

RESPONSE

Conservation marketing and education for less charismatic biodiversity and conservation businesses for sustainable development

E. Di Minin¹, I. Fraser², R. Slotow³ & D. C. MacMillan⁴

¹ Finnish Centre of Excellence in Metapopulation Biology, Department of Biosciences, University of Helsinki, Helsinki, Finland

² School of Economics, University of Kent, Canterbury, UK

³ School of Life Sciences, University of KwaZulu-Natal, Durban, South Africa

⁴ Durrell Institute of Conservation and Ecology, School of Anthropology and Conservation, University of Kent, Canterbury, UK

Correspondence

Enrico Di Minin, Finnish Centre of Excellence in Metapopulation Biology, Department of Biosciences, P.O. Box 65, University of Helsinki, Helsinki, FI-00014, Finland

Email: enrico.di.minin@helsinki.fi

doi:10.1111/acv.12060

Ecotourism can potentially provide important economic benefits to local people and help protect biodiversity (Kiss, 2004). However, previous studies have found that tourists have narrow viewing preferences for charismatic species that limit the potential to create markets for less charismatic biodiversity (Leader-Williams & Dublin, 2000). In addition, the resources generated by ecotourism are often not shared equally with the people with whom biodiversity coexists (Adams *et al.*, 2004). Yet, recent studies have highlighted how more experienced tourists are also interested in less charismatic biodiversity (Di Minin *et al.*, 2013a). In addition, conservation businesses based on consumptive and non-consumptive use of biodiversity, may provide win-win strategies for biodiversity conservation and sustainable development (Di Minin *et al.*, 2013b). More research is now required for in depth analysis of alternative markets to those created by charismatic biodiversity, in order to create new opportunities to protect less charismatic biodiversity.

As pointed out by Buckley (2013), future research into alternative market segments to charismatic species, such as the 'Big Five', would benefit from extending the approach taken by Di Minin *et al.* (2013a) to include a wide range of smaller species. Choice experiments, a form of stated preference method, are particularly suited for this purpose and have been extensively used in biodiversity-rich countries (Naidoo & Adamowicz, 2005; Bush, Colombo & Hanley, 2009). Specifically, future choice experiments could include a wider range of smaller species, ranging from those that are well-known to little-known to tourists, or species which are under different levels of threat. The results of such studies may help decision makers market currently less popular conservation areas, which lack charismatic megafauna. In addition, to research on conservation marketing, it will be strategic to develop targeted education programs for tour-

ists from emerging economies, such as those in Asia and South America, who are increasingly visiting conservation areas in their own countries and abroad, as this may raise awareness of less charismatic biodiversity and help support alternative markets (Balmford *et al.*, 2009). It is also important to start educating the next generation of visitors to conservation areas about broader aspects of biodiversity than simply of charismatic species.

Caro & Riggio (2013) correctly point out how important it is to target other audiences besides tourists in order to create incentives for biodiversity conservation in Africa. As we point out above, conservation education programs are indeed important to start educating younger generations. However, providing local stakeholders with economic incentives remains a key strategy to make biodiversity conservation sustainable in the long term. The 'Big Five' and other charismatic species play an important role in attracting tourists to conservation areas in sub-Saharan Africa (Di Minin *et al.*, 2013a). However, the economic benefits generated by consumptive and non-consumptive use of these species are rarely shared with local stakeholders neighbouring conservation areas. Perhaps it is time to move beyond the strict control of budgets of protected areas by central governments in Africa and advocate for new public-private-community partnerships that could help channel an important part of the revenue generated from ecotourism and trophy hunting directly to local people living on reserve borders (Jorge *et al.*, 2013). This may also be beneficial in better marketing many protected areas in Africa, which are hardly visited by any tourist (Fischer, Muchapondwa & Sterner, 2011).

The lack of capacity for business development in local communities, as well as the limited information on possible conservation businesses, has so far limited the potential of

ecotourism to contribute to protected area expansion and poverty alleviation in many parts of Africa. An alternative strategy may be to allow well-established and better capitalized private companies and tour operators to join forces with local communities and run conservation businesses on leased land, as such businesses are increasingly delivering financial benefits and guaranteeing employment to local communities helping achieve human and economic development (Spenceley, 2010; Fischer *et al.*, 2011). Such joint collaborations may be particularly beneficial to support ongoing initiatives for protected area expansion for both charismatic and less charismatic biodiversity. The establishment and development of conservation businesses on communal land will also receive support at high political levels. Di Minin *et al.* (2013b) demonstrate the full potential of ecotourism and sustainable use of biodiversity to bring under protection a considerable proportion of threatened biodiversity, while delivering substantial economic benefits to local stakeholders in a global biodiversity hotspot. Marketing broader biodiversity opportunities than the Big Five will also create the opportunity to diversify the range of local stakeholders who can benefit from ecotourism.

In conclusion, we need to ensure that future research promotes better understanding of tourists' preference for less charismatic biodiversity so that we can fine tune new marketing strategies for less charismatic species and currently less popular conservation areas. Conservation education programs will also play a key role in better educating traditional tourists to conservation areas and those from emerging economies on broader aspects of biodiversity. However, there is now a real threat of losing some of the most iconic species that have and are attracting so many tourists to conservation areas in Africa and elsewhere. It is time to turn the tide of decline for these species by delivering economic benefits to local people who are bearing important opportunity costs and promote new forms of sustainable development (e.g. conservation businesses).

References

- Adams, W.M., Aveling, R., Brockington, D., Dickson, B., Elliott, J., Hutton, J., Roe, D., Vira, B. & Wolmer, W. (2004). Biodiversity conservation and the eradication of poverty. *Science* **306**, 1146–1149.
- Balmford, A., Beresford, J., Green, J., Naidoo, R., Walpole, M. & Manica, A. (2009). A global perspective on trends in nature-based tourism. *PLoS Biol.* **7**, 1–6.
- Buckley, R. (2013). To use tourism as a conservation tool, first study tourists. *Anim. Conserv.* **16**, 259–260.
- Bush, G., Colombo, S. & Hanley, N. (2009). Should all choices count? Using the cut-offs approach to edit responses in a choice experiment. *Environ. Resour. Econ.* **44**, 397–414.
- Caro, T. & Riggio, J. (2013). The Big 5 and conservation. *Anim. Conserv.* **16**, 261–262.
- Di Minin, E., Fraser, I., Slotow, R. & MacMillan, D.C. (2013a). Understanding heterogeneous preference of tourists for big game species: implications for conservation and management. *Anim. Conserv.* **16**, 249–258.
- Di Minin, E., MacMillan, D.C., Goodman, P.S., Escott, B., Slotow, R. & Moilanen, A. (2013b). Conservation businesses and conservation planning in a biological diversity hotspot. *Conserv. Biol.* (Online DOI:10.1111/cobi.12048).
- Fischer, C., Muchapondwa, E. & Sterner, T. (2011). A bio-economic model of community incentives for wildlife management under CAMPFIRE. *Environ. Resource Econ.* **48**, 303–319.
- Jorge, A.A., Vanak, A.T., Thaker, M., Begg, C. & Slotow, R. (2013). Costs and benefits of the presence of leopards to the sport-hunting industry and local communities in Niassa National Reserve, Mozambique. *Conserv. Biol.* (in press).
- Kiss, A. (2004). Is community-based ecotourism a good use of biodiversity conservation funds? *Trends Ecol. Evol.* **19**, 232–237.
- Leader-Williams, N. & Dublin, H. (2000). Charismatic megafauna as 'flagship species'. In *Priorities for the conservation of mammalian diversity: has the panda had its day?*: 53–81. Entwistle, A. & Dunstone, N. (Eds). Cambridge: Cambridge University Press.
- Naidoo, R. & Adamowicz, W.L. (2005). Biodiversity and nature-based tourism at forest reserves in Uganda. *Environ. Dev. Econ.* **10**, 159–178.
- Spenceley, A. (2010). Tourism product development interventions and best practices in sub-Saharan Africa: part 2: case studies. Report to the World Bank. Washington, US.