

## The Economic Value of Natural Features in Kgalagadi Transfrontier Park

### How Visitors Could Compensate Local People for Conserving These Features

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Visitors to Kgalagadi Transfrontier Park, located between Botswana and South Africa, are concerned about the kind of activities that take place within the park. This is not surprising, given the highly fragile Kgalagadi ecosystem. In our study, visitors assigned a monetary amount to the value they derive from pristine tourism opportunities. If this monetary value is greater than the amount that local communities assign to their livelihood activities in the park, then one group can compensate the other. The results of our study imply that visitors want more recreational zones, which entails preventing local communities from extensive use of environmental resources in the area. Our results indicate that significant benefits could be obtained from a program aimed at imposing resource use restrictions inside the park, charging higher fees to visitors, and compensating local people for refraining from activities that degrade the park ecosystem.

The attraction of the Kgalagadi semi-arid area is based on an array of natural and cultural attributes, which collectively contribute to the visitor experience. Visitors to the area are most likely to enjoy the recreational amenities. It is important to note that some of the natural experiences enjoyed by tourists take place on land owned by the Khomani San (i.e., their communal land and the portion of the Kgalagadi Transfrontier Park (KTP) which was allocated to them under land restitution).

It should be noted that the Khomani San people, as co-owners of the park, have resource rights inside the park. This implies that the San are entitled to collect medicinal plants, graze inside the park and collect firewood. In fact, some of the San people are already collecting medicinal plants inside the park. Their actions will impact the visitor experience, hence it is vital that we assess

#### Key Points

- The economic importance of dryland nature-based tourism in the Kgalagadi area is generally unknown, as well as whether tourism provides economic benefits to local communities.
- Instead of finding the value of nature-based tourism as a whole, this study seeks to value selected tourism-related attributes from the point of view of visitors.
- These attributes are produced by an ecosystem, and hence are called "ecosystem services."
- Park visitors prefer more pristine recreational opportunities and increased chances of seeing predators. They disapprove of granting more access inside Kgalagadi Transfrontier Park to local communities.
- This scenario shows that it is possible to craft a scheme where park visitors could compensate the local communities to accept a restriction of resource use in the Kgalagadi area.

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the visitors' preferences in this regard. In some cases, the activities that locals want are in conflict with what tourists want. The conflict would be detrimental to conservation in the Kgalagadi area, unless there is a way to compensate local people for refraining from activities in the park.

Generally tourists want to visit pristine wilderness areas; the San's actions degrade those qualities. The San's actions are potentially unstoppable because they own resource rights in the park. This is the source of the conflict. From the point of view of tourists, these activities can be stopped by imposing restrictions on the San. This is possible if the San are willing to be bought out of those activities and the tourists can provide sufficient revenues for the compensation package.

The study seeks to value nature-based tourism in the Kgalagadi area of South Africa and then assess the potential for tourism to contribute to the Khomani San livelihoods through a payment for ecosystem services (PES) scheme. Instead of finding the value of the entire tourism-based services, the study seeks to place a value on selected tourism attributes from the point of view of visitors.

### Conclusions

The results show that park visitors prefer more pristine recreational opportunities and disapprove of granting more grazing opportunities to local communities. Our estimates of visitors' willingness to pay to experience the ecosystem suggest that there are significant benefits to be obtained from a program aimed at imposing resource use restrictions inside the park. Ideally, payments should be higher than the amount the Khomani San are willing to accept to refrain from activities, and below the amount the visitors are willing to pay. If locals have less willingness to pay, it means that they value the ecosystem services less. If visitors have more willingness to pay, it means they value the services more. Those who value the services more can pay those who value the services less so that those who don't value them as much will refrain from disturbing the ecosystem. The results from our related study, which estimated the values placed on dryland ecosystem services by indigenous communities, show that their valuation of the ecosystem services is lower than the amount the visitors would be willing to pay. Thus, there seem to be grounds to suggest that a payment scheme can potentially resolve the conflict and develop more sustainability in the Kgalagadi ecosystem. Of course, the methods of payment, how locals receive payments, and what actions locals should desist from would require a more detailed analysis. But it seems there is a case for a payment scheme.

### ABOUT THIS BRIEF

This brief is based on "The Economic Valuation of Dryland Ecosystem Services in the South African Kgalagadi Area and Implications for PES Involving the Khomani San," by Johane Dikgang and Edwin Muchapondwa, December 2013, EfD Discussion Paper 13-16. (The DRB series of research briefs is associated with the EfD Discussion Paper Series.)

### FURTHER READING

Adamowicz, W.L., P. Boxall, M. Williams, and J. Louviere. 1998. Stated Preference Approaches to Measuring Passive Use Values: Choice Experiments and Contingent Valuation. *American Journal of Agricultural Economics* 80: 64-75.

Alpizar, F., F. Carlsson, and P. Martinsson. 2003. Using Choice Experiments for Non-market Valuation. *Economic Issues* 8: 83-110.

Carlsson, F., M. Kataria, and E. Lampi. 2010. Dealing with Ignored Attributes in Choice Experiments on Valuation of Sweden's Environmental Quality Objectives'. *Environmental & Natural Resource Economics* 47: 65-89.

Kataria, M. 2007. Environmental Valuation, Ecosystem Services and Aquatic Species. Doctoral Thesis, Department of Economics, Swedish, University of Agricultural Sciences.

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