

# PARTICIPATORY LEARNING AND ACTION (PLA) APPROACH FOR THE ACHIEVEMENT OF A SUSTAINABLE RURAL DEVELOPMENT: LESSONS LEARNED FROM A PILOT ROLL-OUT (PRO) PROJECT IN EAST NUSA TENGGARA (NTT) PROVINCE, INDONESIA

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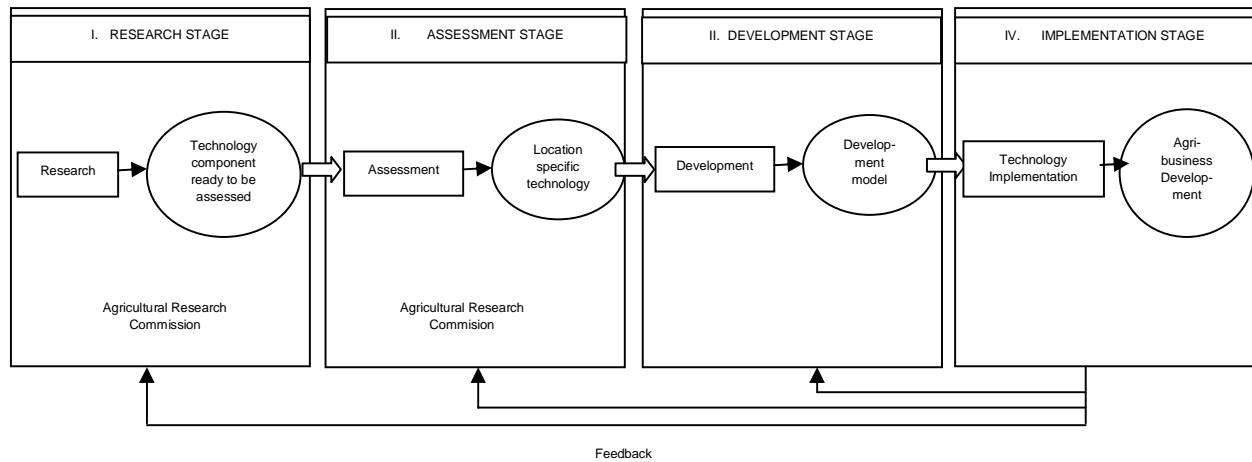
**Abstract:** Indonesian agricultural research centers have generated numbers of technologies. Assessment Institute for Agricultural Technology (AIAT) has responsibilities to assess and adapt technologies from research centers to suit prevailing farm condition, and to communicate them into farmers. Transfer of technology approach has been used to facilitate these processes. However, the effectiveness of this approach in the technology assessment projects of AIAT for delivering more impact on farmers' livelihood is questionable as numbers of technologies produced by research centers are not (yet) widely adopted by farmers. This paper aims to show how the participatory learning and action (PLA) approach can enhance the impact of technology assessment projects on farmer's livelihood. A study was conducted in August-September 2010 to evaluate an agricultural research for development (RfD) project in East Nusa Tenggara (NTT) Province implemented PLA approach. The study used interviews, focus group discussion and document review. It was shown that active participation of all key stakeholders in the whole processes, farmers play central role and no longer seen as passive receivers of the project, and knowledge exchange processes could contribute to create sense of ownership over the issue, the process and the outcomes of the project. The lessons learned from the implementation of PLA approach were: a people-centered approach in agricultural RfD project has created a greater sense of ownership, active participation of stakeholders involved created

collective ownership, farmers active role in the whole processes has empower them gaining new skills, knowledge and self-decision making which are important for a sustainable rural development.

**Keywords:** PLA approach, participation, ownership, empowerment, sustainable rural development

## INTRODUCTION

Framework of agricultural research for development in Indonesian is as stated in the Minister of Agriculture's decree number 03 year 2005 (figure 1) (*Badan Penelitian dan Pengembangan Pertanian*, 2005). This framework serves as guidelines for Indonesian Agency for Agricultural Research and Development (IAARD) in the agricultural technology development and implementation. Assessment Institute for Agricultural Technology (AIAT) is one of the institutions under the IAARD that was established to bridge the technology produced from the national research centers into farmers' practice. There are thirty-two AIATs in all provinces in Indonesia and they are managed by the Indonesian Centre for Agricultural Technology Assessment and Development (ICATAD). One of AIAT's duties is to conduct technology assessments. Technology assessment is a collaborative field research between AIATs and partner farmers to adapt the technologies from research centers that can suit their local conditions.



**Figure 1:** Framework of agricultural research for development in Indonesian

In this stage AIATs generate location specific technologies which then will be adapted into agroecological, socioeconomic, cultural and institutional conditions in order to produce a development model. This development model will be handed over into dissemination partners (extension officers, NGO, local government, etc) for large scale implementation. However, since the establishment of AIATs, one of the issues in the technology assessment projects is its limited impact on farmer's livelihood because often agricultural innovations are not (yet) widely practiced by many farmers. There are at least three main factors contributing to this issue. Firstly, the process of the technology assessment projects that focus on transfer of technology rather than on farmers' needs and opportunities (Van de Fliert, Jamal and Christiana, 2010). In transfer of technology approach, the project design and decision making process are mostly dominated by researchers which only create a little sense of ownership by farmers over the issue, process and outcomes of an agricultural research for development project as a result. Furthermore, in the implementation stage supply of inputs required by such innovations usually are provided by the projects. Farmers are also commonly guided to follow the standard sets of recommendations and packages of the project. As a result, there was almost no room for farmers to test and adapt innovations on their own while there are diversity of farmers' farm conditions. This process can create dependency and do not empower farmers. Secondly, the selected partner farmers for such

project frequently did not represent the average farmers' conditions (Van de Fliert *et al.*, 2010). The 'best farmers' are commonly involved in order to achieve the maximize yields of the projects (Connell, et al., 2007). Thirdly, quite often the project duration is only for one year which is a very short period of time for a process to change farmers' practice and to convince farmers practicing the introduced innovations sustainably. Therefore, the effectiveness of the transfer of technology approach up till now implemented in agricultural research for development project by IAARD in linking the agricultural innovations to farmer's practice change is questionable.

In response to this issue, IAARD in collaboration with Australian Centre for International Agricultural Research (ACIAR) implemented different approach in technology assessment and knowledge exchange projects under Support for Market-Driven Adaptive Research (SMAR) program, and established "Innovation Team" in April 2008 in four AIATs in Eastern Indonesia provinces, West Nusa Tenggara (NTB), East Nusa Tenggara (NTT), South Sulawesi, and Southeast Sulawesi. The Innovation Team consisted of multidisciplinary researchers and extension experts who were trained to improve the impact of technology assessment projects in farmers' fields, through the implementation of participatory learning and action (PLA) approach. For this purpose, a pilot project was set up in each of those provinces.

This paper aims to show how the PLA approach could improve the effectiveness of technology assessment processes to deliver impact on farmer's livelihood and hence to attain a sustainable rural development. This paper will also present the process of technology assessment and knowledge exchange in PLA approach of the pilot project in NTT Province as lessons learned. It is expected that this paper will be considered for the improvement of the approach in the technology assessment projects.

### RESEARCH METHODOLOGY

A case study research was conducted in August-September 2010 to evaluate the Participatory Development Communication (PDC) principles and practices of a Pilot-Roll Out (PRO) project in East Nusa Tenggara (NTT) Province. Case study is a research method with the purpose to provide in depth and detail information of an issue in its context (Patton, 1990).

One of the objectives of the study was to identify the processes of PRO project implementing PLA approach. The study was undertaken by collecting information from the project coordinators and all stakeholders involved in this project, namely partner farmers in Oebola and Tuapanaf villages, the extension officers (in Bahasa: *Petugas Penyuluh Lapangan* or PPL), Department of Agriculture (in Bahasa: *Dinas Pertanian*), NGO and head of AIAT NTT Province.

Three (3) data collection methods were selected for this study, semi structured interviews with all stakeholders involved, a focus group discussion with project implementers and document review. All data were analyzed to address the purpose of the study.

### RESULTS AND DISCUSSION

#### The implementation of PLA approach in a Pilot Roll-Out (PRO) project

Regarding the need for more farmers' participation as has been explained in the review from case studies in Africa, Lado (1998, p. 165 cited in Van de Fliert *et al.*, 2010) mentions that 'where useful technologies exist, their spread has been very limited and where they have been adapted, the benefits only accrue to a small segment of the community'. This evidence reflects that the projects failed to address the roots of the problems in the community. This could be happened as the project mainly focused on what researchers' perceived needs which can be different from farmers' or local needs. Therefore, recognising the farmers' needs is very crucial part of the process to make project design more relevant to address the local issues. This argument is supported by Quarry and Ramirez (2009) who mention that "listening to the context is about appraising, learning, recognizing

and appreciating all those dimensions so that we can make well-informed decision". Another supporter is Guijt (1998 cited in Cooke and Kothari, 2001) who states that participatory approach to development aims to enhance the involvement of socially and economically marginalized people in decision-making for their own lives. Quarry and Ramirez (2009) also mention that "people's abilities and knowledge were seen to be the basis for change, hence the need to have them participate in defining what development should mean to their lives". Therefore, people are no longer seen as passive receivers but are actively involved in the process of their own development.

The PLA is an approach which promotes farmers' participation that responds over the issue in agricultural research, extension and development (Chambers & Jiggins, 1987; Farrington & Martin, 1988; Sumberg, Okali, & Reece, 2003; Thorbecke & Van der Pluijm, 1993; Van der Eng, 1996). Furthermore, Van de Fliert (2010) mentions that the factors contributing for the success of PLA approach is "local involvement, dialogue and the provision of tailored solutions". And participatory development communication (PDC) can be a powerful tool to facilitate this process. A comprehensive definition of PDC is stated by Fraser and Restrepo-Estrada (1998, p. 63 cited in Quarry and Ramirez, 2009) as follows:

"Communication for development is the use of communication processes, techniques and media to help people toward a full awareness of their situation and their options for change, to resolve conflicts, to work towards consensus, to help people plan actions for change and sustainable development, to help people acquire the knowledge and skills they need to improve their condition and that of society, and to improve the effectiveness of institutions".

The implementation of PLA approach in a technology assessment and knowledge exchange efforts can be seen in a pilot project of SMAR program that was called Pilot-Roll Out (PRO) project, that is a rural development project aiming at enhancing farmers' livelihoods. The main principle of PRO project was the active involvement of all key stakeholders who represent of real life implementation in the future in the whole processes of the development, namely issues identification, decision making, designing the project, implementation and evaluation. This would reinforce to create sense of ownership as all key stakeholders actively participated and were involved to input the project. Creating ownership is very crucial or otherwise the program will always be perceived as "someone else's" (Bessette, 2004, p. 20). Besides creating sense of ownership, capacity building particularly to empower farmers was also another

important principle developed in PRO project, as these two principles are important to ensure the sustainability of farmers' practice change. Furthermore Palis *et al* (2010) claim that farmers and other key stakeholders participation in the process of technology development will create sense of ownership, and that is principal for the sustainability of the use of the technology.

The PRO project in NTT Province was undertaken in Oebola and Tuapanaf villages and was commenced in July 2008. For farmers in NTT Province, corn is considered as the staple food and cattle as farmers' savings. Before the PRO project, farmers had a shortage of corn for food security and were hired to raise cattle that were owned by others (AIAT NTT, 2009, p.8). Therefore, PRO project in NTT Province aimed at enhancing people's livelihood through improved farming practices in the corn-cattle system. Various stakeholders involved in PRO project in NTT Province were 13 partner farmers, extension officers, Department of Agriculture, and NGO. The initial outcomes of the first phase of PRO project in NTT Province were that farmers gained higher yield of corn, therefore they could purchase their own cattle or other types of investment (AIAT NTT, 2009).

The study to evaluate the PDC principles and practices of a PRO project in NTT Province showed that the processes of PRO project implementing PLA approach can be described as follows (Istriningsih, 2010) : Firstly, the processes of PRO project was begun with participatory need and opportunity assessment (PNOA) then followed by holding a workshop for project design. This initial stage was very essential to identify the key challenges and farmers' needs, and then use findings from PNOA to design specific project activities. This process facilitated the dialogue and could incorporate aspirations by all stakeholders involved. Farmers had influence in shaping the direction of the project. This is good as it was expected that the project decisions were made through consultation with all stakeholders involved. However, due to the characteristics of farmers in NTT Province who are not used to be asked to speak out in a formal meeting and the figure of the head of farmers' group is quite strong and dominant in the farmers' group, therefore project implementer was required to have skill as a good facilitator. A good facilitation process could create positive feelings which plays important role to enhance the level of participation during the process, so that the facilitation process is more likely to deliver the desired outcomes.

Secondly, the implementation of improved farming practices were conducted through learning process by awareness raising, thematic training and regular

interactions between farmers, researchers, technician staff, extension officers of AIAT NTT Province and PPLs. Thematic training model was used in this project to improve farmers' knowledge and skills. The project divided training into several themes which relevant to each stages of project activities, as farmers would immediately try and practice the newly acquired skills and knowledge from each trainings into their own farmings. Therefore farmers could adopt and adapt innovations by themselves. In the training process, the facilitator played an important role to create conducive environment in order to enhance farmers' participation. The training provided room for the process of knowledge exchange for farmers. The training was also used to prepare farmers as the agent to spread the innovations. This process could increase farmers' self-confident with their newly acquired knowledge and skills, and farmers' empowerment as a result.

Thirdly, all key stakeholders were involved in monitoring and evaluation activities so that they could assess themselves whether they were performing well or not in achieving their targets as well as to provide feedback mechanism which in turn could suggest the areas of improvement for the project.

The outcomes of the first phase of PRO project implementing PLA approach at farmer's and other key stakeholder's levels are described below. At farmer's level, besides increasing corn yield and the surplus of income to buy cattle or other type of investment, PLA approach has changed farmers positively as it led to create a greater sense of ownership, empowered farmers, as well as motivated farmers to continue engaging for practicing the technologies after the life of the project. Farmers acknowledged that they were involved and their voices were listened, so that the project could address farmers' problems. Farmers voluntarily encouraged and trained other farmers to adopt the innovation and there were also few farmers even enlarge their farming scale. Farmers groups play a significant role post the PRO project as they serve function as farmers support as shown by the existence of mutual assistance and regular meeting, as well as with the strong figure of the head of the farmers groups. They independently disseminate the innovations to other farmers and accelerate the spread of innovations amongst farmers as a result. These evidences showed how have PDC principles been internalised at farmer's level. Whereas at other stakeholder's level, a spin-off of the PRO project was found in a new program that developed by the NGO involved in PRO project in which they adopted a similar approach (plant corn harvest chicken, plant corn in conjunction with cattle feed) to support the community empowerment in their programs. Extension Officers

claimed that they were expecting to use PRO sites as a model for other farmers to learn the technologies, while Department of Agriculture was expecting to use this project as a model for future agricultural development plan in NTT Province. In conclusion, these dissemination partners has responded positively to the PLA approach implemented in PRO project. Thus these outcomes demonstrate that technology assessment and knowledge exchange efforts using PLA approach is more likely to deliver more impact on farmers' livelihood than previous top-down approaches that mainly focused on transfer of technology.

### **Lessons learned from a PRO project in NTT Province**

The following lessons learned are reflections on the implementation of PLA approach in the context of PRO project in NTT Province: (a) A people-centered development approach has created a greater sense of ownership over the communication processes. Therefore the focus in an agricultural research for development project is no longer on the technology decided by researchers or projects but has shifted to focus on the people. PLA approach has facilitated the participation of farmers in their own development, so that farmers had influence to make well-informed decision of a development to improve their lives. Enabling environment for the dialogue among stakeholders to occur has been created throughout the project. As a result, PLA approach has lead to create a greater sense of ownership over the issue, the process and the outcomes of the project. (b) Strong relationships and collaboration among stakeholders can create collective ownership of the project. It is very important that all relevant stakeholders are involved in every stage in order to create collective ownership of the development process, as they will play role in the later large scale implementation. (c) Farmers' active role in the whole processes has empower them gaining new skills, knowledge and self-decision making which are crucial for a sustainable practice change and for a sustainable development. By PLA approach, a dramatic shift has occurred as farmers were no longer seen as passive receivers but were actively involved in the whole processes. Farmers played main role to identify their needs and opportunities, to input the project, to influence in decision making, to experience in testing and adapting technologies in their own realities, to give feedback for the improvement of the process, and farmer empowerment as a result. (d) Enhancing people's participation is the critical starting point of a project which leads to a sustainable practice changes. As showed from PRO project that when farmers were involved in the whole processes, it could create sense of ownership and empowered farmers as a result. Therefore, PLA approach is proven to be more

effective in facilitating to achieve the objective of a program and to contribute to farmers' commitment and motivation to pursue and sustain the program. As shown by the evidences after the life of PRO project, farmers were still enthusiastic to sustain the practice change and spread innovations to other farmers. (e) A sustainable development requires enabling environments from all stakeholders involved. At farmer's level, the enabling environment was created through farmers group. They were together put efforts to sustain this program, although formal intervention from relevant stakeholders in large scale implementation programs has not been (yet) materialised. Even though other key stakeholders were aware that this project has positive impacts on farmers' livelihood, however clear interventions from relevant stakeholders are needed to ensure the continuation of this project. The outcomes of the first phase of PRO project served as evidences that PLA approach has improved the impacts of technology assessment and knowledge exchange efforts of AIAT. Therefore, IAARD are suggested to incorporate the PLA approach into their future agricultural research for development projects in order to support a sustainable rural development in Indonesia.

### **CONCLUSIONS**

PLA approach applied in a PRO project in NTT Province has successfully facilitated the achievement of a sustainable rural development. In order to deliver more impact on farmers' livelihoods and to achieve a sustainable farmers' practice change, thus an agricultural research for development requires focusing on the people, listening to the context, and active participation of all key stakeholders in the whole processes of the technological assessment and knowledge exchange efforts. As they can create a greater sense of ownership and capacity building for farmer's empowerment and contribute to stakeholders' commitment and motivation to pursue and sustain the program within their agendas.

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