

Picturing Impact!

John Pontius

Over the years, many participatory approaches have been used by the staff of IPM projects in Indonesia to examine the results of IPM activities. The most recent, a photo study in the Ciamis district of West Java, was carried out by Farmer Study Groups to learn about the impact of Community IPM on poverty in farming communities.

A total of three villages were selected for the study, one in each of three different sub-districts, Padaherang, Lakbok, and Cikongeng. By 1999, the final year of the national IPM farmer training project, there existed in all three sub-districts:

- Government trainers who had conducted FFS;
- Farmer IPM trainers who had conducted farmer-to-farmer FFS;
- Groups of FFS alumni conducting field studies;
- IPM trainers who had facilitated technical and planning meetings for alumni at the sub-district level.

Farmer Field Schools for Integrated Pest Management (IPM) began in the Ciamis district in the early 1990's, but there have been no nationally funded IPM activities in Ciamis since 1999. However, numerous activities have been funded or supported by

the district governments, by FAO's Community IPM programme, and by the National IPM Farmers Association. Two field workers from Ciamis District Agriculture Services, who were part of the national IPM farmer training project, have been coordinating the support from these organisations and providing technical support to the activities of FFS "alumni" (graduates of the field schools) in the area.

Farmer Study Groups were formed over the last two years as action research groups for FFS alumni. The FSG have become the organisational foundation for FFS alumni in the villages, as they work to establish farmer-led community IPM programmes. The members of the FSG have been conducting various field studies in vegetable and rice production systems. One of the primary concerns of the groups is soil ecology. As a consequence, the groups have worked on issues related to composting and organic soil amendments. The three FSGs have also been assessing the effectiveness of SRI (System of Rice Intensification). The groups have been trying to increase the numbers of farmers applying IPM approaches in their villages. Although there are similarities among the three FSGs, their activities have varied due to the differing social and ecological conditions. These groups and their members are the driving force for Community IPM in their villages.

CINTA ALAM FARMER STUDY GROUP Sidaharja Village, Lakbok Sub-district

Marsim and Samini are members of the evaluation team



This is rice straw. Before we had IPM, this straw was burned. Now the straw is being composted or turned under. Also we have learned that using a cangkul for field preparation is better for the soil than using a tractor. And once the land is prepared we spread ash. These things help the fertility of our soil. Marsim

This is the yard of my neighbour, a non-alumnus. You can see eggplant, chillies, and cassava. My neighbour used to let this land go to waste. Now, having seen what alumni are doing with organic fertiliser and their back yards, my neighbour is copying them and planting empty ground with vegetables and using organic fertiliser. Now my neighbour has a "living store" that helps with daily needs and provides some income. Marsim



This photo shows the study plots of our Farmer Study Group, Cinta Alam. We have planted vegetables and are using organic fertiliser. The plots help to provide an example for other folks and we learn about growing vegetables and using organic fertilisers. The idea is to help us increase our incomes. Our meeting place is in the background. Marsim



FSG Cinta Alam organised advocacy led to the repair of this irrigation ditch in our village. This ditch was broken and caused our homes to flood. Alumni have helped the whole village by their advocacy to local government to get support to repair this ditch that provides water to over 25 hectares of rice fields. To do the job, 6 million rupee was needed. We collected US\$ 2 million from farmers. Negotiations led by Bapak Sukendar, a Farmer IPM Trainer, between alumni and the Public Works Department led to their contributing the other 4 million. The houses next to these ditches use to be continually flooded. The fields didn't get enough water. Now, with the repairs, the fields will get water and the houses stay dry. Samini

Methods

Participatory evaluation should set out to capture the perspectives, voices, preferences and decisions of the least powerful stakeholders related to a given project. In the case of Community IPM, this means farmers. Photographs can be used to help the individual, group or community reflect on itself (Freire 1989).

For the study, five members from the FSG in each of the three villages were selected to become members of the evaluation team. They were mostly the newer members of the FSGs, and their task was to conduct the evaluation study in each of their villages. In brief, the teams were asked to take photographs that showed the impact of IPM on poverty in their villages. Each team member wrote short explanations for the photographs that he or she made.

The study took place in three stages. The first stage was a four-day workshop with three objectives: establishing a perceptual focus for the study among team members; reviewing IPM activities in the villages and what members perceived as the results; and familiarising the evaluation team members with the cameras that they were to use.

During the second stage of the study, team members returned to their villages. Each participant carried a roll of film and a battery for the camera. There was one camera per village and it rotated among the five evaluation team members in each village. Each person had the camera for a day and each could take as

many pictures as they wanted up to the capacity of the role of film that they carried (36 photos).

The third stage of the study was a follow-up workshop. During this workshop, team members:

- wrote an accompanying text describing the photographs and made "IPM impact albums";
- analysed their results and made team presentations on the impact of IPM activities on poverty in each village;
- discussed and presented their conclusions about what they learned during the study;
- developed action plans for their FSGs;
- evaluated the study process that they had experienced over the last several weeks.

Below are a few of the photographs and accompanying explanations made by the evaluation team. In a very real sense, each of these photographs portrays the impact of IPM activities.

Analysis and Conclusions

During the follow-up workshop, each village evaluation team was asked to present an analysis of the impact of IPM on poverty in their village based on the data that they collected during the study. Discussion followed the presentations and the teams went on to note that in general, community IPM activities had led to greater creativity, independence, lowered costs and improved incomes.



Growing pesticide-free rice and vegetables with organic fertilisers allows alumni to make ponds in their fields that can be used to produce fish. This provides additional income. Samini



This is the kitchen in Bapak Parijan's house. He uses the ashes from the cooking stove to enrich his soil. He learned in his FFS that wood ashes could be used to create better soil, increase soil fertility, and fight pest and disease in his plants. Nasiman

TURANGGA FARMER STUDY GROUP Mangunjaya Village, Padaherang Sub-district

Mafahir, Nasiman, Iin Suryanih and Sakiman Holil are members of the evaluation team



This is Bapak Zakaria and his wife. He is an IPM Farmer Trainer and has become the head of his hamlet. He has been a part of Turangga's activities and he is now using ground that was once empty to grow chillies. He uses compost to help improve his soil. Iin Suryanih



A creative farmer makes use of his land by planting mung beans after rice. This yields beans and green fertiliser is made from the leaves of the mung bean plant. These farmers are drying mung beans. Mafahir

The following quotes are further examples of their analysis.

IPM activities have increased creativity among farmers.

The teams cited examples including the following:

- “*Trichoderma*, which is an antagonist of *fusarium*, can be used effectively in chillies. Because we want to apply IPM and avoid using pesticides we are forced to be creative to find alternative approaches to pest control.”
- “The FFS opened my eyes. Because my family was able to analyse its daily needs and could determine how to try to fulfil those needs by, among other things, using our yard for a vegetable garden, we have been able to improve ourselves. I learned about these things in my FFS.”
- “Making use of used plastic bags and plastic ware as pots for planting vegetables”
- The use of inter-cropping and organic fertiliser.
- The use of open land and yards for vegetables and fish ponds.
- “Producing and using “bio-lahang” lowers our dependence on commercially produced decomposers.”
- “Before IPM, all farmers were planting certified seeds which were unsatisfactory, now we produce our own seeds which have better rates of germination and higher yields.”
- “The application of rice-fish practices.”

This creativity has led to either decreased costs or increased incomes, while decreasing dependence on others for inputs and meeting daily needs. Included in the examples presented by the team as evidence of this are:

- “IPM and not using pesticide increases our confidence in using rice-fish culture. The fish will be able to survive. This increases our income.”
- “Our studies of SRI in which IPM and soil ecology principles are applied show increased yield rates.”
- “Using cow urine to control oteng-oteng (a chrysomelidae beetle) in cucumbers and mustard greens has lowered production costs.”
- “Composting of cheap and available organic materials to produce organic fertiliser is a way to overcome the high costs of chemical fertilisers.”
- “Producing and using “bio-lahang” lowers our dependence on commercially produced decomposers.”

The benefits from IPM activities are not limited to only alumni, but are accessible by all in a village. Examples of this that were pointed out by the team included:

- “Our irrigation ditches were causing problems. For six years in a row, every rainy season there would be flooding. Our group organised activities to lobby local government for repair of the ditches in 1998-1999. These activities resulted in repairs being made (work organised and completed by farmers). The repairs have lowered flooding and fields that once couldn’t be planted can now be planted.”
- “The use of open land and yards for vegetables and fish ponds. This has lowered dependence on others for vegetables and increased incomes. Many who have not attended an FFS now use these practises. This is just one example of how everyone in a village has access to IPM knowledge.”

Produce your own seeds! In the bags are seeds that I have saved. After we studied the problem of seed quality, it turned out that farmers can produce higher quality seeds than we can buy. IPM farmers are not anxious to buy from others. Sakiman Holil



Ibu Uli is collecting rice husks. She uses the rice husks to make compost and she also sells the husks for additional income. Iin Suryanih

**TIRTA BUMI FARMER STUDY GROUP
Budiasih Village, Cikoneng Sub-district**

Yakub Syah, Euis Holisoh, Aleh Soleh and Jarot Indraloka are members of the evaluation team



This photo shows that composted land is easy to prepare and you can find lots of eels there. The tractor in the picture is working a field that has been heavily composted over several years. The boys are catching eels uncovered by the plough. Sakiman Holil



Our decomposer is made from “lahang” (sugar palm sap), slices of banana tree trunks, and water. Tirta Bumi tested the decomposer against a product called EMBIO, which is quite expensive. Biolahang is the equal of EMBIO. Yakub Syah

During the first workshop, the team developed a “Farmer Poverty Framework” of conditions that they felt arise because one is poor. According to them, poverty leads to:

- Limited opportunities for learning both for children and adults.
- Limited access to a balanced diet.
- Limited scope for work.
- Reduced living conditions.
- Decreased self-regard.
- Increased discrimination.

The framework can be used to determine whether and in what ways Community IPM activities have affected or could affect these conditions. The data show that FSGs and community IPM support a wide variety of activities, from farmer research to advocacy. The data also show how these activities affect the conditions identified in the “Farmer Poverty Framework”.

The major conclusion of the evaluation team was that IPM has helped to alleviate poverty in their villages. Besides this major conclusion, the evaluation team concluded that there were some definite benefits in doing this study both for them and potentially for their village:

- “We learned how to use a camera and this is important because we can continue to document the IPM activities in our village.”
- “We have analysed and summarised our data and now have a document to show other people in our villages, as well as being able to tell them what we discovered about the impact of IPM.”

- “We have been able to discover what is being done in the village because of IPM and can describe the impact of IPM on poverty in the village. This is important for at least two reasons. We can evaluate our activities and improve them. We can raise the awareness of others regarding the importance of IPM in the alleviation of poverty.”
- “We understand the characteristics of poverty, its causes, and what arises because of poverty. This will help us to discuss poverty with others and find ways to alleviate poverty.”
- “We will be better able to provide leadership in the village related to poverty because the study has motivated us to follow-up on activities that have had the greatest impact on poverty in the village. The study has increased our awareness, confidence and determination.”

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A full version of this paper is available at www.eseap.cipotato.org/upward.

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I took this photo of a goat shed at the edge of the rice field to show how farmers have made it easy to have manure on hand to compost for their fields.
Euis Holisoh



It used to be that farmers were told what to do by the extension worker. Now we have learned for ourselves how to do such things as reproducing trichoderma. It used to be that only the agriculture department lab made this. Euis Holisoh



The farmer in this picture is watering his plants with a mixture of cow urine and water. Cow urine can keep away hama kutuh daun. Urine replaces pesticide. Aleh Soleh



By not using pesticides we can create a healthy agro-ecosystem. This makes it possible for farmers to diversify by raising fish in combination with rice or vegetables.
Jarot Indraloka