

**Technology (ex-ante) assessment and farm household segmentation for inclusive poverty reduction and sustainable growth in agriculture (TIGA)**

TIGA project meeting, ZEF Bonn, Sept 13-14, 2012

**Summary**

The overall purpose of the project is to identify innovations that foster agricultural productivity and strategies to reach all strata of the poor among rural smallholders. The (ex-ante) assessment aims at providing information on

- 1) where the underperforming agricultural areas and unused potentials of the rural poor are,
- 2) what the barriers to innovation and adaptive change are and
- 3) which innovations are suitable for which segment of the rural poor.

For this purpose, the project partners from Bangladesh, India, Ethiopia and Ghana and the distinguished Project advisors gathered at the campus of ZEF, Bonn Sept 13-14, 2012 and presented the state of the art in agricultural technology and productivity in their countries and discussed different methodological approaches to be taken for assessing (ex-ante) technology innovations for inclusive growth in agriculture.

Participants from different countries/advisors/donor were below:

<b>Name</b>	<b>Country</b>	<b>Organizational affiliation</b>
Mohammad Abdul Malek Md. Amzad Hossain	Bangladesh	BRAC and ZEF BRAC
Bekele Hundie	Ethiopia	Ethiopian Economic Association (EEA)
Samuel Asuming-Brempong	Ghana	Forum for Agricultural Research in Africa (FARA)
Praduman Kumar, Devesh Roy and Gaurav Tripathi	India	Int. Food Policy Research Institute (IFPRI)
Joachim von Braun Franz Gatzweiler Heike Baumüller Valerie Graw Christine Husmann Antonio Rogmann Max Stephan Anne Marie Königshofen Saiful Islam	Germany	Center for Development Research (ZEF)
Prof. Arie Kuyvenhoven Prof. Franz Heidhues	Netherlands Germany	TIGA project advisors
Kate Schneider	USA	Bill and Melinda Gates Foundation

Day 1 (Sept 13): The partnering countries' representatives presented the current **state of agricultural productivity, technology innovations and food security** in their respective countries (Bangladesh,

India/Bihar and Odisha, Ethiopia and Ghana). They also focused on an overview of country specific needs and opportunities. The partners prepared slides and written contributions. All slides have been made accessible to the project members via a dropbox folder.

The second day of the meeting (Sept 14) was initiated by a presentation on the new developments, approaches and difficulties in mapping marginality hotspots for the TIGA project by Valerie Graw who just returned from a 2 weeks visit at **Harvest Choice** in Washington. The rest of the day the partners discussed their country specific research strategies and time schedules for implementing the common approach (assessment, analysis, models) in following three working steps:

**Working step 1: Identifying marginality hotspots**

Current status and literature, data collection for mapping, hotspot mapping

**Working step 2: Identifying smallholder potential**

Study area and household selection, field research (assessing assets, needs and options), household segmentation, identifying barriers/ enablers.

**Working step 3: Identifying and estimating innovation potential**

Identifying possible innovations, matching innovations with HH segments

The common analytical approach developed by ZEF and BRAC with input from all partnering organizations was found to be a useful guide for implementing the project activities. With the contributions to the workshop it will be further developed into a **manual for ex-ante assessment of agricultural technologies for the poor**

At the end of the workshop, the project advisors (Professor Arie Kuyvenhoven and Professor Franz Heidues) gave valuable feedback on the project activities to be followed.

**Main points addressed** by them were:

- the need to include the lessons learnt by other agricultural technology related projects and the question of comparability of research results.
- With regards to the latter, Prof. Franz Heidhues suggested to follow the analytical framework as provided so far but give freedom in the choice of methods/analytical tools for matching characteristics of the poor, barriers and suitable ag tech innovations.
- Both advisors noted that the project will have achieved much if it reaches the stage of identifying the barriers and institutional constraints to technology innovations. One needs to be modest in recommending quick fixes. If “areas of solutions” are outlined by the partners, much is already achieved.

**Important issues from the project advisors and the partners:**

- Ag technology innovations are presumably to be introduced as bundles or packages together with institutional and policy changes.
- The **dynamics** of ag tech innovations is important to keep in mind. Innovations which seem appropriate today may be inappropriate tomorrow or by the time they are being implemented.

- Note: During the Marginality project a system dynamics tool was tested by ZEF with different stakeholders. It may be a suitable additional tool for TIGA towards the end of the project.
- When addressing needs of all strata of the poor there is the need to collect micro-level data from households in the respective countries. The gap in secondary data can be closed by collecting primary data and information by local experts (e.g. extension agents, development workers, local authorities).
- Identifying and eliminating inappropriate technology as well as moving out of the agricultural sector can also be an option
- Secondary, multiplier or spill-over effects of adopting agricultural technology innovations should also be taken into consideration, even if a full investigation may not be possible during this project.
- Strategic options of rural poor households are often diverse to reduce risk. The strategic options suggested by the TIGA approach recognize that by proposing an income diversification option (income from agriculture and non-ag sector)
- Economic feasibility of technology innovations important. Also the sustainability of technology innovations needs to be evaluated by socio-cultural and ecological criteria
- Farming systems approach is a good starting point for defining strategic options
- Mapping is as an important tool in particular for area selection. However, the limitations of maps also need to be seen, especially with regards to data availability and the choice of indicators and cut-off points.
- We are interested in exploitable yield gaps
- Methods for identifying innovation potential are those which can analyse which impacts can be expected; which assess the likely adoption of innovations
- In order to know (ex-ante) the likelihood of success of any ag tech innovation it is necessary to look back and in front
- Optimization of existing ag technologies is a way forward; just like elimination of useless technologies.

**The project meeting was closed with the following decisions:**

- All partners are requested to send their final contributions (4-5 pages country summary in line with all three working steps the partners presented in the meeting/planned to implement for their country studies) no later than **28 September 2012** for inclusion in the TIGA project manual).
- It is anticipated that the **TIGA manual** will be prepared and published by January 2013. Franz Gatzweiler will send a draft outline of the manual with the required contributions from all project partners. The manual is planned to be published in the ZEF Working Paper Series. The possibility of publishing it as book will be discussed.
- The IFPRI partners have been so kind to host a GIS/Data management workshop for TIGA project at IFPRI, New Delhi dated **29 Oct-Nov 2 2012**. Preparatory steps have been taken by Valerie, Max and Antonio.

- For the smooth accomplishments of the deliverables within the rest of the project period, it was decided that a **mid-term review meeting** would be held at April 2012. Provisional dates are **April 18-19, 2013**. The Ethiopian Economic Association has expressed interest to host this meeting and will be address by ZEF for further planning.
- A final workshop at which the results will be presented will be held in **September 2013**.