

Anjozorobe–Angavo & Tsinjoarivo

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This forest corridor extends from the Anjozorobe–Angavo Protected Area in the north to the Tsinjoarivo Classified Forest in the south, and is entirely contained between two of eastern Madagascar’s largest rivers (the Onive River to the south and the Mangoro River to the east). Because of its westerly position relative to other eastern rainforest sites, and its biogeographic position spanning eastern and western drainages, it contains higher altitude forest that represents a transition between typical eastern humid forest and sub-humid high plateau forest (now represented only in extremely small fragments such as Ambohitantely). This forest’s climate reflects its altitude and westerly position – Tsinjoarivo receives just 2,000 mm of rainfall per year, much



Diademed sifaka (*Propithecus diadema*), Critically Endangered. (Photo: Mitchell Irwin/SADABE)

less than lower-altitude coastal sites, and temperature ranges from daily highs of about 26°C in January to daily lows of 7°C in July.

The Anjozorobe–Angavo–Tsinjoarivo forest is rich in biodiversity. It contains twelve primate species, including three Critically Endangered taxa: Sibree’s dwarf lemur (*Cheirogaleus sibreei*), indri (*Indri indri*) and diademed sifaka (*Propithecus diadema*); and two Endangered taxa: aye-aye (*Daubentonia madagascariensis*) and eastern woolly lemur (*Avahi laniger*). There have also been sightings of the Critically Endangered greater bamboo lemur (*Prolemur simus*) at Tsinjoarivo. It is especially important as a refuge for the newly rediscovered dwarf lemur *C. sibreei*, as this species seems to be restricted to highest-altitude humid forest (>1,300 m), and is currently known only from two highly restricted areas in this corridor and one additional, isolated



Sibree’s dwarf lemur (*Cheirogaleus sibreei*), Critically Endangered. (Photo: Mitchell Irwin/SADABE)



Anjozorobe-Angavo & Tsinjoarivo forest corridor. (Photo: Mitchell Irwin/SADABE)

site within Ranomafana National Park. The region's unique and transitional biogeographic position has also led to rich and unique biodiversity in other animal and plant groups, such as a record-setting 17 tenrec species (including 12 sympatric *Microgale* species) – the highest tenrec diversity of any site in Madagascar.

Protection of this forest corridor was practically non-existent until 2005, when the Anjozorobe-Angavo corridor was given protected area status by the Malagasy government.

This area is managed by the NGO Fanamby, which has installed tourist infrastructure and initiatives (see <http://www.sahaforestcamp.mg>). However, the southern half of the corridor, including Tsinjoarivo Classified Forest, still has no official protection, and pressures on the remaining forest are considerable – especially tavy (deforestation), illegal logging and gold mining. These pressures pervade the forest corridor but are most acute in the western areas (due to the close proximity to high plateau human settlements). This is unfortunate because the western, highest altitude forests (reaching 1,650 m) are among the last of their kind in Madagascar, and the last strongholds of the high altitude dwarf lemur *C. sibreei*. The NGO Sadabe (<http://www.sadabe.org>) has been working at Tsinjoarivo since 2000, and currently manages several research, conservation and development projects there. Urgent action is needed to preserve this unique ecosystem – specifically, strengthening of the protection of Anjozorobe-Angavo, and the creation of a new protected area at Tsinjoarivo.

At Tsinjoarivo, SADABE will pursue three major initiatives that, in combination, will protect threatened lemur populations. First, it will continue its research, conservation and development programs, which have been effective at preserving forest cover in their intervention areas, and expand these activities from existing areas (approx. 40 km²) to cover the southern half of this forest corridor (approx.



Waterfall on the Onive River, part of the Anjozorobe-Angavo & Tsinjoarivo forest corridor. (Photo: Mitchell Irwin/SADABE)



Eastern woolly lemur (*Avahi laniger*), Endangered. (Photo by Russell A. Mittermeier).

2,000 km²). The fragmented forest site of Mahatsinjo (where SADABE teams have worked since 2000) will be the region's "Model Station", hosting demonstrations and training sessions for pisciculture, apiculture, improving agricultural production, reforestation and tree farming, environmental education, and ecological monitoring. SADABE researchers will also work with international and local collaborators and students to increase research activities, following three major priorities: spatial variation in anthropogenic threats and lemur population densities, population genetics and dispersal abilities, and the impacts of habitat disturbance on lemur populations' health and viability. Finally, ecological monitoring and forest patrols will be initiated to detect and control illegal exploitation. Such patrols have already been initiated at Tsinjoarivo (KASTI: Komitin'ny Ala sy Tontolo Iainana). These activities will necessitate the establishment of seven new intervention sites to complement the three existing sites (Mahatsinjo, Ankadivory and Vatateza); all ten sites will become local training and education centers.

Second, in parallel with these grassroots initiatives, SADABE will work with the Malagasy government to establish a new protected area. We will host government and local consultations to identify priority sites for protection, dividing

this region among MNP-administered protected areas and community-managed protected areas via management transfer. This will ensure that the region's biodiversity will be protected, while its forest ecosystems will continue to contribute to human well-being in a sustainable manner.

Third, SADABE will develop infrastructure and human capital for tourism at Tsinjoarivo. In addition to its rich biodiversity, Tsinjoarivo has a rich cultural history: it is the site of a royal palace (rova) that was used as a vacation residence by three queens and various prime ministers. The site was chosen by Queen Ranavalona I in 1832, and a five-building complex was built in 1834-1836, overlooking two massive waterfalls on the Onive River. SADABE teams will build and replace existing infrastructure (lodging, food preparation, roads and bridges), and train local village associations to work directly in tourism or provide necessary local products and services. By partnering with national and international tour agencies, we will increase tourist visitation rates and promote a broader appreciation for Tsinjoarivo's biological and cultural richness.

In the northern part of the forest corridor (Anjozorobe-Angavo), efforts will be made to strengthen existing protection and infrastructure through four major activities. First, teams will demarcate the recently-legislated protected area boundaries. Second, existing ecological monitoring and forest patrols will be strengthened and expanded to cover all regions of the protected area. Third, environmental education activities will also be strengthened and expanded to cover all regions of the protected area. Finally, we will launch extensive reforestation and tree-farming programs in all the communities implicated in the management transfers and around the periphery of the protected area; this activity will help reduce future pressures on forest timber products within the corridor.

Budget: US\$ 195,000 over 3 years