



PROLINNOVA–Tanzania report on field study process for CLIC-SR Annual Meeting 25 May 2013, Nairobi, Kenya

1. Introduction

Strengthening Community Resilience to Change: Combining Local Innovative Capacity with Scientific Research (CLIC-SR) is a project coordinated by the PROLINNOVA International Secretariat and implemented in four countries in Eastern Africa, namely Ethiopia, Tanzania, Kenya and Uganda.

The objectives of the project are to:

- Strengthen the resilience to change of smallholders and their communities, especially women, by enhancing their innovative capacity and thus their livelihood security through participatory innovation development (PID)
- Build the capacity of organisations working on agriculture and natural resource management (NRM) such that they can effectively work with and support smallholder communities in their efforts to adapt
- Increase insight and awareness on relevance and effectiveness of PID through sharing and learning
- Mainstream PID as an accepted approach within targeted national policies and programmes related to agricultural development, NRM and climate change adaptation (CCA).

In Tanzania, the project activities are implemented in two districts, namely Kondoa and Chamwino. One of the initial activities is conducting field studies to assess how communities perceive and try to respond to changes in their environment and adapt on their own initiative. This report gives a brief overview of how the study was conducted in six villages: three in each of the two districts.

The study team included a development worker from INADES Formation, a researcher from Agricultural Research Institute (ARI) Hombolo, District Council representatives and local extension workers. One day was spent in each village to carry out the study using a guide provided by PROLINNOVA International. From the study, it was evident that there are effects of climate change, and that men and women have similar perceptions of these changes. However, women may feel the changes more strongly, as they have a heavy workload as compared to men, who work for very few hours a day. At least one local innovation was known by the community in each village. However, there need to be more opportunities to identify more innovations, since the meaning and importance of “local innovation” were not fully understood by the communities during this study.

2. Methodology

2.1. Study areas

The study was conducted in three villages in Kondoa District, Dodoma Region (Kolo, Tura and Kelema) and three villages in Chamwino District, Dodoma Region (Ilolo, Muungano and Makoja). Administratively, Kondoa has 8 divisions, 35 wards and 160 villages whereas Chamwino has 5

divisions 32 wards and 77 villages. Both districts are situated in semi-arid areas and have a dry savanna-type climate, characterised by a long dry season and by uni-modal and erratic rainfall that falls between November/December and April. Kondoa District has an annual average annual rainfall of about 500–800 mm and an annual average temperature of about 21.6°C and Chamwino has an average annual rainfall of about 500–700 mm and annual average temperature of 22°C. The economies of Kondoa and Chamwino Districts depend on agriculture (crop and livestock production). The main crops grown in Kondoa District are maize, finger millet, oil seeds, pearl millet and sorghum (URT 2003) and in Chamwino District pearl millet, sorghum, sunflower and groundnuts (INADES baseline report 2011).

2.2. Research design and methods of data collection

A cross-sectional research design was used in this study. Both primary and secondary data were collected at village and district level. The study sample for each village was obtained using a simple random-sampling technique from a sampling frame of farmers who produce crops and livestock. Also key informants including ward and village leaders, crop and livestock extension workers, religious leaders, teachers, community development workers and elderly farmers were selected purposely. Qualitative information was collected through key informant interviews and focus-group discussions (FGDs). Quantitative data were collected and triangulated through FGDs. To collect qualitative data, a checklist of items was used for in-depth interviews with key informants and a focus-group interview guide was used in the FGDs involving one group of men (10–20) and one group of women (10–20) in each village.

2.3. Data and information interpretation

Interpretations of both qualitative and quantitative data were consolidated for each theme (summing, ranking and looking at percentages) and to give meaning to the results. Findings about perceptions of climate change were based on the answers given in the FGDs.

3. The actual process experienced in making the studies

The following went differently than planned:

- There were two guidelines to carry out the field study, but at the beginning of the study it was not very clear which one to use. Was it for baseline information or a field study?
- The study needed a lot of time and resources to undertake. One day for three core facilitators per village was not adequate. At least three days for six core facilitators would have been required, as well as one week for the core facilitators to prepare for the study.
- With regard to inviting farmers to take part in the study, it was seen that those farmers who attended trainings from INADES and other institutions are the ones who participated and not a cross-section of the village community. Time could not allow for correcting this, considering we spent only one day in each village.

4. The challenges faced in making the studies and how these were dealt with

The following were seen by the field-study team as challenges:

- The concept of change in agriculture and NRM was understood differently by farmers than intended by the study team. Some farmers were telling about changes that were not related to agriculture and NRM. For example, one farmer referred to how young boys were now wearing very low-slung trousers behind as a change he had seen. Time was needed to make the concept of change clear to them.
- The study was done during a time of food insecurity, and participation was affected by many people going to sell their labour or do petty business as a coping strategy. The project contributed soft drinks and snacks to participants to encourage them to take part.

5. The opportunities revealed through the field studies

- There are potential innovations in the farmers' world in rural areas that help them to adapt to climate and other changes, e.g. farmers have joined voluntary groups that help them reduce the effects of changes happening in their livelihoods.
- There are a number of institutions working in rural areas geared to help farmers adapt to external change, especially climate change; this offers an opportunity to have a consortium/platform in supporting farmers with whom we can work in the field. The main institutions include District Councils, research institutions, NGOs, seed producers, the Ministry of Agriculture and HADO – a national programme started in early 1970s, called in Kiswahili **Hifadhi Ardhi Dodoma**, meaning Conserve Land in Dodoma. Under the HADO programme, target areas are destocked from livestock and encroachment is prohibited to allow regeneration of vegetation. The HADO Head Office is in Kondoa, where the land was almost barren.
- Each village has an Environmental Village Committee (EVC) that deals with natural resource management at village level but, in most cases, is relatively weak in scientific capacities and has a weak understanding of the concepts of climate change and NRM.
- One INADES staff is a member of the Agriculture and Livestock Zonal Research Executive Committee (ZEC) and two farmer innovators are also members of this committee, which is a pathway used to link local innovation with formal research.
- There are cases of joint experimentation by farmers and researchers on fishponds, trench cultivation and “*Mapambano*” compost using the Local Innovation Support Fund (LISF).

6. Results

- All the six villages lie in the semiarid climatic area of central Tanzania, Dodoma Region, which faces frequent crop failure, usually in three out of five years.
- In all villages, the percentage of wealthy people is very low (3.1% on average). The majority of the villagers are middle class (58%), according to farmers' perceptions. Poor people are also quite high in proportion (38.9%).
- In all groups of both men and women, the local people mentioned reduced rainfall leading to drought as the main change they see today that affects their livelihoods. This was followed closely by declining natural vegetation and depleted soil fertility. Most groups of men and women said they have been affected much by deforestation and cutting of trees also in fields.
- The impacts of these changes mentioned by all groups were food insecurity, prevalence of diseases, social insecurity, declining incomes and even death of livestock and people.
- All groups of men and women admitted that the social group that suffers more is that of the women, as men can escape from the village to rescue themselves and all the burden remains with women who could not leave the children to die.
- Timelines indicated that women remember most issues connected to food insecurity, mainly hunger, whereas men could remember even the war with Iddi Amin (former President of Uganda), El Nino rainfall etc.
- The 24-hour daily calendars of work for five villages showed that women work between 15 and 18 hours a day, while men work for 5–6 hours a day. In such a situation, women suffer more than men due to effects of climate change.
- The CLIC–SR project is highly needed by rural communities as the study showed that their environment as well as their lives are endangered by many changes.
- The study identified the following cases that can be further documented and possibly be entry points for PID for adaptation to change as perceived by the communities.

Table 1: Innovation cases identified during the field study

No.	Case identified	Individual / collective	Village
1	Establishing fishpond on bank of sand river	Individually innovated	Kolo
2	Establishing natural forest	Individually innovated	Tura
3	Pit cultivation in sand rivers during dry season	Individually innovated	Kelema
4	Women forming a committed group called Raia Makini to ensure food security and increased household income to improve their livelihoods	Collectively innovated	Makoja
5	Trench cultivation for tomato production	Individually innovated	Muungano
6	Gully healing using live barriers	Individually Innovated	Ilolo

- The baseline indicated that there are institutions that are working with farmers in the area, these being the District Councils, NGOs, researchers and faith-based organisations.
- In all villages, there are organised farmer groups that have been sensitised by various institutions. Men seem to be aware of income-generating activities, whereas women are also involved in groups for joint effort for self-help (e.g. merry-go-round savings) and food security.
- Not all households are food secure the whole year around; over 80% of community members are food insecure for the months between October and April. A small percentage of villagers are food secure the whole year around (about 20% and below).

7. The main lessons learnt in the course of making these field studies

- There are potential innovations in the farmers' world in rural areas that help them adapt to climate change and need recognition, possibly improvement and wide dissemination.
- Due to food insecurity, participation of farmers in the study was affected by poor attendance.
- Innovations that have been working in the area are seen by the community but there is not a good understanding of how they work and hence there is little spread to reach more people. Promotional intervention is needed.
- Farmers are aware of the effects of change in their livelihoods but seldom know the causes of these changes; they tend to think that the solution is in traditional rituals.
- The social group that suffers more is that of the women, as men can escape from the villages to rescue themselves and all the burden remains with women, who could not leave the children to die.
- Men seem to be aware of income-generating activities whereas women are also involved in groups for joint effort for self-help and ensuring food security.
- Most groups seem to be dependent on external support, with the exception of the Raia Makini Women's Group in Makoja village in Chamwino District, who depend solely on themselves and wanted to solve a common problem facing them.
- The study indicated that there are institutions that are working with farmers in the area, these being the District Councils, NGOs, researchers and faith-based organisations, but they do not seem to be informed about each other's work.

Some pictures of the PROLINNOVA–Tanzania work



CLIC– SR stakeholders planning meeting in Dodoma capital city of Tanzania



Discussion in Tura and Kollo villages, respectively, in Kondo District