



Tropentag 2009  
University of Hamburg, October 6-8, 2009  
Conference on International Research on Food Security,  
Natural Resource Management and Rural Development

---

---

**Empowering Smallholder Producers in Integrated Agricultural Research for Development in Lake Kivu**

Pali<sup>ab</sup>, Pamela, Jemimah Njuki<sup>c</sup>, Robin Buruchara<sup>d</sup>, W. Chiuri<sup>e</sup>, Moses Tenywa<sup>f</sup>, Jonas Mugabe<sup>g</sup>, Adewale Adekunle<sup>h</sup>

a Institut des sciences Agronomiques du Rwanda (ISAR), P.O. Box 73, Ruhengeri, Musanze, Rwanda

b Forum for Agricultural Research in Africa (FARA), 2, Gowa Close, Roman Ridge, Pmb Ct 173, Accra, Ghana

c International Livestock Research Institute (ILRI), Box 3079, Nairobi, 00100, Kenya

d The international Centre for Tropical Agriculture (CIAT), P.O. Box 6801, Kigali, Rwanda

e Makerere University, Department of soil science, P.O. Box 7062, Kampala, Uganda

f Institut des Sciences Agronomiques du Rwanda (ISAR), 47 rue Député Kimuzinzi, B.P. 5016, Kigali, Rwanda

g Forum for Agricultural Research in Africa (FARA), 2, Gowa Close, Roman Ridge, Pmb Ct 173, Accra, Ghana

### **Introduction**

There has been a shift in focus to include process evaluations to realise outcomes and results in addition to the inputs-activities –outputs approach. The latter approach in isolation has not been beneficial to the intended communities (PERRIN, 2006; KELLOGG FOUNDATION 1999). The involvement of multi stakeholders in process evaluation of community issues renders empowerment evaluation a participative, collaborative, and democratic evaluation method. In empowerment evaluation, stakeholders institutionalize concepts, techniques and findings of the program through iterations of the learning, reflection and action cycle hence realizing self determination (FETTERMAN, 2006). Ultimately, the role of process evaluation in impact assessment is the explanation of why and how of the process and therefore producing useful findings for a wider stakeholder range. The use of different empowerment evaluation tools, in isolation, for process monitoring have been reported, however, fewer studies have reported the use of a comprehensive set of process evaluation tools in a regional, multilingual, multi stakeholder (both vertical and horizontal) context.

We discuss the implementation process of monitoring and evaluation (M&E) tools that are being used in the Lake Kivu region. M&E documents the principles of creation and sustenance of innovation platform's (IP's) - the implementation modules for Integrated Agricultural Research for Development (IAR4D); to test whether IAR4D works, is cost effective and can be replicated outside test sites. IP's bring together a range of stakeholders, technologies and co-ordination procedures to generate innovative solutions to community challenges. We report the different ways in which learning occurs through the iterative use of process tools, how the selected tools were adopted and adapted and the lessons of empowerment are discussed in the IP establishment phase.

### **Materials and Methods**

The sites selected in Rwanda, Uganda and the Democratic Republic of Congo (DRC) share the proximity to Lake Kivu, steep slopes that present natural resource management challenges, bi modal rainfall and high population density with fragmented smallholder plots. Seven IP action sites were selected based on minimal outside agricultural research for development (AR4D) intervention. Site selection was facilitated with the use of a diagnostic tool (FARROW et al., 2008), and in addition, consideration for the local government unit and

the market potential which was assessed using the methodology developed by ASARECA (2005). Three, two and two IP's in northern Rwanda, south western Uganda and eastern DRC were established respectively, between November 2008 and January 2009. Prior to IP initiation, a stakeholder analysis was conducted in each site to baseline the IP actor inventory, stakeholder's priorities, and the approach for establishing functional IP's. IP scooping using the snowballing approach beginning at the local administrative unit was the approach used to identify of stakeholders to participate in the IP initiation meeting. An IP initiation meeting was held at the seven respective sub administrative units (*county/secteur/groupment*) where explanations of IAR4D and IP's were given, the results of the stakeholder analysis (SA) were presented and prioritized. The establishment and functioning of IP's were documented using various M&E tools including IP registers and activity reports.

## Results

### Establishment of community challenges and stakeholder prioritized results

The stakeholder analysis tool showed that the challenges articulated and validated during the IP initiation meeting, concerned livelihood improvement through the increased productivity and knowledge on crop production methods and sustainable NRM. In Rwanda, all IP's articulated in their prioritized results insufficient capital while Gerakuntego Rwerere IP, situated two hours from Ruhengeri articulated the poor road infrastructure (Table 1).

**Table 1 Prioritized results from the stakeholder analysis and IP initiation meetings**

Name of IP	Challenge articulated	Stakeholder prioritized results	Income crop focus
Uganda Chahi ifatanya bu basha	To produce high quality Irish Potatoes in large quantities	1. Low soil fertility 2. Pest and diseases 3. Limit access to market	Irish potato
Uganda Bufundi united	Insufficient knowledge and inputs for conserving soil fertility for increased production of Irish potatoes, fruits and livestock	1. Lack of agricultural inputs 2. Insufficient agricultural information and illiteracy 3. Low soil fertility and erosion	Irish potato
Rwanda Gerakuntego Rwerere	Erosion and insufficient knowledge	1. Insufficient capital 2. Erosion 3. Insufficient water	
Rwanda Huguka Mudende	Poverty generated by insufficient knowledge in farming (agriculture and livestock activities)	1. Insufficient knowledge 2. Insufficient credit 3. Land degradation (soil fertility depletion)	Milk
Rwanda Isangano Gataraga	Insufficient fodder; have erosion and do not have clean seed for mainly potatoes and maize.	1. Insufficient Capital 2. Insufficient knowledge 3. Erosion	Irish potato
DRC Musanganya ya Mupfuni Shanga	Poverty reduction, improved nutrition of children, improved rducation, Improved production, good market access, improved security situation, Promouvoir l'épargne, les installations de stockage disponibles, l'amélioration de l'habitat et nutritionnelle, l'augmentation de la production	1. Insufficient knowledge of production techniques 2. Poor access to markets 3. Poor access to improved seed s	Banana
DRC Muungano	Improved security, le logement confortable, increase in bean production to 30 bags (100 kg/bag) per Ha, l'augmentation de routes de dessertes agricoles et de l'élevage	1. baisse et faible fertilité des sols 2. maladies des plantes et des bétails 3. mauvaises pratiques culturelles /pratiques traditionnelles perturbations climatiques	Irish potato

**Source:** Stakeholders analysis and IP initiation meetings

The stakeholder analysis identified stakeholders, and generated the community challenges by multi stakeholders in the region hence providing a foundation and strategy for their inclusion and interaction in response to the challenges articulated.

### **Refinement of the IP establishment processes**

The activity report was used after every activity. The activity report has an after action review (AAR) component which evaluated the IP initiation in Uganda, and resulted in the refinement in the IP initiation process in Rwanda and DRC. The IP scoping method used in Rwanda, included contact details of stakeholders and inclusion of the private and banking sectors. The method of prioritization of the constraints generated from the stakeholder analysis improved from the show of hands to the use of the pair wise ranking methodology in Rwanda and DRC. In Rwanda, the activity reports were used to improve the logistical arrangements for the IP initiation meetings, while in DRC, more attention was paid to the refinement of the process of selection, nomination and voting of the IP committee members.

At subsequent monthly meetings to the IP initiation phase, the method of IP management by the committee, work plans, and constitution were discussed to formalize the IP's as institutions. In one IP, 100 USD was given as a cash hand out to the participants by the IP chairperson, however, at the evaluation, it was agreed that the money should be given to the treasurer and accounted for in order to receive subsequent operational finances for the subsequent meetings. The IP's made financial requests to fund their work plans and were trained on how to submit accountabilities of these monies.

### **Inclusion and empowerment of stakeholders**

Empowerment outcomes at the IP level included cases where the IP chairperson in one IP was replaced by another chairperson, because he belonged to their community and represented their interests. The IP's were empowered to use their collective powers to select a candidate they saw fit to represent them through the evaluation.

In Rwanda and Uganda, evaluations resulted in the replacement of selected committee members who due to non attendance of three consecutive IP meetings have resulted in their replacement. This was in accordance with the IP constitution in question.

In Rwanda, the constitution was drawn up by the committee members in line with the government's regulations on co-operatives and in consultation with the IP members, who felt that the membership fee was high and reduced it to a figure consented upon by voting. A varied consultation method for the constitution was used in DRC, where components of the constitution were discussed in small groups and the critique was presented and discussed in plenary.

### **Democratic election processes**

Three candidates for treasurer were nominated (based on gender and the level of education) and voted for using the secret ballot method. A draw was realized between two candidates, (Female and highly educated), an equivalent of a probability method was used; where the candidate of higher education was selected.

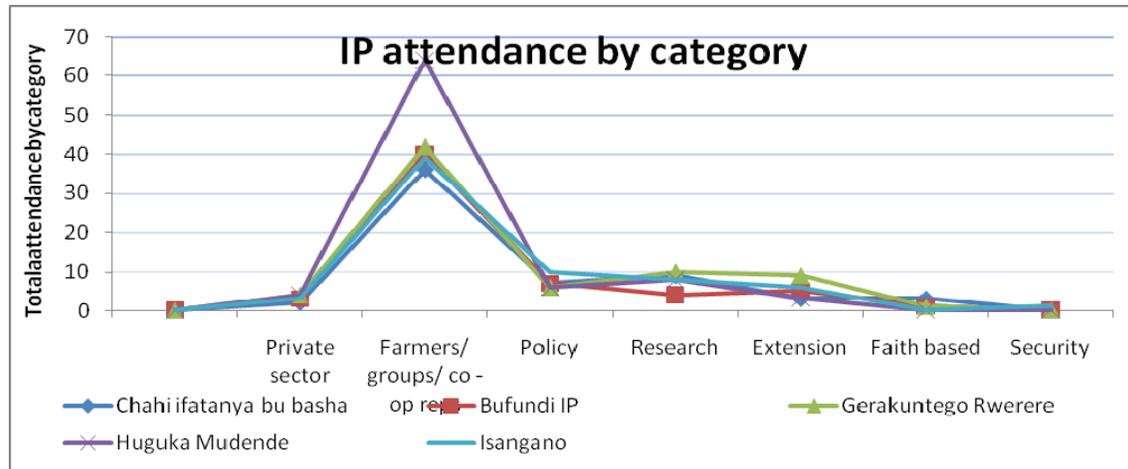
The activity report is simple, versatile and can be used by IP actors of differential literacy, language and education levels and across the horizontal and vertical management levels. The tool was used to capture and document IP establishment and functioning, refine processes, ensure stakeholder inclusion and empowerment. Activity reports were adapted by extracting the evaluation component and posing it as a question to IP members at the IP meeting to evaluations conducted with selected stakeholders at the end of the IP meeting. Due to low literacy levels and sensitivity of the matters being discussed, the activity report may exclude relevant detail and may need to be used with other more informative tools such as the minutes of the meeting, observations and ground truths.

### **Consistence of attendance**

The IP register measured the representation and consistence of the stakeholder participation by the diversity of actor types and by gender (Figure 1). The highest number of stakeholder actors for the first four meetings of five IP's were farmers. Although banks were invited,

invitations were not honored due to the higher opportunity cost of time for their obligations at work; also, the discussions at the IP meeting were still in the conceptualization phase and not the level of sourcing funds for agricultural production.

**Figure 1. Stakeholder attendance by actor category**



**Source:** IP registers from five IP's

### **Integration of other PLS level and work plan Monitoring and evaluation tools**

To introduce stakeholders to the other PLS level IP tools such as the most significant change tool, the after action review etc and how to monitor the IP level workplans, M&E training workshops were conducted at the country level. Five M&E representatives were selected from each IP, using criteria such as gender and parish representation, being trainable and the ability to train others, and active farmer. Members of one IP generated criteria such as ownership of two or more hectares of land with evidence of modern agriculture, use soil erosion control measures and storage facilities. In Musanganya ya Mupfuni Shanga the selection process was said to have been flawed however this was not followed up. Farmers were trained on participatory monitoring and evaluation for the field level monitoring of the work plan. Objectives and tools were developed to collect data to monitor these work plans by the M&E committee.

### **Conclusion**

This paper gives a preliminary review of the initiation of M&E into the establishment and functioning of the IP's, the process related and empowerment related outcomes. Learning and self determination has been linked to community challenges that shall be addressed by IP's to ensure the sustainable improvement of livelihoods in Lake Kivu. Evaluation tools can be used to refine processes, track progress and changes, hence contributing to the quality of the impact assessment; however, once used by multi lingual multi stakeholders from different countries, varied methods have to be used to integrate them, and their use is adapted by the different stakeholders. Although these tools can be influenced by power relation in the IPs, they can be used at various stages and levels of the project, from the farmers' different production activities, to higher level management activities.

### **References**

- ASARECA, 2005. *Fighting poverty, reducing hunger and enhancing resources through regional collective action in agricultural research for development*. ASARECA (Association for Strengthening Agricultural Research in Eastern and Central Africa) Strategic Plan 2005-2015, August 2005, Entebbe, Uganda. 94 pp
- Fetterman D.M. 2001. *Foundations of empowerment evaluation*. Thousand Oaks, CA: Sage