

## **Senior Fellowship for Dr. Fanomezana Mihaja Ratsoavina: "Land-use systems, conservation genomics and health assessment of lemurs within a newly protected area, Ambohidray, central east Madagascar"**

Initiative: Wissen für morgen – Kooperative Forschungsvorhaben im subsaharischen Afrika (beendet)

Ausschreibung: Postdoctoral Fellowships "Resources, their Dynamics and Sustainability - Capacity-

Development in Comparative and Integrated Approaches"

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Laufzeit: 3 Jahre

Increasing pressure on land resources, especially forested areas, is the main reason for the decline of wild fauna and flora. Understanding the dynamics of these forested areas are indispensable for long-term protection of biodiversity, this is the rationale under protected areas creation and conservation, such the case of Ambohidray, central eastern Madagascar. Farmers surrounding Ambohidray face high poverty linked with low productivity of the soil exacerbated by climate change effects. Cumulative demand on land surfaces for crop and poor agricultural systems, unstable historical management and illegal mining are heavy threats and position Ambohidray as hotspot for conservation due to its high endemism such threatened lemurs species. One of Madagascar emblematic species, lemurs viability is likely affected by habitat changes and loss. In summary, land-use systems can impact lemur populations both negatively and positively. It is thus critical to reach a congruent land-use patterns that are both useful to people and sustaining for lemurs be developed and emphasized. Thus, robust baseline data on lemur population structure and health status are crucial. In the frame of this project, we intend to discern the interplay of ecological constraints by understanding the land-use system, adaptive genetic variation and wildlife health in lemur populations inhabiting Ambohidray. Generated information will be used to predict the future of lemur populations and to establish appropriate conservation strategy for the unique in-situ biodiversity. Our approach starts with land use assessment as well as lemur diversity, population size and structure, then their dynamics related to the habitat structure. Using advanced technics such genomic on gut microbiome screening, our data will explore unstudied domain in wildlife such the immune system susceptibility through Major Histocompatibility Complex polymorphism.

### **Projektbeteiligte**

#### **Prof. Dr. Hartmut Stützel**

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