

## **Senior Fellowship for Dr. Roger Daniel Randrianiana: Diversity, ecology and conservation of freshwater fishes fauna of 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"

Bewilligung: 23.07.2014

Laufzeit: 3 Jahre

This project has multiple focuses to gather data on the breeding of the endemic species, to map the actual distribution area of the endemic species and the introduced species, to survey the invasion of the introduced species in Madagascar 5 main issues will be addressed: (1) monitoring the reproduction and the faculty of adaptation of the endemic species after their reintroduction in their natural habitat in which, a fieldwork in Andapa Region will be conducted. The "Association des Producteurs Privés d'alevins d'Andapa" in Andapa in the north of Madagascar, has arrived to breed about 10 endemic species of freshwater fishes of Madagascar and the monitoring program is very important as it constitutes a pilot study of the breeding of the endemic species; (2) monitoring the ability of local people to breed endemic fishes. A regular survey of the peasant breeding ponds will be carried out to note the success of the local population in the breeding of native fishes; (3) monitoring the invasion of the introduced fish species vs. threatening of the endemic species, to quantify the impact of the introduced species, community parameters and reproductive parameters which will be compared between two types of lakes: the one set consists of lakes with, the other set of lakes without introduced species, (4) establishing the biogeography of Madagascan fresh water fishes, (5) monitoring the possible impact of the recently introduced Asian alien toad *Duttaphrynus melanostictus* on freshwater fishes as the eggs of the toads are poisonous. The first three issues of this new project will be carried out intensively in Andapa and surroundings. For the biogeography question, some fieldwork in other areas will be conducted. This is also very important for studying the "difficult groups" with high cryptic diversity, which has not been yet able to identify to species level like gobies. The last issue will be carried out in Toamasina and surroundings, where the toad is currently distributed.

### **Projektbeteiligte**

#### **Prof. Dr. Hartmut Stützel**

Universität Hannover

Naturwissenschaftliche Fakultät

Institut für Gartenbauliche Produktionssysteme

Abteilung Systemmodellierung Gemüsebau

Hannover

**Dr. Roger Daniel Randrianaiaina**

University of Antananarivo

Faculty of Sciences

Department of Animal Biology

Antananarivo

Madagaskar