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**Factors influencing the compensation for reduced access to
Pendjari Biosphere Reserve, Benin: a contingent valuation study**

LAURA HASAERS

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Promotor: prof. dr. ir. Steven van Passel

Abstract

Factors influencing the compensation for reduced access to Pendjari Biosphere Reserve, Benin: a contingent valuation study

The Pendjari Biosphere Reserve in Benin is the most intact ecosystem of West Africa. The reserve is facing some major threats including resource erosion, poaching and encroachment of agricultural land. The human impact on the reserve is increasing with the growing population. The reserve is officially recognized as a Man and Biosphere reserve by UNESCO, implying that sustainable and innovative solutions should be found to support the harmonious integration of humans and nature. The human population living around Pendjari is estimated around 40,000 people. In 2017, the park management was taken over by African Parks. Stricter rules and punishments for exploitation of resources within the reserve were installed for conservation purposes. A large part of the surrounding population depends on services provided by the reserve, the most important one being food provision from agriculture. The assessment of the economic value to the local population of the controlled agricultural zone is conducted through survey based questionnaires using the contingent valuation method. Willingness to accept was measured in money and supported by qualitative discussions about alternative sources of income. The study area contained 19 villages located on the two axes that border the park, located within and just outside the controlled agricultural zone. A total of 150 households were interviewed in order to estimate the economic value of the controlled zone to the ecosystem services provided by Pendjari reserve. The willingness to accept question was asked in an open-ended format. An OLS regression was performed using the point estimates as dependent variable and sociodemographic characteristics as explanatory variables. The factors significantly influencing the stated WTA amount were identified: the distance to the fence line and the income from crop farming. The mean willingness to accept was estimated at 15 911 CFA monthly (\approx €24.25), the median 12 500 CFA monthly (\approx €19.05). These values together with the most important factors influencing the compensation can be used in cost-benefit assessments to support policy decision-making. Compensation mechanisms should aim to strengthen sustainable development, so a balance between social and ecological systems is reached.

Key words:

Man and Biosphere Reserve, agricultural value, ecosystem services, willingness to accept, contingent valuation, Pendjari, African Parks