Africa's Protected Natural Assets

The importance of conservation areas for prosperous and resilient societies in Africa

Case study 4

ANKARAFANTSIKA NATIONAL PARK, MADAGASCAR

Green Value

NATURAL CAPITAL IN AFRICA

giz Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH

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GREEN VALUE
NATURAL CAPITAL IN AFRICA

The Green Value Initiative is the umbrella program of the German Federal Ministry for Economic Cooperation and Development (BMZ) on the value of nature in Africa. In providing multiple benefits such as clean air and water, productive soils, extreme weather and erosion protection, health benefits, and solutions to climate change, Africa's natural wealth is an important asset that contributes significantly to the continent's welfare and achievement of societal development goals. The Green Value Initiative supports its African partner countries and development institutions to integrate the value of these assets in decision-making. Its objective is to mainstream natural capital into policies and planning, financial markets and development finance, as well as measures of economic progress and national accounts (natural capital accounting). With that, the Green Value Initiative contributes to one of the key building blocks for transformative change towards nature-positive economies and development in Africa.

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CASE STUDY

ANKARAFANTSIKA NATIONAL PARK, MADAGASCAR

Modelling erosion and hydrological systems shows how the park contributes to regional water and food security

STATUS: National park

SIZE: 130,026 ha divided into a core protection zone of 42,878 ha and a buffer zone of 93,635 ha

ECOSYSTEMS: Tropical dry forest, the last continuous forest of its kind in the region

KEY ECOSYSTEM SERVICES: Erosion prevention, carbon storage, opportunities for nature tourism

NEARBY POPULATION AND INFRASTRUCTURE: Rural population in buffer zone, important national road cuts through the park

LAND-USE: Sustainable land-use practices allowed in buffer zone

CHALLENGES: Encroachment and expansion of agricultural land, erosion

Ankarafantsika National Park (ANP) is a well-established national park of 130,026 ha with a buffer zone where certain sustainable land-uses are allowed. ANP is the last continuous dry tropical forest of scale in this ecoregion with its unique species mix. The plain of Marovoay to the north of the park is one of Madagascar's major rice granaries, with more than 38,000 ha of cultivation area.

The park is under direct pressures from fires which are set up outside park boundaries to improve pastures and create new agricultural land. Illegal logging for charcoal production poses an additional threat, as do foraging and poaching.

APPROACH OF THE ASSESSMENT

The assessment sought to evaluate the current pressure of agricultural practices on the park and the associated economic risks and consequential losses. It then examined how ANP's natural capital contributes to the region's development and what opportunities could be tapped in the future. The better understanding of the pressures as well as the parks contributions and potentials for development shall inform strategies defining development options and incentives in the region around Ankarafantsika National Park.

CASE STUDY
MADAGASCAR

SOME KEY FINDINGS

Concerning the important agricultural area of Marovoay north of the park the assessment quantified the effects of soil erosion to rice production. The rice paddies in this region are fed by rivers passing through the park. The Marovoay plain is threatened by siltation: Sedimentation of the watering system slowly degrades the rice paddies until they are unprofitable or require large restoration efforts.

Looking at the 10 municipalities around the Ankarafantsika National Park, the analysis showed that agricultural production in two municipalities is insufficient with regards to the population's needs from nutrition as well as a livelihood perspective today. In order to compensate for this insufficient supply, farmers extend agricultural activities and encroach into the national park and degrade of forest cover inside the park and in the buffer zone. In a business-as-usual scenario for 2030, this loss of natural capital will continue, resulting in a lack of soil fertility and water provision.

This large but remnant protected dry forest area influences the hydrology of the surrounding landscape. The assessment's projection showed that forest protection and sustainable agricultural practices could reduce erosion and avoid siltation of more than 500 ha of rice paddies by 2030. Also, the park's water provisioning function is of key importance to agricultural use in surrounding landscapes, where the population is exposed to food insecurity. This evidence is not yet well reflected in debates on regional development.

The natural capital assessment highlighted development potentials that are largely untapped today. One being nature-related tourism especially on the national level tourism due to the park's location on the main road connecting the capital of Madagascar Antananarivo with the Northern Coast. In 2019 nature-related tourism in ANP benefited 1,815 households directly as guides or in touristic facilities or indirectly as jobs are in conservation related-activities within the national park management and operations as well as the fire brigades. The value is mostly monetary and therefore constitutes cash income. In 2019 this value amounted to US$ 265,000. While the Covid-19 pandemic depreciates these benefits for years to come, investments in the park's infrastructure will allow for even higher incomes when travel recovers. Sensitively developed it could become an alternative source of income for the local population via the development of touristic service activities on the one hand and the supply of agricultural products to the hotel enterprises.

Source: Authors' analysis

Ankarafantsika National Park is famous for sandy eroded rock areas as well as for valuable dry tropical forests