



Strengthening Multi-stakeholders Partnerships:

Experiences from PROLINNOVA Tanzania

**Based on six years experiences and contributions
from PROLINNOVA Tanzania Partners**

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PELUM Tanzania,
P.O.Box 390,
Morogoro, Tanzania
East Africa
Tel./Fax: +255 23 261 36 77
Email: info@pelumtanzania.org
Website: www.pelumtanzania.org

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Acronyms and Abbreviations

AIS	Agriculture Innovation System
AR&D	Agriculture Research and Development
ARI	Agriculture Research Institute
ASDP	Agriculture Sector Development Programme
CBO	Community Based Organization
CORDEMA	Client Oriented Research and Development Management Approach
CSOs	Civil Society Organizations
DGIS	Directorate General for International Cooperation
FAIR	Farmer Access to Innovation Resources
FYM	Farm Yard Manure
GDP	Gross Domestic Product
HBS	Household Budget Survey
IK	Indigenous Knowledge
IRDO	Ileje Rural Development Organization
KM	Kraal Manure
LGAs	Local Government Authorities
LISF	Local Innovation Support Fund
M&E	Monitoring and Evaluation
MCM	Mapambano Compost manure
MoU	Memorandum of Understanding
NGO	Non-Governmental Organization
NRM	Natural Resources Management

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NSC	National Steering Committee
PELUM	Participatory Ecological Land Use management
PID	Participatory Innovation Development
PM&E	Participatory Monitoring and Evaluation
PROLINNOVA	PROMoting Local INNOVation
URT	United Republic of Tanzania
ZARDEF	Zonal Agricultural Research and Development Funds
ZaTCs	Zonal Technical Committees
ZSCs	Zonal Steering Committees

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1.0 About PELUM Tanzania

PELUM stands for “Participatory Ecological Land Use Management”. PELUM Tanzania is a legally registered network of Civil Society Organizations (CSOs) that have come together to facilitate and promote networking, learning and advocacy in participatory ecological land use management/sustainable agriculture. PELUM Tanzania was founded in 1995 and has a membership of 33 (May 2011) legally registered Civil Society Organizations spread in 16 out of 30 regions of the United Republic of Tanzania. PELUM Tanzania Member Organizations are generally working towards supporting smallholder farmers in participatory ecological land use management in sustainable agriculture.

It is one of the ten (10) associate members of PELUM Association which has its headquarters in Lusaka Zambia with members in Eastern, Central and Southern Africa region. Other members of the association are PELUM Rwanda, PELUM Uganda, PELUM Kenya, PELUM Zambia, PELUM Malawi, PELUM Zimbabwe, PELUM South Africa, PELUM Lesotho, and PELUM Botswana. The Association was founded in 1995 and the members have come together to facilitate learning, networking and advocacy in sustainable agriculture.

The mission of PELUM Tanzania is to facilitate the process of sustainable development notably promoting sustainable ecological land use management, through building the capacity of Member Organizations working with the smallholder farming community by networking, documentation, lobbying and advocacy, and mainstreaming of cross cutting issues. The core business of PELUM Tanzania is sustainable ecological

agriculture whereby a number of strategies and tools are used such as: Strengthening the capacity of its Member Organization especially through organizing own training workshops related to the concept of sustainable agriculture; Document and communicate information related to sustainable agriculture and land use; Facilitate networking of Member Organizations and Farmer Organizations; Advocate for food security, access to market and sustainable land use; and PELUM Tanzania institutional and organizational development for promoting sustainable agriculture and ecological land use.

2.0 Agriculture Development

2.1 Global Agricultural Development

In the middle of the 19th century, the era of modern agriculture began, characterized by the development of synthetic fertilizers, the use of machinery powered by fossil fuels and large-scale production of monocrops. This development continued in the 20th century, when technology further advanced, and inorganic pesticides, livestock vaccines and improved transportation and storage systems became available.

Since the 1900s these science-based production systems have dominated the developed world and are spreading amongst the high-value export crop systems in developing countries (McNeely and Scherr, 2003). In the late 1960s, due to international efforts, the 'Green Revolution' was started, an attempt to extend the benefits of these modern agricultural technologies to staple food production in developing countries. The 'Green Revolution' was especially a success in high quality, irrigated farmlands where production significantly increased.

However, in the 1960s and 1970s, the environmental side effects of these new production technologies came to light, revealing a decrease in wild biodiversity and a high concentrate of pollutants in the soils. Critics started to condemn the modern agricultural techniques as having little regard for long-term sustainability and resource conservation (McNeely and Scherr, 2003). In addition to all the environmental accusations, modern agriculture also proved to have little benefits for poor farmers in developing countries.

These farmers, often farming in more arbitrarily environments and with lower productivity, were unable to adopt modern agricultural methods, since they either couldn't afford to use them or the methods were not appropriate in their specific situation (Altieri 2002; McNeely and Scherr, 2003). Farmers in developing countries continued to keep using low-input agricultural systems, since they were excluded from access to credit, information and technical support, and remote from infrastructure or markets, that would have contributed to a transfer to modern agriculture (Altieri, 2002).

However, population growth kept on spurring the modernization and intensification of agricultural systems, as global food demands increased, resulting in excessive forest clearance, soil erosion and a global loss of biodiversity. All these developments were the inspiration for some commercial farmers to adopt the principles of organic agriculture to produce food more sustainably. Increasingly more farmers and agribusinesses started to embrace the science of more ecologically oriented production systems. Ecological concerns started to integrate within the modern agricultural production systems, leading to a new field of study; agro-ecology (Altieri 1990). The importance

of ecology within agricultural systems was slowly being recognized by scientists resulting in numerous scientific studies over the years (McNeely and Scherr, 2003).

Simultaneously with the recognition of the importance of ecologically oriented agriculture, there also emerged a fundamental change in natural resources related development thinking. This change resulted in a more participatory approach to agricultural research and development whereby more attention was paid to the needs and knowledge of local people. This development contrasted with the strong belief in the superiority of scientific knowledge that dominated the 20th century whereby interventions were passed down through extension agents, without considering the views and indigenous knowledge of local people. This top-down, science-based agricultural research and development resulted in an immense dependency and alienation of local people (Altieri, 2002).

2.2 The role of Agriculture in Tanzania

Agriculture is the foundation of the Tanzanian economy. It accounts for about half of the national income, three quarters of merchandise exports and is source of food and provides employment opportunities to about 80 percent of Tanzanians. It has linkages with the non-farm sector through forward linkages to agro-processing, consumption and export; provides raw materials to industries and a market for manufactured goods. Agriculture in Tanzania is dominated by smallholder farmers (peasants) cultivating an average farm sizes of between 0.9 hectares and 3.0 hectares each (URT, 2002/3).

About 70 percent of Tanzania's crop area is cultivated by hand hoe, 20 percent by ox plough and 10 percent by

tractor. It is rain-fed agriculture. Food crop production dominates the agriculture economy whereby 5.1 million ha are cultivated annually, of which 85 percent is under food crops. Women constitute the main part of agricultural labour force. The major constraint facing the agriculture sector is the falling labour and land productivity due to application of poor technology, dependence on unreliable and irregular weather conditions. Both crops and livestock are adversely affected by periodical droughts. Irrigation holds the key to stabilizing agricultural production in Tanzania to improve food security, increase farmers' productivity and incomes, and also to produce higher valued crops such as vegetables and even flowers.

The diversity in agro ecological zones of Tanzania allows the country to produce an equally wide range of agricultural products. However, the production is still largely subsistence accounting for 48% of national GDP, and providing 75% of exports. Wide variety of crops can therefore be grown in Tanzania due to its wide climatic variation and agro-ecological conditions. For about past 20 years, the contribution of agricultural sector to the Tanzanian GDP has been increasing year after year up to 1995 after which it started to decrease.

The contribution of agriculture to the GDP increased from 47.9% in 1990 to 50.7% in 1995 after which it decreased to 46.8% in 2003, 46.3% in 2004 and 45.6% in 2005. In 2006, the contribution from agriculture to GDP was 26.2% while in 2007 it was 25.8% (URT: Economic Surveys 2001, 2003, 2005, and 2007). Although its contribution to the GDP has been decreasing, agriculture has remained and still the main employer in Tanzania, employing more than 67% of Tanzanians (ILFS, 2007; HBS, 2007).

3.0 PROLINNOVA Programme

PROLINNOVA is an international multi-stakeholder program established to build a global learning and advocacy network for promoting local innovation in ecologically-oriented agriculture and natural resources management (NRM). The programme focuses on recognizing the dynamics of indigenous knowledge (IK) and learning how to strengthen the capacities of smallholder farmers to adjust to changing conditions in order to develop and adapt their own site-appropriate systems and institutions of resource management to attain food security, sustain their livelihoods and safeguard the environment. The programme builds on and seeks to scale up farmer-based research and development approaches that start with discovering how farmers (innovators) carry out informal experiments to develop and test new ideas for improved use of natural resources, to increase production, to conserve the environment and to solve any other social problem they are facing.

In its implementation, the programme conducted a number of activities aiming to strengthen capacities of its members, facilitate networking and collaboration among actors, and facilitate validation and integration of informal and formal knowledge, and the mainstreaming of Participatory Innovation Development (PID) approach into Agriculture Research and Development (AR&D) institutions. To increase ownership and accountability of partners, these activities were implemented through multi-stakeholders partnerships, bringing together actors from different disciplines and institutions of resource management. The key issues that are addressed by the program include the following:

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- Change of mindset of development actors to value the role and contributions from indigenous knowledge to ensure client control over priorities setting and resources management,
- Establishment and strengthening of multi-stakeholder partnerships to increase participation, ownership, accountability and sustainability of the programme
- Ensure quality services delivery and management of resources based on proper participatory planning, implementation, Monitoring and Evaluation (M&E) procedures and development of up-scaling/out-scaling strategies for potential local innovations/ technologies.
- Increase capacities of farmers, researchers, extension staff and policymakers in participatory approaches so that they are capable to continue facilitating the process.
- Mainstreaming and institutionalization of participatory approaches to farmer-led innovation and experimentation into institutions of agricultural research, extension and education
- Piloting decentralized funding mechanisms to promote local innovation and to enable farmers to have a decisive role and control over resources in research and development
- Facilitate set up of different platforms for reflection, analysis and learning about promoting local innovation

4.0 PROLINNOVA Tanzania

4.1 Implementation of PROLINNOVA Programme in Tanzania

In Tanzania, PROLINNOVA started in January 2005 under the coordination of PELUM Tanzania as the host organization. Since its inception to June 2011, the Programme was financially supported by EED, a Church based organization from Germany, DGIS/ETC from the Netherlands and contributions from PELUM Tanzania and partners organizations involved in the program. The implementation of PROLINNOVA Tanzania put more focus on building the capacities of its partners on farmer – led participatory methods for research and development in sustainable agriculture and natural resource management; promotion and institutionalization of Participatory Innovation Development (PID) approach used by the programme into Agricultural Research and Development (AR&D) institutions; and documentation and publication of successful community initiatives and field experiences for wider sharing. Other activities implemented by the programme are those related to facilitating multi-stakeholder partnerships building and strengthening, facilitating joint planning and experimentations with farmers, policy lobbying and advocacy and good governance.

4.2 Principles used by PROLINNOVA Tanzania

The Programme used different principles to achieve the set objectives. Among these included the establishment of inventory and database of successful local innovations, innovator farmers and partners working with farmers at grassroots to promote local innovation.

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The identification of key stakeholders from research and extension institutions, a series of capacity building interventions on PID and other participatory approaches such as workshops, field visits were organized to enable them identify and document local innovation and engage effectively in joint experimentation process. Farmer exhibition shows, TV and radio and use of other public media were used to create awareness and inform the public about the programme. In order to create favorable institutional and policy environments for PID process, local strategies for lobbying and advocacy were developed to facilitate farmers and development partners engage in policy dialogue with key decision-makers. PROLINNOVA established the National Steering Committee to oversee the programme and provide proper directions for implementation. In addition to that, zonal multi-stakeholder and local platforms were initiated to facilitate reflection and sharing of experience among members. Both formal and informal consultation meetings were facilitated to establish trust and ownership of the programme by all partners, and as a means to bring in more actors in the process especially decision makers and government representatives.

PROLINNOVA Tanzania developed mechanisms to bring together farmers, development agents and formal researchers to facilitate effective joint priority setting, planning and to implement joint experimentations of local innovations in a participatory manner to try out new ideas and ways of doing things. However, the experience showed that the management of a multi-stakeholder partnership process requires adequate knowledge and facilitation skills due to its complexity. It requires more time and resources (human, physical

and financial) to develop. Since its inception, the programme put more efforts in creating local, regional and national multi-stakeholder platforms for sharing information and experience about local innovations and to learn together about PID, its mainstreaming and institutionalization into AR&D institutions. Participatory monitoring and evaluation (PM&E) of joint activities, outcomes and impacts was part and parcel of process.

4.3 Major Problems Addressed by PROLINNOVA in Tanzania

- Inadequate recognition and acknowledgement of the effectiveness of user-led innovation systems for sustainable development by scientific community
- Inadequate farmer-extension-researcher partnerships
- Inadequate capacities of farmers, researchers, extension people and policy makers on the effectiveness, facilitation and implementation of user/farmer – led participatory approaches
- Participatory approaches to farmer-led innovation and experimentation process are not integrated into institutions of agricultural research, extension and education
- Lack of specific national policies that are supportive to the innovation systems development
- Lack of appropriate forum for reflection, analysis and learning about promoting local innovation

4.4 Participatory Innovation Development Process

PROLINNOVA programme is implemented through a Multi-stakeholder partnership process targeting to enhancing the capacities of farmers, researchers, development practitioners and policy makers on

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PID process/approach to facilitate integration of participatory approaches into relevant research and extension institutions, farmer organizations and NGOs/CBOs. It aims at encouraging continuous action learning, joint experimentation, innovation development and dissemination of successful local innovations for wider use and improving the livelihood of resource-poor farmers.

During the implementation of the programme, there was no single way of doing it. The methods and practice used varied depending on the type of partners and local innovation being tested. Some experiments were carried out by partner NGOs and farmers but others required the contribution from research partners. However, the validation process was done through involving various actors especially by visiting farmers in their field to appreciate how the process is being carried out and assessment of the results thereof. The process helped to link different actors from research and development institutions to promote local innovation. The partnership involved researchers from both crop and livestock research institutions and universities, extension workers from public and private institutions, and farmers themselves.



Field visits.

4.5 Steps for engaging stakeholders in PID process

The first step was training of the facilitators on PID concept and processes followed by the identification of key actors to be involved in the programme in accordance with their influence in the community and their institutions. There followed awareness creation sessions for all research and development actors and members of PROLINNOVA Tanzania. Along the process, the interactions with farmers helped actors to realize that farmer innovators know more of their own problems and solutions. During the identification of local innovation for joint experimentation and improvement, development actors especially field extension staff started with finding out from farmers what they are interested in exploring, who in the locality had already tried to explore that particular innovations and what others in the locality think of the results obtained from informal experimentation by farmers. Farmers and development actors where appropriate, agreed on the new innovation or ideas that needed to be tried out through a joint experimentation process implemented in partnership. Extension staff and formal researchers assisted farmers in setting up experiments to gain a better understanding of how the local innovations work. The process stimulated actors to develop new ideas jointly and see how they work compared with other practices and to investigate possible improvements to the introduced practices. In some cases, the verification of local innovations was done through farmer-group discussions with farmers interested in that particular innovation without involvement of researchers. However there were other local innovations that needed continuous technical support through participation of researchers in the validation process.



Agreeing on the idea/innovation to be tried out.

4.6 PROLINNOVA Multi-stakeholder Partnership process

Before inception of PROLINNOVA programme, PELUM Tanzania programmes were mainly implemented targeting its member organizations that are local NGOs working in rural areas at community level. There were weak linkages between PELUM Tanzania and other public institutions involved in agriculture research and extension such as local and central government authorities, research institutions or academia. The implementation of PROLINNOVA programme strengthened PELUM Tanzania strategies to engage strongly into forging partnerships with other stakeholders apart from its members and in intensifying potential linkages and collaboration with AR&D actors.

4.7 Key steps used in implementing Multi-stakeholder partnership

PROLINNOVA programme followed a number of steps to facilitate achievement of set objectives. The most important steps that were used included the following:

- Defining need and goal for engaging in multi-stakeholder partnerships and establishing trust among stakeholders to increase commitment. It was done at the inception workshop prior to implementation process as partners at zonal level had to develop their own action plans
- Situation analysis to create shared vision on the problem and previous initiatives to address the same problem. This was done prior to implementation and before the inception workshop.
- Developing jointly agreed upon intervention strategies and sharing roles and responsibilities. This was done every year during the stakeholders meeting held annually.
- Capacity building, coaching, mentoring which was done every year depending on the needs identified during zonal and national stakeholders meetings held on half and yearly basis.
- Monitoring, evaluation and communication of the results from the multi-stakeholder and joint experimentation processes. The sharing of experience and challenges was followed by review process of intervention strategies annually.

4.8 Management of PROLINNOVA Tanzania Partnership

PROLINNOVA Tanzania is implemented through a multi-stakeholder partnership process involving actors from

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local farming communities, NGOs, farmer organizations, local government authorities, research and development institutions, academia and departments of research, training and extension from the Ministry of Agriculture, Food Security and Cooperative and as well as the Ministry of Livestock Development and Fisheries. Each of these partners has got a role to play in the partnership and in the implementation process to increase ownership, accountability and sustainability of the programme.

PROLINNOVA Tanzania was governed by the Board of PELUM Tanzania as the highest decision making organ and managed by PELUM Tanzania Coordination office.. In addition to that, the programme established a National Steering Committee (NSC) made of representatives from partner institutions. While PELUM Tanzania Coordination Office acted as a secretariat and overall coordinating NGO for the programme activities, the role of the NSC was to oversee the programme implementation process and to provide guidance and advice to PELUM Tanzania Board of Directors for further decisions. To enhance effective implementation, the programme has been further decentralized in a way that field activities are implemented and coordinated by stakeholders in their respective zones. All partners are involved in capacity building and learning activities.



Zonal meeting.

Field activities at farmer level were however, implemented in two agro-ecological zones namely the Southern Highlands Zone and the Central Zone of Tanzania Mainland. At Zonal level, two multi-disciplinary teams were formed to assume responsibility for the coordination of field activities, planning, implementation and M&E process. Co-implementers in the zones are selected based on their commitment, interest and capacities to serve the programme. To ensure more accountability and commitment, Memorandum of Understanding (MoU) and contract agreements between PELUM Tanzania and co-implementer partners were developed and signed prior to engaging in partnerships.

4.9 PROLINNOVA Tanzania stakeholders, their interests and roles

Stakeholder	Interest and role in process
Farmers (innovators)	Farmers were the key actors in the process from the identification of new idea and or thing that needed to be tested, implementation process, M&E, adoption and dissemination process as well as in scaling up the innovation for future sustainability. During the experimentation, farmers provided labour, financial and physical resources required for the experimentation and time for monitoring day to day progress. They recorded information needed based on local and programme indicators, they facilitated learning activities to empower fellow farmers through groups and networks as platform for learning, reflection and sharing.

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	<p>Through their experimentation, they provided evidence based information for lobbying and advocacy to influence other farmers and policy makers to support their initiatives for wide use and dissemination. Generally, farmers are interested to access successful innovations/techniques and scientific information that helps them increase their production, safeguards their environment and improve their livelihoods.</p>
NGOs	<p>The Non-Governmental Organizations played an important role in coordinating the PID process. Development staff from PROLINNOVA partner organizations had a facilitating role in the identification of farmer innovations and innovators, linking farmer innovators with other service providers involved in agricultural research and development and policy makers. They also helped farmers with technical support from time to time through organized follow up and backstopping sessions to ensure that the plans for joint experimentations are implemented accordingly. They are interested to see their target communities with improved livelihood and actively practicing sustainable agricultural practices. They are the key coordinating and facilitating agents for changes.</p>

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Researchers	<p>The interest of researchers is the validation of innovations and technologies jointly developed with farmers through formal experimentation process or those developed by farmers through informal experimentation process. They are interested to compare performance of some innovations on the production and management of resources. Researchers are also interested to appreciate to what extent local innovations are contributing to scientific knowledge to bring change in livelihoods of people in various aspects. The role of researchers was to generate evidence based information scientifically approved through their analytical skills to differentiate causes and effects, and the ability to design experiments that lead to clear results. They helped to analyze whether the innovation was technically, economically, environmentally and socially sound for sustainability purpose.</p>
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Academia	They are interested in the validation of innovations and technologies jointly developed through formal and informal experimentation process and the integration of Participatory Innovation Development (PID) approach into training curriculum of higher learning institution to acquaint students with farmer – led participatory methods that build from farmers’ experience. The role of academia is to train practitioners and generate evidence based information through their analytical skills to differentiate causes and effects, and the ability to design experiments that lead to clear results.
Local Government Authorities (LGAs)	The main interest is to access useful information; technologies and innovations that will help the communities increase production, sustain the environment and improve the livelihood of the people. The role of LGAs is to disseminate and finance the uptake, dissemination and scaling up/out of successful innovations and provision of technical support services through extension staff

Policy Makers	They are mainly interested to see technologies and innovation that quickly provide solutions to the problems faced by the communities and especially those that are in line with existing policy intervention strategies. Their key role is to ensure that existing policies and interventions are supportive and have room for the promotion and institutionalization of the agricultural innovation systems development process.
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5.0 Case studies on Joint Experimentation

Since its inception in 2005, PROLINNOVA Tanzania concentrated much on building capacities of its stakeholders in the area of Participatory Innovation Development (PID) and documentation and dissemination of local innovations to facilitate sharing of experience on local innovations that have shown success to improve food security and safeguard the environment. From 2008, PELUM Tanzania in collaboration with other stakeholders facilitated joint experimentation processes to test new ideas/local innovations and develop appropriate solutions to address the prevailing social economic problems faced by local communities. However, due to insufficient financial resources and human capacities to support a large number of joint

experimentations, only two geographical regions were selected to pilot local innovation process. Local innovations that were tested are those mainly related to crop production, environmental conservation, soil and water management, livestock keeping and fish farming. INADES Formation Tanzania and Ileje Rural Development Organization were the main implementing organizations of PROLINNOVA activities and facilitators of the zonal Multi-stakeholders platforms in Dodoma and Mbeya regions respectively. Some case studies on joint experimentations are presented hereunder:

i. Participatory validation of inland fish feeding using chicken feces: A case of Chamkoroma

In May 2010, a joint experimentation study was carried out at Chamkoroma village, Kongwa district in Dodoma region to assess the effect of chicken droppings on the growth of inland fish compared to normal maize bran conventionally used as a feed for inland fish. This experiment involved innovative farmers of Mazingira group at Chamkoroma, researcher from the National Livestock Research Institute, Mpwapwa, INADES Formation Tanzania, Kongwa District Council and PELUM Tanzania. Two fish ponds were constructed to compare the two types of feeds. The experiment was conducted from May 2010 to February 2011 whereby equal number of Tilapia fingerlings in each pond were

equally treated with extra feed complements required for fish farming. Every month, farmer innovators with the help of the researcher measured the fish fingerlings both weight and lengths. After eleven months of experiment, the results showed that fingerlings fed with chicken droppings performed more less equally as fingerlings fed with maize brand as per charts below.

Chart 1: Comparative fish weight as affected by sources of feeding

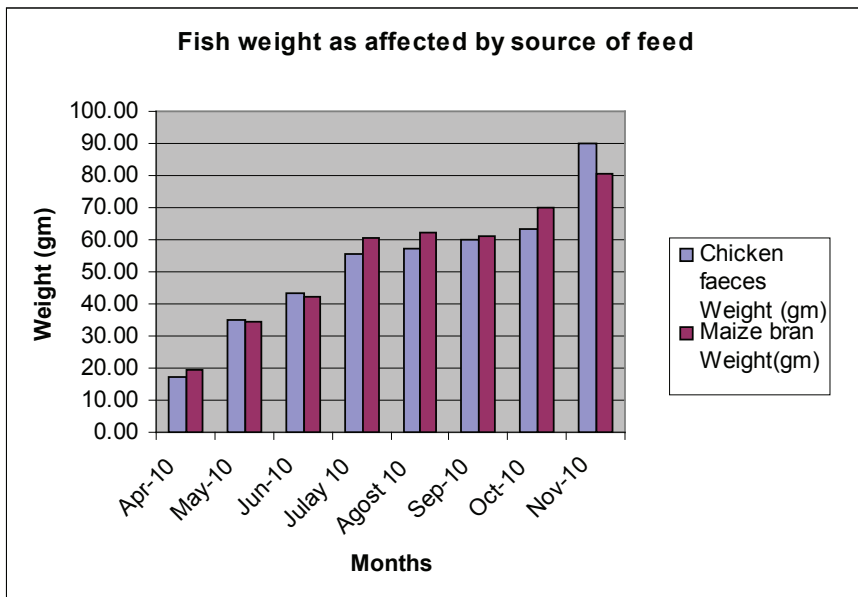
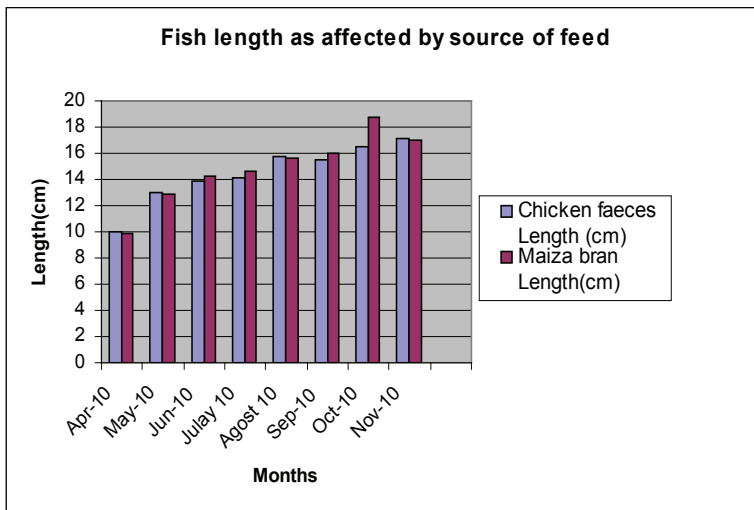


Chart 2: Comparative fish length as affected by sources of feeding



ii. Assessment of the effect of “Mapambano compost (Organic Manure) on Maize Performance and yield: A case of Haubi village, Kondoa District

Using PID principles, a joint experimentation process was carried out to assess the effect of Mapambano Compost on Maize growth and performance. The experimentation involved farmer innovators from Haubi village, INADES Formation Tanzania, Kondoa District Council, the Central Zone Crop Research Centre particularly ARI Hombolo and PELUM Tanzania. The aim of the experiment was to compare Maize performance under Mapambano compost innovated by a farmer (Ms Suzana Sylivester) and normal farm yard manure (Kraal manure). Three different treatments

namely “Mapambano Compost Manure (MCM)”, Kraal Manure (KM) and control treatments were set for the experiment. The treatment with Mapambano compost showed good results on crop performance, yield and cobs filling.

Chart 3: Plant height and yield

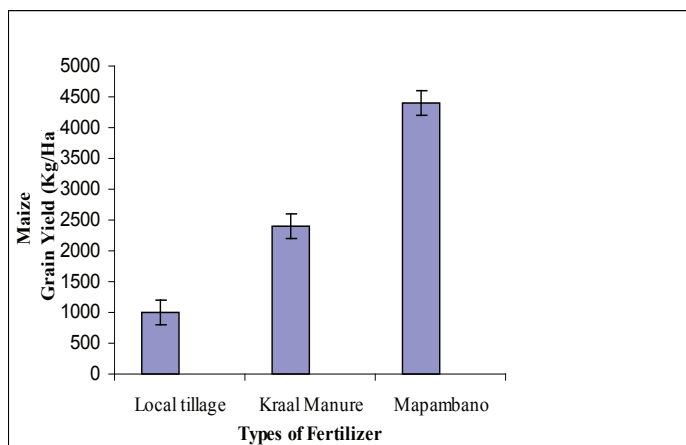
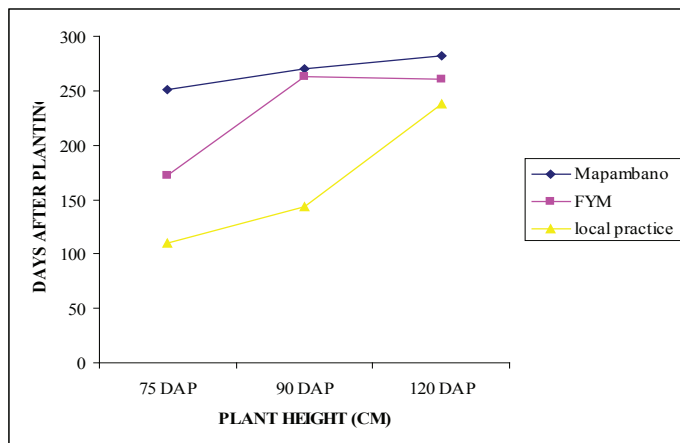
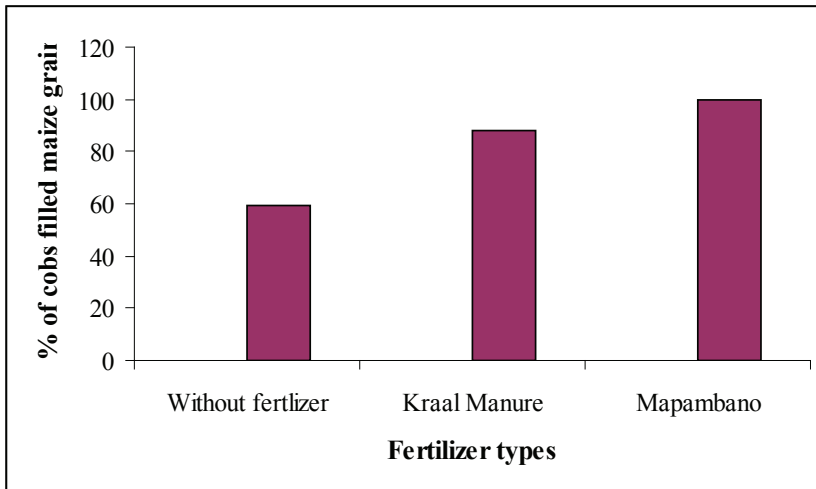


Chart 4: Cobs filled with maize grain



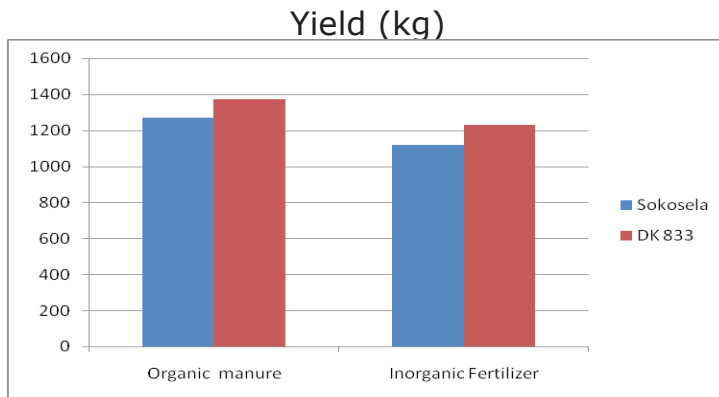
iii. The effect of compost manure and inorganic fertilizers on local and improved maize varieties: A case of Ileje District in Mbeya Region

The Southern Highlands and Ileje District in particular is among the areas of Tanzania that have suffered much from soil toxicity due intensive application of inorganic fertilizers and pesticides leading to poor crop performance and low yield. Together with the challenge of low yield and poor crop performance, there are some indigenous crops that are performing well despite the prevailing climatic conditions and unpredictable rainfall. To cope with that challenge, farmers decided go backward to indigenous methods of cultivation. Through their groups and networks, they decided to initiate a local project aiming to preserve the existing local seeds as means to cope with the above challenge and for future use. With the support from Ileje Rural Development Organization (IRDO) and LISF/FAIR

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project, farmers involved in this project conducted a joint experimentation to assess the level of crop performance and yield between local maize varieties and improved varieties on different types of fertilizers. After two years of experimentation, farmers were able to compare the crop performance and yield of indigenous seeds versus improved varieties in the areas. The experiment involved two types of Maize seeds, Sokosela (local variety) and DK 833 (improved variety) that were subjected to organic manure and inorganic fertilizer with same application rates and climatic conditions. The results showed that under same treatments and conditions, the selected local seeds performed more or less equally as improved varieties. The experiment showed that both seeds performed well when treated with organic manure than inorganic fertilizers. This can be explained by the fact that the soil treated with organic manure conserves more moisture than a soil treated with inorganic manure to allow nutrient uptake by the plant. In addition to that farmers realized that growing local seeds is cost effective when compared to improved varieties as they use locally available resources that every farmer in the area can afford to get. Contrary to that, improved seeds and inorganic fertilizers are not easily accessible by smallholder farmers in remote areas due to poor distribution of subsidies by government agencies accompanied by small quantities of seeds and fertilizers distributed in relation to farmers' requirements.

Chart 5: Effects of different sources of fertilizers on Indigenous vs Improved Maize Varieties



6.0 Outcome and Achievements

6.1 Outcomes from PID process

PID helped to strengthen local capacities for farmers in undertaking and managing research and development interventions. Farmers and professionals who participated in various field activities and field visits developed self-confidence and presentation skills and are now capable to play a vital role in their respective communities. They have managed to integrate development activities with cross cutting issues such as gender and HIV&AIDS. The involvement of farmers in joint experimentation with research and extension workers has helped farmers to gain skills in systematic comparison and to understand the principles behind the local innovations and also boost their confidence to interact with scientists.



Farmer innovator detailing their joint experimentation to district policy and decision makers.

Through multiple interactions, innovator farmers developed good relationship with service providers and now can easily access research and development agencies partners in the programme to address issues of their concerns. In the pilot areas where PID was carried out, farmers are in a better position to play decisive roles not only at the local level but also in exerting influence on the research and development agenda at district and regional and agro ecological zone level. Furthermore, they developed sense of ownership and play a facilitation role on their subject of intervention. As a result some farmers and development staff from

partner institutions are members of the Zonal Steering Committees and Technical Committees which are managing boards of the Zonal Agricultural Research and Development Funds (ZARDEF) in various agro ecological zones of Tanzania.

6.2 Achievements from PROLINNOVA Multi-stakeholder process

After six years (2005-2010) of PROLINNOVA implementation, the following changes have been realized as result of the Multi-stakeholder process in Tanzania:

- Farmer innovators involved in the programme have developed mechanisms for self-help to support each other through facilitating members to accessing small loans to undertake social and economic activities.
- Due to the potential of the approach used in PROLINNOVA, the membership of PROLINNOVA Tanzania increased from 12 NGOs in 2005 to 22 partners from public and private sector in 2010.
- The programme managed to influence the integration of PID into ongoing government programmes to mainstream the Agricultural Innovation System (AIS) concepts into national agricultural research and development programmes in which PROLINNOVA partners are playing an important role to enhance successful implementation of existing national laws and policies to support PID and its institutionalization into AR&D. PID and AIS constitute the first block among four that constitute the national training programme for researchers and development practitioners on participatory approaches commonly known as Client Oriented Research and Development Management Approach (CORDEMA). PELUM Tanzania was involved in the design of CORDEMA training manual.

- Apart from being a member of the National Team of Trainers on CORDEMA, PROLINNOVA Tanzania is a member of the Zonal Technical Committee (ZaTC) and the Zonal M&E team responsible for the Zonal Agricultural Research and Development Funds (ZARDEF) in the Central Zone. Some staffs from PROLINNOVA partner organisations are currently members of Zonal Technical Committees (ZaTCs) and Zonal Steering Committees (ZSCs) for ASDP and ZARDEF in various agro-ecological zones of Tanzania.
- Some partners such as NGOs, local government authorities (LGAs) and research institutions are allocating funds to finance PROLINNOVA related activities to pilot local innovation.

7.0 Challenges and Lessons Learnt

7.1 Challenges encountered

Despite a number of successes, there are also challenges.

- More effort in terms of time and resources is needed for the scaling up of PID concepts and putting it into practice both in vertical and horizontal dimensions by actors involved in AR&D. Partners need to invest more in lobbying for the mainstreaming and institutionalization of the concepts in the national development policy documents.
- Due to the complexity of the multi-stakeholder process resulting from interrelationships between and among different actors, it is difficult for outsiders to link the outcomes from interventions to the multi-stakeholder process.
- PROLINNOVA concepts require spreading the PID concepts to those who can apply it on the ground.

However, they are constrained by resources (human, financial, physical, competencies on PID at partners' level and policy directives and targets) in the implementation of assigned development activities.

- Due to multiple interactions among actors, there is influx of approaches, which are sometimes are confusing, and frustrating development agents and beneficiaries.
- The multi-stakeholder process requires more ability and skills for the coordinating agents to handle conflicts that may emerge along the process as a result of actors' conflicting interests.
- Another challenge is how to compromise the situation of scaling up PID concept and integrating the concept into regular programs implemented by its partners through sharing of resources.

7.2 Lessons and recommendations from PROLINNOVA multi-stakeholder platforms

The implementation of PROLINNOVA Programme has helped PELUM Tanzania and partners to learn from the process on how to collaborate with partners and utilise effectively the available natural resources including financial, human and physical resources. Among those lessons include the following:

- For PID process to be effective through multi-stakeholder partnerships more time and resources are needed to build confidence, credibility and help to get network of champions.
- In order to achieve strong institutional support from various stakeholders, a multifaceted approach to farmer – led participatory research and development is needed to facilitate the process
- It is very crucial to establish a continuous and regular monitoring and evaluation system for tracking the

changes brought in through multi-stakeholder process, PID and the agricultural innovation system development.

- Targeting influential people and senior staff is vital to influence the management decisions of local organizations and their policy towards integration and institutionalization of farmer – led approaches.
- The use of evidence based case studies is important to stimulate the adoption and adaptation of successful innovations and technologies by farmers and to strengthen farmers' experimentation capabilities.
- In case of operating on a wider scale or a large number of stakeholders, it is good to establish supporting structures. In Tanzania, we have the national steering committee and two multidisciplinary zonal facilitation teams which coordinate the implementation process of the programme activities at field level.

8.0 Conclusion

To be more effective, Partnerships building need enough time to grow. The process needs well plans and specific attention. Specific skills are required to facilitate effective partnership building while regular assessment of functioning of partnerships is very important to learn and improve. The aim of establishing PROLINNOVA multi-stakeholder partnership was to strengthen the local platforms from reflection and exchange among actors from village level to national, and enhance stakeholders' involvement in planning and implementation of development projects for improved livelihoods of the target groups. Multi-stakeholder partnership has not only created conducive environment for the implementation of the programme activities but also enhanced the institutionalization

of PID approaches into AR&D institutions operating in the areas of sustainable agriculture and natural resource management in Tanzania both from private and public sector. Multi-stakeholder partnership through PROLINNOVA programme helped partners to integrate PID concept and beneficiaries' needs into their development plans.

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