

## **Socio-economic field research for Master thesis in a rice irrigation plain in a semi-arid region in the north of Toliary, Madagascar**

The Government of Madagascar, Ministry of Research /FOFIFA, Regional Directorate in Tulear, has promoted for several years the formation of farmers' associations for the multiplication of certified rice seed and the distribution of irrigation water. The adoption of improved rice varieties in Madagascar is critical for sustainably increasing the yield of irrigated rice. In Ankililoaka about 75 kilometers north of Toliary, a development project has rehabilitated and expanded the existing irrigation system. It now allows to irrigate rice throughout the year in this otherwise fairly dry area where seasonal rainfed agriculture can only be undertaken in the rainy season between December and March. To compensate for the declining productivity and increased risk of rainfed agriculture in uplands, farmers seek to intensify their irrigated cropping systems or to diversify household incomes by seeking off-farm employment. The national road connecting Ankililoaka with Tulear has been asphalted a few years ago for the first time ever which resulted in a substantial reduction of transport costs that might have triggered a substantial transformation of the rural economy to more market orientation and a rise in off-farm employment, especially in the service sector. These major changes in the rural infrastructure and institutional landscape might have also led to an intensification of irrigated rice as well as upland crops.

Within this background, Professor Zeller (Chair of Rural Development Theory and Policy, Hans-Ruthenberg-Institute for Tropical Agricultural Sciences) offers a master thesis in Madagascar. Field research is best being done during the period February to November each year. Medium-level knowledge of the French language is absolutely required. The field research of Master students is being institutionally supported by the University of Antananarivo and a local researcher of FOFIFA based in Tulear. Students' applications for field research stipends at donor institutions can be supported.

### ***Working title for Master thesis: Structure, conduct and performance of farmers' associations for adoption of improved rice seed and mineral fertilizer***

Farmers' associations can improve the access to improved seeds and fertilizer. Using an ex-post facto research (non-experimental) quantitative research design, the student visits a random sample of farm households and of associations in the project area. The student will perform descriptive statistical analysis regarding a number of outcome variables regarding access to and use of seeds and fertilizer at association and household level. Based on a theoretical framework, the student will collect data on hypothesized explanatory variables (among them being the intensity and length of membership in a farmers' association, as well as structure and conduct of the association) which account for the likelihood and intensity of adoption of improved seeds and mineral fertilizer as well as recommended other inputs, such as animal dung or compost, for rice farming.

**Required Skills:** The successful completion of this master thesis will require the following skills:

- Proficiency in conducting a comprehensive literature review, critically analyzing academic sources, and synthesizing key findings.

- Ability to prepare and undertake a quantitative survey in a remote rural area with simple living conditions (no reliable access to electricity, internet, piped water or adequate basic health services).
- Competence in statistical analysis using software such as R or STATA to explore and interpret the gathered data.
- Good working knowledge in French (speaking, reading)
- Strong writing skills to effectively communicate research findings and draw conclusions.
- Interested candidates should send their CV, motivation letter and transcript of records to [manfred.zeller@uni-hohenheim.de](mailto:manfred.zeller@uni-hohenheim.de) and subject ***Master thesis opportunity Madagascar Tulear.***