided to covert to Islam. In 1994 he and other Outer Baduy who had moved to

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[7]). Pangiwa Japar expresses this a follows: **ka cai kudu** saleu**saleuwi ka darat jadi salogak**, which can be translated as 'to achieve unity, given allegory as going to take bath at the same deep pool in the river (**leuwi**) and going to terrestrial area at the same hole (**salogak**)'.

the new resettlement at PKMT Sukatani, were converted by the **ulama** from Rangkasbitung. Today, he rarely visits Baduy, but still retains land in his hamlet of origin. This land is usually cultivated by close relatives, and some of the produce, such as fruits, is sent to him.

7. Wet rice farming

In addition to swidden farming, some Outer Baduy living in the resettlement area have established **sawah**. The **sawah** are created by converting dry land or pawning from non-Baduy people, and usually yield two rice harvests a year. The main cultivation period is during the rainy season (**musim rendeng**), with another during the dry season (**musim katiga**).

There are two major groups of rice varieties grown: local varieties called **pare gede** (tall rice) or **pare heubeul** (old rice), and new varieties or New High Yielding varieties (NHV) called **pare anyar** (new rice) or **pare leutik** (short rice). Various local varieties commonly planted, such as **pare geulis**, **pare rajawesi**, **pare gantay**, **pare seksek**, **pare kawung**, and **pare latifan**, while new varieties recorded: **sadane**, and **IR64** (**pare sapuluh**).

The main, rainy, season sawah is planted by local or new varieties. If local varieties are selected, planting takes place in November/December and harvesting in March/April. After harvesting, if there is still enough water, a field will be recultivated as soon as possible:

planting local rice varieties in May and harvesting in June/July. Conversely, if new rice varieties are selected, planting takes place in November/December and harvesting in March/April. Before sawah is recultivated, it is normally fallowed for about 1.5 months, between March and April. Therefore, recultivation of rice during the dry season usually starts at the same time whether the sawah has been previously planted with local or new varieties; but if sawah has been previously planted with local varieties, the sawah is not fallowed first.

The schedule for wet rice farming during the rainy season is the same as that for swidden farming, particularly if the sawah is planted with local rice varieties. However, when sawah is recultivated in the dry season, this coincides with the time when swiddens are being fallowed. Synchronising wet rice and swidden farming is very important, as it helps to avoid migratory pests. In addition, if sawah rice is harvested earlier, immature rice planted in neighbouring swiddens will be 'warmed' (**kagebos**) by hot air created in rice harvesting. Since straw and unhulled paddy is heaped and moved from the **sawah** being harvested it influences the micro climate by creating 'warm air' and disturbing neighbouring swiddens.

The techniques employed and rituals undertaken in the farming of wet rice are different in a number of important respect from swidden farming. These differences have become even more pronounced because of the influence of the district and sub-district agricultural extension service

(**penyuluh pertanian kabupaten dan kecamatan**), which provides information on, for example, applying pesticides and chemical fertilisers. Chemical pesticides are now replacing traditional herbal methods and ritual incantations, while on conversion to Islam old rituals are abandoned.

There are 7 main stages in wet rice farming: preparing the nursery (**nyieun pabinihan**) and first hoeing (**macul sakali** or **naragal**), preparing seeds (**nyiapkeun binih**), second hoeing (**macul mulihan** or **ngahaluskeun**), pulling seedlings (**babut**) and transplanting (**tandur**), weeding (**ngoyos**) and fertilising (**ngarabuk**), harvesting (**panen**), and storing.

7.1. Preparing the nursery and first hoeing

An appropriate place is chosen for the nursery (**pabinihan**), which has fertile soil and is located near a water channel (**saluran** cai or **selokan**) or water source (**sumber cai**) [see Figure 7.6].

The rice stubble from the previous season is cut with a **parang**, the land is hoed and new dykes bordering the nursery plot are constructed while existing dykes are weeded and repaired. The burrows of rats and crabs in the dykes are covered with mud. The plot is re-hoed, the soil surface levelled (**nyarapak**), and an inlet and outlet made. To irrigate a nursery properly the plot is usually divided into sub-plots of about 1 m x 5 m by digging small channels

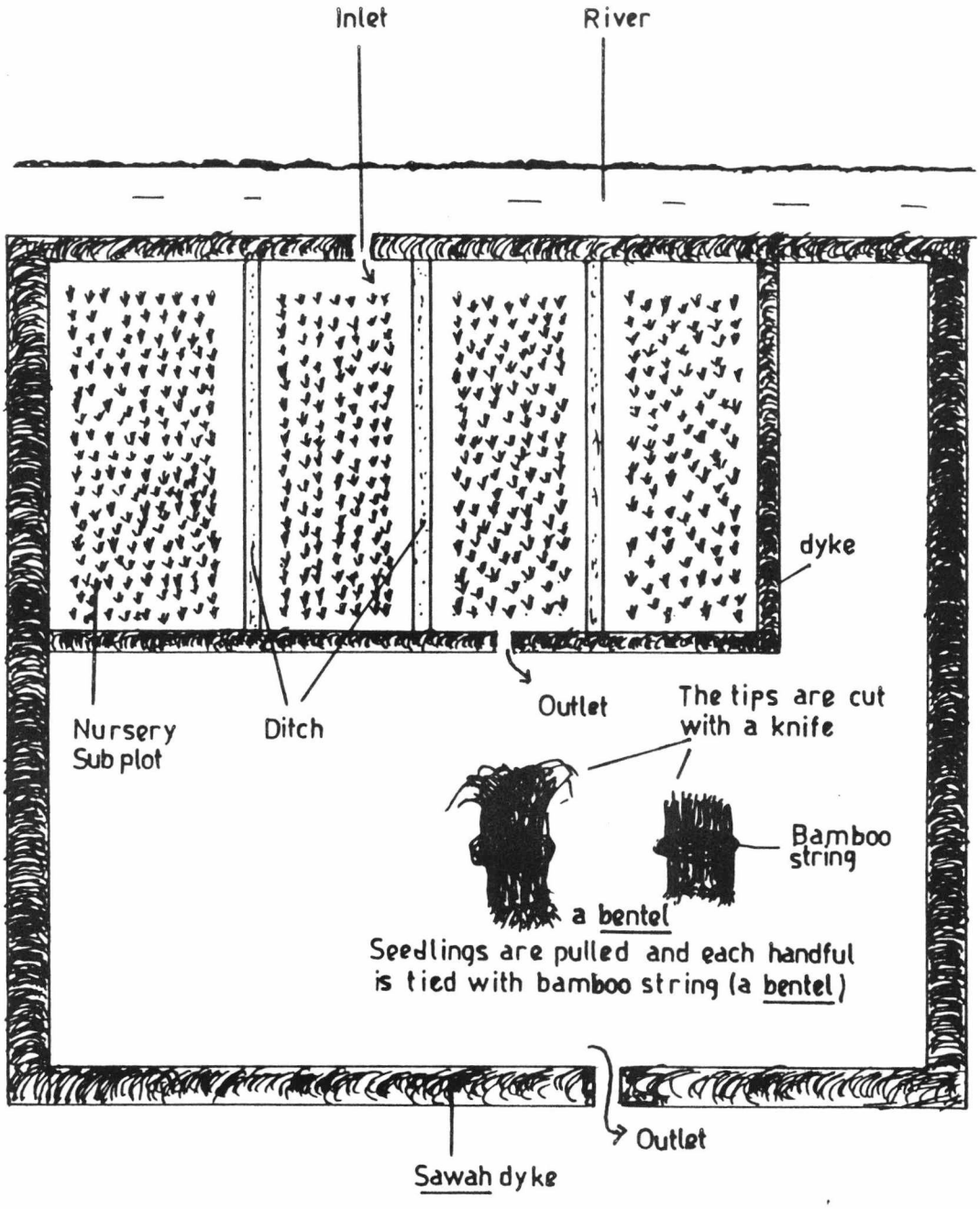

Figure 7.6 A nursery plot dividing four sub plots

in lines (Figure 7.6). As a result, if the nursery is dry, water is still available in the small channels.

Nursery preparation takes one man one or two days. At the same time, other sawah plots are prepared. The rice stubble is cut and the fields hoed roughly (**naragal**). If the field has been previously planted with new rice varieties, cutting rice stalks is not necessary, because the stables has been cut with sickles (**arit**) during harvesting. In addition, dykes are weeded and repaired making them more stable. The field is flooded and left for several days.

In a few cases, land is prepared by ploughing with the aid of water buffalo (**ngawuluku**). The hoeing and ploughing is undertaken by men. The work starts at about 6.00 or 7.00 o'clock in the morning and continues until 12.00 o'clock (**sajongjonan**). If ploughing is involved, work starts at 6.00 or 7.00 o'clock and is finished by about 9.00 o'clock. This is called **pecat sawed** time (**pecat sawed**=to open a string around the water buffalo's neck or **koyang**).

7.2. Preparing seeds

After the nursery has been made, seeds are prepared at home. Seeds are selected from the last harvest, borrowed from relatives or close friends, or bought from towns, such as Rangkasbitung. This latter is particularly the case for new rice varieties.

The seeds are soaked (**dikeueum**) in a bucket (**ember**) or

wash basin (**baskom**) over night and dried (**dipeuyeum**) for another night. Sometimes, new variety seed is carried into the nursery in a sack and soaked (**dikeueum**) there for about 2 nights and dried (**dipeuyeum**) for one night. Ears of germinating seed (**pare narongtot**) of local varieties are spread evenly in a nursery, undertaken by women or for new varieties, by women or men. Before sowing begins a ritual is performed. Betel leaves, gambier, lime, and areca nut, **kihura**, **pacing** (Costus speciosus), and **panglay** (Zingiber cassumunar) are placed in the nursery, incense is burned and incantations are pronounced. The nursery is provided with enough water or sometimes water is reduced to avoid rotting seed caused by too much water. Between two and three times a week, the water situation in the nursery is checked, and an eye is kept on pests, particularly rats, and disturbing livestock, such as chickens, ducks, sheep, goats and water buffaloes.

7.3. The second hoeing

After the first hoeing and ploughing, the field is dried slightly and re-hoed (**dipacul mulihan** or **nghaluskeun**). In a few cases water buffaloes are used to harrow (**ngagaru**). In addition, dykes are prepared, the soil surface is levelled (**sarampak**) with a wooden flattener, and water is added to about 1 centimetre above the soil level. Like the first hoeing, the second weeding and harrowing are undertaken by men, working daily from early morning to

midday, stopping only after the drum (**bedug**) has called people to midday pray. Harrowing has normally finished by 9.00 o'clock. Now the field is ready to be transplanted with rice.

7.4. Transplanting

About seventeen days after sowing in the nursery the seedlings are pulled (**babut**) by women. Each handful is tied with bamboo string and the tips are cut with a knife called a **bentel** (see Figure 7.6). Some **bentel** are put in a woven bamboo basket and carried by men to different sawah plots. Women assist in this process by carrying **bentel** by hand (**dijingjing**) and placing them in each **sawah** plot. However, sawah plots located near the nursery are provided with **bentel** which is only thrown or shifted from the nursery.

Before planting rice, a special ritual is performed in a certain place which corresponds to the **pungpuhunan** in swidden farming. Various articles such as **kihura**, **pacing**, and **tamiang pugur** are put in this place. **Panglay** is chewed and spat over the soil, incense is burned, and incantations are made. Immediately after conducting the ritual, rice seedlings are transplanted in a particular direction depending on results of **naptu** calculations. To transplant rice, each seedling bundle is loosened and between 5 and 7 individual seedlings are transplanted by women who move backward to avoid trampling transplanted rice with their feet. Other women assist in this process without payment,

and in return they will be provided with extra rice at harvest time, the **ngepak**. In other villages, before transplanting rice, land is normally made into rows and columns using a wooden harrow (**caplak**) to transplant rice in straight lines and to weed more easily later on. In this area, however, this technique is not applied because it is considered uneconomical of labour.

After one plot is completely transplanted, workers move to another plot. Different varieties are planted in separate parts of the same plot, or in different plots.

7.5. Weeding

About 15-20 days after transplanting, rice seedlings have grown and appear fresh and green (**pare lilir**). At the same time, sawah is also covered with aquatic weeds, such as **genjer** (Limnocharis flava), **eceng** (Eichornia vaginalis), **ganggeng** (Salvinia natans), and jukut **jajagoan** (Echinocloa sp). As a result, to avoid rice seedlings having to compete with the weeds, the sawah is weeded (**nguber** or **ngoyos**). All the weeds are pulled out, collected and buried in the soil. Some of them are put on dykes to dry under in the sun.

After the first weeding (**nguber**) sawah is slightly emptied of water and given chemical fertilisers, such as UREA, TSP, and KCL. UREA, TSP, and KCl are applied to 1 hectare of sawah as follows: 150 kilograms, 100 kilograms, and 100 kilograms, respectively. However, if the sawah is less than 1 hectare, the fertilizer quantity is

proportionately less. For instance, in a quarter hectare of sawah, 25 kilograms (0.25 x 100 kilograms) of KCL is normally applied. These fertilizers are bought from Rangkasbitung. In 1995 the urea was bought for 550 rupiah per kilogram, while TSP and KCL cost 650 rupiah and 500 rupiah per kilogram, respectively.

About two or three weeks after the first weeding, sawah is covered with weeds again, and a second weeding is necessary. Like the first weeding, all weeds are removed and at the same time dykes are also weeded with a **parang** (**babad galeng**). This is undertaken by men.

The first and second weeding are mainly undertaken by women helped by men. Family labour is mainly used, helped by relatives and close friends who in return will be provided with the **ngepak** at harvest time. I return to this arrangement below.

In addition, if the rice is attacked by pests, such as **kungkang** (Leptocorisa acuta), **simeut** (grasshoppers), **wereng batu**, and **beurit** (rats), a chemical pesticide, such as **basudin** is commonly applied, bought for 3,500 rupiah per bottle in Rangkasbitung.

7.6. Harvesting

After weeding, the rice plants grow steadily. The sawah is checked to control water levels two or three times a week. If the sawah is dry, water is added from the inlet water channel directly, or via other plots. The outlet and

holes in dykes caused by crabs are repaired. If there is too much water it is reduced by adjusting the outlets.

New varieties are harvested about 100 days after transplanting, while local varieties are harvested about 5-6 months after transplanting. Local rice varieties are harvested systematically for each variety using a finger knife (**etem**). Rice panicles are cut individually using the right hand. After cutting about five panicles, these are held in the left hand. All leaves are cut with the right hand and each fistful put on the dykes. This work is undertaken by family members; men, women, girls and boys, helped by relatives and close friends. Non family labourers can be divided into two groups; the first group are those who have previously helped with weeding, and the second group those who have not been involved in weeding. The first group is usually called **ngepak**. They are paid one fifth of the total rice harvested (**gacong**). For every 4 rice bundles going to the owner, 1 bundle is given to the harvesters. Non **ngepak** labourers are paid less, in a ratio of, say, 10:1.

About four fistfuls are tied together with a bamboo string, to form a **sabeungkeut** or **sapocong** (one bundle), while 2 **pocong** tied together are called a **saranggeong**. In this form, this is carried by the men on their shoulders using a bamboo stick, or by women in the small of their back or at the hip with the help of a cloth sling. In front of the house the rice is put on plastic plaited mats to dry in the sunshine.

Unlike local varieties, new varieties are harvested using sickles (**arit**). A handful of rice stalks are held in the left hand and the stalk bases are cut with a sickle using the right hand. These stalks are collected into heaps on the ground if the sawah is dry, or on the dykes if wet. The stalks are then threshed (**diirik**) by stamping on each bundle on the plaited mat or threshed (**dikeprik** or **digebot**) on a wooden box, separated rice grains collecting on the mat. Before grains of rice are carried to the settlement, a part is given to the harvesters. For every four litres (usually measured in a tin), one harvested litre of rice is for **ngepak** (who joined weeding earlier), called 5:1, while non **ngepak** labourers are paid less, in a ratio of 7:1 and 8:1, depending on what owner decides.

The rice is spread on the plaited mats and dried in the sunshine in sawah, after which it is put in sacks and carried to the settlement by men and women. After threshing and paying for labours, rice is directly put in sacks without drying first and carried to the hamlet. In the hamlet, the rice is dried in an open place in the homegraden.

Selecting seeds (**ngalean**) for planting in the next season is undertaken during harvesting for local varieties, the better quality rice having larger grains (**beuneur**) and being homogenous. It is selected and stored separately (**dipasing**). Selected seed for new varieties is put in separate sacks and stored separately.

Normally, the seeds of new varieties are viable for up

to 3 plantings only. After this the seeds must be changed otherwise it begins growth heterogeneously, to be taller and to produce lower yields. New seed is bought from urban markets, borrowed or exchanged from relatives. New rice seed was priced at 800 rupiah per kilogram in Rangkasbitung in 1996.

Both local and new rice varieties are stored in either rice barns (**leuit**) or in houses. Unlike in Baduy, where rice is stored in barns over several decades, in resettlement areas it is rarely stored for a long time because the rice stores less well and because of heavy consumption demands. When rice is consumed it is milled using a huller (**panggilingan pare**), transported between hamlets rather than being pounded with a wooden mortar (**lisung**). The cost of milling rice is about 50 rupiah per kilogram, or when paid in rice, 1 kilogram for each 10 kilograms milled.

7.7. The financial costs and benefits of wet rice cultivation

The cash inputs and outputs for farming **sawah** of 2,000 m2 or 15 litres of rice seed (based on one informant from the resettlement) are as follows:

INPUTS

-First hoeing, undertaken by 5 persons in one day
=5x3,500=17,500 rupiah
-Second hoeing, undertaken by 2 person in two days
=2x2x3,500=14,000 rupiah
25 kilograms of UREA fertilizer
=25x550 =13,750 rupiah

25 kilograms of TSP fertilizer
=25x650 =16,250 rupiah
25 kilograms of KCL fertilizer
=25x500 =12,500 rupiah

A half bottle of pesticides = 2,000 rupiah
New rice varieties x 15 litres
=15x800 =12,000 rupiah
Labour for carrying 88 kilograms rice to settlement
=88x400 =35,200 rupiah

Total cost =123,200 rupiah

Total output= 20 sacks or about 800 kilograms
of unhulled rice (**gabah**)=800x400 =320,000 rupiah

Total profit =196,800 rupiah

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From the input and output analysis provided above, it can be seen that the total profit is about 197, 000 rupiah, which is slightly higher than swiddening the same size (0,2 hectare) plot, which normally produces 20 rice bundles (**pocong**) or 60 litres of unhusked rice (**beas**), or the equivalent to 126,000 rupiah (60 litres x 700 rupiah). However, it must be remembered that in the swiddening case there are also non rice products from the same plot, such as bananas, pigeon peas, maize, sesame, pumpkin, and cucumber (see Table 6.5). Based on my field experience, these non rice products are normally more than 50 % cash equivalent of the rice production, not including production of palm sugar (**gula kawung**). Moreover, because a swidden plot is normally planted with a great variety of fruits and vegetables, swiddening plays an important role in providing the household with vitamin-rich food (Iskandar, 1992: 94).

Moreover, swidden farming has either no cash or very low cash inputs, whereas in wet rice farming this is about 38.5 % of the total production cost (123,000 rupiah of 320,

000 rupiah), and is much dependent on outside subsidies, such as through the market.

8. Summary and conclusion

Baduy identity is strongly linked to the practise of swidden farming and the performance of various rituals, such as **kawalu** and **ngalaksa** connected with the swidden cycle. However, to maintain a viable lifestyle Baduy have also to engage in other economic activities within and outside the Baduy area. For example, they trade cash crops and handicrafts. But by engaging with this monetised economy they run the risk of violating **pikukuh**, customary law, which is enforced through severe sanctions exercised by the **puun**. This presents a dilemma: on the one hand ordinary Baduy desire to be acknowledged by **puun** as true Baduy, on the other hand, to survive many claim that they must engage in various activities prohibited by **pikukuh**.

As long as people are acknowledged and allowed to participate in rituals of **kawalu** performed by **puun**, Baduy living inside or outside traditional Baduy territory and engaging in any economic activity, are considered as members of the community. However, even if people continue to practise swidden farming, but **puun** rule that they may not mix with other Baduy and no longer participate in **kawalu**, they are no longer considered to be Baduy. The status of such people is resolved, and Baduy custom satisfied, if they ask proper permission from the **puun** by

offering various goods put in a copper bowl called **ngabokoran**.

Most Outer Baduy who have moved to the resettlement project, have a transitional identity. By growing cash crops, consuming luxury goods and generally conducting their lives in ways which resemble 'the outside world' they are stigmatised by **puun**, and their original culture is gradually abandoned. However, they also face problems in adapting to the different social and cultural conditions in the new area.





Albizzia or **kalabise** (Paraserianthes falcataria) seedlings are planted in a swidden plot. Outer Baduy men plant **kalabise** seedlings intercropped with rice in the swidden plot.
Photo: J. Iskandar 1995





Albizzia (Paraserianthes falcataria) trees mixed with rice, before harvesting rice in a swidden plot.
Photo: J. Iskandar 1995.





After harvesting rice in Outer Baduy fallowed land (reuma) are often covered with maturing Albizzia (Paraserianthes falcataria) trees.
Photo: J. Iskandar 1995.





Para rubber (**karet**=Hevea brasiliensis) trees are intercropped with rice in swidden plots rented by Outer Baduy from non-Baduy owners. Non productive rubber trees are cut for fire wood.
Photo: J. Iskandar 1995.





Although coffee (**kopi**=Coffea arabica) is a prohibited crop in the Baduy area, some coffee trees are found in the Outer Baduy with local consumption.
Photo: J. Iskandar 1995.





Mahagony (**mahoni**=Switenia mahagony) and banana (**cau**=Musa paradisiaca) are intercrooped (tumpang sari) in swidden plots on land belonging to the state forestry corporation, perhutani.
Photo: J. Iskandar 1995.

CHAPTER 8

CONTINUITY AND CHANGE IN THE BADUY SWIDDENING SYSTEM

I have shown in the preceding chapters how the practice of swiddening is embedded in Baduy culture, articulated through ritual and surrounded by prohibitions. It is, therefore, a powerful and core expression of their identity as a separate people. I have also shown that as the Baduy move away from their traditional cultural centre, and change their agricultural practices, so this impacts on their identification as Baduy. However, there are two interesting paradoxes associated with this process. The first is that Baduy with modified cultural practices, located in Outer Baduy, and even more so in the dangka areas, serve as a buffer for the Inner Baduy area, protecting it from rapid ecological, social and cultural changes. Secondly, by introducing certain new crops, most obviously Albizzia, Baduy have been able to practice swidden cultivation in a near-sustainable way, despite population growth and forest depletion.

In this final chapter I shall recapitulate, in summary form, my basic analysis of the Baduy swiddening system, looking at it in historical perspective. I shall then examine this model of the Baduy system in relation to the comparative literature on the sustainability of swiddening. Finally, I shall examine the Baduy case in relation to recent Indonesian government development policy, and in the light of this make some tentative recommendations.

1. Baduy swidden farming, 1880-1996

Before the late nineteenth century we can assume that most Baduy practising swidden farming had as their main economic goal self sufficiency. Each household cultivated a swidden plot which was about the same size as every other, situated in communal land; undertaking a narrow range of subsistence-directed economic activities. The sale of rice was prohibited and was mainly used for home consumption and in various rituals. As a result, production can be characterised in terms of the well-known backward-sloping supply curve (Chayanov, 1966, Sahlins, 1972: 87-92) and communities tended to be isolated, autonomous, homogenous, and corporate (Wolf, 1965), with a low population density and little influence from the market economy.

The total population of Baduy in the 1920s is reported to have been only 1,521 (Van Tricht, 1929: 79), while communal swidden land in neighbouring Desa Kanekes was still abundant, and private land ownership not yet developed (Soepomo, 1967 [1933]: 118-119). As late as the 1880s farming labour was mainly provided by household members. Surpluses of non rice products were normally exchanged or bartered with the neighbouring Muslim community (**urang are**) through the **jaro dangka** and **girang seurat** (Kruseman, 1888: 3). At the same time, money, particularly copper or silver coins (**duit logam**), were gradually introduced to Baduy, but when paper (**duit kertas**)

was introduced it was at first rejected. At about the same time (1880s), weekly village markets (**pasar**) are first reported for Baduy and adjacent areas. e.g. at Ciboleger. This market was located under a big **karet kebo** tree (buffalo rubber= Ficus sp), and occurred each Saturday. Goods such as salted fish and salt were sold by itinerant traders who moved from one village market to another. Two main routes can be identified. Firstly, traders came from Rangkasbitung, moving from Ciboleger (Saturday), to Kalangbalang (Sunday), Ciliman (Monday), Leuwidamar (Tuesday) and returning to Rangkasbitung. Secondly, they came from Rangkasbitung, moving to Ciboleger (Saturday), Ciminyak (Sunday), Gajrug (Monday) and then returning to Rangkasbitung.

In the 1960s Baduy were still relatively isolated. A road was available only from Leuwidamar to the former Dutch rubber plantation at Gunung Tunggal, Pasir Kopo and Muncang and from these places to neighbouring Baduy settlements in the north it was necessary to walk about 2-3 hours (Geise, 1952: 1). Similarly, Moechtar (1975: 36), who visited several times in the early 1960s, points out that to visit Baduy from the sub-district centre, Leuwidamar, requires taking the footpath through the forest and crossing the Cisimeut river.

To buy salt, fish paste, salted fish, and fermented fish, Baduy normally came to village markets. In the 1960s, it was only permitted to sell non rice surpluses in Inner Baduy from farm houses to visiting middlemen. In addition,

Baduy were forbidden to set the price (**ngahargakeun**). More commonly, products which could not be produced locally were obtained by bartering (**ojol**) with visiting traders. These traders brought commodities such as salt, fish paste, fermented fish, soya sauce, prawn crackers, and fermented soya bean, in baskets slung across their shoulders on bamboo carrying poles. By this time a few Outer Baduy had begun to trade in palm sugar at local markets. In return, they purchased salt and salted fish.

After 1970, most Baduy, particularly Outer Baduy, were involved in the village market system, as by this time roads had improved, footpaths had been widened and reinforced with stones. Transport between villages and the subdistrict centre at Leuwidamar, as well as the district centre at Rangkasbitung, had been developed. The old village market in Ciboleger had disappeared, but a new market and some small stalls had been established along the road. This was called **pasar** Cibengkung, located in desa Cibungur to the northwest of Kanekes. In addition, to the southwest of the Baduy area, **pasar** Karoya in desa Karangnunggal had been established, being mainly visited by Inner Baduy from Cikeusik and Outer Baduy living in places such as Pamoean, Cibogo, Cisadane, Batubeulah, Ciranji, Cikulingseng and Cikadu.

On market day in Cibengkung (Monday) and Karoya (Sunday) both moslems and Baduy gathered for several hours of busy and noisy activity, beginning around 6.00 o'clock. The market also served as a place to meet Baduy from

different hamlets. By the seventies the range of goods had increased, and included cloth, knives, machetes, axes, small hoes with short handles (**kored**), sickles, finger knives, bamboo hats, baskets of various kinds, hoes, (**pacul**), pandanus leaf mats, cooking vessels, wooden bowls, salt, tobacco, gambier, salted fish, fermented fish, fish paste, vegetables and fruits. Additionally, cooked rice, side-dishes, bottled drinks, and traditional cakes were sold by vendors from stalls. The market was also an opportunity to sell surpluses of farm produce, such as palm sugar, **tiwu endog** (Saccharum edule), banana and **rinu** (Piper rindu); and for buying salt, salted fish, fermented fish, tobacco, gambier, and farming tools.

Thus, by the nineteen seventies Pasar Cibengkung had become a central institution in Baduy (particularly Outer Baduy) economy, determining, directly or indirectly, the price at which an exporter could purchase for delivery to the national market.

By the end of the 1980s, a car parking area and a footpath bordering the Baduy area to the north, in Ciboleger, were established by the district Department of Tourism. At the same time, some permanent stalls were established selling basic necessities and foodstuffs, which today are used by most Baduy instead of going to the village market. Thus, Pasar Cibengkung has been replaced and has disappeared over the last decade. It is here also that Inner Baduy bring surpluses of non rice products, which are sold to stall owners, who sell them to middlemen.

The trade in non rice products in Outer Baduy has rapidly developed, and surpluses of these are sold directly to middlemen in Ciboleger, to Outer Baduy middlemen from the same or different hamlets or non-Baduy middlemen. For instance, Inner Baduy have regularly sold bananas to middlemen in Ciboleger and the cash so obtained used to buy hulled rice, salt, salted fish, and fish paste (see chapter 4 pp:207). Inner Baduy now commonly sell to middlemen in their own settlement or in Ciboleger. However, if the transaction takes place in their own settlements, they prefer to sell at the same price as would be obtained in Ciboleger (**ngahargakeun ka harga Ciboleger**). If they cannot, they sell in Ciboleger. Increasingly, Outer Baduy have become middlemen themselves. They buy produce in their village and sell in Ciboleger or in towns, such as Rangkasbitung, Pandeglang and Serang.

It has been suggested that involvement in a market economy undermines social solidarity by creating social class differentials (e.g. Humphrey and Hughes-Jones, 1992:3; Smith, 1984:60), while 'money is associated with, and promotes, the growth of individualism and the destruction of solidarity of the communities' (Bloch and Parry, 1989:4). Hefner (1990), writing specifically of upland communities in east Java has noted that economic change may cause a reorientation of identity. He puts it this way:

> economic change is a moral as well as material process. Its impact is felt not only in the brute facts of income and production but in the reshaping of identity, aspirations, and authority (1990: 1).

Although we have seen in this thesis that some Outer Baduy do re-interpret their identity through involvement in a modern economy, many Baduy have - for the time being at least - achieved some kind of compromise. Although Baduy trade their surpluses through the market system, they have adopted a strategy which limits their involvement. They sell surpluses of non rice products, such as durian, banana, locus bean (**peuteuy**), palm sugar, and **rinu** (pepper); and traditional handicraft products, such as the **koja** and **jarog**, **kain tenun: poleng kacang herang**, **suat songket**, **suata mata**, **adu mancung** (see chapter 7 pp:431-436). But most cash obtained from trading is re-invested in farming. For example, it pays the wages of labourers and is used to buy food for the rituals which punctuate the agricultural year. In other words, the market has been used to maintain traditional swidden farming. Indeed, where Outer Baduy have made culturally inappropriate purchases (e.g. luxuries) these have been destroyed by **puun** staff during purification rituals (**pembersihan adat**).

Many Baduy, therefore, have become petty commodity producers without threatening their main subsistence base. This strategy is widely recognised as providing benefits for peasants in developing countries (Cook, 1976; Bernstein, 1979; Gavin Smith, 1979; Friedman, 1980; Carol

Smith, 1984; Gomes (1993). Thus, as Carol Smith puts it:

> Employment in petty commodity production, even as labour, does not require one to give up subsistence production. Thus most rural petty producers, where labour or 'capital', continue to provision a share of what they need for subsistence outside the market (1980: 86).

But what is unusual in the Baduy case is that this strategic compromise with the market economy is bolstered by traditional religious beliefs and practices. Thus, swidden rice is sacred and its sale is prohibited. Such rice is mainly used to fulfil the rituals of swidden farming and most is stored in rice barns (**leuit**), often for several decades. For daily home consumption, **sawah** rice is bought with money obtained from trading non-rice products or petty commodity production.

Only when there is insufficient money to buy **sawah** rice is swidden rice consumed. By contrast, non-rice subsistence crops are regularly consumed and surpluses sold. Trading non rice crop products is not prohibited. Thus, for a long time, Outer Baduy have been involved in trading palm sugar, not only in local villages but also in more distant towns. This home industry is considered acceptable, because the sugar palm is seen as an integrated part of swidden farming. From a practical point of view, it also provides flexibility, as they can provide both for home consumption and cash income. If the price of palm sugar falls on the market, it can still be used for home consumption.

In addition, Baduy have introduced cash crops such as

coffee and Albizzia. These have been integrated into swidden plots as well as fallowed land. The Albizzia, in particular, has become an important crop in the swidden system, the seeds being mixed with rice seed and continuing to grow in fallow land after the rice has been harvested. This fast-growing tree can improve soil fertility by fixing free nitrogen. When the fallowed land is recultivated, after 5 years, the Albizzia trees are cut down and the timber sold to wood buyers to provide cash income. Branches which are not sold can be used for firewood, and twigs and leaves used as humus or burned to increase nutrients in the swidden plot.

Another crop, coffee, is also integrated into traditional Baduy farming. In the past, Baduy obtained considerable money by selling coffee, because of the high price which it commanded. But although the price of coffee has fallen over the last decade, Baduy economy has not been seriously damaged because it can be redirected to home consumption.

In addition to rice, Baduy can be said to operate an agroforestry regime (King, 1974) focused on firewood producing, timber producing, fruit producing and other commercial trees. This is increasingly regarded as an appropriate development strategy for subsistence farmers and farmers involved in petty commodity production (see Gomes, 1993: 20).

2. The Baduy swiddening system: a provisional model

To simplify our understanding of Baduy interaction with their environment through the practise of swidden cultivation we can construct a model. The model suggests that Baduy swidden cultivation involves five main components: human population, food and cash income, agricultural land, forest land, and non-local market factors. The model for Inner Baduy (Figure 8.1) differs from that for Outer Baduy (Figure 8.2), in that the Inner Baduy system achieves greater closure. In other words, Inner Baduy has been less influenced by external factors, such as the market. In terms of land use (see Map 2.7 in chapter 2), Inner Baduy consists of a large area of protected mature forest, whereas in Outer Baduy mature forest is found only on the tops of hills, elsewhere having been converted to swidden fields. Moreover, by increasing population in Outer Baduy, agriculture has intensified and some commercial crops have been introduced, such as clove (in the past), coffee, and Albizzia. Another difference between Inner and Outer Baduy is that all swidden plots in Inner Baduy are located on Baduy territory. This is consistent with **pikukuh**, which prohibits practising swidden cultivation outside their area. By contrast, Outer Baduy have practised swiddening not only on their own land but also in non-Baduy areas, on land obtained by renting or sharecropping. In addition, Inner Baduy are less involved in off-farm jobs in the non-Baduy moslem area. Rather, they

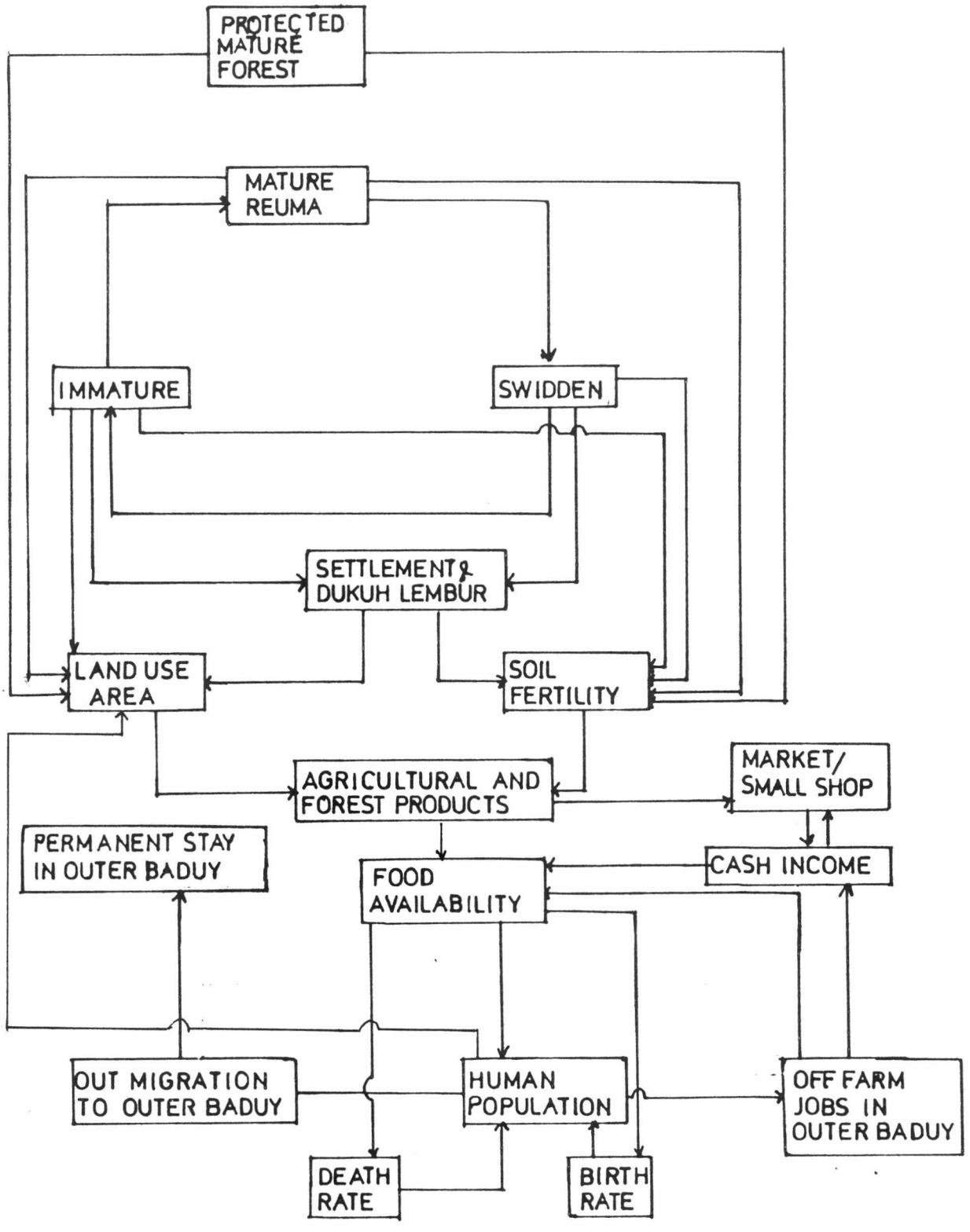

Figure 8-1. The principal causal loops in the swidden cultivation model for Inner Baduy

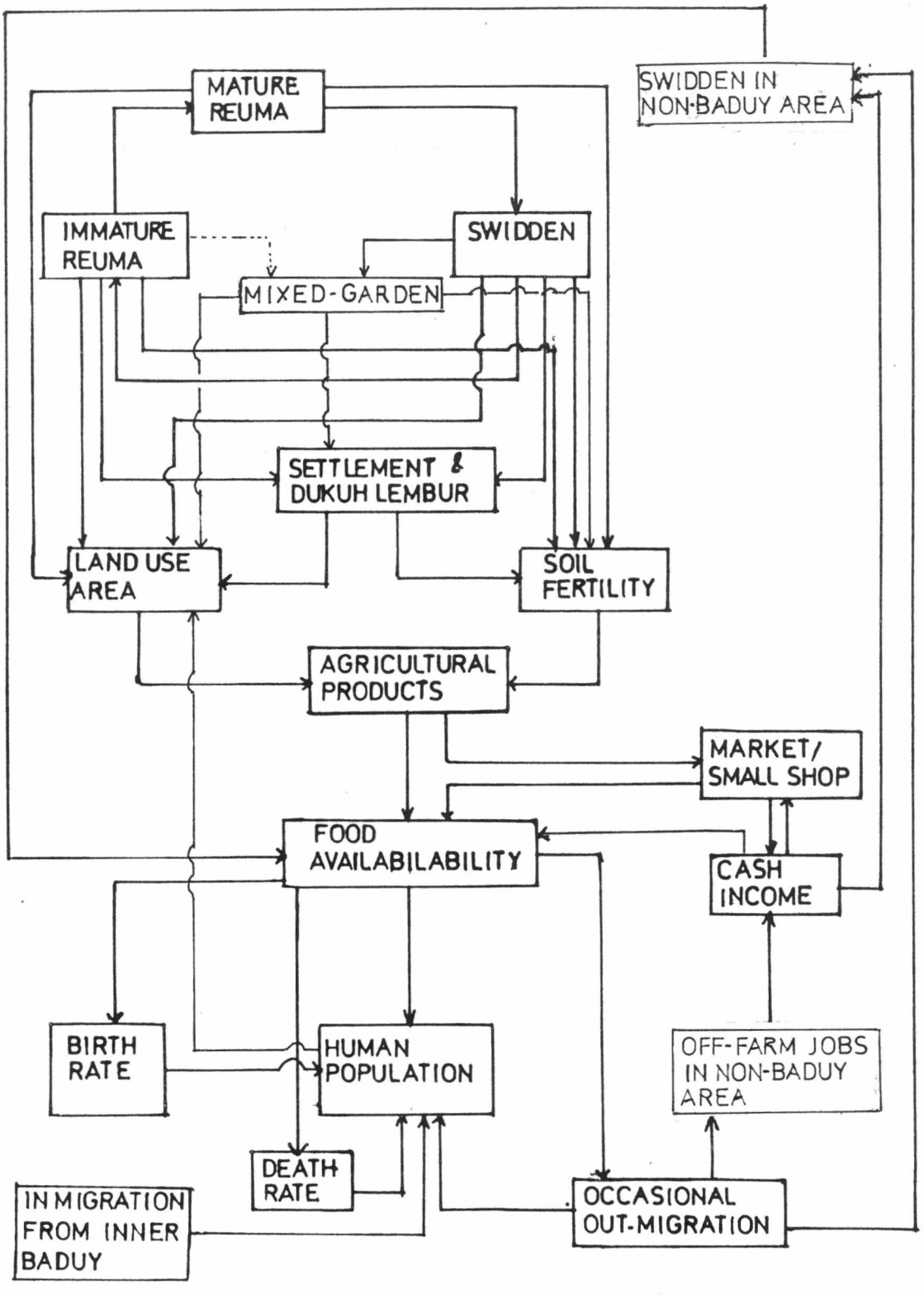

Figure 8.2. The principal causal loops in the swidden cultivation model for Outer Baduy

are involved in wage labour only in Outer Baduy. Conversely, Outer Baduy are extensively involved in trading non-rice agricultural products and engage in other off-farm jobs in their area, as well as in the neighbouring non-Baduy area.

The Inner Baduy population has changed over time. Population level is determined, in the first instance, by birth and in-migration rate. However, because Inner Baduy have maintained their traditional law effectively there is no in-migration of non-Baduy or Outer Baduy to the Inner Baduy area. Therefore, population input is determined only by birth rate. Outputs for population level, by contrast, are determined by death rate and out-migration rate. Although there is no official out-migration, some Inner Baduy who violate traditional law are exiled to Outer Baduy or the **dangka** area, returning to their hamlet after 40 days. In many cases, however, some of these people prefer to stay permanently in Outer Baduy. Thus, in practice out-migration does occur from Inner Baduy. I suggest that violations of traditional law have been stimulated by changes in the availability of food and income. In other words, through occasional out-migration, population level, carrying capacity, and a conservative traditional law in Inner Baduy have been maintained. The population of Inner Baduy increased by only 318 people between 1888 (Table 2.16) and 1994 (Table 2.17, in chapter 2), while the Outer Baduy population has increased eighteen times that of Inner Baduy, or by 5,830 people over the same period. This figure

does not include Baduy **dangka** and Outer Baduy who moved to non-Baduy spontaneously or those involved in the government settlement programme. Another advantage for Inner Baduy is that its population is only about 20 per cent of the total population of desa Kanekes, while their territory is about 57 per cent (see Map 2.7, in chapter 2). As a result, although Inner Baduy population has increased over time, population pressure on the land is lower than that in Outer Baduy. It is possible for them to continuously engage in swidden cultivation even though it requires the opening of about 0.5-1.0 hectares of fallow land annually by each household. However, as a result of a recent increase in population, the length of the fallow has been reduced, from more than 10 years in the past to less than 5 years at the present time. This has had ramifications for other components of the Inner Baduy farming system (Figure 8.1). For example, decreasing fallow land has lowered soil fertility. Consequently, rice and other annual swidden crops have also declined in output. Moreover, total food supply and cash income for each household has decreased, influencing general quality of life, including health and human fertility.

Various strategies have been developed to counteract this trend. These include the intensive harvesting non-timber forest products from the mature protected forest: mushrooms, wild animals, vegetables (bamboo shoots and edible young leafs), fruits (pepper, durian, locus bean, **asam ranji**), honey, **kawao** vines (used in the processing of

Outer Baduy palm sugar), and rattan. These products are used directly for household consumption and related purposes, or sold to middlemen or in local markets. The resulting cash is used to buy rice, salted fish, salt and other foods. In addition, Inner Baduy exchange these products with Outer Baduy, in return for goods such as palm sugar. Some Inner Baduy are also now involved in limited off-farm activities, such as weeding Outer Baduy swidden plots, and are paid in cash or goods, including sugar and rice. By developing these strategies, although a decline in fallow time has led to declining food production, overall food supply and income have been maintained.

Unlike Inner Baduy, the Outer Baduy population has changed rapidly over time, as birth, death and in-migration have altered with temporary out-migration to neighbouring areas. The in-migration rate is affected by Inner Baduy exiles who have violated traditional law and who prefer to stay in Outer Baduy. It is also affected by Baduy **dangka** people moving to Outer Baduy under pressure from non-Baduy. At the same time, the out-migration rate is only slightly and temporarily affected, as Outer Baduy move between their traditional hamlets and swiddens in the non-Baduy area. Thus, unlike Inner Baduy, the Outer Baduy population level is decreased only by death and occasional movements to the neighbouring lowland area. Since population inputs are higher than population outputs, the Outer Baduy population is growing exponentially. This has ramifications for other components in the local system, such as amount land for

swiddening and the volume of food produced (Figure 8.2). As the population increases, for instance, the length of the fallow period decreases, as does total arable land (including fallow) and the area of cultivated land available to individual households.

However, unlike in Inner Baduy, population increase in Outer Baduy is not supported by existing swidden land. As a result, most Outer Baduy have to move temporarily to neighbouring non-Baduy areas to rent or sharecrop. Moreover, by swiddening in non-Baduy areas, Outer Baduy have had intensive contact with non-Baduy as well as experience of the market system. Normally, during temporary stays in the non-Baduy area (for example, in farm shelters), they have been involved in various jobs. Thus, both men and women sell firewood or barter (**ojol**) with rice. In addition, women are involved in planting and harvesting **sawah** rice, weeding gardens, and carrying timber (rubber trees or Albizzia) from gardens to trucks. Men are commonly employed in hoeing wet rice fields, fencing gardens, carrying timber, and working as contract labourers in towns. In return, they obtain cash, which is used to buy food and other goods. In addition, fallow land (**reuma**), mixed-gardens (**kebon**), and hamlet forest (**dukuh lembur**) play an important role in providing fruits and materials to satisfy household demand and for trade (Figure 8.2). By comparison, rice and other annual crops are mainly produced from swidden plots and used mainly to fulfil various ritual requirements. Sale is prohibited.

Other Outer Baduy means of increasing income include making palm sugar, handicrafts, trading non rice products and planting cash crops, including coffee and Albizzia (see chapter 7 pp. 404-426). As a result, population pressure on land has been reduced. The normal pattern today is for swiddening on traditional fallow lands to alternate with renting land and sharecropping in the neighbouring non-Baduy area.

We can therefore see that the long-term sustainability of the Baduy cultivation system has been maintained through increasing reliance on other subsistence strategies: petty commodity production, collecting non timber products, and sharecropping and renting land in neighbouring areas. We can see a similar pattern elsewhere in Southeast Asia (Sutlive, 1978; Ellen, 1979b; Peluso, 1983; Gomes, 1993; Dove, 1996), aspects of which will be discussed further below.

3. The comparative study of sustainable swiddening

The term 'sustainability' is now widely used in discussions of economic development, particularly after the Stockholm United Nations conference on the Human Environment, held in 1972, which yielded the notion of 'sustainable development'. However, the concept is ambiguous. What does it really mean?. According to dictionary definitions, sustainability means 'to maintain', 'keep', or 'hold it going for a long time'. On this basis,

the term has been used in a narrow sense to refer to very specific aspects of a biological or physical environment, such as fish or forest stock. More broadly it has been used to refer to entire biological, physical, socio-economic and cultural systems (Dixon and Fallon, 1989). Thus, definitions of what constitutes a sustainable system have been developed in various contexts. For example, in the context of the World Conservation Strategy (IUCN, 1980, cited in Barbier, 1987:101), sustainable development:

> emphasizes the maintenance of essential ecological processes and life-support systems, the preservation of genetic diversity, and the sustainable utilization of species and ecosystems, with overall aim of achieving sustainable development.

In the context of the new approach of economic development, according to Barbier (1987: 104) the general objective of sustainable development:

> involves a process of trade-offs among the various goals of three systems all the time: the biological systems (genetic diversity, resilience, biological productivity), economic systems (satisfying basic needs, equity-enhancing, increasing useful goods and services), and social system (cultural diversity, institutional sustainability, social justice and participation).

Emphasizing more the socio-economic and cultural context, Chambers suggests the notion of 'sustainable livelihood security'. He approaches this as follows:

> **Livelihood** is defined as adequate stock and flows of food and cash to meet basic needs. **Security** refers to secure ownership of, or access to, resources and income-earning activities, including reserves and assets to offset risk, ease shock and meet contingencies. **Sustainable** refers to the maintenance or enhancement of resources productivity on a long-term basis. A household may be enabled to gain sustainable livelihood security in many ways-through ownership of land, livestock or trees, right to grazing, fishing, hunting or gathering, through stable employment with adequate remuneration; or through varied repertoires activity (Chambers, 1986: 9-10).

A more technical definition of sustainability developed in the context of agroecosystems work (Conway, cited in Barbier, 1987:105) is:

> the ability of a system to maintain its productivity when subject to stress or shock, where the stress is a regular, sometimes continuous, relatively small and predictable disturbance, for example the effect of growing soil salinity or indebtedness, and the shock is an irregular, infrequent, relatively large and unpredictable disturbance, such as is caused by a rare drought or flood or a new pest.

Finally, a more recent attempt at a broader definition of sustainability in agricultural systems is that agriculture is considered to be sustainable if it is: "ecologically sound, economically viable, socially just, humane, and adaptable" (Reintjes et al, 1992: 2-3)[1].

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[1]). "**Ecologically sound**, which means that the quality of natural resources is maintained and the vitality of the entire agroecosystem-from humans, crops and animals to soil organisms-is enhanced. **Economically viable**, which means that farmers can

In all of these definitions we can see that bio-physical, economic and socio-cultural aspects are strongly connected, suggesting that sustainable agricultural systems can only be identified by considering a number of different dimensions: economic, ecological, social, cultural and developmental.

Swidden cultivation as an agricultural system is found in a variety of historical, environmental and socio-economic situations, in many regions of the tropical and sub-tropical world, such as Africa, Central and South America, Southeast Asia and Oceania (Okigbo, 1984:1). It has been suggested that it has survived over the long-term because it is accompanied by various ecological, economic, social and cultural features, which are adaptive to local conditions. These include subsidies through non agricultural resources, the provision of security through ownership of land and other natural resources, and the provision of mechanisms which keep the population within carrying capacity.

Loss of rights to land and non-domesticated resources is undoubtedly a major problem for swidden farmers. It

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produce enough for self-sufficiency and/or income, and gain sufficient returns to warrant the labour and costs involved. **Economic viability** is measured not only in terms of direct farm produce (yield) but also in terms of functions such as conversing resources and minimising risks. **Socially just**, which means that resources and power are distributed in such a way that the basic needs of all members of society are met and their rights to land use, adequate capital, technical assistance and market opportunities are assured. **Humane**, which means that all forms of life (plant, animal, human) are respected. And **Adaptable**, which means that rural communities are capable of adjusting to the constantly changing conditions for farming: population growth, policies, market demand etc" (Reintjes et al, 1992:-3).

tends also to de-motivate them to maintain the environment. For example, according to Berkes et al (1989: 92), the nationalization of forest land in Nepal in 1959 did not solve the problem of forest destruction. The situation was only ameliorated by the re-creation of communal management at the local level. Berkes et al mention also that forest destruction in Thailand occurs because villagers do not have rights to land. In the strict **de jure** sense forest land in Thailand cannot be owned by local people (see also Sophon Ratanakhon, 1978). Local people, therefore, have little incentive to conserve and every incentive to cut down trees before someone else does (Berkes et al 1989: 93).

Another way in which swidden farmers maintain the sustainability of the their system is to adapt and integrate the techniques to meet local conditions. Practising swidden cultivation of the Geertz ideal type (see Geertz, 1963) provides benefits: in terms of provision of a sustained yield of diverse food crops throughout year, an avoidance of failure of harvest and pest attacks, reduction of weeds, efficient used of energy, maintenance of soil nutrients, and conservation of genetic diversity. But sustainable swidden cultivation in different regions can often only be maintained on a long term basis because it is practised in conjunction with other subsistence techniques, including extraction of non-swidden starch staples, hunting, and fishing (e.g. Ellen 1975: 137-143; Persoon 1992: 189; Dove 1983:93-4; Rappaport 1971: 118;

Sutlive 1978, 87, Nations and High 1980: 19; and Pelzer 1978: 276-282).

Non-swidden crops tend to be planted by swidden farmers when favourable locations and suitable factors combine. In Kalimantan (Dove, 1983, Pelzer, 1978), as well as in Sumatra (personal experience in Talang Mamak, Siberida, Riau, 1992), growing rubber in swidden fields tends to be very flexible. For example, if swidden cultivators fail to get sufficiently high yields or when there is harvest failure in the swidden field due to pests, long dry periods, and other factors, they compensate by intensive rubber tapping. However, if the rubber price on the world market decreases the rubber trees are abandoned. They can be tapped again if the rubber price increases. Thus, rubber trees are used as a long term buffer against subsistence failure, or can be harvested when market condition are favourable. In Sarawak, pepper and rubber are commonly planted and sold by Iban. These activities have led to diversification of income from resources in greater demand than forest products and participation in the trade of market towns (Sutlive, 1978: 115). Similarly, many swidden farmers in Northern Thailand and Burma, in order to support the subsistence economy grow opium. The high price of this crop makes it attractive despite being illegal (see Sanga Sabhasri, 1978). The similarities between these cases and the reliance on Albizzia and rubber by the Baduy will be clear.

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4. The historical roots of official representations of swiddening in West Java

It has become conventional to distinguish two opposed types of agricultural system in Indonesia: wet rice farming (**sawah**) and swiddening (**ladang** or **huma** in Sundanese). Though over simplified, this dichotomy has been widely discussed, based largely on the work of Geertz (1963). According to Geertz, it has been generally accepted that **sawah** is associated with positive stereotypes. By contrast, **ladang** is associated with negative stereotypes. Geertz quotes Gourou and Pelzer as follows:

> (1) it is practised on very poor tropical soils; (2) it represents an elementary agricultural technique which utilizes no tool except the axe; (3) it is marked by a low density of population; (4) it involves a low level of consumption; and .... a lack of tillage, less labour input than other methods of cultivation, the non utilization of draft animals and manuring, and the absence of a concept of private landownership (1963: 15).

The negative evaluation of swidden farming is reflected in the attitudes of governments and states. In order to understand this attitude, we have to assess mystical aspects of traditional Javanese and Sundanese perception of forest, the use made of forest by states, and the difficulties states have experienced in controlling and taxing swidden farming.

It has been argued by some scholars (e.g. Pigeaud, 1962; Lombard, 1983; Dove, 1985a; Daldjoeni 1996), that

Javanese aristocracies have had a negative image on forest. Forest land is largely considered to be dangerous place, inhabited by giants and evil spirits. As a result, to conquer bad giants and evil spirits, forest must be cleared, cultivated, and 'civilized'. Once wilderness was domesticated it could be developed for various state purposes and became part of the 'centre'. Consequently, forest has rarely been appreciated positively in Javanese culture. For example, this is reflected in ancient literature, including the **Nagarakertaga**, **Sri Tanjung**, **Sutasoma**, and **Bima Suci**, stories of **wayang** (traditional puppet plays), and stories of contemporary comic **silat** (traditional self-defense arts)[Lombard, 1983: 266-274]. These stories always portray a bogeyman or woman who fights with robbers, demons and various evil forest beings, ending with the heroes conquering the external or internal bogeyman or woman of the forest and returning triumphant to the ordered and civilized realm. Thus, there is a fundamental cultural contrast between forest and open low land area.

Moreover, spurred on by a desire to conquer 'dangerous wild forest lands', ancient states frequently expanded their territory. In Javanese, **babad** means both 'cutting' grass, shrubs and tress, and 'history' or 'chronicle of the kingdom's history'. For example, there is the famous **Babad Tanah Jawi**, telling the story of the Javanese Kingdoms from ancient times. According to this account the history of Majapahit begins with the opening of Trik forest (**babad**

alas Trik) in Mojokerto, East Java, while the history of Mataram began with opening of Mentaok forest (**babad alas Mentaok**) in Kotagede, Central Java (Daldjoeni, 1996: 5). This indicates an ideological imperative to transform the non-domesticated landscape to one which better serves the needs of states, including making them controllable. Thus, in seventh and tenth century Central Java, and between the thirteenth and fifteenth centuries in East Java, particularly during the Majapahit (1293-1478) period, the open lowland areas provided the court centres of the great states (Donner, 1987: 59), called **kejawen** by Geertz (1963).

Traditionally, land was owned by the king or **raja** who in the Hindu tradition was considered to be descended from the gods. The income required to support the royal households and other expenditure, such as development of temples, rituals and irrigation, was derived from the agricultural sector, particularly from irrigated rice field (**sawah**), whether directly through the labour of bondsmen, or indirectly through taxes on freemen (Onghokham, 1984: 5; Dove, 1985: 12; Hoadley, 1994: 33). In other words, **sawah** had an important role in providing state income (Pigeaud, 1962; Van der Meer, 1979; Dove, 1985).

To encourage village people to open-up and domesticate 'wilderness forest', they were given incentives, such as tax exceptions. As a result, lands came within the orbit of the state (Lombard, 1983: 266). However, there was a paradox associated with cultivating forest land. On the one hand, farmers were given incentives to open forest; on the

other hand, the swiddeners who cultivated forests were considered to be an 'inferior' community. Practically, although swiddeners have had a negative stereotype, many people have historically moved to the forest to escape the control of the state. Dove (1985a: 13), for instance, points out that prior to the fourteenth century in Central and East Java, many people who migrated from the lowland to the forest 'wilderness' have seen it as an attractive option, compared with more intensive irrigated rice agriculture.

During the Hindu period **sawah** farmers (**cacah**) were mainly divided into two groups: **sikep** (land owners) and **numpang** (landless people, working as tenants and living with **sikep** households) or **bujang** (unmarried **numpang**, or those without families). These farmers were obliged to render public services, such as irrigation construction, opening of new **sawah**, and levies for warfare. To control **cacah** the king was usually assisted by a class of **priyayi** (**yayi**=younger king)[Onghokham, 1984: 5]. In return, the **priyayi** were provided with land or apanage (**lungguh**) measured in number of **cacah** controlled instead of area. This, I suggest, formed the basis of rural social stratification in **sawah** areas. Therefore, I disagree with Geertz (1963: 97)[2] when he claims that wet rice farmers achieved a high degree of social and economic homogeneity

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[2]). Some critics have objected to the agricultural involution thesis because it is supported by so little empirical evidence for homogenous traditional villages and egalitarian ideology (see White, 1973; Collier, 1977; Stoler, 1977; Elson, 1978; Alexander and Alexander, 1982).

through 'shared poverty' and 'involution'. This is because for centuries social structure has been closely linked to access to land. However, the Geertz argument works better when applied to swiddening areas, because swidden farmers were less controlled by the state. They lived beyond the cultural centre, in forest areas regarded as wilderness. Each individual household had more-or-less the same access to land, mainly determined by number of working members in a household. Thus, unlike **sawah**, social stratification based on patron-clientage did not emerge. The arrangement was altogether more egalitarian. In some cases, however, swidden farming was not trapped into a spiralling 'involution', but was transformed into other farming systems by selecting and/or introducing more commercial crops, including **talun**, garden, and mixed garden systems.

From the early fifteenth-century, the Hindu-Buddhist Kingdoms disappeared and were replaced by islamic states. Like their Hindu-Buddhist predecessors, the main income of islamic states was derived from irrigated wet rice farming. Forests were continuously both extracted and converted. Forest provided various functions for the state, including timber for housing, storehouses, and hunting grounds for kings and other elites.

Kings often used forest to hunt game, villagers providing pasture by cutting forest land. In addition, villagers provided rice and other foods for hunting trips (Pigeaud, 1962; Peluso, 1992: 35). Due to the intensification of hunting, and decreasing game animal

populations, some hunting reserve forest blocks, located outside the core area (**krapyak**), were established, from the seventeenth century onwards (Lombard, 1983: 264).

Cutting forest and establishing open areas was continuously undertaken by the islamic states. Like his Hindu-Buddhist predessors, the king was considered to be the only means of linking the micro-cosmos of man with the macro-cosmos of the gods (Moertono, 1981: 35).The positions and functions in the king's administration were filled by **punggawas** (officials) or **abdidalem** (the king servants), with the relationship between them called **djumuhing kawula gusti** (the emerging of servant and master), the main objective being ultimate one-ness (**manunggal**) with God (ibid, 1981: 93). Thus, the symbiosis between **desa** and **kraton** was seen as of mutual benefit, but the advantage lay emphatically with the **kraton**. The villagers looked to the court for maintenance and extension of irrigation works and other public works, for charisma, and food storage. Under extreme conditions the farmers could emigrate to another similar kingdom or to the wild areas where swidden farming was practised. But these community groups were disliked by the state (Sievers, 1974: 85).

The territories controlled by the islamic states in many places expanded into neighbouring areas especially after Senopati's rule of Mataram (1575-1601). For instance, after 1619 Cirebon in West Java, known as an important coastal trading centre since 1513, was directly controlled by Mataram (Ekadjati, 1984: 90, 104). Thus, the expansion

of Mataram to the Cirebon-Priangan area of West Java (the Sunda area), where the main subsistence of farmers had been swiddening (Haan, 1910), led to increasing penetration of wet rice cultivation. This was particularly in the lowland north coastal area, where **sawah** was established to increase the income of the sultanate. At the same time, in the extreme west of West Java, in Banten, **sawah** had also been introduced following the establishment of the Sultanate there in 1520.

Unlike farmers of **sawah**, swiddeners who cultivated upland areas were not controlled easily by the state. The upland farmers of Priangan and South Banten, including the Baduy, were able to freely practise swidden cultivation. They had a more egalitarian social system and were under less control by the sultan, because they lived in the frontier areas. They were regarded as having no fixed land ownership system. Scheltema notes that:

> **Huma** land couldn't be sold, leased, pawned or inherited and land ownership was relinquished if farmers stopped cultivating, and such land became **jami**(abundant land). ..... Each household cultivated rice in **huma** block of about 0.5-1 **bau**. Renting and sharecropping was not recognised because each individual household could obtain land freely..... (my translation after Scheltema 1931 [1985]: 189-190).

Consequently, the sultanate's perception of swidden farmers was similar to that of the pre-islamic kingdom, portraying it through negative stereotypes. For example, people living in the forests were called **orang pinggir**

('frontier people'). Among them were recognised, **Orang Kalang**, those who had been moved by the Sultanate of Mataram from the forests in the east and central Java to the lowlands. However, although they had been moved and islamised by the islamic state, they continued to be portrayed through negative stereotypes called **orang pinggir**, and having a special duty to build houses for aristocracies (Lombard, 1983: 270).

Even before the Dutch colonial period in Java, the Dutch East India Company (**VOC**) had strongly influenced the sultanates. For instance, to establish their power base, the VOC made alliances with anti-Mataram rebels (Hefner, 1990: 37). The VOC helped them with troops, and in return the rebels had to sell agricultural products, such as rice and teak, at prices determined by the VOC. As a result, by the late sixteenth century, the VOC, based at Batavia (Jakarta today), dominated the trading ports of north coast Java and competed for treaties with the sultanates of Mataram, Demak, Cirebon and Banten. The formal entrance of the VOC onto the stage of Cirebon-Priangan history was marked by a series of treaties between the VOC and the region's rulers. The first was signed on 30 April 1681, and from 1685 the VOC exercised governmental authority over the Priangan region (Hoadley, 1994: 1).

Coffee cultivation was introduced into Java by the VOC in the last decade of the seventeenth century. It become widespread on the island, particularly in west Java, and by the 1720s coffee had proved to be a lucrative product for

the European market (Fernando and Malley, 1990: 172). At this time, the economy of swidden farmers in West Java had already been influenced by the Company and the local state. Fernando and Malley put it this way:

> There had been a massive transfer of land and labour into coffee production. But this did not have the transforming effect that it might have had, because the regents took less and less interest in coffee cultivation when the Dutch unpredictably reduced purchase price in order to attempt to balance production and market conditions, while the **cacah**, who received no cash recompense from the regents for their coffee-raising efforts, also became indifferent to cultivation. In social terms, however, the need to produce coffee in such quantities helped to bring together various **cacah** and compelled them to establish more settled communities, working both coffee plantations and permanent fields-either dry **tegalan** or terraced wet-rice sawah-for subsistence crops in Cirebon's hinterland (1990: 173).

Similarly, Adiwilaga writes:

> Since the main subsistence of farmers in Priangan had been recognised as swiddening, farmers were asked by **Bupati** to plant coffee bushes in the forests to provide revenue for the Dutch, the so-called the **Preanger stelsel**. The coffee bushes had to be planted with rice in the swidden fields. At harvesting time, the coffee had to be sold to the Dutch at a price determined by them. The **Preangerstelsel** was abolished in 1921, four decades after abolishing the cultivation system (**cultuurstelsel**) in general. Eventually, to declare their freedom from forced state cultivation, the coffee bushes were burned by the farmers (my translation after Adiwilaga 1975: 68).

Thus, both through the VOC, and later through the colonial government, the Dutch were able to control the rural economy of Java by enforcing the cultivation of commercial crops, such as coffee, through the **Preanger**

stelsel (1720-1921), and coffee, sugar cane, tea, pepper, chincona and cinnamon through the 'cultivation system' (1830-1870). This was achieved through collaboration with local officials, such as **bupati** and **asisten residen.** At that time, agricultural land was claimed by the state, and individual land ownership was abolished. The officials were provided with a monthly salary instead of land. As a result, the officials and **priyayi** lost access to land and their bondsmen, and therefore became more dependent on Dutch patronage (Onghokham, 1984:17).

Under the Dutch government, **sawah** continued to support state incomes. By contrast, although the swidden lands had been influenced by the state, swiddeners had more flexibility compared with farmers of **sawah.** This re-enforced the negative stereotypes of swidden as 'waste land' and the swiddening system as a 'robber economy' (Geertz, 1963). Indeed, under the pressures of the colonial state, a kind of dual agricultural economy developed in Java, with both **sawah** and **ladang** providing both a staple food (rice) and a commercial crop (e.g. sugar cane in **sawah** and coffee on **ladang**). Geertz has pointed to the consequences of this arrangement:

> In the mutualistic relationship, the expansion of one side, sugar cultivation, brings with it the expansion of the other, wet rice growing. The more sugar can be grown; and the more people-a seasonal, readily available, resident labour force (a sort of part-time proletariat)-supported by these terraces during the non sugar portion of the cycle, can grow sugar (1963:56-57).

By contrast, he describes the situation with **ladang:**

> On 'waste' land, coffee's fortunes were only indirectly linked with those of peasant subsistence agriculture. Coffee did not demand the periodic efforts of great holders of peasant-coolies organized ant-like into short, intensive 'campaigns', but the steady, pains-taking application of at least semiskilled labour, and so it was cultivated by labour force less massive and less fluctuating than the one employed in sugar (1963: 58-59).

In the absence of taxation, including labour on public works (**herendiensten**), and labour for public officials (**pantjendiensten**), swiddeners had been continuously portrayed negatively by the state. In addition, to protect forest exploited by villagers, laws were introduced. For instance, in 1865 forestry law was formally established in Java which along with the agrarian law of 1870, declared all un-claimed forest lands as the domain of the state. Another law, of 1875, turned various farming activities, such as forest cutting, forest damage, grazing cattle in young stands, setting fires in the forest, and transporting wood without prior payment, into criminal actions (Peluso, 1992: 50, 54). In addition, some special regulations to combat swiddeners were also introduced. Eventually, from 1896, practising swidden cultivation was formally banned by the government (Kools, 1935). By contrast, however, most natural forest in the northern area of central and east Java, such as Blora, Bojonegoro, and Gunung Sewu were opened and replaced by teak forest with labour being obtained from local villages, under the **tumpang sari** system. Under the **tumpang sari** system, farmers were only

permitted to plant agricultural crops between the rows of young teak trees on reforestation plots in one or two years (Peluso, 1992: 55-56). Because the local people were not allowed to 'enter forest', some local agrarian protest movements rose. **Gerakan Samin**, which rejected taxes, fines, wages, and rent, for example, arose in the strictly controlled teak forest of Randu Blatung, East Java in 1890 (ibid, 1992:55-71). Similarly, the Dutch attempt to control **huma** in the Banten region failed because the law was so strongly rejected by swidden farmers themselves (Kools, 1935). Later, the strong protest of Bantenese against Dutch government policy appeared through the peasant revolt of 1888 (Kartodirjo, 1966).

These policies indicated an ambivalent attitude to the control of forest resources. On the one hand, traditional swiddening was rejected for its apparent destructive and inefficient characteristics (a 'robber economy' or **roofbouw**); while on the other hand the state aggressively opened-up forest to plant teak and to cultivate other commercial crops. Coffee cultivation in Java and Sumatra was a case in point. In Cirebon-Priangan some thousands of hectares of forest were opened to coffee cultivation involving an average of some 24,500 households a year in 1850, increasing to 36,200 in the late 1860s, and to 61,250 households in the late 1870s, leading to average coffee production of almost 28,400 **picul** per year in the late 1870s (Fernando and O'Malley, 1990: 182, 184). Another commercial crop, tobacco, had been established by the Dutch

in Deli, the eastern part of what is today north Sumatra province. This tobacco gardening had been initiated by Jacobus Nienhuys and was developed by Dutch traders using a bondsperson system (**koeli kontrak**) based on imported Javanese labour. It was abolished in the late 1870s. This form of cultivation caused some thousand hectares of forest destruction, undermining soil fertility, and damaging the economy of the **cacah** community (Breman, 1997).

Prejudice against swidden cultivators continued in the post colonial period. The similarity between colonial and post colonial policies has been pointed out by Dove:

> Based on the government's tendency to view all forested land as **tanah negara**, 'federal lands', these policies emphasize that such land should be managed (under the aegis of the national ministry of forestry) for export-oriented timber production and, to a lesser extent, for protection of watersheds, conservation of nature, and for the socio-economic development of the local people. In the eyes of the government, arguably the one factor most inimical to the attainment of these goals is the practice of swidden agriculture, which is the dominant system of agriculture in Indonesia's Outer Islands in terms of both the amount of land and number of people involved.
> The government's criticism of swidden agriculture covers a gamut of concerns, involving its effects not only on the environment in which it is practised but also the people who carry it out. The government speaks unfavourably of the swidden cultivators as still living secara **berpindah-pindah** and **terpencar-pencar**, 'in a nomadic and scattered manner'. It regards them as **terasing** 'the most foreign' and **terbelakang** 'the most backward', and their system of agriculture as technologically poor and intellectually unprepossessing. Indeed, there is even some suggestion that swidden cultivation does not represent a system of agriculture at all (1985: 2).

I suggest that official perceptions of swidden cultivation have been strongly influenced by colonial views and by traditional lowland views of upland agriculture, and that they lack supporting scientific data, and neglect the practical realities of farming in these areas.

Conklin (1957:31) distinguishes two types of swidden cultivation: integrated and partial systems. The integrated system is one where culture and social organisation are intimately connected with agriculture. In other words, people conduct swiddening as a 'way of life'. In Southeast Asia, such populations include the Iban in Sarawak (Freeman, 1970), the Hanunoo in the Philippines (Conklin, 1957), the Nuaulu in Seram (Ellen, 1978), the hill peoples of Northern Thailand (Kundstadter et al, 1978), and the Kantu in West Kalimantan (Dove, 1985a). By contrast, a partial system, is one where a major portion of agricultural production is obtained through some other technique, such as wet rice farming. Examples include, Thai lowland farmers who have expanded land to upland forest areas (Granstaff, 1980: 2) and Bugis migrants who have converted lowland dipterocarp forest to pepper plantations along the main Samarinda and Balikpapan Road in East Kalimantan (Vayda and Sahur, 1985: 93-94).

Earlier studies of swidden cultivation in different parts of Southeast Asia have demonstrated that the ecological and social life of swiddeners is deeply embedded in their agricultural practises (Geddes, 1954; Freeman, 1970; Conklin, 1957, 1969; Ellen, 1978, and Dove, 1985a).

And such 'embedded' systems involved extensive knowledge of local environments necessary for the effective management of long-term sustainability. By contrast, partial swiddeners often lack knowledge of the local environment and are mainly concerned to maximise short-term outputs. For example, Vayda and Sahur write that:

> The major aim of the pepper farmers is the profitable production of crops, which is not seen by the migrants as depending in either the short or long run on maintenance of particular plots of land. It is important to keep in mind the difference between Bugis migrants and those stereotypical peasant farmers who, depend on local resources and having no appreciable mobility, try to avoid destroying those resources and, in the process, destroying themselves (1985: 105-106).

The distinctions between integral and partial systems of swidden cultivation is, however, sometimes indistinct. Commercial logging, the transmigration programme, and other development activities, have all influenced integral swiddeners in Indonesia, and in some cases they have become partial swiddeners. As a result, traditional values are radically changed. For example, Kartawinata and Vayda (1983) describe how traditional swidden farmers in east Kalimantan have adopted chain saws and sell logs instead of burning them for fertilising swidden fields.

Following some failures of the green revolution programme in the 1960s and 1970s -mainly linked to over specialisation and short-termism- there has been much more emphasis on sustainable agriculture (Conway and Barbier, 1990: 11). Both academics and the government have noted the

disadvantages of agricultural regimes which focus on single commodities, which are primarily market orientated, disregard the environment, neglect local knowledge and resources, and are gender-biased. There is now more emphasis on developing 'low-external-input and sustainable agriculture' (LEISA) [Reintjes et al, 1992: 10-11). Such new approaches, according to Reintjes et al, seek:

> Use of locally available resources by combining the different components of the farm systems, i.e. plants, animals, water, climate and people, so that they complement each other and have greater possible synergetic effect; and seeks ways of using external inputs only to the extent that they are needed to provide elements that are deficient in the ecosystem and to enhance available biological, physical and human resources. In using external inputs, attention is given mainly to maximum detrimental impact on the environment (1992: 21).

LEISA, therefore, places renewed value on aspects of indigenous farming systems, such as forest gardens and integral swiddening, very low-external inputs, maintenance of high crop diversity (thereby protecting genepools), and involving a wider range of export crops -such as rattan, damar, coffee, rubber, pepper, coconut and nutmeg- to avoid susceptibility to world market price fluctuations (Pelzer, 1971: 133; Dove, 1996: 44).

In many cases, swiddening has not collapsed but has been transformed through the application of new technologies in order to achieve increased appropriate food production (Boserup, 1965). The **talun-kebun** system in West

Java is a case in point. Although West Java has a very high population density today, people are still able to practise this form of semi-swidden cultivation (**talun-kebun**). In practising the **talun-kebun** system, people continue to practise a shifting pattern of cultivation, **talun** being the equivalent to the fallow period (i.e. the forest stage) and **kebun** being equivalent to the garden in cultivation, as shown in figure 8.3. (Soemarwoto, 1985: 207-208). The **talun-kebun** system, however, has been adapted and modified to the new environments, in ecological, socioeconomic and cultural terms. For example, people practising **talun-kebun** by felling, burning and moving fields each year in Albizzia and/or bamboo forest have selected and introduced new crops in order to respond to market forces and to fulfil household needs. In Albizzia and/or bamboo **talun-kebun**, other perennial tree crops and annual crops, such as chillies, eggplants, beans, tobacco, cucumber, and tomatoes are integrated. Albizzia and annual crops, including rice are well suited to improving household income and soil fertility, as we have seen from the Baduy case (chapter 7, pp: 423-426). In the **talun-kebun** system, bamboo and beans are also well integrated because bamboo can be used for soil protection, fencing, building materials, fire wood, and climbing beans, which in turn are sold or consumed in the household. Moreover, some waste products have also been re-cycled, such as animal dung and kitchen waste. **Talun-kebun**, therefore, is a modification of the traditional swiddening system to suit new conditions

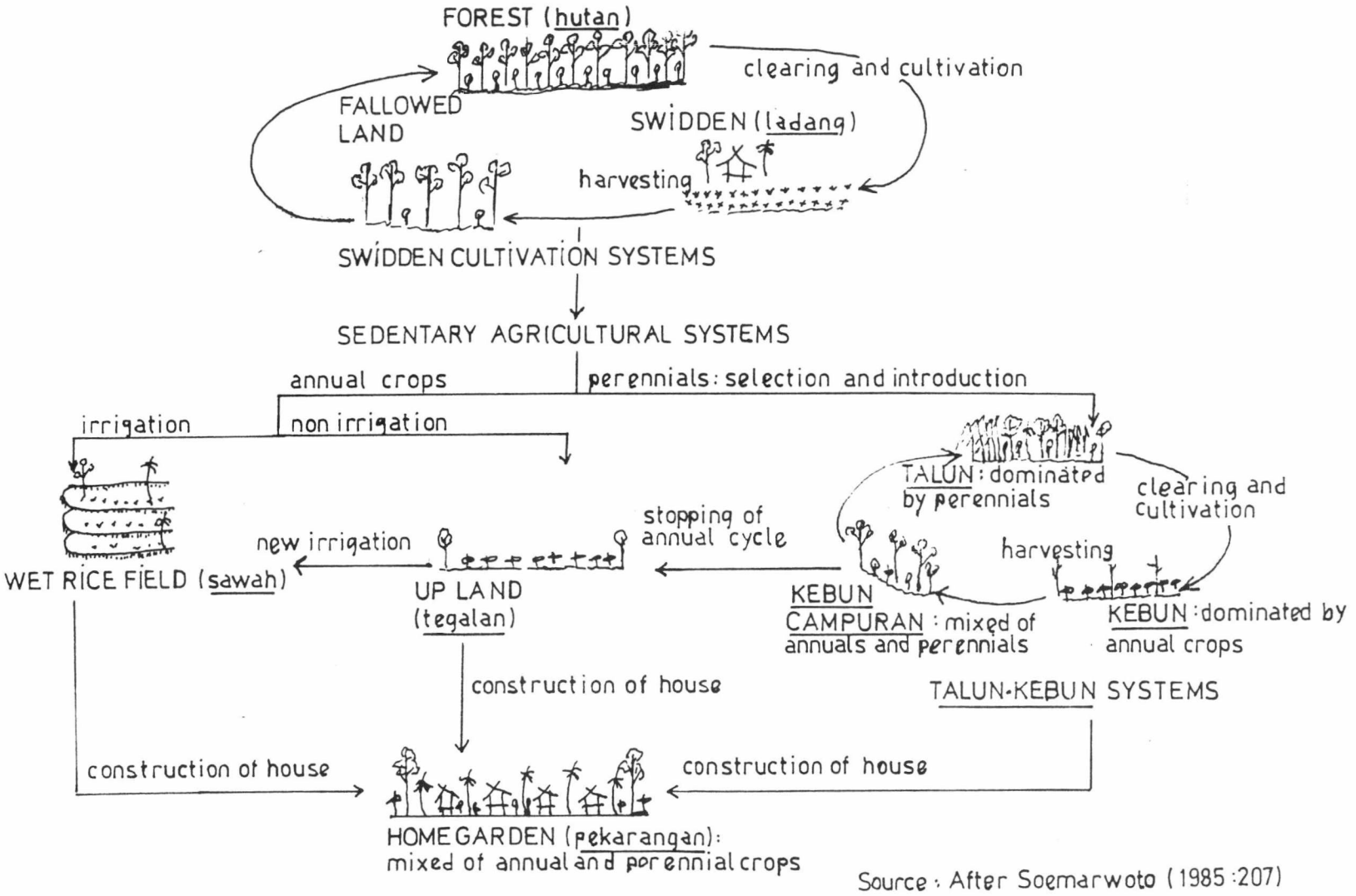

Figure 8.3. Evolution of swidden cultivation in Java

(see Figure 8.3).

5. The Baduy and government development programmes

Finally, we must return to the Baduy case, and examine, in the context of our discussion of agricultural change in West Java, the comparative study of swidden systems, and official attitudes towards them, the consequences of recent government development programmes.

Since 1966, the Indonesian New Order (**Orde Baru**) government has systematically formulated a national development programme called **Repelita** (an acronym derived from **Rencana Pembangunan Lima Tahun**, or Five-Year Development plan), which has been targeted on rural areas [3]. It has been suggested [4] that **Repelita** is similar to programmes in other developing countries, emphasizing

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[3]). The Indonesian government has initiated a wide range of village development programmes, including: rural electricity (**listrik masuk desa**); a literacy campaign, popularly known **kejar** derived from **bekerja** (to work) and **belajar** (to learn); a family planning (**KB=Keluarga Berencana masuk desa**); family welfare programmes directed especially at village women (**PKK=Pembinaan Kesejahteraan Keluarga** or Family Welfare); village cooperatives (**KUD=Koperasi Unit Desa** or Village Unit Cooperative); intensification of rice production through **BIMAS** (**BIMAS=Bimbingan masyarakat**= mass guidance, including capital subsidies, introduction of chemical fertilizers and pesticides, and rehabilitation and development of irrigation system); and introduction of village newspapers (**Koran masuk desa**) [see Soemardjan and Breazeale, 1993].

[4]). The Indonesian development programmes under the New Order (**Orde Baru**) have been discussed by, among others: Collier et al (1973); Alexander and Alexander (1982); Hardjono (1983); Hart (1986: 50-76); Husken (1989: 303); Husken and White (1989: 247-259); Hefner (1990: 12-15); Suparlan (1993b: ix).

mainly 'macro economic growth' following the model developed by Rostow (Rostow, 1962). Such a model is fundamentally different from an 'economic development' approach. The first is usually identified by reference to some quantifiable index, such as increase in per capita income or Gross National Product (GNP), while the second model emphasizes other welfare goals, including development of human resources (education), reduction of poverty and employment, and diminution of inequality (Long, 1977: 3) to achieve sustainable social livelihoods (Chambers, 1986: 9-10).

In many areas, programmes which are part of **Repelita** have had a profound affect on village economy and society (Collier et al 1973; White and Wiradi, 1989; Husken and White, 1989; Nordholt, 1991; Selo Soemardjan and Breazeale, 1993). For instance, due to increasing agricultural productivity brought about by using 'Green revolution' techniques, with respect to the cultivation of wet rice (**sawah**), social differentiation has increased, ending the process which Geertz has called 'involution', and even leading to the beginnings of rural capitalism in Java. Thus, the conventional view described by Geertz (1963), that rural Java is a relatively egalitarian and homogenous society may no longer be valid (Husken and White, 1989: 236).

Given this context, it is perhaps surprising that a tiny Sundanese group, the Baduy, have been able to resist modernisation and have managed to preserve a distinctive

identity. They remain relatively egalitarian, with little social and economic differentiation. The social and economic impact of urban derived modernisation has been filtered through their **adat** (**pikukuh**), even though they are themselves not far from urban centres, and only some 120 km from Jakarta. The Baduy comprise only one desa, of a total of 300 desa registered in **kabupaten** Lebak, and amount to less than 2.5 per cent of the **kabupaten** or district population (6,440 of a total of 285,966 people) [BPS Lebak, 1990:7].

The importance for the Baduy of maintaining their cultural identity and the respect accorded to this identity in official circles is well reflected in a remarkable meeting in 1985 between President Suharto, recognised as **Bapak Pembangunan** or Father of National Development, and the now deceased Jaro Nakiwin, recognised as the official representative of the Baduy. In general terms, the Baduy are widely regarded by outsiders as a **masyarakat terasing** (isolated community), a **masyarakat terbelakang** (backward community) and a **masyarakat animis** (animist community), all rather derogatory terms. At the aforesaid meeting, Jaro Nakiwin, who wore traditional Baduy dress and was barefoot, announced that the Baduy were not prepared to face the modern world, and asked the President for protection against outside interference. Persoon, quotes him as follows:

> Please, leave us alone, we don't want to be developed. The President in reply promised this protection but urged Nakiwin to join the national

> development programme. Nakiwin repeated his request: "Please, do not disturb us!", adding that it was against their **adat** to change their traditional way of life (Persoon, 1989: 1).

This meeting was widely reported by national television and newspapers. For example, the welcome given for Jaro Nakiwin by President Suharto in the **Istana Negara** in Jakarta was televised and their photograph appeared in local and national newspapers.

Today, although the Indonesian government has continued its various efforts 'to modernise' the Baduy, the programmes are still rejected. We can illustrate this with two examples:

> 1). At end of 1995, It was planned to give the Baduy community 4 television sets, complete with big parabolic antenna, to watch national and international television programmes, on the occasion of the visit of the **Panglima Kodam III, Siliwangi** (Military Commander of West Java province). However, the television sets were given to neighbouring villages instead: Kampung Ciboleger, the new Baduy resettlement area in Kampung Cilangir, and the muslim enclave community at Kampung Cicakal Girang. Moreover, because of **puun** intervention, the television given to Kampung Cicakal Girang, was taken back by Jaro Pulung, the Jaro Pamarentah, helped by **Kodim** staff (Military Subdistrict). This action caused serious conflict between the Jaro Pamarentah and most of the people of Cicakal Girang. They resented the fact that their television had been taken back. As a result, Jaro Pulung received a protest from a group of people from Cicakal Girang who came to the Jaro Pamarentah's house. However, they could not successfully return the television set to their hamlet because it had been taken by Jaro Pamarentah and put in his own room.

The second example concerns a government subsidy for a development programme in Baduy which was rejected:

2). In recent years the Indonesian government has provided a special subsidy for low income villagers called **bantuan IDT** (**IDT=Inpres Desa Tertinggal**, Presidential Instruction to help underdeveloped villages). This allocates 20 million **rupiah** to each village per year. The Baduy were forced by the local **camat** to receive this subsidy in 1996, because Desa Kanekes had been categorised as underdeveloped, and the Baduy identified as low income. The Baduy rejected the government subsidy, arguing that it was against their **pikukuh**. They considered themselves self-sufficient in food production and didn't need help from outsiders. However, some Outer Baduy who had moved to non-Baduy areas managed to make a successful claim on behalf of the entire Baduy community, and cooperated with the **camat**. As a result, they received the IDT grant. Consequently, the **jaro pamarentah** was blamed by **puun**, assuming that he had received the government subsidy. He was investigated by **puun** staff and his signature endorsing receipt of the subsidy was looked for by **puun** staff in the district (Rangkasbitung) and resident (Serang) office. If the evidence had been found, the **jaro pamarentah** would have been discharged as soon as possible by **puun**. However, the evidence was not found and some questions arose for **puun** and his staff, as to why the government subsidy could be withdrawn without the approval of the **jaro pamarentah**. At the same time, the **jaro pamarentah** was invited by the sub-district leader to attend a meeting in the district office in Rangkasbitung, where he had to submit to the inspection team of the **BAPENAS** (**BAPENAS=Badan Perencanaan Pembangunan** or National Planning Agency) from Jakarta, confirming that the IDT grant had been received. Finally, however, because the **jaro pamarentah** did not confess to receiving the government subsidy, he was asked by the **camat** to go home, when the meeting took a lunch break. The inspection team was informed by the sub-district leader that the **jaro pamarentah** of Kanekes could no longer attend the meeting due to a village commitment. In fact, he went home because he was asked to by the **camat**.

More recently, it was reported in Kompas newspaper that the government subsidy had been 'accepted' by Baduy, because it was withdrawn by Haji Kasmin (39) without direct involvement of the **jaro pamarentah**. Haji Kasmin is an Outer Baduy who moved to a neighbouring non-Baduy area, became muslim, engaged in trade and established a local firm. Moreover, this subsidy was loaned to few groups of Outer Baduy people in Kampung

Cisaban to assist palm sugar (**gula kawung**) trade. According to the local **bupati** this money was a loan rather than **bantuan** (subsidy) and should have been returned to other **arisan**, or savings associations (Kompas, 1997).

From these cases it can be seen that Baduy continue to maintain their distinctive identity, although exposed to various development programmes. I suggest that any attempt by the government to change the Baduy community will fail unless it has a positive attitude toward certain values and practices such as maintaining a simple life (**hidup sederhana**), honesty (**jujur**), hard work (**gawe tekun**), respect for the environment (**miara lingkungan**), entrepreneurial activity (**jiwa wiraswasta**), a desire for autonomy (**mandiri**), maintenance of social harmony, reliance on organic farming techniques, use of traditional medicine, and the practise of swidden and mixed garden agriculture. Conversely, any development programme which seeks to erode these values and practices, is 'top down' and paternalistic, will be resisted. Indeed, such approaches have been shown to be counter productive in other parts of Indonesia (see Harjono, 1983; Suparlan, 1993a: 18-19; Koentjaraningrat, 1993: 348-349).

I have discussed in the preceding chapters the movement of some Baduy to non-Baduy areas and their integration into neighbouring muslim communities. Some have moved spontaneously and some sponsored by the government. Some of those who have moved spontaneously have developed various strategies to adapt to the new situation, such as the creation of wet rice fields, trading agricultural

products and wage labour. A pioneer Baduy group from kampung Kompol led by Ki Sayi (former Jaro) who moved to a non-Baduy area and established themselves independently in a new hamlet at kampung Cicakar, desa Jayasari, Kacamatan Cimarga, is a case in point (Tim Peneliti Unpad, 1995: 52-70). This group managed, after much hard work, to establish a new hamlet, with houses, a religious school (**madrasah ibtidaiyah**) and roads. The school was destroyed several times by forestry officials because it was constructed on government (Perhutani) land. However, their hamlet and school are now permanently established. Following a visit by sub-district staff, including the **Camat**, **Danramil** (subdistrict military official), **Dansek** (sub district police official), **Kepala desa** (village leader), and **petugas kehutanan** (forestry official) in 1982, it was given the status of **RT** 8 (**rukun tetangga** or administrative sub-hamlet) of the **RK** 4 (**rukun kampung** or administrative hamlet). Today, the hamlet has about 60 houses in which reside 72 households, a total of 242 people. The residents mainly come from Outer Baduy and the Dangka areas (ibid, 1995: 60). The main reason for the success of this development was the leadership of the former **jaro** Kampung Kompol, Ki Sayi, and later his grandson (Pak Juhri), who, using ties of kinship, affinity, and friendship built up business enterprises in the new area.

The Baduy who initially moved to **proyek pemukiman Baduy** in Cipangembar, Gunung Tunggal, also had an entrepreneurial leader, Jaro Samin (the former village

leader of Desa Kanekes), and later his son Nalim, who acted as a catalyst in much the same way. However, unlike the Cicakar group, those who moved to Cipangembar benefited from official government assistance, in the form of provision of houses, agricultural land, food, seed, cattle, and agricultural tools. They were also provided with information on the use of such things as chemical fertilizers, pesticides, and new high yielding seeds. They were given incentives to get involved in commercial monoculture farming (of clove and rubber) at the expense of traditional polyculture. These interventions had the effect of eroding older values and practices. They still engage in swidden farming, but with many external and market inputs, such as chemical fertilizers and pesticides. With these new inputs in swiddening and sawah farming, they have been strongly influenced by the market economy. One consequence of the changes was that with the fall in the price of clove and rubber at the end of the 1980s, their household economy was damaged. Most households became dependent on government subsidies, in addition to the market, showed less initiative, and some even returned to their home areas (see Chapter 7, pp:447). In contrast, the Cicakar group being more independent, was able to respond more quickly to the changes by trading in agricultural products and engaging in wage labour.

These examples support the recommendation of Koentjaraningrat (1993:349) that it is often far more effective for the government to build on traditional

practices, knowledge and values by providing health centres, schools, stalls, and recreation centres as incentives for participatory development, rather than establishing grandiose resettlement projects (**proyek pemukiman**) with high cost physical infrastructure and a top-down paternalistic ethos.

Outer Baduy land shortage, for example, is most appropriately managed using the **tumpang sari** or **taungya** systems (that is planting rice in combination with timber trees), which are part of the widely-implemented social forestry programme (**program hutan kemasyarakatan**) of the state Forestry State Corporation (**Perhutani**). Indeed, today most Outer Baduy practise share cropping and rent land with farmers of the neighbouring moslem community, under the guidance of a **mandor Perhutani** (foreman). Baduy labour is used by landlords to cultivate cash crops on private land and also by **mandors** to plant timber trees on the forestry land. In return, Outer Baduy have been provided with land on which to practise swidden farming. Thus, as long as Baduy labour is in demand, this arrangement is mutually beneficial and will continue to be maintained. In addition, Baduy are considered by some non-Baduy farmers (and the central government in Jakarta), to have a range of positive attitudes (such as a simple way of life, honesty, seriousness, diligence, hard work, obedience, innocent and a nature conservationist culture) which make then adapt well. Despite this, some officials at the local district or sub-district levels, and in the forestry department,

perpetuate negative stereotypes of the Baduy, as backward traditionalists (**masyarakat terbelakang**), illegal squatters (**menyerobot lahan**), illiterate (**tuna kasara**) and agents of environmental destruction (**merusak lingkungan**). These are clearly obstacles which have to be overcome if effective sustainability, in all its aspects, is to be achieved.

Because of the importance of Baduy swidden farming for their cultural identity, there are other reasons for working to modify it rather than replacing it. For instance, trees on fallowed land can be selected to increase productivity, but in so doing it is necessary to consider carefully the appropriateness of the species selected for existing forest cover (see Grandstaff, 1978: 563-564; Grandstaff, 1980: 21-22). The monoculture of cash crops is ill-suited to Baduy circumstances, as it increases risk and uncertainty, both in terms of coping with pest outbreaks and managing market price fluctuation. This is a lesson to be learned from the Baduy resettlement project discussed above.

Traditional handicrafts are an additional means by which Baduy can raise capital to invest in farming, particularly handicrafts using raw materials which are readily available in the area. The making of traditional bags and weaving are already well-established, and the manufacture of goods from bamboo is also a promising means of supplementing household income. The area is rich in varieties of bamboo, with populations of sufficient size to sustain required levels of extraction. Bamboo can be used

for various goods: kitchen utensils such as woven bamboo baskets (**baris**), bamboo woven fans (**hihid**), and round flat winnow bamboo basket (**nyiru**); household furniture such as: woven bamboo walls (**bilik**), tables, chairs, and hats (**dudukuy** or **topi**); and traditional musical instruments such as idiophones (**angklung**) and flutes (**suling**). In addition, bamboo can be used as a means of protection against erosion and has many household uses, in construction, as fire wood, water pipes, bridge material, as containers (for water and palm juice) and as food (edible bamboo shoots).

However, I suggest that if we wish to introduce development programmes to the Baduy, we have to understand their internal social organisation and the process by which the Baduy themselves have adapted to outside (modern) influences.

As mentioned earlier, unlike the lowland moslem community, Baduy are relatively autonomous and have a distinctive cultural identity. Since the pre-colonial period, Baduy have been recognised as a self-governing entity. They are led by traditional leaders, **puun** and their staff who are considered to be descended from **Batara**. Thus, **puun** have an important and central role in maintaining Baduy autarky. To communicate with outsiders, such as the king during Hindu period or the sultan during islamic period, the **jaro warega**, who lived in Dangka Kamancing of Cisimeut village, served as a go-between. However, the introduction of colonial village administration and village leaders in the early nineteenth century, eroded the

function of the **jaro warega** as mediator, and his role was gradually replaced by that of the **jaro pamarentah**. Eventually, the **jaro warega** moved to Kaduketug, in Outer Baduy.

Similarly, in the post colonial period, as with other villages throughout Java, the position of **jaro pamarentah** (called **lurah** in other areas) administered the village and served as the link between the village community and the sub-district leader (**camat**). However, the position of **jaro pamarentah** in Baduy remains inherently ambiguous[5], because they must be loyal to both **puun** and **camat**. **Puun** must, at the same time, maintain Baduy culture, and implement various government programmes under the direction of the **camat**. In many cases, **jaro pamarentah** have been compelled to violate traditional laws in carrying out government instructions, and as a result some have been discharged by **puun**.

Despite the capacity of the Baduy to maintain a strong traditional identity, they have nevertheless adapted to various changes in ecology, society and economy (see chapter 7). These innovations have mainly involved introducing cash crops, and trading non-rice crops and

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[5]). Most development programmes in Indonesia rely on the formal administrative linkages and the top down approach. Thus, village leaders (**lurah** or **jaro pamarentah**) have become important persons in the implementation of government policy. But in many cases village leaders become 'buffers' instead of 'bridges' because they are not supported by the village community. Instead of formal leaders, informal leaders such as religious leaders (**kiyayi** or **puun** in Baduy), religious teachers (**ustad**), and successful middlemen (**juragan**) have became respected village persons (see van Ufford 1987: 7-23; de Jonge 1987: 25-45).

handicrafts. By acting as entrepreneurs, those individuals responsible have become cultural brokers[6] in their villages. For instance, my informant Ayah Ailin in Marengo who was very active as an entrepreneur. His house was used as a 'guest house' for visitors. By having a lot of guests, Ayah Ailin was able to sell handicrafts and make many contacts. He was able to visit his friends in the towns which were the market for various traditional clothes and handicrafts. In return he obtained cash and goods which he was able to re-invested in swidden farming. By travelling around to sell various traditional commodities, Ayah Ailin created a wide network of friends. These contacts have brought various other benefits, including access to rented or sharecroped swidden land in the non-Baduy area. In many cases Ayah Ailin was offered rented land by landlords or provided with information by his friends whom he met during his travels. Obtaining swidden land in Cibengkung in 1995 was a case in point. Haji Abdullah, a businessman from Serang, was looking for sharecroppers to plant Albizzia on his land in Cibengkung. At the same time, Ayah Ailin was looking for swidden land. They met each other when Ayah Ailin visited his friend's farm house to sell traditional clothes and handicrafts. Thus, through informal contacts, Ayah Ailin was able to sharecrop land belonging to Haji

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[6]). An entrepreneur may be defined as person who takes the initiative, and in the pursuit of profit in some discernable form, manipulates other persons and resources (Barth 1963: 6). A special type of entrepreneur who is highly expert in social networking, and by virtue of this controls second order resources and manipulates these for his own profit, might be called a broker (Boissevain 1974: 148).

Abdullah.

Ayah Ailin has, therefore, become a channel for the circulation of goods in his village and in other Baduy villages. By initiating the planting of cash crops, including Albizzia, he has been successful in providing benefits to the Baduy community. New crops are thus introduced through local brokers instead of the government. Similarly, Outer Baduy who have spontaneously moved to non-Baduy areas have became entrepreneurs. Amenities, such as the village road, religious school, small prayer house, and sawah in Cicakar mentioned earlier, have been established through mutual help without government assistance. Thus, as Barth (1967:664) has pointed out, entrepreneur activity can become a significant factor in social change. In other words, entrepreneurs are agents of change. There are many other examples of this from elsewhere in Indonesia (e.g. van Ufford 1986: 7-23; de Jonge 1967: 43), and some development programmes have been undertaken through grassroots entrepreneurial initiatives, relying on, for example, **juragan** (successful traders) instead of hierarchies of official leaders of the gubernur-bupati-camat-lurah kind.

Baduy themselves have in various ways spontaneously adopted innovations through individual agents of change, including entrepreneurs such as Ayah Ailin, they have been able to control the rate and direction of change in a way which has enabled the sustaining of an essentially traditional way of life -both ecologically and culturally.

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Abbreviations and Glossary

BAPENAS Badan Perencanaan Pembangunan, National Planning Agency
BIMAS Bimbingan Massal, Guidance to the masses: the program for intensification of food crop production, with primary emphasis on rice cultivation during 1970s
BPN Badan Pertanahan Nasional, The National Land Agency
BTI Barisan Tani Indonesia, Indonesian Farmers Union, formally affiliated to PKI
DPL Di Atas Permukaan Laut, Above Sea Level (ASL) in meter
GBHN Garis-garis Besar Haluan Negara, General Outlines of State Policy
IPD Iuran Pembangunan Daerah, Regional Development Levy
KK Kepala Keluarga, Household
KITLTV Koninklijk Instituut voor Taal, Land- en Volkunde (Dutch), the Royal Institute for Linguistics, Geography and Ethnology in Leiden
KLH Kantor Menteri Lingkungan Hidup, the Ministry of the environment
KTP Kartu Penduduk, Official Indonesian identity card citizen
ORNOP Organisasi Non Pemerintah, Non Governmental Organisation (NGO)
PERUM PERHUTANI Perusahaan Umum Hutan Indonesia, State Forest Corporation
PIR Perkebunan Inti Rakyat, People's Nucleus Plantation
PKI Partai Komunis Indonesia, Indonesian Communist Party
PP (P2) Pembayaran Pajak, Land Taxes
REPELITA Rencana Pembangunan Lima Tahun, National five year development plan
RK Rukun Kampung, Hamlet unit, led by **Ketua RK** (RK leader) or **kokolot kampung** in Baduy
UUD45 Undang Undang Dasar 1945, the Basic Indonesian Law of 1945
UUPA Undang Undang Pokok Agraria, the Basic Agrarian Law
VOC Vereenigde Oost Indische Compagnie (Dutch), United East India Company

Adat the set of customary laws, practices and behavioral norms specific to a given area or ethnic group in Indonesia, called **pikukuh** in Baduy
Afdeling an administrative unit administered by an assistant resident (Dutch)

Alat tinun hand-loom
Angklung set of nine bamboo idiophones, which are played by being shaken, the highest two are called **roel**, and from high to low pitch they are called: **torolok**, **indung leutik**, **engklok**, **gunjing**, **dongdong**, **ringklung**, and **indung gede**, accompanying three drums: **talingting**, **ketuk**, and **bedug**
Babakan new small hamlet established by Outer Baduy
Baduy widely used to mean Baduy community who reside in Kanekes village
Baduy jero widely used colloquially to mean Inner Baduy, also **Baduy dalam**
Baduy pamukiman Baduy living in the government resettlement area.
Baduy panamping widely used colloquially to mean Outer Baduy
Bandar middlemen
Batara tunggal considered the god of the Baduy community
Bau a unit of measurement equal to 7096.5 sq metres or 0.71 hectares
Beas milled rice (**beras** in Indonesian language)
Beas huma swidden husked rice
Bedug a standard work period of five hours
Bentang kerti the Pleiades, also called bentang **kartika**
Bentang kidang Orion, the most important constellation for Baduy people to start swidden cultivation cycle
Bilik woven bamboo sheet used for the walls of house
Binih seed, rice seed (**binih pare**)
Binihan an amount of seed, such as **tilu binihan** (three rice bundles)
Bupati district (**kabupaten**) head, elected by the District Representative Council for a five year term and confirmed in office by the president
Calintu the bamboo stick making hole in different internodes if wind blowing through holes will produce sound, placed near farm house (**saung**), described as music to entertain the rice goddess
Camat subdistrict (**kecamatan**) head: appointed by governor of the province
Carik village secretary
Ceritera silat comic book stories
Cultuur stelsel compulsory cultivation system (Dutch)
Daerah area
Derah Baduy Baduy area, Kanekes
Derah Baduy dalam Inner Baduy area
Daerah Baduy luar Outer Baduy area
Daerah Dangka dangka area or Baduy buffer zone
Dalang the puppeteer in a Sundanese puppet show
Desa village administrative division
Dibuat harvesting rice

Dukuh lembur forest encircling hamlet, also called **talun** in other areas of West Java
Dukun traditional healer or person with supernatural powers
Elet an end-blown flute, about 25 cm long with five finger holes
Etem hand-knife for harvesting (**ani-ani** in Javanese)
Gade to mortgage
Geblogan desa village communal land
Gotong royong mutual help activities, voluntary collective work
Gubernur provincial head; governor of a province
Huma vernacular name for swidden field
Huma panamping swiddens belonging to each Outer Baduy household
Huma puun swiddens belonging to a **puun** family
Huma tangtu swiddens belonging to Inner Baduy each household
Huma dangka swiddens belonging to each dangka family, also called **huma tauladan**
Huma serang sacred swiddens belonging to collectively Baduy
Indung beurang traditional birth attendant
Jaro Pamarentah village head, elected by the people (but in Baduy elected by the religious leader) for an eight-year term and confirmed in office by district head (**bupati**)
Kabupaten administrative district
Kalima month of **kalima** (May-June) in the Baduy calendar
Kampung hamlet, small settlement
Kanekes the name of Baduy village according to formal government administration
Kawalu annual ritual in Baduy after harvesting rice or at the end of the Baduy calendar, also fasting time
Kawedanaan formerly an administrative district below regency
Kebon garden or mixed garden, a piece of land planted with annual and perennial crops, such as **kebon karet** (rubber garden), **kebon kopi** (coffee garden), **kebon cengkeh** (clove garden)
Kecamatan sub-district
Kekeluargaan family-based social system
Keresidenan residency administrative division
Ketan glutinous rice
Kios pertanian a shop selling agricultural inputs such as seed and fertilizers
Kolot traditional hamlet leaders, called also **kokolot**
Kupat ritual rice wrapped in young coconut
Lebaran day after the end of the Islamic month of fasting, Ramadhan
Leuweung forest
Leuweung kolot mature forest
Leuweung titipan traditional mature forest conservation which is mainly found in Inner Baduy, also called **leuweung kolot** or **leuweung gede**

Liliuran labour exchange
Lisung a hollowed-out tree trunk in which rice is hand-pounded
Mandala community living in sacred parts of the forest in pre-islamic times
Mandor overseer, foreman
Mantun the night-long recitation of the **pantun** story
Muuhan to put rice seed in the hole done by women
Nabi prophet, Nabi Adam (prophet Adam)
Ngaganggang to dry vegetation biomass after clearing and felling
Ngahuru to burn vegetation biomass
Ngalaksa ceremony conducted in each **dangka** area after harvesting rice
Ngaseuk planting rice
Ngored weeding
Ngored munggaran the first weeding
Ngored ngarambas the second weeding
Nuar to fell trees
Nyacar to clear shrubs
Nyewa garapan to rent land
Nyi Pohaci the rice goddess (**Dewi Sri** in Javanese)
Orde baru new order (1966-present)
Paal unit of 1,506.943 metres
Panghulu a man who supervised marriage ceremonies in Non Baduy, also recognised as funeral ceremony leader in Baduy
Pangiwa bearer of orders issued by the village head or higher authorities
Pantun an epic narrative sung by a male singer who accompanies himself on a zither (**kacapi**)
Pare huma unhulled swidden rice
Pasar the market place
Picul/pikul a man's double load, each weight tied on either end of a yoke, carried across one or both shoulder; also, formerly, 100 catties or about 150 pounds of goods
Priyayi aristocrat, upper-class person, person of high status, called **menak**, **ningrat**, and **daleum** in Sundanese
Provinsi provincial administration division
Pungpuhunan sacred place or centre of the swidden field where various rituals are commonly performed
Puun traditional or religious leaders of the Baduy
Rajin industrious
Rereongan cooperative work
Reuma fallowed land, a piece of land formed by abandoning a swidden field after harvesting rice and other annual crops in developing into mature secondary forest by natural succession
Reuma kolot mature secondary forest after fallow growth of than 3 years

Reuma ngora immature secondary forest, after fallow growth of between 1 and 3 years
Rupiah Indonesian currency = £ 3,500.00 in 1995/1996
Salametan ritual meal to mark celebration, also called **hajatan**
Sarung part of the Indonesian dress (sarong)
Saung a farm house or farm shelter
Sawah wet rice cultivation
Sawah ganjaran land granted to officials, relatives, and personal favourites of the sultan
Sawah yasa land opened up by employing the compulsory services attached to **pusaka** land
Sawah negara land laid out by the command of the sultan or his appanage-holder, royal domain
Seba a ceremony sending agricultural productions by a Baduy delegation after harvesting rice to district and resident leader, to respect the government
Subsidi desa village subsidy, called also **bantuan**
Sunda West Javanese people
Sunda Wiwitan original Sundanese, religion of Baduy community, also called **Sunda Asli**
Syahadat the first pillar of Islam, the profession of belief in Allah
Tabu taboo, some traditional prohibition in Baduy community, also called **buyut**, **henteu wasa**
Talun land is mainly planted by mixed perennial crops
Tanah larangan prohibited land, Inner Baduy land
Tegal dry fields
Tujuh batara seven batara; see Batara Tunggal
Tumpang sari reforestation system under which farmers are permitted to plant agricultural crops between the rows of forest species for one to two years
Tumpeng rice prepared for ritual by shaping into a mound
Ubar pare herbal medicine
Urang Baduy Baduy people, also called **urang Kanekes**
Urang Baduy jero Inner Baduy people, also called **Urang Tangtu**, **Kaum Daleum** or **Urang Girang**
Urang Baduy luar Outer Baduy people, also called **Urang Panamping**
Urang Islam islamic people
Urang landeuh lowland people
Warang parents of a son-in-law or daughter-in-law, called also **besan**
Warisan inheritance, land inheritance (**warisan tanah**)
Warung small shop or stall selling perishable food
Wayang golek Sundanese wooden puppet
Wayang kulit Javanese shadow play
Wedana district head in former times
Zaman kemerdekaan post colonial period
Zaman klasiran or **de klassering** land classification period
Zaman penjajahan colonial period
Zaman ratu period of Hindu Kingdoms and Sultanate
Ziarah ascetic ritual

APPENDIXES

1. Plant species common in different Baduy biotopes

A. Outer Baduy Hamlet Forest (**dukuh lembur**)

SCIENTIFIC NAME	FAMILY NAME	LOCAL NAME (FUNCTIONS)*	SDR **)
1. Albizzia chinensis (Osb) Merr	Mimosaceae	Jeungjing (FW,BM)	0.84
2. Albizzia lebbek (L) Benth	Mimosaceae	Kitoke (FW,BM)	0.23
3. Alstonia scholaris (L) R.Br	Apocynaceae	Lame (FW,TM)	0.46
4. Ammomum coccineum (L) Merr	Zingiberaceae	Tepus (TM)	0.93
5. Ananas comosus (L) Merr	Bromeliaceae	Danas (FR)	0.93
6. Areca catechu L	Arecaceae	Jambe (CW,TM)	0.65
7. Arenga pinnata (Wurm) Merr	Arecaceae	Kawung (HI, RT, TM)	5.67
8.Artocarpus heterophyllus Lmk	Moraceae	Nangka (FR)	0.46

*) Various plant uses: AE =Aestetical plants; ASF=Additional staple food; BM=Building materials; CS=Crop shading; DL=Delicacy; HI=Home Industry; CW=Chewing; FR=Fruit; FW=Fire wood; GL=Glue materials; OS=Others; PT=Petty trading commodities; RM=Roofing materials; RT=Ritual purposes; SF=Staple food; SP=Spices; PC=Pest Control; SM=Stove materials; SW=Sugar wrapping; TM=Traditional medicine materials (leaf, bark, fruit, latex etc); VG=Vegetables.

**) SDR=Summed Dominant Ratio, an index derived from combining relative frequency (FR) and relative dominance (DR) or SDR=(FR+DR)/2. Thus, if a plant species has a high SDR index, it means that this species is commonly recorded (high frequency) and has a high population (dominance) in the survey plots.

9. Bambusa sp	Graminae	Awi hideung (BM, FW,TM)	0.77
10. Baccaurea racemosa (Reinw ex Bl) M.A	Euphor-biaceae	Menteng (FR)	0.91
11. Bombax macrophylla Griff	Bombaceae	Gandaria (FR)	0.23
12. Ceiba pentandra (L) Gaertn	Bombaceae	Kapuk (PT)	0.27
13. Cinnamon sp	Lauraceae	Kiteja (FW)	0.51
14. Cocos nucifera L	Arecaceae	Kalapa (SP, TM,PT)	2.66
15. Codiaeum variegatum (L) Bl	Euphor-biaceae	Puring (OS)	0.27
16. Coffea arabica Linn	Rubiaceae	Kopi (PT, DL)	0.35
17. Costus speciosus (Koen) J.E. Smith	Zingiberacea	Pacing (RT)	0.95
18. Curcuma xanthorrhiza Roxb	Zingi-beraceae	Koneng gede (TM)	0.91
19. Dolichandrone spathacea	Bignoniaceae	Pongporang (OS)	0.27
20. Durio zibethinus Murr	Bombaceae	Kadu (FR, PT)	6.79
21. Elaeocarpus obtusus Bl	Elaeocar-paceae	Andul (OS)	2.56
22. Erythrina variegata L	Papilion-aceae	Dadap (TM, CS)	1.45
23. Ficus brecuspis Miq	Moraceae	Beunying (OS)	1.14
24. Ficus grassularoides Burm.f.	Moraceae	Seuhang (VG, FW)	1.20
25. Ficus septica Burm.f.	Moraceae	Kuciat (OS)	0.27
26. Gigantochloa apus (Bl ex Schult f) Kurz	Graminae	Awi tali (BM,FW,TM)	0.23

27. Gigantochloa verticillata (Willd) Murr	Graminae	Awi gom-bong(BM, FW)	3.28
28. Gluta renghas L	Anacar-diaceae	Reunghas (OS)	0.50
29. Homalomena pendula (BL) Bakh.F.	Araceae	Cariang (TM)	4.36
30. Hopea minor Val	Diptero-carpaceae	Pining (OS)	0.51
31. Lagerstroemia speciosa Pers	Lythraceae	Bungur (TM,BM,FW)	0.69
32. Languas galanga (L) Stuntz	Zingibe-raceae	Laja (TM, SP)	0.99
33. Lansium domesticum Corr	Meliaceae	Pisitan (FR,PT,TM)	2.64
34. Leea indica (Burm.F) Merr	Vitaceae	Sulangkar (RT, FW)	1.03
35. Litsea noronhae Bl	Lauraceae	Meuhmal (BM, FW)	0.95
36. Litsea sebifera (Non Pers)	Lauraceae	Tangkalak (OS)	0.27
37. Macaranga tanarius (L).M.A	Euphor-biaceae	Mara (FW,RT)	0.23
38. Mangifera caesia Jack ex Wall	Anacar-diaceae	Binglu (FR)	1.87
39. Mangifera odorata Griff	Anacar-diaceae	Kaweni (FR)	1.22
40. Maranta dichotoma Wall	Marantaceae	Bangban (FW)	0.31
41. Melastoma malabathricum L	Melasto-maceae	Harendong (FW)	0.59
42. Metroxylon sagu Rottb	Palmae	Kiray (RM)	4.70
43. Musa paradisiaca L	Musaceae	Cau (FR, PT)	4.70
44. Nephelium lappaceum L	Sapindaceae	Rambutan (FR,TM,PT)	3.75
45. Pangium edule Reinw	Flacour-tiaceae	Picung (VG, PT)	1.14

46. Parkia biglobosa Auct non Bth	Mimosaceae	Peundeuy (VG)	0.23
47. Parkia speciosa Hassk	Mimosaceae	Peuteuy (VG, PT)	1.59
48. Peronema conescens Jack	Verbenaceae	Kisabrang (FW)	0.23
49. Pinanga coronata (Bl ex Mart) Bl	Arecaceae	Bingbin (TM, RT)	0.58
50. Piper aduncum L.	Piperacae	Kiseureuh (FW, TM)	0.31
51. Piper betle L	Piperaceae	Seureuh (RT,CW,TM)	0.27
52. Piper rindu DC	Piperaceae	Rinu (PT)	1.00
53. Pithecellobium jeringa (Jack) Prain ex King	Mimosaceae	Jengkol (VG, PT)	0.46
54. Planchonia valida (Bl) Bl	Euphor-biaceae	Putat (BM, FW)	0.46
55. Polygonum quercifolium L	Polygonaceae	Kadaka(OS)	0.27
56. Pometia tomentosa (Bl) Jacobs	Sapindaceae	Leung-sir (OS)	0.46
57. Pterocarpus indicus Willd	Papiliona-ceae	Angsana (FW, TM)	0.46
58. Renusatia vivipara Scott	Araceae	Kajar-kajar (OS)	0.23
59. Saccharum officinarum (Bl) K.Schum	Graminae	Tiwu (RT, CW)	0.31
60. Salacca edulis Reinw	Arecaceae	Salak (FR, TM,SW)	0.23
61. Sandoricum koetjape (Burm.f) Merr	Meliaceae	Kacapi (FR, TM)	0.73
62. Saurania bracteosa DC	Saurauiaceae	Kileho (TM)	2.80
63. Sericocalyx crispus (L) Bremek	Labiatae	Kecibeling (TM)	5.64
64. Sterculia javanica R.Br	Stercu-liaceae	Hantap (TM)	0.54

65. Syzgium/Eugenia densiflora Duthie	Myrtaceae	Kopo (FW)	0.46
67. Symplocus cochinnensis (Laure) Moore	Sympolo-caceae	Peuris (OS)	0.23
68. Syzygium polycephalum (Miq) Merr & Perry	Myrtaceae	Kupa (FR)	0.23
69. Syzigium polyyanthum (Weight) Walp	Myrtaceae	Salam (FR, SP)	0.31
70.		Baris (OS)	0.27
71.		Hahapaan (OS)	0.23
72.		Haraghag (OS)	1.16
73.		Kianyar (OS)	0.23
74.		Kibelong (OS)	1.26
75. Arenga porphyrocarpa (Bl ex Mart) H.E. Moore	Arecaceae	Kiwura (RT)	0.50
76. KIbara coriaceae (Bl) Tulasne	Monimiaceae	Kukuyaan (RT)	0.23
77.		Paku (OS)	14.9
78.		Seueur (OS)	0.73
79.		Sulampat (OS)	0.62

B. Swidden (**huma**)

SCIENTIFIC NAME	FAMILY NAME	LOCAL NAME (FUNCT-IONS*)	IN-NER BA-DUY **)	OUTER BADUY **)
1. Albizzia chinensis (Osb) Merr	Mimosaceae	Jeungjing (FW,BM)	0.76	2.94
2. Albizzia procera (Roxb) Bth	Mimosaceae	Kihiang (FW,BM)	0.26	0.27
3. Aleurites moluccana (L) Willd	Euphor-biaceae	Muncang (VG,PT)	0.26	
4. Amomum cocineum (Bl) K.Schum	Zingibe-raceae	Tepus (TM)	0.26	
5. Areca catechu L	Arecaceae	Jambe (CW,TM)	0.26	
6. Arenga pinnata (Wurmb) Merr	Arecaceae	Kawung (HI,RT, PT,TM)	0.51	4.55
7.Artocarpus elasticus Reinw ex Bl	Moraceae	Teureup (HM, TM)	0.51	0.80

8.Artocarpus heterophy-llus Lmk	Moraceae	Nangka (FR)	0.26	0.27
9. Alstonia scholaris (L) R.Br	Apocynaceae	Lame (TM)	1.78	0.54
10. Cajanus cajan (L) Huth	Papilio-naceae	Hiris (VG)	2.10	3.56
11. Ceiba pentandra (L) Gaertn	Bombaceae	Kapuk (PT)	0.26	
12. Cinnamon sp	Lauraceae	Kiteja (FW)	0.26	
13. Citrus grandis (L) Osbeck	Rutaceae	Jeruk gede (FR,PC)	0.26	
14. Coleus galeatus (Poir) Bth	Labiatae	Jawer kotok (RT,TM)	0.51	
15. Costus speciosus (Koen) J.E. Smith	Zingibe-raceae	Pacing (RT,TM)		1.34
16. Capsicum frutescens L	Solanaceae	Cengek (SP,PT)		1.35

17. Cocos nucifera L	Arecaceae	Kalapa (SP,TM, PT)		0.27
18.Colocasia esculenta (L) Schott	Araceae	Taleus (ASF)	0.52	2.68
19.Colocasia nigrum	Araceae	Taleus hideung (ASF)	1.04	
20.Cordyline fruticosa Backer	Liliaceae	Hanjuang (RT)	0.26	
21. Cucumis sativus L	Cucurbi-taceae	Bonteng (VG)	0.77	0.80
22.Cucurbita moschata (Duch) Poir	Cucurbi-taceae	Waluh (V)	2.30	0.54
23. Curcuma domestica L.	Zingibe-raceae	Koneng (SP,TM)	0.51	
24. Curcuma xanthorrhiza Roxb	Zingibe-raceae	Koneng gede (TM)		1.07
25.Cymbopo-gon citratus (DC) Stapf	Graminae	Sereh (SP,TM)	0.26	

26. Dillenia aurea Smith	Dileneaceae	Sempur (FW,SM)	1.02	0.54
27.Dioscorea alata L	Diosco-reaceae	Hui manis (ASF)	2.30	1.87
28. Dolichos lablab L	Papi-lionaceae	Roay (VG)	1.28	0.54
29. Durio zibethinus Murr	Bombaceae	Kadu (FR,PT)	2.04	1.07
30.Erechti-tes valeriani-folia (Wolf) DC	Asteraceae	Sintrong (V)	0.26	
31.Erythrina variegata L	Papiliona-ceae	Dadap (TM,CS)		0.80
32. Ficus brevicuspis Miq	Moraceae	Beunying (OS)	0.76	0.27
33. Ficus grossularo-ides Burm.f.	Moraceae	Seuhang (FW,VG)	0.51	0.54
34.Gigan-tochloa verticilata (Willd) Murr	Graminae	Awi gombong (BM, FW)		0.27

35. Gnetum gnemon L	Gnetaceae	Tangkil (VG)		0.27
36. Hibiscus macrophyllus Roxb ex Hornem	Malvaceae	Tisuk (FW)		0.27
37. Ipomoea batatas (L) L	Convo-lvulaceae	Mantang (ASF)	1.85	
38.Kaemp-feria galanga L	Zingibera-ceae	Cikur (SP,TM)		0.28
39.Lagerstro-emia speciosa Pers	Lythraceae	Bungur (FW,TM)		0.53
40. Languas galanga (L) Stuntz	Zingi-beraceae	Laja (TM,SP, PC)		0.27
41. Lansium domesticum Corr	Meliaceae	Pisitan (FR,PT, TM)	0.26	0.54
42. Litsea noronhac Bl	Lauraceae	Meuhmal (BM)	0.26	
43.Macaranga sp	Euphor-biaceae	Pareng-peng (FW)	0.26	

44.Macaranga tanarius (L) M.A	Euphor-biaceae	Mara (FW,RT)	0.26	0.27
45.Mangifera odorata Griff	Anacar-diaceae	Kaweni (FR)	1.27	
46. Manihot esculenta Crantz	Euphorbia-ceae	Dangdeur (ASF)		1.35
47.Melastoma malabath-ricum L	Melas-tomaceae	Harendong (FW)	0.51	
48. Musa sp	Musaceae	Kole beurit (TM)		0.26
49. Musa paradisiaca L	Musaceae	Cau (FR,PT, ASF)	3.83	3.23
50.Nephelium lappaceum L	Sapindaceae	Rambutan (FR,PT, TM)	0.51	
51. Oriza sativa L	Graminae	Pare (SF)	54.6	54.89
52. Pangium edule Reinw	Flacour-tiaceae	Picung (VG,PT)	0.51	

53.Paraserianthes falcataria (L) Nielsen	Leguminosae	Kalabise (BM,FW, PT)		0.26
54. Parkia speciosa Hassk	Mimosaceae	Peuteuy (VG,PT)	0.51	0.80
55.Phaseolus vulgaris L	Papilionaceae	Kacang beureum (VG)	0.26	
56. Phoebe macrophylla Bl	Lauraceae	Kiranca (OS)	0.26	
57. Piper aduncum L	Piperaceae	Kiseureuh (FW,TM)	0.26	0.80
58.Pithecellobium jeringa (Jacq) Prain ex King	Mimosaceae	Jengkol (VG,PT)	1.79	0.27
59.Plectranthus rotundifolius (Poiret) Sprengel	Labiatae	Kumili (ASF)	0.52	2.20
60. Premna foetida Reinw	Verbenaceae	Kitahi (OS)	0.26	

61.Psopho-carpus tetragonolo-bus	Papiliona-ceae	Jaat (VG)	0.76	1.87
62.Saccharum officinarum (Bl) K.Schum	Graminae	Tiwu (CW,RT)	0.76	1.87
63.Saccharum edule Hassk	Graminae	Tiwu endog (VG,PT)		0.26
64. Saurauia bracteosa DC	Ochnaceae	Kileho (TM)	0.51	1.07
65. Sauropus androgynus (L) Merr	Euphor-biaceae	Katuk (VG)		0.27
66. Sesamum orientale L	Acanthaceae	Watu (PT, ASF)		1.35
67. Schima wallichii (DC) Korth	Theaceae	Puspa (BM,FW)	0.51	
68. Smilax leucocephala Bl	Styraceae	Jirak (OS)	2.56	0.27
69.Symplocus fasciculata Zall	Styraceae	Jirak (OS)	2.56	0.27

70. Syzygium policephalum (Miq) Merr&Perry	Myrtaceae	Kupa (FR)	0.26	
71. Vernonia arborea Boch Ham	Asteraceae	Hamirung (FW)	0.26	
72. Vigna sinensis	Papiliona-ceae	Kacang panjang (VG)	1.54	
73. Vitex pubescens Vahl	Verbenaceae	Laban (FW)	0.26	
74. Coix lacryma-jobi L	Graminae	Hanjeli (ASF)	1.04	0.54
75. Zea mays L	Graminae	Jagong (ASF)	0.27	
76.		Kucay (VG)	0.26	
77.		Mayasih (VG)	0.26	
78.		Kianyar (OS)	0.27	

79.		Kipang-gang (OS)	0.26	

C. Fallowed land (**reuma**)

SCIENTIFIC NAME	FAMILY NAME	LOCAL NAME(FUNCTIONS *)	INNER BADUY SDR**)	OUTER BADUY SDR**)
1. Albizzia chinensis (Osb) Merr	Mimosa-ceae	Jeungjing (FW,BM)	2.13	2.26
2. Albizzia procera (Roxb) Bth	Mimosa-ceae	Kihiang (FW,BM)		0.24
3. Aleurites moluccana (L) Willd	Euphor-biaceae	Muncang (SP,PT)	0.68	
4. Alstonia scholaris (L) R.Br	Apocyna-ceae	Lame (TM)		0.88
5. Amomum coccineum (BL) K. Schum	Zingebera-ceae	Tepus (TM)	0.26	0.49
6. Amorphophallus variabilis Bl	Araceae	Acung (OS)	0.95	0.25
7. Areca catechu L	Arecaceae	Jambe (CW,TM)	0.22	0.24
8. Arenga pinnata (Wurmb) Merr	Arecaceae	Kawung (HI,RT,TM,PI)	0.68	2.56
9. Artocarpus elasticus Reinw Ex Bl	Moraceae	Teureup (HM,TM)	0.22	0.61
10. Artocarphus heterophyllus Lmk	Moraceae	Nangka (FR)	0.44	
11. Artocarpus integer (Thunb) Merr	Moraceae	Nangka beurit (FR)	0.22	
12. Beilschmiedia sp	Lauraceae	Huru batu (BM)	0.22	

13. Bridelia monoica (Lour) Merr	Euphor-biaceae	Kanyere (FW,TM)	0.50	0.71
14. Ceiba pentandra (L) Gaertn	Bombaceae	Kapuk (PT)		0.21
15. Chromolaena odorata	Astera-ceae	Kirinyuh (FW)		9.07
16. Cocos nucifera L	Arecaceae	Kalapa (SP,TM, PT)		0.53
17. Codiaeum variegatum (L) Bl	Euphor-biaceae	Puring (OS)	0.22	
18. Colocasia nigrum	Arecaceae	Taleus hideung (ASF)	0.28	
19. Cordyline fruticosa Backer	Liliaceae	Hanjuang (RT)	0.44	0.71
20. Costus speciosus (Koen) J.E. Smith	Zingiber-aceae	Pacing (RT,TM)	0.78	0.21
21.Curculigo recurvata Dr Yand	Amaryl-idiaceae	Congkok (OS)	3.49	
22. Curcuma xanthorrhiza Roxb	Zingibe-raceae	Koneng gede (TM)	0.83	4.70
23. Datura metel L.	Solana-ceae	Kecubung (OS)	0.24	
24. Dilium indicum L.	Fabaceae	Ranji (FR,PT)	0.43	
25. Dillenia aurea Smith	Dillenia-ceae	Sempur (FW,SM, TM)	0.67	2.29
26. Dioscorea alata L	Dioscore-aceae	Hui manis (ASF)	0.24	
27. Durio zibethinus Murr	Bombaceae	(FR,PT, TM)	0.44	1.20

28. Erythrina variegata L	Papiliona -ceae	Dadap (TM,CS)	0.23	0.21
29. Ficus brevicuspis Miq	Moraceae	Beunying (OS)	2.72	2.65
30. Ficus collosa Willd	Moraceae	Ilat (OS)	0.44	
31. Ficus grassularoides Burm.f.	Moraceae	Seuhang (FW,VG)		5.34
32. Ficus septica Burm.f.	Moraceae	Kuciat	1.23	
33. Ficus fulva Reinw	Moraceae	Hamerang (FW)	1.40	1.04
34. Flemingia lineata Roxb	Legumi-nosae	Kitambaga /Babakoan (FW)	27.80	11.42
35. Garcinia mangostana L	Guttife-raceae	Manggu (FR)	0.22	
36. Gigantochloa apus (Bl ex Schult) Kurz	Graminae	Awi tali (BM,FW,TM)	0.43	0.21
37. Dioscorea bulbifera L.	Dioscorea	Hui (ASF)	0.24	
38. Gigantochloa verticilata (Willd) Murr	Graminae	Awi gombong (BM,FW)		1.53
39. Glochidion sp	Euphor-biaceae	Kihuut (FW)	0.22	0.22
40. Glochidion glancum Bl	Euphor-biaceae	Kipare (FW)		0.22
41. Gordonia excelsa (Bl) Bl	Terustro-emiaceae	Kisapi (FW)		0.53
42. Grewia tomentosa Juss	Tiliaceae	Derwak (OS)		1.87

43. Hibiscus macrophyllus Roxb ex Hornem	Malvaceae	Tisuk (FW)		0.22
44. Homalomena cordata Schott	Araceae	Cariang Hejo (OS)	1.14	
45. Homalomena rubescens Runth	Araceae	Cariang		0.88
46. Ipomoea batatas (L) L	Convol-vulaceae	Mantang (ASF)	0.62	
47. Kleinhovia hospita L	Sterculia -ceae	Bintinu (FW)	2.32	
48. Lagerstroemia speciosa Pers	Lythra-ceae	Bungur (TM,BM, FW)	0.44	
49. Languas galanga (L) Stuntz	Zingibera -ceae	Laja (SP,TM, PC)		3.38
50. Lansium domesticum Corr	Meliaceae	Pisitan (FR,PT, TM)	1.17	0.75
51. Leea indica (Burm.f.) Merr	Vitaceae	Sulangkar (FW,RT)	0.97	0.22
52. Macaranga sp	Euphor-biaceae	Pareng-peng (FW)	1.17	
53. Macaranga tanarius (L) M.A	Euphor-biaceae	Mara (FW,RT)	1.69	1.38
54. Manihot esculenta Crantz	Euphor-biaceae	Dangdeur (ASF)		0.61
55. Mangifera caesia Jack ex Wall	Anacardia -ceae	Binglu (FR)	0.22	0.94
56. Mangifera odorata Griff	Anacardia -ceae	Kaweni (FR)	0.44	0.24

57. Metroxylon sagu Rottb	Palmae	Kiray (RM)	3.31	
58. Musa sp	Musaceae	Kole beurit (TM)	2.92	
59. Musa paradisiaca L	Musaceae	Cau (FR,AFS, PT)		0.32
60. Melastoma malabthricum L.	Melastoma -ceae	Harendong (FW)		9.64
61. Nephelium lappaceum L.	Sapinda- ceae	Rambutan (FR,PT,TM)	0.71	0.21
62. Nicolaia hemisphaerica (Bl) Horan	Zingibera -ceae	Honje (VG,TM)	0.43	
63. Omalanthus populneus (Geisel) Pax	Euphorbia -ceae	Kareumbi (FW)	0.24	0.22
64. Pangium edule Reinw	Flacourti a-ceae	Picung (VG,PT)	1.61	
65.Paraserianthes falcataria (L) Nielsen	Legumino- sae	Kalabise (FW,BM, PT)		0.21
66. Parkia speciosa Hassk	Mimosa- ceae	Peuteuy (VG,PT)	1.34	0.21
67.Peronema canescens Jack	Verbena- ceae	Kisabrang (FW)		0.21
68. Phrynium pubinerve Bl.	Maranthа- ceae	Patat (RT)	0.27	
69. Piper aduncum L	Pipera- ceae	Kiseureuh (FW,TM)	2.05	4.23
70. Piper rindu DC	Pipera- ceae	Rinu (PT)	1.22	

71. Pithecellobium jiringa (Jack) Prain ex King	Mimosa-ceae	Jengkol (VG,PT)	0.22	1.09
72. Pittosporum ferrugineum Dryand	Pittos-poraceae	Kihonje (OS)	0.22	0.22
73. Polyalthia sp	Annona-ceae	Sauheun (OS)	1.55	
74. Pterocarpus indicus Willd	Papiliona-ceae	Angsana (FW,BM,TM)		0.22
75. Remusatia vivipara Schott	Araceae	Kajar-kajar (OS)	0.26	
76. Saccharum officinarum L.	Graminae	Tiwu (CW,RT)	0.66	
77.Saccharum spontaneum L.	Graminae	Kaso (FW)	9.75	10.36
78. Sandoricum koetjape (Burm.f.) Merr	Meliaceae	Kacapi (FR)		0.33
79. Saurania bracteosa DC	Ochnaceae	Kileho (TM)	0.22	1.00
80. Schefflera aromatica Harms	Aralia-ceae	Ramogilin g (OS)		0.65
81. Stereospernum chelonoides D.C	Bignonia-ceae	Kicaang (OS)	0.22	
82. Symplocus cochinensis (Lour) Moore	Symploco-caceae	Peuris (OS)		0.52
83. Syzygium polycephalum (Miq) Merr&Perry	Myrtaceae	Kupa (FR)	0.22	0.41
84.Vitex trifolia L.	Verbena-ceae	Laban (FW,BM)		1.12

85. Zingiber odoriferum Bl	Zingibera -ceae	Lampuyang (TM)		0.40
86. Piper betle L.	Pipera-ceae	Seureuh (CW,TM, RT)	0.26	0.22
87.		Kilangir (OS)	0.22	0.27
88.		Paku (OS)		3.56
89.	Zingibe-raceae	Lajagoah (OS)		0.51
90.		Reungrang (OS)		0.23
91.		Salompat (OS)		3.12
92.		Tarentang (OS)		0.44
93.Albizia sp	Mimosacea e	Tarasi (BM,FW)		2.59

D. Inner Baduy Mature Forest (**leuweung kolot**)

SCIENTIFIC NAME	FAMILY NAME	LOCAL NAME (FUNCTIONS) *)	SDR **)
1. Acorus calamus L	Araceae	Jaringao (TM)	0.11
2. Aegle marmelos (L) Corr	Rutaceae	Maja (FR,TM)	0.87
3. Aleurites triloba Forst	Euphorbiaceae	Tondeh (FW)	0.64
4. Alpinia Sp	Zingiberaceae	Barahulu (RT, TM))	0.47
5. Alstonia scholaris (L) R.Br	Apocynaceae	Lame (TM)	0.21
6. Amomum sp	Zingiberaceae	Barahulu (RT)	0.11
7. Amomum coccineum (BL) K. Schum	Zingiberaceae	Tepus (TM)	0.11
8. Anadendrum sp	Araceae	Lolo (string material)	0.80
9. Antidesma tetradrum Bl	Euphorbiaceae	Kiseueur (BM,FW)	0.32
10. Arcypteris irregularis (Prest) Holtt	Pteridaceae	Paku kapal (TM)	1.20

11. Areca nenga Bl.	Arecaceae	Ngenge (OS)	0.48
12. Arenga porphyrocarpa (Bl.ex. Mart) H.E. Moore	Arecaceae	Kihura (RT)	0.26
13. Artocarpus rigida Bl	Moraceae	Pensar (BM,FW,FR)	0.77
14. Baccaurea javanica M.A	Euphorbiaceae	Eucit (BM,FW)	0.60
15. Bischapia javanica		Gintung (BM,FW)	0.26
16. Bridelia monoica (Lour) Merr	Euphorbiaceae	Kanyere (TM)	0.11
17. Calamus sp	Arecaceae	Hoe Cacing (BM)	0.43
18. Canarium galbrum Bl	Burseraceae	Kicaruluk (BM)	0.47
19. Canarium repella (Bl) Miq	Burseraceae	Kipelah (BM)	0.21
20. Castanea argentea Bl	Fagaceae	Saneninten (BM)	0.11
21. Castanopsis tungurrut (Bl) DC	Fagaceae	Kaliomborot (BM)	0.32

22. Cinnamomum sintox Auct	Lauraceae	Sintok (BM)	0.21
23. Clidemia hirta Don	Melastomaceae	Harendong (TM)	0.11
23. Cordyline fruticosa Backer	Agavaceae	Hanjuang (RT)	0.47
24. Costus speciosus (Koen) J.E. Smith	Zingiberaceae	Pacing (RT)	0.80
25. Creochyton bibracteata (Bl) Bl	Melastomaceae	Areuy harendong (FW)	0.11
26. Crinum asiaticum L.	Amaryllidaceae	Penuh (RT)	0.47
26. Cryptocarya reticulata Bl	Lauraceae	Huru hiris (BM,FW)	0.26
27. Daeronarops ruber Renw ex Mart Bl	Palmae	Pelah (HM)	0.75
28. Dianella nemorosa Lam	Liliaceae	Jambaka (PC)	0.48
29. Dilium indum L	Fabaceae	Ranji (FR,PT)	0.43
30. Dilenia aurea Smith	Dilleniaceae	Sempur (FW,SM, TM)	0.11

31. Dioscorea buxifolia Hiern	Dioscoreaceae	Cantigi (BM,FW)	0.24
32. Diospyros sp	Ebenaceae	Kicalung (BM)	0.21
33. Donax cannaeformis (G.forst) Schm	Maranthaceae	Bangban (RT, TM)	0.47
34. Durio zibethinus Murr	Bombaceae	Kadu (FR,PT,TM)	0.73
35. Elaeocarpus floribundus Bl	Elaeocarpac	Kihuru leuweung (BM,FW)	0.37
36. Elateriospermum tapos Bl	Eu[horbiaceae	Tapos (BM,FW)	0.80
37. Embelia ribes Burm.f.	Myrsinaceae	Kacembang (BM,FW)	0.11
38. Eurya acuminata DC	Theaceae	Kisapu (BM,FW)	0.11
39. Evodia sp	Rutaceae	Kisampang (FW)	0.53
40. Ficus sp	Moraceae	Darangdan (FW)	0.21
41. Ficus brevicuspis Miq	Moraceae	Beunying (FW)	0.52

42. Ficus fulva Reinw	Moraceae	Hamerang (FW)	0.43
43. Ficus grossularoides Burm.f.	Moraceae	Seuhang (FW,VG)	0.43
44. Ficus pumila L	Moraceae	Kimancirang (FW)	0.77
45. Ficus virens W.Ait	Moraceae	Bisoro (FW)	0.60
46. Ficus variegata Bl	Moraceae	Kondang (FW)	0.09
47. Fimbristylis sp	Cyperceae	Jukut galing (TM)	0.24
48. Garcinia dioica Bl non J.E. Smith	Clusiaceae	Ceuri (BM,FW)	0.21
49. Glochidon album Boel	Euphorbiaceae	Mareme (BM,FW)	0.11
50. Gonystilus macrophyllus (Miq)	Gonystylaceae	Garu (RT,PT)	0.11
51. Cinnamomum sp	Lauraceae	Kiteja (BM,FW)	0.90
52. Artocarpus elasticus	Moraceae	Teureup (HM)	0.45
53. Gardenia exelsa (BL) Bl	Theaceae	Kisapi (BM,FW)	0.55

54. Helicia scrrata (R.Br) Bl	Proteaceae	Bareumbeuy (FW)	0.13
55. Hopea minor Val	Dipterocarpa-ceae	Pining (BM,FW)	0.14
56. Homalonema rubescens Kunth	Araceae	Cariang (TM)	0.36
57. Horsfieldia glabra (Bl) Warb	Myristicaceae	Kalapa ciung (OS)	0.42
57. Horsfieldia irya (Gaertn) Warb	Myristicaceae	Paeu	0.17
58.Hoya diversifolia Bl	Asclepiadaceae	Kakandelan (RT)	0.21
59. Kibara coriacea (Bl) Tulasne	Monimiaceae	Kukuyaan (RT)	0.11
60. Leea guneensis G.Don	Leeaceae	Ginggiang (TM)	0.45
61. Leea indica (Burm.f) Merr	Leeaceae	Sulangkar (RT)	0.32
62. Lithocarpus elegans (Bl) Hatus ex Soepadmo	Fagaceae	Kibrahma (BM)	0.43
63. Litsea nornhoe Bl	Lauraceae	Meuhmal (BM,FW)	0.11
64. Litsea polyantha Jues	Lauraceae	Huru dapung (BM)	0.32

65. Litsea resinosa Bl.	Lauraceae	Huru minyak (BM)	0.11
66. Lisea schifera (Non Pers) Bl	Lauraceae	Tangkalak (FW,BM)	0.11
67. Macaranga tanarius (L) M.A	Euphorbiaceae	Mara (RT)	0.71
68. Macaranga triloba (Bl.) Muell.Arg	Euphorbiaceae	Mara asri (RT)	0.51
69. Mallotus tokbrai Muell Argr	Euphorbiaceae	Tokbrai (OS)	0.11
70. Mangifera caesia Jack ex Wall	Anacardiaceae	Binglu (FR)	0.21
71. Mangifera foetida Lour	Anacardiaceae	Limus (FR)	0.21
72. Maglieta glauca Bl	Magnoliaceae	Manglid (BM)	0.11
73. Melastoma malabathricum L	Melastomaceae	Harendong (OS)	0.11
74. Merremia dentata (L) Merrill	Convolvulaceae	Areuy malungpung (TM)	0.45
75. Micrococos paniculata L	Tiliaceae	Kitamiang (OS)	0.13

76. Musa sp	Musaceae	Kole beurit (TM)	0.41
77. Myristica glabra Bl	Myristicaceae	Kalapaciung (OS)	0.21
78. Myristica litoralis Miq	Myristicaceae	Kimokla (BM,FW)	1.17
79. Nasturtium exselsa Bl	Brassicaceae	Cangcaratan (BM,FW)	0.11
80. Nephelium lappaceum L	Sapindaceae	Rambutan (FR,PT,TM)	0.11
81. Neesia altissima (Bl) Bl	Bombaceae	Bengang (BM,FW)	0.24
82. Pandanus humilis Rump	Pandanaceae	Jakas (OS)	0.11
83. Pentace polyantha Hassk	Tiliaceae	Sigeung (OS)	0.43
84. Passiflora suringariana Burck	Cucurbitaceae	Jengkot (OS)	0.11
85. Phoebe macrophylla (Bl) Bl	Lauraceae	Kiranca (BM,FW)	0.47
86. Phyllantus niruri L	Euphorbiaceae	Trumbueusi (RT)	1.07
87. Pinanga coronata (Bl ex Mart) Bl	Arecaceae	Bingbin (RT,PC)	0.11

88. Pipturus repandus (Bl) Wedd	Urticaceae	Areuy laksa TM)	0.21
89. Planchonia valida (Bl) Bl	Euphorbiaceae	Putat (BM,FW)	1.17
90. Plectocomia elongata Mart ex Bl	Arecaceae	Bubuay (BM,FW)	1.07
91. Polygonum sp	Polygonaceae	Kimerak (OS)	0.21
92. Polygonum quercifolium L.	Polygonaceae	Kadaka (OS)	5.06
93. Polyalthia subcordata (Bl) Bl	Annonaceae	Kicantung (BM,FW)	0.21
94. Psychotria angulata Korth	Rubiaceae	Kikores (BM,FW)	0.41
95. Pithecelobium jeringa (Jack) Prain ex King	Mimosaceae	Jengkol (VG,PT)	0.11
96. Quercus sundaica Bl	Fagaceae	Kayang (BM,FW)	0.32
97. Radermachera gigantea Miq	Bignoniaceae	Kipadali (BM,FW)	0.11
98. Radermachera sp	Bignoniaceae	Kiacaang (TM)	0.34
99. Ribessia azurea (Bl) Dc	Melastomaceae	Kibeusi (BM,FW)	0.24

100. Salacca edulis Reinw	Areaceae	Salak (FR,SW,TM)	0.11
101.Sandoricum koetjape (Burm.f) Merr	Meliaceae	Kacapi (FR,TM)	0.73
102. Saurauria bracteosa DC	Actinidiaceae	Kileho (TM)	1.17
103. Selaginella plana Hiern	Sellaginela-ceae	Harane (OS)	0.43
104. Schima sp	Theaceae	Huru batu (BM,FW)	0.24
105. Schima wallichii (DC) Korth	Theaceae	Puspa (BM,FW)	1.32
106. Scleria purpurascens Steud	Maranthaceae	Patat (RT)	0.32
107. Spatolobus ferrugineus Bth	Fabaceae	Maraleuweung / Carulang (TM)	0.50
108. Stephania javonica (Thunb.) Mers	Menispermaceae	Areuy geureung (OS)	0.11
109. Sterculia sp	Sterculiaceae	Hantap (BM,FW, TM)	1.49
110. Stroubosia javanica Bl	Olaceae	Kicaang (OS)	0.37

111. Symplocus fasciculata Zall	Styraceae	Jirak (OS)	1.20
112. Syzigium malaccense (L) Merr & Perry	Myrtaceae	Kopo (FR)	0.60
113. Syzigium polyanthum	Myrtaceae	Salam (FR,SP)	0.33
114. Terminalia bellerica (Gaertn) Roxb	Combretaceae	Jaha (OS)	0.34
115. Tetracera indica (Houtt ex Christm & Panz) Merr	Deliniaceae	Areuy asahan (TM)	0.11
116. Trevesia sundaica (Miq)	Araliaceae	Ponggang (OS)	0.13
117. Turpiana pomifera (Roxb) DC	Staphylleaceae	Kiceuhay (OS)	0.50
118. Vernonea arborea Buch Ham	Asteraceae	Hamerung (FW)	0.11
119.		Aasahan (OS)	0.16
120.		Areuy macan tandang (OS)	0.11
121.		Kikopo (OS)	0.21
122.		Bongpon (OS)	0.11

123.		Buyur (OS)	0.11
124.		Calogor (OS)	0.21
125.		Cumongkok (OS)	0.11
126.		Dasah (OS)	0.11
127.		Damar (OS)	0.16
128.		Geuray (OS)	0.62
129.		Haraghag (OS)	19.25
130.		Huru pecel (OS)	0.13
131.		Kibuluh (OS)	2.02
132.		Kipinang (OS)	0.66
133.		Kikadu (OS)	1.33
134.		Kitaleus (OS)	0.21
135.		Kibubuay (OS)	0.13
136.		Kidamar (OS)	0.13

137.		Kiribut (OS)	0.55
138.		Kaneungay (OS)	1.60
139.		Kibungur (OS)	0.75
140.		Kamoyang (OS)	0.73
141.		Kisireum (OS)	0.45
142.		Kibayur (OS)	0.16
143.		Kicengkeh (OS)	0.28
144.		Kijalupang kuning (OS)	0.21
145.		Kiluruh (OS)	0.80
146.		Kendung (OS)	0.21
147.		Kicengkat (OS)	0.21
148.		Kileho bentang (OS)	0.11
149.		Kitulang (OS)	0.37

150.		Korokot (OS)	0.11
151.		Kapining (OS)	0.47
152.		Kiharupat (OS)	0.32
153.		Kiburuy (OS)	0.32
154.		Kicawene (OS)	0.21
155.		Kiceuhay (OS)	0.11
156.		Kicelah (OS)	0.11
157.		Kiakas (OS)	1.20
158.		Kilangir (OS)	0.26
159.		Kapidengkung (OS)	0.43
160.		Kianjing (OS)	0.47
161.		Kayu kiang (OS)	0.11
162.		Kikadal (OS)	0.60
163.		Kimalam (OS)	0.11

164.		Lolot (OS)	4.09
165.		Loka (OS)	0.11

E. Homegarden and mixed garden of the Baduy ressetlement Project in Kopo II.

SCIENTIFIC NAME	FAMILY NAME	LOCAL NAME & FUNCTIONS	HOME-GAR-DEN (SDR) *)	MIXED GAR-DEN (SDR) *)
1. Albizzia chinensis (Osb) Merr	Mimosaceae	Jeungjing (BM,FW)		0.59
2. Albizzia procera (Roxb) Bth	Mimosaceae	Kihiang (BM,FW)		0.89
3. Aleurites moluccana (L) Willd	Euphor-biaceae	Muncang (SP)		0.45
4. Allium sp	Liliaceae	Kucay (VG)		0.56
5. Alstonia scholaris (L) R.Br	Apocynacea e	Lame (BM,FW)		1.02
6. Anacardium occidentale Linn	Anacar-diaceae	Jambu mede (FR)	0.33	0.18
7. Ananas comosus (L) Merr	Brome-liaceae	Danas (FR)	9.71	3.52
8. Anona muricata L	Annonaceae	Nangka Belanda (FR)	0.41	0.38
9. Areca catechu L	Arecaeae	Jambe (CW)		0.78

10. Arenga pinnata (Wurmb) Merr	Arecaceae	Kawung (HI)		0.58
11. Artocarpus champeden Spreng	Moraceae	Nangka beurit (FR)	0.36	1.15
12. Artocarpus sp	Moraceae	Kelewih (VG)	0.93	0.55
13. Artocarpus heterophyllus Lmk	Moraceae	Nangka (FR)	2.21	1.74
14. Averrhoa carambola L	Geraniacea e	Balingbin g (FR)	0.33	
15. Bouea macrophylla Griff	Anacar- diaceae	Jatake (FR)	0.33	0.20
16. Bridelia monoica (Lour) Merr	Euphor- biaceae	Kanyere (FW,TM)		0.79
17. Canna edulis Ker	Cannaceae	Ganyol (ASF)		0.19
18. Capsicum frutescens L	Solanaceae	Cengek (SP)	0.72	0.46
19. Carica papaya L	Caricaceae	Gedang (FR)	0.67	0.38
20. Ceiba pentandra (L) Gaetn	Bombaceae	Randu (HI)	9.10	1.66

21. Citrus grandis (L) Osbeck	Rutaceae	Jeruk (FR)		0.37
22. Cocos nucifera L	Arecaceae	Kalapa (SP)	2.83	1.46
23. Coffea arabica L	Rubiaceae	Kopi (PT)	1.35	2.91
24. Coleus galeatus (Poir) Bth	Labiatae	Jawer kotok (TM,RT)		0.20
25. Collocasia nigrum	Araceae	Taleus hideung (ASF)	0.57	0.43
26. Cordyline fruticosa (L) A.Chev	Agavaceae	Hanjuang (RT)	0.72	0.61
27. Costus speciosus (Koen) J.E. Smith	Zingibe-raceae	Pacing (RT,TM)		0.18
28. Crescentia cujete L	Bigno-niaceae	Berenuk (OS)		0.18
29. Croton argyratum Blume	Euphor-biaceae	Parengpeng (FW)		0.20
30. Cucumis sativus Linn	Cucurbi-taceae	Bonteng (VG)	0.57	
31. Curcuma domestica Val	Zingibe-raceae	Koneng (SP)	0.36	0.24

32. Cymbopogon citratus (Dc) Stapf	Graminae	Sereh (SP)		0.53
33. Dillenia aurea Smith	Dillenia-ceae	Sempur (TM,FW)		1.45
34. Dioscorea alata L	Diosco-reaceae	Hui manis (ASF)	0.33	0.37
35. Durantha erecta L	Verbena-ceae	Budak Nakal (OS)	5.65	
36. Durio zibethinus Murr	Bombaceae	Kadu (FR)	3.37	1.70
37. Elaeis guineensis Jacq	Palmae	Kalapa sawit (OS)		0.18
38. Garcinia mangostana L	Clusiaceae	Manggu (FR)	0.64	0.37
39. Gigantochloa sp	Graminae	Awi mayan (BM,FW)	6.21	3.24
40. Gigantochloa apus (Bl.ex Schltf) Kurz	Graminae	Awi tali (BM,FW)	1.55	1.03
41. Gigantochloa ater Hassk	Graminae	Awi hideung (BM,FW)	1.64	0.85
42. Gnetum gnemon Linn	Gnetaceae	Tangkil (VG)	1.87	1.34

43. Hevea brasiliensis (Willd ex A.Juss) M.A.	Euphor-biaceae	Karet (PT)		9.01
44. Hibiscus macrophyllus Roxb ex Hornem	Malvaceae	Tisuk (BM,FW)	1.79	0.88
45. Hibiscus rosa-sinensis Linn	Malvaceae	Kembang Ros (AE)	0.85	
46. Hibiscus tiliaceus Linn	Malvaceae	Tisuk (BM,FW)		
47. Ipomoea batatas (L) L	Convol-vulaceae	Mantang (ASF)		0.35
48. Jatropha curcas L	Euphor-biaceae	Jarak pagar (OS)	0.69	0.18
49. Kleinhovia hospita Linn	Stercu-liaceae	Bintinu (FW)		0.97
50. Languas galanga (L) Stuntz	Zingibe-raceae	Laja (SP)	1.52	3.81
51. Leucaena glauca Benth	Legumino-sae	Peuteuy selong (VG)	0.36	0.10
52. Macaranga tanarius (L) M.A	Euphor-biaceae	Mara (RT,FW)		0.64

53. Maesopsis emanii		Sobsi (FW)	0.39	0.68
54. Manihot esculenta Crantz	Euphor-biaceae	Dangdeur (AFW)	0.93	2.93
55. Manihot glaziovii Muel-Arg	Euphor-biaceae	Sampeu karet (OS)	0.33	0.19
56. Mangifera caesia Jack ex Wall	Anacar-diaceae	Kemang (FR)	0.69	0.77
57. Languas sp	Zingi-beraceae	Laja beureum (PT)		11.35
58. Lansium domesticum Corr	Meliaceae	Pisitan (FR)	1.87	0.77
59. Macaranga tanarius (L) M.A	Euphor-biaceae	Mara (FW)		
60. Mangifera foetida Lour	Anacar-diaceae	Limus (FR)	1.33	0.53
61. Mangifera indica L	Anacar-diaceae	Buah (FR)	0.72	1.17
62. Metroxylon sagu Rottb	Palmae	Sagu (RM)		0.24
63. Mucuna sp	Legumino-sae	Kepes (VG)		0.18

64. Musa paradisiaca L	Musaceae	Cau (FR)	9.61	5.96
65. Nephelium lapppaceum L	Sapinda-ceae	Rambutan (FR)	2.83	1.49
66. Nicolaia hemisphaerica (Bl) Horan	Zingibe-raceae	Honje (VG)	3.21	1.83
67. Pandanus amaryllifolius Rox	Pandana-ceae	Pandan wangi (OS)		0.56
68. Pangium edule Reinw	Flacaour-tiaceae	Picung (VG)	0.33	
69. Paraserianthes falcataria (L.) Nielsen	Mimosaceae	Kalabise (BM,FW,PT)		3.81
70. Parkia speciosa Hassk	Mimosaceae	Peuteuy (VG)	4.09	1.34
71. Peronema canescens Jack	Verbena-ceae	Kisabrang (FW)	1.21	0.68
72. Persea americana Mill	Lauraceae	Alpuket (FR)		0.20
73. Piper aduncum L	Piperaceae	Kiseureuh (FW)		0.19

74. Piper rindu DC	Piperaceae	Rinu (PT)	0.33	
75. Pithecello-bium jeringa (Jack) Prain ex King	Mimosaceae	Jengkol (VG)	3.29	1.75
76. Polyscias fruticosa Harms	Araliaceae	Kedondong pager (OS)	1.11	
77. Psidium guajava L	Myrtaceae	Jambu batu (FR)	1.36	1.22
78. Saccharum officinarum L	Graminae	Tiwu (CW)		0.42
79. Salacca edulis Reinw	Arecaceae	Salak (FR)	1.24	0.48
80. Sandoricum koetjape (Burm.f) Merr	Meliaceae	Kacapi (FR)	2.29	1.97
81. Sauropus androgynus (L) Merr	Euphor-biaceae	Katuk (VG)	0.80	
82. Sericocalyx crispus (L) K.Schum	Labiatae	Kecibe-ling (OS)	1.15	
83. Solanum melongena Linn	Solanaceae	Terong (VG)		0.19

84. Sterculia javanica R.Br.	Stercu-liaceae	Hantap (OS)	0.44	
85. Switenia mahagoni (L) Jacq	Meliaceae	Mahoni (FW,BM)	0.33	0.95
86. Syzigium aquaeum (Burm.f) Alst	Myrtaceae	Jambu air (FR)	0.33	0.37
87. Syzigium aromaticum (L) Merr and Perry	Myrtaceae	Cengkeh (PT)	3.13	1.73
88. Vigna sinensis Savi	Legumino-sae	Kacang panjang (VG)		5.49
89. Vitex trifolia L	Verbena-ceae	Laban (FW,BM)		0.20
90. Xanthosoma atrovirens	Araceae	Taleus (ASF)	3.26	0.97
91.		Kicareuh (OS)		0.37

2. Some local rice varieties recorded in Baduy (Note: *) Sacred rice varieties which must be planted in each swidden plot that owns **pungpuhunan**).

RICE NAME	GLUTINOUS/ **KETAN** (G) OR NON GLUTINOUS (NG)	HAIRY/**BULU** (H) OR NON HAIRY SEED/**LEGER** (NH)	SEEED COLOUR: WHITE (W),RED (R) AND BLACK (B)
1. Pare Alean	NG	H	W
2. Pare Ambu ganti	NG	H	W
3. Pare Anjeni	NG	H	W
4. Pare Areuy	NG	NH	W
5. Pare Baduyut	NG	H	W
6. Pare Balogor	NG	NH	W
7. Pare Bangban	NG	NH	R
8. Pare Banter	NG	H and black	W
9. Pare Baur	NG	H	W
10. Pare Batu	NG	NH	W
11. Pare Bayur	NG	NH	W
12. Pare Bentik	NG	NH	W
13. Pare Beunteur	NG	NH	W

14. Pare Beureum Tiwu	NG	H and black	R
15. Pare Biluk	NG	H	W
16. Pare Bologor	NG	NH	W
17. Pare Bongkok	NG	NH	R
18. Pare Bunȯr	NG	NH	R
19. Pare Bubuay	NG	H	W
20. Pare Buntut Menjangan	NG	H	W
21. Pare Buntut Nyiruan	NG	H and short	R
22. Pare Cao	NG	NH	W
23. Pare Cere Telong	NG	NH	R
24. Pare Cikur	NG	NH	W
25. Pare Cinggir	NG	NH	W
26. Pare Cokrom	NG	NH	W
27. Pare Gintung	NG	NH	R
28. Pare Guling	NG	NH	W
29. Pare Hawara Bunar	NG	NH	W

30. Pare Hawara Koas	NG	H	W
31. Pare Janah	NG	NH	W
32. Pare Jawara	NG	H	W
33. Pare Jeruk	NG	NH	W
34. Pare Karudin	NG	H	W
35. Pare Kapundung	NG	NH	R
36. Pare Kembang Ading	NG	NH	W
37. Pare Kembang Kalapa	NG	NH	W
38. Pare Ketan Areuy	G	NH	R
39. Pare Ketan Beledug	G	H	W
40. Parea Ketan Bodas/Huis	G	H	W
41. Pare Ketan Bulu Kuda	G	H	W
42. Pare Ketan Gadog	G	NH	W
43. Pare Ketan Hideung/Peuceuk	G	NH	B
44. Pare Seuti	NG	H	W

45. Pare Ketan Kasumba	G	H black redish	W
46. Pare Ketan keuyeup	G	NH	R
47. Pare Ketan Kidang	G	H	W
48. Pare Ketan Jalupang	G	H	W
49. Pare Ketan Langgasari *)	G	NH	W
50. Pare Ketan Meloy	G	H	W
51. Pare Ketan Nangka	G	H	W
52. Pare Tanjung	NG	NH	W
53. Pare Ketan Putri	G	NH	R
54. Pare Ketan Siang (Pare Siang)*)	G/NG	NH/H	R
55. Pare Kiara	NG	H	W
56. Pare Kokak	NG	NH	W
57. Pare Kolelet	NG	H	W
58. Pare Koneng *)	NG	NH	W
59. Pare Konyal	NG	NH	R

60.Pare Leungsir	NG	NH	W
61. Pare Limar	NG	NH	R
62. Pare Lopang	NG	NH	R
63. Pare Malati	NG	H	W
64. Pare Marukan	NG	NH	R
65. Pare Menteng	NG	NH	W
66. Pare Menyan	NG	H black	W
67. Pare Nagayanti	NG	H	W
68. Pare Nangsi	NG	NH	W
69. Pare Ninggul	NG	H black	W
70. Pare Pendok (leger)	NG	NH	W
71.Pare Sikep Kuning	NG	H	W
72. Pare Peuteuy	NG	NH	W
73. Pare Racik	NG	H black	W
74. Pare Reumay	NG	NH	W
75. Pare Rumbay	NG	NH	W
76. Pare Sabeulah	NG	NH	W

77. Pare Salak	NG	H	W
78. Pare Sampay	NG	H	R
79. Pare Sempur	NG	H	W
80. Pare Sereh	NG	H	W
81. Pare Seungkeu	NG	H	W
82. Pare Ketan Ruyung	G	NH	R
83. Pare Singgul	NG	H	W
84. Pare Sintung	NG	NH	W
85. Pare Tanggay	NG	NH	W
86. Pare Tapos	NG	NH	W
87. Pare Tunggul	NG	H	W
88. Pare Wanti	NG	H	W
89. Pare Tundun	NG	H	W

3. List of wild animals recorded in different habitats of Baduy (Note: *) Protected animals in Indonesia)

A. Mammals

SCIENTIFIC NAME	FAMILY NAME	FAMILY NAME	POPULATION (HABITAT)
1. Tupaia javanica (Horsfield)	Tupaidae	Memes	Very common (various habitats)
2. Macaca fascacicularis (Raffles)	Ceropishe-cidae	Monyet	Very common (mature forest)
3. Presbytis aygularis (Linnaeus) *)	Ceropishe-cidae	Surili	Rare (mature forest)
4. Presbytis cristata (Raffles)	Ceropishe-cidae	Lutung	Very common (mature forest)
5. Hylobates moloch (Andebert) *)	Ceropishe-cidae	Oa/Kueung	Rare (mature forest)
6. Callosciurus notatus (Boddaens)	Sciuridae	Buut	Common (various habitats)
7. Hystrix javanica (Cuvier)*)	Hystricidae	Landak	Rare (mature forest)
8. Mydaus javanensis (Leschenauls) *)	Mustelidae	Sigung	Rare (mature forest)
9. Aonyx cinerea (Illigen)	Mustelidae	Sero	Common (various habitats near river)

10. Paradoxurus hermaphroditus (Pulles)	Viverridae	Careuh	Common (mature forest)
11. Sus vittatus (Linnaeus)	Suidae	Bagong/ Babi	Common (mature forest)
12. Tragulus javanicus (Osbeck)*)	Tragulidae	Peucang	Common (mature and secondary forest)
13. Muntiacus muntjak (Zimmerman)*)	Cervidae	Mencek	Rare (mature and secondary forest)
14. Manis javanica*)	Maniidae	Peusing	Rare (mature forest)

B. Birds

Note:
*) Protected birds in Indonesia.
) **Huma =Swidden field
Reuma =Fallowed land/secondary forest
Hutan tua=Mature forest
I =Inner Baduy
II =Outer Baduy
AB =Abundance, an index derived from an individual number of certain bird species divided by total individual of all bird species, recorded in the sampling area. Thus, if a species has an Abundance Index (AB) >5 %, it means very common (VC); 2-5 %=common (C), and <2 % = rare (R).

SCIENTIFIC NAME	LOCAL NAME	HUMA (AB) I	HUMA (AB) II	REUMA (AB) I	REUMA (AB) II	HUTAN TUA (AB) **) I
1. Ictinaetus malayensis *)	Heulang hideung					R
2. Spilornis cheela *)	Heulang ruyuk	R		R	R	C
3. Spizaetus cirrhatus *)	Heulang borontok				R	
4. Falco moluccensis *)	Alap-alap				R	
5. Gallus varius	Cangeh-gar			R		
6. Turnix suscitator	Puyuh			R	R	

7. Macropyga phasianela	Uwuk				R	R
8. Macropyga ruficeps	Imbok Gunung			R	R	
9. Geopelia striata	Perkutut			R	R	
10. Streptopelia chinensis	Tikukur	C	C	C	C	
11. Treron griseicanda	Walik			R	R	
12. Ducula lacernylata	Pergam					R
13. Cacomantis sp	Uncuing		R	R	R	R
14. Cacomantis merulinus	Wikwik abu			R		
15. Cacomantis variolosus	Swangi			R		
16. Centropus bengalensis	Dudut			R	R	
17. Surniculus lugubris	Wiwik hideung			R	R	
18. Phaenico-phaeus curvirostris	Kadalan	R				
19. Ninox scutulata	Rongrong			R	R	R

20. Ottus bakkamoena	Bueuk				R	
21. Collocalia esculenta	Kapinis	C	C	C	C	VC
22. Rhapidura leucopygialis	Layang kecil				C	R
23. Hemiprocne longipenis	Kapinis puhun	R	R	R	R	R
24. Halcyon chloris *)	Cekahkeh		R		R	
25. Halcyon cyanoventris *)	Manuk Hurang	R		R		
26. Megalaema australis	Ungkut-ungkut gunung	R		R	R	VC
27. Megalaema haemacephala	Ungkut-ungkut			R	R	C
28. Megalaema javensis *)	Tulung-tumpuk			R	R	VC
29. Megalaema zeylanica	Bututut					R
30. Dinopium javense	Caladi kundang		R		R	C
31. Picoides macei	Caladi kotok	R	R	R	R	
32. Eurylaimus javanicus	Boroboy			R	R	R

33. Pitta guajana *)	Manuk Paok			R		R
34. Hirundo daurica	Dodono					R
35. Hirundo tahitica	Walet	C	C	C	C	R
36. Hemipus hirundinaceus	Jingjing teureup	R	R	R	R	C
37. Lalage nigra	Manuk muncang		R			
38. Pericrocotus flameus	Manuk sepah	R	R	R		R
39. Aegithina tiphia	Cipeuw	R	R	R	R	
40. Chloris cochinensis	Manuk daun		R	R	R	R
41. Criniger pallidus	Kores	C	C	C	C	VC
42. Pycnonotus atriceps	Kuricang	C	C	C	C	VC
43. Pycnonotus aurigaster	Cangku-rileung	C	C	C	C	R
44. Pycnonotus goiavier	Jogjog	C	C	C	C	R
45. Pycnonotus melanicterus	Treng-goleng	R		R	R	R

46. Pycnonotus plumosus	Jogjog air			R		R
47. Pycnonotus sp	Corokcok					R
48. Dicrurus leucophaeus	Saeran hawuk	R	R	R	R	
49. Dicrurus macrocerceus	Saeran gunting				R	
50. Dicrurus remifer	Saeran rawing					C
51. Dicrurus paradiseus	Cawicawi		R	R	R	
52. Oriolus chinensis	Binca-rung		R			
53. Corvus enca	Gagak		R	R	R	R
54. Crypsirina temia	Londrok					R
55. Sitta frontalis	Salser	R	R	R	R	R
56. Pellorneum capistratum	Cica bata			C	C	C
57. Alcipe sp				R		
58. Macrones gularis	Congcong			R	R	R
59. Stachyris sp				R	R	R

60. Timalia pileata	Manuk kaso			R	R	R
61. Copsychus saularis	Manuk Haur		R	R	R	
62. Enicurus leschenaulti	Manintin			R	R	R
63. Myophoneus caeruleus	Tiung					R
64. Orthotomus cuculatus	Cinenen			R		R
65. Orthotomus ruficeps	Esel-nangka		C	C	C	C
66. Orthotomus sutorius	Ciang-ciang	R	R	R	R	R
67. Prinia familiaris	Pacikrak	C	C	C	C	
68. Prinia flaviventris	Pacikrak pare	C	C	C	C	
69. Cyornis banyumas	Anis bingbin		R	R	R	
70. Culicapa ceylonensis						R
71. Hypotimus azurea	Kelicap ranting					R
72. Rhipidura javanica*)	Manuk Sapu		R	R		

73. Lanius cristatus	Bentet beureum		R	R		
74. Lanius schach	Bentet	R		R	R	
75. Acridotheres javanicus	Jalak kebo			R	R	
76. Gracula religiosa	Beo	R		R		C
77. Aplonis panayensis	Jalak keling					R
78. Arachnothera braziliensis *)	Manuk madu		R		R	R
79. Aetopyga mystacalis *)	Manuk Madu beureum	R		R	R	C
80. Anthreptes malacensis *)	Manuk Madu kalapa				R	
81. Arachnothera affinis *)	Manuk Jantung		R			
82. Nectarinia jugularis*)	Sriganti	R		R	R	
83. Arachnothera longirostra*)	Kalaces	R	R	R	R	C
84. Diceum trigonostigma	Ceced	C	C	C	C	C

85. Dicaeum tricholeum	Manuk manga-neuh	R		R		
86. Zosterops plapebrosa	Manuk Kaca-panon		R	R	R	C
87. Lonchura leucogastroides	Piit	C	C		C	
88. Lonchura punctulata	Peking		R			
89. Lonchura ferruginosa	Bondol	R			R	
90. Ploceus manyar	Manyar				R	
91.	Kang-kangkot					R
92.	Totot					R
93.	Pituit					R
94.	Cerecet					R
95.	Harahag					R
96.	Ganggeng					R
97.	Manuk Peucang					R
98.	Corog					R
99.	Loklok					R

100.	Cokolele					R
101.Trichastoma sepiarium	Brecet					R
102. Cacomantis variolosus	Uncuing					R

C. Reptiles

SCIENTIFIC NAME	FAMILY NAME	LOCAL NAME	POPULATION AND HABITAT
1. Calotes jubatus (Dam & Bibn)	Aganidae	Londok	Commonly found in HF,SF,MF
2. Draco volans (L)	Aganidae	Haphap	Commonly found in HF,SF,MF
3. Mabuia javanica (Kuhl)	Scincidae	Kadal	Commonly found in HF,SF,MF
4. Varanus salvator (Laur)	Scincidae	Bayawak	Commonly found in river bank of Ciujung
5. Bungarus fasciatus (Schueider)	Elapidae	Oray welang	Rarely found, namely in river bank of Ciujung
6. Agkistrodon rhodostoma	Crotalidae	Oray taneuh	Commonly found in SF
7. Python sp	Boidae	Sanca bodo	Rarely found, in the river bank
8. Python sp	Boidae	Sanca manuk	Rarely found in the river bank
9.Naja sp	Elapidae	Oray hideung	Rarely found, in SF

*) HF=Hamlet forest (**Dukuh lembur**); SF=Secondary forest (**reuma**), and MF=Mature forest (**Leuweung kolot**).

D. Fish of Baduy Ciujung river

LOCAL NAME	SCIENTIFIC NAME	FAMILY NAME
1. Berod		Mastocembilidae
2. Beunteur	Puntius binotatus (C.V)	Mastocembelidae
3. Bogo	Ophiocephalus gachua H.B	Ophiocephaloidei
4. Buntu		
5. Hampal	Hampala macrolepidota (C.V)	Cyprinidae
6. Jeler		Combitidae
7. Kancra	Labeobarbus douronensis (C.V)	Cyprinidae
8. Kehkel	Akysis varigatus (Blkr)	Cyprinidae
9. Leat	Lethrinus ornatus C.V	Lautjamidae
10. Lele	Clarias batrachus L	Claridae
11. Lubang	Anguilla mauritiana Benn	Anguillidae
12. Paray*)	Rasbora sp	Cyprinidae
13. Salusur	Homaloptera sp	Homalopteridae
14. Sarompet		
15. Sengal	Macrones sp	Bagridae
16. Sosoro		
17. Rarancak		
18. Regis	Puntius bramoides (CV)	Cyrinidae

19. Ujeg		

*) This fish is commonly used in performing rituals.

4. A sample letter concerning leasing (**gade garapan**) or selling (**oper garapan**) land in Outer Baduy.

Surat keterangan gade garapan/oper garapan
di Blok Ciseel, Desa Kanekes

Nama : Arseni bin Kalwin
Umur : 60 tahun
Alamat : kampung Cisaban
Digadai/dijual kepada Aipan dengan emas 30 gram
Batas : Utara garapan Ayah Sani
Barat garapan Talsin
Selatan garapan Jaiti
Timur garapan Latif

Tanda tangan
Jempol

1). Arseuni
2). Aipan

Saksi 1). Arsah
2). Astian
3). Nasinah
4). U.Sukarna

Mengetahui
Kepala Desa

Samin

Which can be translated as:

A leasing/selling land letter
at Block Ciseel, Kanekes village

Name : Arseuni son of Kalwin
Age : 60 years
Address : Cisaban hamlet
Land was sold/leased to Aipan with paying 30 grams of gold
Borders : North bordered of Ayah Sani land
West bordered of Taslin land
South bordered of Jaiti land
East bordered of Latif land

Signature/
fingerprint

1). Arseuni
2). Aipan

Witnesses 1). Arsah
2). Astian
3). Nasinah
4). U. Sukarna

It was known by
the village leader

Samin

5. A list of menus most commonly consumed by Baduy families

Various meals (description in English term)
Sangu/kejo (steamed rice), **sepi** (jengkol/jering (Pithecelobium jeringa) is preseved), **kacang panjang** (fresh long bean), and goreng lauk emas (fried carp fish) [OB]
Kejo (steamed rice), **uyah di batok** (salts put in coconut shell), **goreng teri** (fried tiny sea fish) and **seupan iwung** (steamed bamboo shoot) [OB]
Kejo (steamed rice), **beuleum lauk asin Belitung** (baked salted fish from Belitung), and **uyah** (salt) [OB]
Kejo (steamed rice), **beuleum lauk asin Belitung** (baked salted fish from Belitung), and **ceungceum hiris** (pigeon pea/Cajanus cajan soup) [OB]
Kejo (steamed rice), **lauk teri pake gula** (tiny sea fish mixed with brown sugar), and **seupan jaat** (steamed or boiled wing bean/Psopocarpus tetragonolobus) [OB]
Kejo (steamed rice), **beuleum lauk asin Belitung** (biked salted fish from Belitung), and **oreg bihun** (fried thin rice noodles mixed with spices, such as salt and sugar) [OB]
Kejo (steamed rice), **lauk asin belitung diseupan dibungkus daun seuhang** (Belitung salted fish wrapped in seuhang leaves/ Ficus glossularoides and steamed) , and **uyah** (salt) [OB]
Kejo (salted fish), **sawi** (fresh **Brassiceae** vegetable), and **beuleum lauk peda** (baked salted fish of peda) [IB]
Kejo (steamed rice), **beuleum lauk asin Belitung** (baked Belitung salted fish of belitung), **uyah** (salt), and **pais picung** (**picung**/Pangium edule fruits wrapped in banana leaves and cooked in fire place/hawu) [OB]
Kejo (steamed rice), **pais lauk paray** (river fish/paray (Rasbora sp wrapped in banana and cooked in fire place ash/hawu), **uyah** (salt), and **seupan daun gedang** (steamed papaya leaves) [OB]
Kejo (steamed rice), **beuleum lauk asin** (bake of salted fish), **seupan iwung** (steamed bamboo shoot), and **sambel tarasi** (**tarasi** sauce, made of chili, salt mixed with tarasi/condiment made from pounded and fermented small fish) [OB]
Kejo (steamed rice), **beuleum lauk asin** (bake of salted fish), and **sayur gedang** (young papaya fruit is made soup) [OB]

[OB]

Kejo (steamed rice), **sangray kacang/ceos kacang** (beans cooked in kettle with a little water instead of frying oil), and **uyah** (salt) [OB]

Kejo (steamed rice), **beuleum lauk asin** (baked salted fish, **daun kacang panjang** (fresh long bean leaves), and **uyah** (salt) [OB]

Kejo (steamed rice), **beuleum lauk asin** (baked salted fish), **seupan kucay** (steamed or boiled Allium bulbs) and **uyah** (salt) [IB]

Kejo (steamed rice), beuleum lauk asin (baked salted fish), **sawi** (fresh **sawi/Brasicaceae** vegetables leaves), and **seupan boros lampuyang** (steamed young shoot of **Zingibereraceae**) [IB]

Kejo (steamed rice), **goreng teri** (fried tiny sea fish), **cengek** (fresh hot chilies), and **uyah** (salt) [OB]

Kejo (steamed rice), **goreng lauk asin** (fried salt fish), and **uyah** (salt) [OB]

Kejo (steamed rice), **uyah** (salt), **cengek** (hot chilies) and **kacang panjang** (fresh long bean) [OB]

Kejo (steamed rice), **goreng lauk asin** (fried salt fish), **sayur kunur** (gourd/Benincasa soup), **seupan gedang** (steamed young papaya), **kacang panjang** (fresh long bean), **seupan iwung** (steamed bamboo shoot), and **uyah** (salt) [OB]

Kejo (steamed rice), **beuleum lauk asin** (baked salt fish), **seupan kacang panjang** (steamed long bean), **bonteng** (fresh cucumber), **cengek** (fresh hot chilies) and **uyah** (salt) [IB].

Kejo (steamed rice), **goreng lauk bandeng** (fried **bandeng**/milk fish), **goreng tempe** (fried **tempe**/fermented soya bean), and **uyah**
(salt) [OB]

Kejo (steamed rice), **pais teri** (tiny sea fish wrapped in banana leaves cooked in fire place ash), and **pais picung** (**picung**/Pangium edule wrapped in banana leaves and cooked in fire place ash) [OB]

Kejo (steamed rice), **goreng lauk emas** (fried carp fish), and **goreng jengkol** (fried jering/Pithelelobium jeringa) [OB]

Kejo (steamed rice), **beuleum lauk asin** (baked salt fish), **sayur daun dangdeur** (cassava leaves mixed with spices and fried), **pais picung** (**picung**/Pangium edule wrapped in **seuhang** leaves/Ficus grossularoides and cooked in fire place ash) [OB]

Kejo (steamed rice), **beuleum lauk asin** (baked salt fish), **sayur tangkil** (**tangkil** fruits/Gnetum gnemon mixed with spices and fried), and **seupan oyong** (steamed young fruits of Luffa acutangula) [OB]

Kejo (steamed rice), **beuleum lauk asin japuh** (baked salt fish of japuh), **sayur hiris jeung terong** (hiris/pigeon pea and terong/eggplant mixed with spices to make soup), **terong** (fresh eggplant), **roay** (fresh hyacinth bean/Dolichos lablab) , **seupan jaat** (steamed wing bean), and **sambel tarasi** (**tarasi**/fish paste hot chili sauce) [OB]

Kejo (steamed rice), **beuleum lauk asin belitung** (bake salt Belitung fish), and **ceungceum** (**hiris**/pigeon pea soup) [OB]

Kejo (steamed rice), **usam** (salt fish mixed with brown sugar), **sayur tangkil** (Gnetum gnetum fruit mixed with spices and fried), and **jaat** (fresh wing bean) [OB]

Kejo (steamed rice), **beuleum lauk asin** (baked salt fish), and **uyah** (salt) [OB]

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Notes:

[IB] = inner Baduy, [OB]= outer Baduy
Estimated price and household consumption:
Rice and side-dish: A family with one child will approximately consume the following: 4 litres of rice.

-Price of rice 600,- - 700,-/litre, consumed about 3 litres/day by one family with 1 child.

-Price of **lauk asin japuh**/salt fish 2.000,- rupiah/kg (20 items), consumed about two items

-Price of **lauk asin belitung**/salted fish 2.000,- rupiah/kg (24 items), consumed daily about two items

-Price of **lauk emas** (fresh water fish/ carp) 4.000,-/kg (10 items) consumed only sometimes, two items by one family with one child

-Price of Arenga palm sugar 400,- - 500,- rupiah or home made

-Price of **Tempe**/fermented soya bean 100,- rupiah/pack, consumed one pack for one person

-Price of fried oil 800,- kg (bottle), for about 1 months

-**Tarasi**/condiment made from pounded small fish 200,-/pack consumed for two times

-**Uyah**/salt 500,- /pack, consumed for about two months