



INCLUSIVE PARTICIPATORY APPROACHES ON CLIMATE ADAPTATION AND MITIGATION FOR FARMERS

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ABSTRACT

Community service organized by Politani in a Tailor-made Training (TMT) was conducted from 6th to 13th of October 2019 in Soe city and Noinbilla village, South Central Timor Regency (TTS). The aim of this training was to give a clear perspective and profound comprehension about inclusive participatory approaches on climate adaptation and mitigation especially for farmers which could subsequently assist them in establishing a smarter-climate agriculture that is more resilient to climate change. The program was divided into two major sessions: 1) In-door training; where the participants were given interactive-based theoretical training about the topic and 2) Field Trip Study; where they visited several vegetation areas in order to further practise what they have learned from the previous session. Evaluation showed that almost all of the participants have a clear understanding on the basic principles of smart-climate agriculture and how they are going to apply the participatory approaches for establishing and strengthening partnership from multi-sectoral perspectives in order to achieve a more climate-resilient agriculture yet still productive.

Keywords : TMT, Climate Adaptation, Climate Mitigation, Smart-Climate Agriculture

BACKGROUND

Indonesia is one of the Country that mostly rely on Agriculture for conducting its mainly livelihoods. Its resources are among one with the most potentials because of its strategic location near the equator, and therefore, climatically, would be perfectly suitable for cultivating a wide variety of crops with high productivity. However, in recent decades, our agriculture sector has been facing a huge challenge due to extreme climate change that hindered its progress to become a more self-sustainable and major exporter country (*Towards Successful PPP Partnership on Climate adaptation for Food Security in East Nusa Tenggara*, n.d.). With erratic precipitation, uncertain weather and low intensity of awareness for an interrelated cooperation, farmers have started to suffer from crop yield loss that would definitely threatens food security in the future. Nevertheless, Indonesia still remain to uphold what have been declared at the G20 Meetings of Agriculture Ministers for an integrated and holistic risk management in fighting against climate change or to at least, minimizes its risks (“G20 Agriculture Ministers Declaration 2018,” n.d., p. 20).

While in other parts of the country have experienced recuperating cultivation land and system, a different case occurred in East Nusa Tenggara (ENT) province. Predominant dry-land that covers over half of the region, low frequency and intensity of rain, water scarcity and lack of supporting facilities and infrastructures are major grounds that impede the resilience and productivity of our agricultural system (“G20 Apresiasi Pembangunan Pertanian di Indonesia,” n.d., p. 20).

Unpredictable weather in recent years has seemed to take its toll on crops in ENT. In Noelbaki village, drought has spread in almost 150 ha of its rice field (developer, 2019). The same thing also happened in 3 sub-districts of East Flores where the severity of drought was categorized as a disaster that prompted immediate response from the government (“Kemarau Panjang, Tiga Kecamatan di NTT Gagal Panen: Okezone News,” n.d.). In Manggarai, insufficient rainfall and dried-up water springs led to yield loss of rice, corn and other secondary crops (“Petani di Manggarai NTT Menjerit, Kekeringan Parah Bikin Gagal Panen—VIVAnews,” 2019).

Many efforts have been done by the government, NGOs and academic institution and Politani is also one of them included. Our institution remains to be at the forefront in providing community

engagement and services as well as vocational knowledge and skills that can readily be applicable to the society. Regarding to evading the pressure of climate change, Politani too have played role in skill training and facility provisions for farmers. However, most of it have not been focusing on how to raise awareness of the importance of community engagement involving vulnerable groups such as women and youth while strengthening relationships with other component of the community such as stakeholders and NGOs. In this community service, Politani Kupang in collaboration with Van Hall Larenstein, Netherlands provide a Tailor-made Training (TMT) for a deeper perspective both theoretically and practically on how to apply what is called the inclusive participatory approaches related to climate change adaptation and mitigation purposes for farmers. It is hoped that the farmers will learn on how to expand and strengthen their social, economic and technological skills for a more practical-oriented innovative approaches based on specific issues or problem happening at their own areas.

METHOD

The TMT was carried out from 6th to 13th of October 2019 and divided into two sections. The first section was conducted in-door at Timor Megah Hotel, Soe, South Central Timor Regency (TTS) where the participants consisted of farmers representing several Farmers' Union from Kupang and also representing Farmers' Union from TTS regency, were given interactive-based theoretical training by both trainers of Politani as well as from Van Hall Larenstein (VHL). The second section was field trips at several vegetation centres where the participants arranged into small groups tried to apply what have been taught at the previous section to identify, observe and proposed a simple solution from a case study. The last day of the TMT was ended with a summary from the trainers of what have been learned from the past week followed by an evaluation as proficiency assessment including planning outlines that could be implemented once each participants has returned to their headquarters and dealt with the issues faced there.

RESULTS AND DISCUSSION

1. In-door TMT

During this training, participants were first introduced with the concept of participatory methods and how it could be deployed in initiating community for a more climate-adaptive livelihood.

The farmers (which have been divided into small groups) themselves were also engaged in presenting their own perspectives on what participatory meant to them and visualized it in a cardboard paper. Each group was very enthusiastic and determined in envisioning what the concept meant to them. One group contemplated their drawings in a form of ants with different colour (representing different roles in a community) surrounding a piece of food (as a problem). Another group envisaged it as a bunch of people sitting in a round table seemed to be discussing about something while others drew several hands holding together a round object perceived as a problem or matter. Regardless to whatever versions of their figures were, each group had common grounds in which participatory methods acquired a collective collaboration from varied perspectives and/or roles in order to analyse and solve a problem holistically, a similarity that was further identified and justified by the trainers.



Figure 1. The participants visualized and presented their ideas about participatory methods.

Participatory approaches itself were something that the trainers urged for the farmers to apply at their own areas when assessing their agricultural lands for example during framework planning before cultivation or as anticipative actions after experiencing a disaster that led to crop failures. The basic principles of this method fall into several aspects which are (Arensbergen, n.d.-a):

- a. Acknowledging multi-faceted perspectives,
- b. Requiring a group learning and discussion process,
- c. Specifically constructed for each subject matter,
- d. Linking the locals with people from the outer circle of the community,

- e. Leading to a change or transformation,
- f. Acquiring information from a wide range of sources
- g. Minimizing partisanship by relying on a committed self-evaluation,
- h. Applying a more flexible and sometimes informal combination of methods, and
- i. On-field analysis

This concept also considers the implementation of secondary data obtained from interviews and therefore, how the participants formulated their questions in order to be able to achieved the data their looking for is crucial. An ambiguous type of questions and leading questions could be used intermittently for achieving this goal. The farmers too were also endowed with such techniques that would later be arranged into small groups for assessment practise in a form of sensitive interviewing.

Sensitive Interviewing

The extension of both leading and ambiguous questions is a sensitive interview defined as a semi-structured interviewing where a guided conversation is administered from an interviewer to an interviewee based on predetermined topic(s), while the follow-up questions or insights will depend on how the discussion progresses. Based on observations, in every group every interview was preceded with some sorts of introduction known as “*basa-basi*”, an effort to ‘break-the-ice’ and creating a comfortable atmosphere that could hopefully made the interviewee not too uptight to share their knowledge or information. This was perceived as a part of our cultural backgrounds where to-the-point conversation is often considered unfamiliar and rather impolite.



Figure 2. Sensitive interviewing supervised by one of the trainers.

Participants were really responsive during the practise and the topics they discussed were also different ranging from smart-climate agriculture, crops suffering from pest damage, thin cows, to general topics such as crying child and being a mother. However, several groups experienced a rather off-track topic developed too wide from the centre focus of the interview and therefore, needed to be alerted from the supervisor. In general, in conducting a sensitive interviewing, one should consider several points as follows (Arensbergen, n.d.-a):

- a. Preparation as a team,
- b. Interview guidelines (*ex*: checklists),
- c. Being respectful and sensitive especially toward the interviewee(s),
- d. Visualization approaches for a more engaging and interactive conversation,
- e. Patience in listening and learning,
- f. Open-ended questioning by applying 5W1H,
- g. Scrutiny of responses,
- h. Judgement of responses through facts, rumours, opinions, etc.,
- i. Cross-checking.

At their own areas, the farmers were often organized into small groups called the Farmers' Union and therefore, it was also deemed necessary for them to build rapport community for a more cooperative and constructive working environment. Paths that could be taken for attaining these level of milieu are by displaying social empathy with a positive attitude, devotion and motivation to comprehend the complexity of relationships among members including: power differentials, interdependencies and appropriate channels; while on the other hand keep encouraging each subject to tell their stories and getting more involved.

Visualization Techniques

Visualizing things could ease our assessment on a certain community, especially for establishing a smart-climate agriculture that is more resilient to extreme climate change. During the TMT, the trainers introduced pra-mapping methods that could assist the farmers in preparing for cultivation of their lands, anticipating any scarcity or disturbance based on patterns identified and analysing the interconnection of all aspects as a whole. It could be constructed into at least one of the three main categories which are: space mapping, time mapping and relation analysis (Figure 3.)

TYPES OF PRA MAPPING



Figure 3. Types of Pra-Mapping that could be approached by the farmers.

Space Mapping could be contrived through many ways such as doing a transect for a certain distance and observe every vegetation, animals, infrastructures and other resources relevant along the line. Another type of Space Mapping could be done to identify the pattern of areas vulnerable to natural hazards (*ex*: flooding, land-slides, cyclones and sea-level rise), health hazards (epidemics, diseases, pandemics), technological shocks and/or political conflicts. Space Mapping could also record seasonal changes in livelihood activities or period where important resources are at its most vulnerable or scarce (time mapping) (Arensbergen, n.d.-b). Relation Mapping could also analyse the social effect that give influence to the progress or development of a cultivated land particularly under the organisation of Farmers' Unions.



Figure 4. Space Mapping done (left) and presented (right) by one the group participant.

The participants themselves were directed to construct a pra-mapping for their own areas and presented it to the trainers which also serve as preliminary data before conducting the study field trip the next day. During this process, they learned on how to be collaborative and coordinative with other farmers form different unions. The trainers noticed that they were really creative and innovative in making their pra-mapping and they too admitted that this was something they have never thought about and it could help guide them in preparing and managing a more productive land yet climate-resistant.

2. Field Trip Study

For the trip, the TMT participants went to Netpala village under the management of “Tunas Baru” Farmers’ Union. In the area, the small group of farmers were spread out to observe several vegetational spots based on the pra-mapping they have done before and further analysed each aspect relevant for managing a climate-smart agriculture. When necessary, they even constructed another mapping specific to the vegetational spot they were observing in order to obtain a more detailed information (Figure 5.). Other data not conveyed by visual observation were later complemented from participatory method through sensitive interviewing of the local farmers and/or stakeholders.



Figure 5. Study Field Trip at Vegetational spots in Noinbilla village.

During this session, the farmers were also accompanied by several co-trainers from Politani who assisted them in directing the questions and constructing the mapping. It was noticed that the farmers were really committed and persevering in trying to get as detailed information as possible and seen really engaging with each other and the other local farmers in discussing about how the areas should be managed. Not only did the participants identify the vegetational species and productivity, but they also did gain information on the hazardous factors commonly faced by the local farmers and recent risk management done so far.



Figure 6. Study Field Trip at the Forest area in Noinbilla village.

Besides agricultural lands, other participants also took time to visit forestry land that was co-managed by both the “Tunas Baru” Farmers’ Union and authorities from the Forestry Department. In this area, the participants focused more on learning to achieve information through applying the participatory methods. They were proven to be quite proficient in integrating such approaches for obtaining information (Figure 6.). After the field trip, each group were given time to prepare their presentation of what have been obtained that were then summarized by the trainers during the closing day.

3. Evaluation

Based on the evaluation results, 83,33% of the participants have understood the basic principles or concepts of smart-climate agriculture, while all of them have been aware of the importance on building, widening and strengthening relationship from multi-layered and multi-perspective society. However, only 75% have a clear outline of how they are going to make it come to fruition. Even some of them are planning to urge the other farmers from other unions for a gathering in order to organize a meeting with their local government related to a more productive and climate-resilient agriculture establishment. The rest of the participants which only accounted for 25% were perceived to be more passive in their involvement, in which it seemed that they will only wait for the government or other stakeholders to make the first move.

CONCLUSION AND RECOMMENDATION

Based on this Community Service provided by Politani in the form of Tailor-made Training (TMT), several things could be concluded:

1. The TMT about inclusive participatory approaches on climate adaptation and mitigation for farmers have been conducted successfully according to plan and complied with what the goals actually are.
2. Based on observation (especially during the study field trip), most participants have already proven to be adequate in applying the participatory methods in the goal of achieving sufficient and relevant data regarding to agricultural land managements.
3. The participants have become fully aware on the importance of expanding and strengthening relations more pro-actively with components outside their community for a better insight on how to be establish a climate-smart agriculture, and this would definitely require the implementation of participatory methods.
4. By applying the participatory tools, it could hopefully help guiding the farmers in finding a better and more effective ways for dealing with issues facing at their own areas related to climate change.

In order to fully optimized the significance of this training, several things could also be recommended:

1. It would be better to provide thorough supervision from the institution in a longer term in order for this approaches to be fully integrated in farmers' cultivation system and for a better result in being resilient towards climate change while also at the same time still being eco-friendly.
2. It would also require a more active involvement and support by the local governments that could expand the scope of the training in a much broader level.

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