

8. The Big Picture

Farmers have been continually opening up new dimensions for Community IPM. With their help new possibilities are being created for Community IPM activities. Three questions that concern both the present and the future provide the focus for this chapter.

- What has Community IPM achieved in the region?
- What are important Community IPM programme operational principles?
- What's next?

In the end we close with where we started, farmers and empowerment.

8.1 Farmer-to-farmer Activities in the Region

What has Community IPM achieved in the region? In a number of countries across the region farmer-led Community IPM has emerged. A focus on Farmer IPM Trainers and their activities provides a snapshot of Community IPM in the region in the year 2000. This snapshot reveals some of the achievements of farmer-led Community IPM in the region.

8.1.1 Bangladesh

There are two organisations conducting IPM activities in Bangladesh CARE and the Department of Agriculture Extension (DAE). DAE has two separate IPM projects one supported by DANIDA and the other by UNDP/FAO. The Community IPM programme has supported the activities of both organisations especially in the development of Farmer IPM Trainers and Farmer-to-Farmer programmes.

The **DAE UNDP/FAO project** has been in progress for several years and in 1999 began Farmer-to-Farmer activities. The project has trained 320 FFS alumni as Farmer IPM Trainers and will train 320 more during the present year. By the end of November 2000, Farmer IPM Trainers will have conducted a total of 926 FFS. The UNDP/FAO project has established the following process for developing Farmer IPM Trainers:

- Project IPM field trainers identify potential Farmer IPM Trainers over the course of an FFS.
- Upon completion of their FFS, these alumni participate in a week-long TOT.
- After the TOT each Farmer IPM Trainer teams up with a DAE IPM Field Trainer to conduct an FFS. During this “apprenticeship”, the Farmer IPM Trainer does all the planning, preparation and running of an FFS with support and assistance from the IPM Field Trainer.

- Following the apprenticeship season, the Farmer IPM Trainer will establish and run his/her own FFS supported by their DAE IPM Trainer team-mate who will attend a limited number of FFS meetings.
- Regional review and training meetings conducted by DAE trainers are held at the middle and end of this FFS season for Farmer IPM Trainers.

The **DAE/DANIDA project** has trained 40 Farmer IPM Trainers and will continue to train more. The project follows the same process as the DAE UNDP/FAO project in developing Farmer IPM Trainers. The following describes a farmers IPM club. Clubs usually provide a forum for Farmer IPM Trainers to provide IPM training and advice to other farmers. However, as the following brief case shows, the activities of IPM clubs are neither limited to IPM nor adults.

Box 8.1

Laupara Elementary School

In 1998, 25 rice farmers, including five women, participated in an FFS at Laupara in Bagmara Upazila in Rajshahi District. At the end of their FFS the 25 farmers established an IPM club and built a simple shed for meetings near their fields. The group assessed a membership fee of US \$.60 per month. Their first activities included providing IPM management advice for their neighbours. Membership grew to 43. Members wanted a school for their children. The group built a second building. The building became a school for local children. There are now 37 pupils attending grades one through six at this school.

CARE Bangladesh has trained farmers to be Farmer IPM Trainers. For CARE, the main purpose of the Farmer IPM Trainers is to extend the benefits of their IPM activities beyond the project period. Farmer IPM Trainers were encouraged to develop their own roles. CARE conducted an evaluation of the activities of their Farmer IPM Trainers. The following is a summary of their review.

Money is not the most important motivational issue. CARE discovered that most of their Farmer IPM Trainers found “social recognition” to be more important than the potential of earning money as a Farmer IPM Trainer. Farmer IPM Trainers state that non-alumni have been coming to them to learn about IPM and they are proud of this new recognition that they get from their neighbours.

Farmer IPM Trainers improve linkages with line agencies at the community level. Farmer IPM Trainers were developing linkages and networking with different organisations and helping their communities to acquire new information and technologies.

Farmer IPM Trainers contribute to community cohesion. Farmer IPM Trainers respond to community and alumni needs and take initiatives.

- Farmer IPM Trainers have reorganised FFS alumni into groups that are similar to agricultural cooperatives. The groups are generating funds from their own contributions for use in IPM activities.
- Farmer IPM Trainers design and implement field trials with FFS alumni based on local interests and problems. Results are shared with all farmers in their communities.
- Farmer IPM Trainers are assisting school children to learn about ecology and crop production.

8.1.2 Cambodia

In Cambodia, there are over 6000 FFS alumni and around 300 Farmer IPM Trainers. The Farmer IPM Trainers have conducted activities that have increased the scope and range of the national programme in Cambodia. Farmer IPM trainers are:

- Working with alumni to conduct field research;
- Conducting IPM Field Schools in schools for primary grade students;
- Conducting vegetable IPM Field Schools.

A relatively high percentage of rural people in Cambodia are physically disabled. Farmers with physical disabilities are often not included in agricultural training activities. The regional Community IPM programme in Cambodia initiated a project in co-operation with Handicap International (HI) in 1999 so that disabled farmers could participate in FFS's. Not only have handicapped farmers been participating in FFS, but disabled alumni have also joined the ranks of the several hundred other alumni who have been trained as Farmer IPM Trainers.

Box 8.2

Disabled Farmers Take a Leading Role

Tropaing Prech Village, Bati District, Takeo now has 4 handicapped Farmer IPM Trainers who have recently conducted their own field experiments on watermelon. The study was part of an alumni/Farmer IPM Trainer project focused on farm level income generation related to IPM in vegetable and rice crops. They investigated the effects of fertiliser and pesticide on crop yield. The farmers found that increased rates of fertilisation with no pesticide use achieved almost twice the yield of the usual practice of low fertilisation



Two handicapped Farmer IPM Trainers conducting FFS

and high pesticide use. The farmer researchers shared their results with other farmers in their village by holding an open meeting for all local farmers.

While this small study focused on crop yield there have been other studies that have examined the economic returns to IPM and the viability of diversification. Farmer meetings have been helpful in improving these research activities, sharing ideas, and strengthening relationships within the farmers' communities.

8.1.3 China

The China IPM programme has been training alumni to be Farmer IPM Trainers since 1998. By the end of 1999 there were almost 600 Farmer IPM Trainers in China. In the current season at least 30 Farmer IPM Trainer TOT's supported by FAO will be conducted for selected FFS alumni. There will be an almost equal number supported by local governments in six provinces. These TOT's will increase the total of Farmer IPM Trainers in China to around 2400.

Women are playing an important role in IPM activities as Farmer IPM Trainers. The following case from Mianzhu County in Sichuan Province indicates that this role will only get larger.

Box 8.3

Women Leading the Way for Community IPM

Minanzhu County in Sichuan Province is approximately 60 kilometers north of Chengdu, the capital of Sichuan Province. Sichuan Province, in southwest China, is one of the largest provinces in China, with a population of approximately 80 million people. Women have always played a critical role in rice production, in Xinshi Township of Mianzhu County. Recently women have become even more important to agriculture in the area as increasing numbers of men are seeking employment in nearby urban areas. Traditionally women have been responsible for seed preparation, crop fertilisation, cultivation, pest and disease management, water management, and harvesting. Clearly, women need to be included in FFS's so that they can learn and apply the principles of IPM in their fields.

In 1999, Ms. Li Jirong from Jiannan Village in Xinshi Township became the first female Farmer IPM Trainer in China to conduct an FFS. Ms. Li Jirong participated in a Farmer IPM Trainers TOT in 1998 after having completed an FFS. She is 37 years old and is the chair of the Women's Union in her village. The 25 participants in the FFS that she organised ranged in age from 25 to 50 and, like her, were all women. But Ms. Li Jirong was not the only woman leading an FFS in Mianzhu County in 1999. There were four other FFS conducted by women during the 1999 rice-growing season. Women will be playing an increasingly larger role in IPM in Mianzhu County. The county

Women's Union leader is strongly behind IPM. In fact the Women's Union of Sichuan Province is strongly supporting IPM at the provincial level. They will be adding funds to help increase the number of FFS being implemented by women for women. The leaders of the Mianzhu County Women's Union intend to have 20 FFS implemented by women for women during the summer of 2000.



Participants in all women's FFS

8.1.4 The IPM Farmers Association in Indonesia

Indonesian Farmer IPM Trainers have continued to expand their activities despite the completion of the Indonesian IPM Training Project in late 1999. The Farmer IPM Trainers organised a national congress of IPM farmers in 1999. One of the decisions of the congress was to establish a national FFS alumni organization. Several hundred Farmer IPM Trainers spread across Indonesia have provided the leadership in getting this organisation up and running. The alumni organisation, known as the Indonesian IPM Farmers Association, has had a very busy initial period with thousands of alumni participating in its activities across the country. The following summarises a few of their activities in 2000-2001.

Provincial and district level congresses have been held throughout the country. The congresses were organised by local branches of the national association to:

- Strengthen the Indonesian IPM Farmers Association at provincial, district and sub-district level.
- Identify and agree upon issues that might serve as the basis for advocacy efforts.
- Discuss the issue of farmer rights and lobby local and provincial officials concerning farmer rights.

The association has used a grant of nearly US \$40,000 (mediated by a local NGO) to further strengthen its membership base by means of a series of organising workshops held in selected districts across 11 provinces.

The association organised a nation-wide training programme with technical support from the FAO Community IPM Programme. The goal of the training was to improve the effectiveness of Farmer IPM Trainers in responding to local needs. Three week-long workshops were held in each of 11 provinces.

Each workshop focused on one of three different topics: advocacy, strengthening the quality of FFS implementation, and farmers led science. In total, around a thousand Farmer IPM Trainers attended these workshops. Participants attended the workshops as two-person teams and during the workshops each team developed an action plan for follow-up in their home districts.

8.1.5 Nepal

A relatively new Community IPM programme, Nepal is moving quickly into the development of a cadre of Farmer IPM Trainers. During 2000, the programme conducted five Farmer IPM Trainer TOT's and Farmer IPM Trainers will organise 31 FFS. The participants in Farmer IPM Trainer TOT's are FFS alumni. The goal of Farmer IPM Trainer TOT 's in Nepal is to develop the facilitation and leadership skills of FFS alumni. The vision is that the participants will not only organise FFS, but also provide leadership at the village level in the development of local IPM programmes. The following summarises the curriculum of the TOT held in Birgani, Nepal. The summary is based on the report of two members of the FAO Community IPM Asian Trainers team who helped in the design of the curricula for Nepal TOT's and participated in the Birgani TOT.

Box 8.4

Farmer IPM Trainers TOT, Birgani, 1-10 May, 2000

The training approach used in the TOT was to have participants practice an activity, then to analyse the process of the activity. Facilitators at the TOT asked a series of questions to help in the analysis of activity processes. Among the questions asked were:

- Why was the activity important to review in the TOT?
- Why is the activity important in an FFS?
- What took place during the activity?
- How can the FFS facilitator help the learning process in this activity?
- When should this activity be conducted in an FFS? Why?

The TOT curriculum covered four major categories of activities, the AESA, Special Topics, Group Dynamics, and FFS Management. The AESA activity was done several times during the TOT. The participants practised and analysed all of the steps in the AESA process. The objective was that participants would master the facilitation of the AESA process.



Alumni at Farmer IPM Trainer TOT

Among the Special Topics that were practiced during the TOT were: Insect Life Cycles, the Insect Zoo, Categorising Arthropods, Drawing and Identifying Insects, Major Pests in Rice, Plant Root and Vascular System, Pesticide Poisoning, Fertilizer Management, Soil and Water Management, Weed Management, Plant Morphology and Growth, Disease Management, Economic Analysis, and Applied Statistics.

The TOT participants also practiced 17 different Group Dynamics activities during the TOT. In this TOT Group Dynamics were used to improve the learning climate before a session or after lunch.

Management topics focused on three major issues, preparation for an FFS, conducting the FFS, post-FFS activities. Preparation topics focused on needs assessment, participant selection, budgeting, and curriculum development. Topics related to conducting the FFS included work plans, and conducting the ballot box activities and the FFS field day. Post-FFS topics included evaluation and the planning of follow-up activities.

8.1.6 Sri Lanka

The first farmer-to-farmer training in Sri Lanka started spontaneously when farmers in three districts decided that they should begin to take responsibility for training farmers in their neighbourhoods. In 1999, the Community IPM programme supported a technical exchange with the IPM programme in Bangladesh. The exchange enabled experienced TOT trainers from Bangladesh to participate with Sri Lankan trainers in a Farmer IPM Trainers TOT curriculum development workshop in Sri Lanka. The trainers designed a five-day curriculum. The curriculum was used in five different TOT's in the Maha 1999/2000 season. Participants in these TOT's were FFS alumni from Galle, Puttalam, Anuradhapura, Kandy, Ratnapura, and Hambantota districts. These new Farmer IPM Trainers conducted 26 FFS during the following season.

After the first season of farmer-to-farmer training Farmer IPM Trainers and project Field Trainers participated in a workshop to evaluate the farmer-to-farmer FFS that had been conducted. One of the results of the workshop was lengthening of TOT's from five days to 10 days to allow for more training on facilitation and technical issues. This new model of farmer TOT is now being implemented in new districts and irrigation systems.

The Farmer IPM Trainers have been successful both as trainers and as local IPM leaders in the districts where they have been active. For example, Farmer IPM Trainers in Galle District have worked with farmers to form IPM alumni groups. These groups are producing seed paddy to meet local requirements. The Deputy Director (Extension) of Galle District, Mr. Indrajee, is so convinced of the impact of farmer-to-farmer training that he has taken a decision to use it as a primary extension strategy.

Farmer-to-farmer FFS is an expanding activity in the programme in Sri Lanka. The number of farmer-to-farmer FFS has been increased for this season. There are now over 200 farmers who have participated in Farmer IPM Trainers TOT's. Present plans call for at least 50 % of these Farmer IPM Trainers to be conducting FFS in the upcoming Maha season.

8.1.7 Vietnam

Community IPM activities in Vietnam have led to an increase in the number and activities of Farmer IPM Trainers. The following is a brief case from Yen Tan Village in Nam Dinh Province. The case is representative of the roles of Farmer IPM Trainers in establishing sustainable village level IPM programmes across Vietnam.

IPM activities began in 1995 in Yen Tan Village with the implementation of a single Field School that was followed by two others, one in 1997 and another in 1998. At this point there were 90 FFS alumni spread among the 10 hamlets of the village. In the autumn of 1998, as Community IPM activities started in earnest, a TOT was held in Yen Tan to train 20 alumni or two per hamlet (a total of 12.5% of FFS alumni in the village). Half of the alumni trained as Farmer IPM Trainers were women. This selection strategy meant that both the local Farmer's Union and the local Women's Unions were represented in the TOT. These two organisations were supporters of IPM and wanted members trained as Farmer IPM Trainers.

After their TOT the Farmer IPM Trainers conducted four Field Schools in 1998 and another four Field Schools in 1999 raising the number of FFS alumni in the village to 330. The Farmer IPM Trainers also helped in the organisation and implementation of 12 field studies over the two years.

Box 8.5

A Farmers Field Study in Nguyet Trung Hamlet, Yen Tan Village

After attending the village planning meeting prior to the spring planting season of 1999, Mr. Tuyen, an FFS alumni who is head of the Crop Production Brigade for Nguyet Trung Hamlet, along with Mrs. Hoan and Mr. Tong, Farmer IPM Trainers, organised a study on fertiliser use. (Mrs. Hoan is a leader in the hamlet branch of the Yan Ten Women's Union and Mr. Tong is the head of the hamlet's Farmers' Union branch.) Their goal was to conduct a study that might have a practical benefit for farmers. The study focused on the impact of phosphorus fertiliser.



Farmer researcher at field study site.

The total number of farmers involved in the study was limited to 20. They managed all of the fieldwork associated with the study. There were farmers from other hamlets involved in the study group to help ensure that results were shared with other IPM clubs. The local IPM Field Trainer played the role of a consultant helping mainly in design issues.

Participants in the study made weekly ecosystem observations and evaluated the impact of phosphorus on yields. Results of the study indicated that increased levels of phosphate led to higher yields in general. Lam Thao phosphate led to higher yields in all the plots in which it was tested. However, in low-lying fields, the study found that melted phosphate had better results than Lam Thao. Results were shared with other farmers in the hamlet IPM Club, about 80 farmers. The study group also conducted a field day for village and hamlet leaders.

Alumni and the Farmer's and Women's Unions began organising IPM Clubs for all farmers in 1998. By early 2000 each of the 10 hamlets had an IPM Club. In each of the clubs Farmer IPM Trainers were named as either the Chair or Vice-chair. These two positions alternate between a representative of the hamlet branch of the Farmers' Union and the Women's Union and a Farmer IPM Trainer is always either the Chair or Vice-Chair. The clubs are conducting field studies organized by Farmer IPM Trainers. Leadership of each hamlet IPM Club meets regularly to share results of studies that they then provide to hamlet club membership. The total membership of the 10 clubs is around 600 farmers. Clubs plan to continue organising studies and FFS.

8.2 Operational Principles

How did we get here? Across Asia, the process of getting Community IPM institutionalised at the village level has usually taken place in the midst of large-scale IPM training projects. The challenge has been the opposite of that facing a successful NGO that wants to take a successful activity at the community level to a larger scale. Community IPM managers and leaders have had to ask not only how to provide large numbers of farmers with the opportunity to participate in FFS's, but also how to enable FFS alumni to establish sustainable IPM programmes in their own communities. Getting IPM institutionalised at the field level has also required working through complex government bureaucratic systems. Centralised bureaucracies tend not to be conducive to participatory IPM. Historically agriculture departments have been the major input suppliers encouraging insecticide use. How then can participatory, ecologically informed programs 'take root' within and through such systems? The following have proven to be effective operational principles and have allowed managers and leaders to answer the above two questions.

8.2.1 Capturing Systems

Attention needs to be given to the highest and lowest levels of the systems that provide the context for IPM field activities. Policy guidance from top levels can combine effectively with bottom-up pressure generated by farmers to 'transform' systems. A classic example of cultivating the highest level in the system comes from Indonesia where an inter-ministerial coalition was established to oversee the development of IPM activities. Indeed, it was this coalition that was able to prevail upon the President to issue a policy that called for:

- The banning of the use of 57 wide-spectrum insecticides in rice;
- The elimination of subsidies for insecticides;
- The implementation of IPM training for government agricultural field workers and for farmers.

This policy mandate provided the initial space for an IPM training programme to move at the lowest level in the system, in the field with farmers. To take advantage of this opportunity meant moving quickly to develop and implement an effective educational model for field workers and farmers. Once such a model was in place, both policy makers and farmers, were available to persuade the mid-part of the system, from the Minister of Agriculture down to village heads, of the importance of IPM, the effectiveness of the FFS approach, and the ability of farmers to implement IPM. When one sees endless pictures of IPM farmers talking in the field with heads of state, ministers, local government chiefs, etc.; think of how 'top-bottom' linkages are being formed.

8.2.2 Move Quickly

Windows of opportunity, once opened, are usually not open for very long. In terms of IPM education for farmers this means getting activities going quickly at the field level after acquiring the mandate to work with farmers. This requires collapsing the layers in a training system so that it is essentially a one-step affair. In Community IPM countries this has been done by organising FFS's for farmers as part of the training for IPM Field Trainers. Further, elaborate hierarchical training systems have not been developed to train field workers or farmers. IPM Field Trainers are trained and they train farmers both during their training and immediately after. A human resource system is established at the field level, not a set of training facilities. When training of Field Trainers is completed the TOT trainers move on to the job of supporting farmers in their efforts to institutionalise IPM at the village level.

8.2.3 Let the Farmers Show Them

Decision makers need evidence to support ecological IPM education for farmers. Written reports are not enough, decision makers should be able to visit an FFS and talk directly with farmers. There has yet to be large-scale implementation of FFS's in any country without decision makers having had a chance to see FFS's first hand and talk with farmers. The FFS is a radical departure from farmer education as usual. Quick implementation, before a

“farmer training as usual” approach sets in allows decision makers to see what farmers can do because of the FFS.

8.2.4 Actively Engage Local Institutions

To engage local institutions means educating local government and non-governmental groups about IPM and advocating for their support for IPM and farmer led IPM activities. Alumni will need both policy and financial support to enable them to organise IPM activities and “base” groups. To achieve this support both education and advocacy will be required. A wide variety of steps can be taken to accomplish this. Every FFS has a Field Day that is organised by FFS participants. The Field Day provides an opportunity for participants to begin the work of communicating with others about IPM and the benefits of IPM. In Vietnam and Indonesia, FFS facilitators have included farmers who also hold leadership positions in the village in their FFS. These leaders have helped to make village funds available to support FFS's. Alumni have also used forums such as Farmers Planning or Technical Meetings to inform local officials about the direction and benefits of alumni organised activities. Advocacy can begin in these forums as alumni can initiate negotiations with local government for funds to support their activities. In Vietnam and China, local mass organisations such as the Women's Union have been recruited to support and organise FFS and IPM alumni associations.

8.2.5 Use TOT Trainers as Communicators

In many countries, the trainers who conduct TOT's have been effective in gaining support for IPM at the local level, especially during the early stages of field activities. In Indonesia, for example, the trainers from the TOT centre supported TOT participants as they implemented Field Schools by helping the participants to solve logistic and facilitation problems, and by working with local government at the district and sub-district levels to acquire support for FFS implementation. In a sense the practicum period was also a learning opportunity for these trainers. They acquired valuable experience in effectively communicating with the middle levels of the system in support of farmer-led IPM.

8.2.6 Establish New Systems via Training

The training activities in support of the implementation of FFS's can be more than simply a TOT programme. This programme offers an opportunity to:

- Lay the foundation for a field management system that can support the institutionalisation of IPM at the village level.
- Influence the context in which FFS implementation and IPM institutionalisation is taking place.

TOT trainers have, in many countries, become the day-to-day managers of IPM field activity implementation. They have effectively counter-acted the tendency of centralised bureaucracies to work in a top down fashion. The

development of trainers as managers within a field based management system has come about by design, not accident.

The TOT programme, when it is conducted as a season-long intensive residential training, provides an opportunity to change the values, skills, and approaches of its participants. The TOT necessarily must provide a motivational force that will sustain IPM Field Trainers as they confront the obstacles that will arise as they organise and facilitate FFS's. Thus as TOT graduates go about their work, they represent, in effect, not only a moral force acting on behalf of IPM and farmers, but also a skill base that can design and implement participatory approaches that sustain a bottom-up approach to the development of sustainable agriculture at the local level. Their potential for affecting the system in which they work can be profound, especially at the sub-district and village levels.

8.2.7 Create Room for Farmers to Take Action

An FFS provides farmers with an opportunity to develop his or her potential. Follow-up activities allow alumni to further develop their potential. Follow-up activities that are focused on developing local IPM programmes provide alumni with the room to take action to institutionalise IPM at the village level. Activities that focus on problem analysis, planning, decision-making, and field research allow farmers, within the context of IPM, to identify local problems related to agriculture and plan actions that will lead to their solution. These activities build teams, enhance values, and strengthen the motivation of alumni to move ahead with their own programmes.

In Indonesia and Vietnam the IPM Programmes have developed approaches for follow-up to FFS's that integrate several activities including participatory problem analysis, activity planning, and activity implementation. These follow-up activities, while initiated by national programme trainers have consistently provided a foundation for farmers to begin the development of their local IPM programmes.

8.2.8 Continuously Build Farmer Capacities

While follow-up activities can build skills, it is important to have a cadre of alumni in as many villages as possible who can organise FFS's and have additional training in leadership. Farmer IPM Trainers have been the key element in all successful IPM movements in the region. Their TOT's provide them with more intensive technical and leadership training. This increased base of skills at the village level is enough to give an edge to alumni as they organise their IPM programmes. Farmers ARE the agriculture "system". Departments of agriculture often fail to take note of this. Only farmers can "institutionalise" IPM at the community level.

8.2.9 Organise IPM Nodes and Networks

The level at which this takes place depends on the country. The concept of an “IPM node” suggests one point in a network that can extend across a whole country. Each node serves to support the work of alumni in institutionalising IPM at the village level. In Indonesia, the sub-district became the focus for the integration of IPM activities. Sub-districts were envisioned as nodes that could be linked up in a wider network as well as influencing the immediate area.

The sub-district level became the focus for developing nodes because:

- The sub-district is the highest level in the Indonesian governmental system where there can be found some level of homogeneity in terms of culture, ecosystem, and availability of resources.
- Most of the institutions that effect village exist at the sub-district level.
- Farmers have easier access to governmental resources at the sub-district level than at district or provincial levels.
- A farmer can easily get to a bus, travel to a meeting, and return home before nightfall within the borders of most sub-districts in the major rice growing areas of Indonesia.
- The Sub-district Head can implement policies that affect the village easier than those governing officials at higher levels.
- The sub-district can offer more immediate support to a community organised IPM programme than any higher level of government.

Organising effective nodes requires forums that allow farmers to communicate, plan activities, and share results of planned activities. Plans can be used to lobby officials for support. Reporting results helps alumni to evaluate their activities. These forums can help an IPM project develop activities that are responsive to the needs of alumni.

8.2.10 Scale-Up, Down, and Out

Demands are placed on any large-scale national IPM training programme to increase coverage and accelerate training processes. The challenge is to accomplish this while setting the foundation for village IPM “base groups”. Thus, there are two facets to this issue: a) accelerating the numbers of farmers participating in FFS’s and their application of IPM principles; and b) developing organisational capacity at the community level.

The Indonesian programme dealt with accelerating the numbers of farmers participating in FFS’s in two ways. The first was to locate at least one TOT centre in each province and have each PHP conduct four FFS’s as part of their training. The second approach used to accelerate FFS implementation was the training of alumni as Farmer IPM Trainers. This strategy also helped to enhance the organisational capacity of alumni at the community level. TOT’s for Farmer IPM Trainers stressed leadership skills including planning and problem solving skills. The FFS itself can enhance village level organisational capacity. (Discussions of the FFS approach and what farmers

can do because of their participation in an FFS were presented in the third and fourth chapters.)

8.2.11 Maintain Flexibility and Organizational Learning

Establishing Community IPM means continually trying new ideas. The “cookie cutter” approach does not effectively support sustainable Community IPM at the village level. In effective programmes there is usually a pilot activity being conducted somewhere. By experimenting, managers and trainers are able to add to their experience. Trying new activities has its ups and downs. Some field staff will find it to be a burden, some will take advantage of what the new activity can achieve. A total of 15 different field activities could be conducted in a given sub-district in Indonesia in 1996. Field managers were encouraged to look at the list of activities as a menu and to use it creatively. For example, the Farmer Technical Meeting was budgeted to be conducted three times a year in one sub-district. The majority of field managers looked at the allocation as an opportunity to be flexible. Some conducted one Technical Meeting per year in three different sub-districts. Others conducted one in each of two sub-districts and used the remaining funds for a meeting that included the two sub-districts. In Vietnam a long list of activities have been developed. There is a budget limit per province, but Community IPM provincial leaders are asked to develop their own local programmes from these lists (or perhaps add some new activities). Again, a Community IPM programme cannot be established in a “cookie cutter” fashion. Field staff should be allowed to make these decisions, not central staff. The closer the locus of decision making is to the farmer, the better the chance of sustainability.

8.3 Looking Ahead

What next? For the last 10 years, IPM training programmes in Asia have been pursuing multiple objectives with considerable success. The explicit goals of the programmes have included farmer empowerment, the conservation of biodiversity, food security, community education, the protection of human health, and policy reform. These multiple objectives have arisen from a growing recognition - among governments, NGOs, donors and farmers themselves - of the interdependence of different aspects of development, and the need to put people at the centre of the development process.

8.3.1 Sustainable Livelihoods Framework

Although IPM training programmes were being implemented prior to the widespread use of livelihoods terminology, the current concept of sustainable livelihoods accurately describes what is going on in these programmes. (See Chambers and Conway, 1992, and Farrington, et.al. 1999 for more discussion of sustainable livelihood concepts and their development.) Within a Community IPM programme, participatory approaches including farmer-to-farmer training, action research and policy dialogue transform natural, human

and social capital into a number of livelihood outcomes. These livelihood outcomes include security of incomes, food supplies and health, and improvements in rural civil society.

Box 8.6

How Community IPM Programmes Promote Sustainable Livelihoods Processes

- Learning about ecology, which leads to an understanding of natural balances and dynamics, and an appreciation of relationships and processes;
- Conducting field experiments, which lead to greater technical knowledge, the development of analytical skills, and 'scientific scepticism';
- Group decision-making, which involves assessment of assets and strategies;
- Collective action, which involves both practical and communicative action;

Structures

- Formation of farmer groups, or revitalisation of exiting groups;
- Networking among farmer groups for knowledge-sharing and support;
- New farmer-driven forums for interaction with local and national government agencies (re technical, funding and policy issues);
- Creation of new alliances between farmer groups, consumer groups, NGOs other organisations with common interests;

Outcomes

- More efficient crop management, resulting in improved food security and incomes;
- Reduced use of pesticides, resulting in improved biodiversity and human health;
- Greater self-reliance, resulting in better response to adversity;
- Better bargaining position, resulting in improved support from Government and reduced threats from corporate interests;

Current descriptions of the livelihoods concept focus on five different types of 'capital' or 'assets': social, human, natural, physical and financial. These are the resources that people can use to improve their livelihoods. As an example of how Community IPM activities can enhance these assets, the following goals were recently established by the Community IPM programme in Indonesia.

Box 8.7**Community IPM Goals in Indonesia**

1. Help create and strengthen social capital in rural communities by supporting farmers' own efforts to build associations and networks, which will give them a voice and an improved means of helping each other.
 - Formalise democratic processes for the management of existing IPM farmer associations.
 - Register new associations and expand active membership, with an emphasis on the recruitment of women farmers.
 - Build the managerial capacity of local organisations (organisational development) and enhance leadership skills.
 - Support planning meetings among IPM farmers on a seasonal basis in at least 100 sub-districts.
 - Organise at least 40 district and provincial congresses and 1 National congress to be attended by representatives of local IPM farmer associations.
 - Undertake policy studies in collaboration with at least 3 existing local NGOs, including a specific gender study.
 - Undertake collaborative advocacy and 'farmers media' activities.

2. Help create and strengthen human capital in rural communities by supporting farmers' own efforts to train other farmers using content and methods, which promote critical thinking and improved decision-making.
 - Evaluate past training activities and develop curriculum for future training during local, provincial and national meetings mentioned above.
 - Organise short training courses for at least 600 farmer trainers, farmer's researchers, and farmer organisers.
 - Support season-long Farmer Field Schools, follow-up activities, and cross-visits for at least 20,000 farmers organised and managed by Indonesian IPM Farmers Association.
 - Support specialised workshops and meetings as and when planned by local groups issues such as marketing, agri-business development, etc.

3. Help preserve and restore natural capital in rural communities by supporting farmers' own efforts to carry out studies and implement farming practices (as individuals *and* as groups), which take account of ecological processes.
 - Share results of field studies that have been completed by farmers and plan future studies during local, provincial and national 'farmer technical meetings' mentioned above.
 - Support the implementation of field studies by farmers that create a better understanding of agro-ecology and develop or test environmentally-friendly practices for crop production.

- Organise at least one meeting per year at which representatives of farmer associations can discuss the results of their studies with professional researchers.
4. Lay a foundation for future improvement in the financial and physical capital of rural communities by creating and strengthening structures and processes which will expedite: a) the provision and management of credit/cooperatives, and b) the creation and management of farmer-led facilities such village laboratories and training centres (activities as above).

Community IPM activities have and will continue to evolve in a manner that is congruent with the sustainable livelihoods framework. The commitment of Community IPM to work at the village level with farmers means that activities will go beyond IPM, but not beyond what farmers identify as necessary.

8.3.2 Further Developments

What further development can be expected in terms of projects and programmes? It will be clear from earlier sections of this document that farmers and trainers, having been empowered by IPM training, are organising their own groups and pursuing their own programmatic objectives. This is creating an opportunity for the democratisation of agricultural development. Farmers are able to negotiate with local government about the provision of services, they are able to contribute to national debates about policies affecting their livelihoods, they are able to share research results with scientific organisations without being patronised... in short, farmers are acquiring a strong and credible voice. IPM projects and programmes, which in earlier days were designed and managed to do things *for* farmers, now need to undergo a paradigm shift so that they start to do things *with* farmers.

What might this mean in practice? We are still learning the answers to this question, but here are a few examples:

- Farmer representatives need to be involved in all stages of project design and appraisal, and in subsequent work planning and monitoring. Governments, NGOs and donors often talk about participation, but the practice often falls short of the promises. Hundreds of thousands of IPM farmers have acquired skills in critical thinking and planning, and they may resent attempts to put a fence around their participation.
- Programmes need to be designed which can accommodate the integration of issues which affect rural livelihoods: not just the integration of pest management with other aspects of crop production (such as soils and water management), but also the integration of crop production with health, education, credit and other farmer defined issues.
- Project funding mechanisms must be established which respond to proposals made by farmer groups. This is not as easy as it sounds, it may mean making a large number of small grants that are difficult to account for (documentation in local languages, expenditures which don't fit into

financial years, disbursements in locations without adequate banking facilities).

- Projects and programmes will need managers who are not afraid to challenge the status quo. When farmers gain a voice, they start demanding their rights. This is likely to cause friction. Diplomatic skills will be required to put these demands on government (and funding agencies') agendas. Project managers who do not take the side of the farmers who are supposed to benefit from projects will be identified by farmers as part of the problem rather than part of the solution. Fortunately a number of development organisations now have policies regarding governance, civil society and democratisation.

This short list of issues indicates that, although existing institutions may continue to play an important role in supporting the development of IPM, new organisational arrangements may be needed. These are starting to emerge in countries like Indonesia where local 'foundations' are being formed specifically to support the work of IPM farmers groups. At the regional level, a group of independent experts who recently reviewed the FAO Programme for Community IPM, have recommended the establishment of a foundation which will support the work of local groups and national groups; the purpose is not to compete with the efforts of organisations such as FAO, IRRI, DANIDA and CARE, but to complement their work by providing an independent structure for interaction among the many local and national groups which exist in Asia. The proposed regional foundation will support activities that are initiated and implemented at the field level by farmers.

8.4 A Final Note about EMPOWERMENT

This programme draws upon the energy, the caring, the thoughtfulness, and the skills of 'Everyman' and 'Everywoman'. Where the IPM Programme has succeeded, success has been due to the efforts of the many rather than the few. In our view 'power', and hence 'empowerment' is not a zero sum game. We strongly believe, and have been strongly reinforced in this belief, that Power can be created. The more individuals, families, and communities that generate this power, be it knowledge-power, social-power, 'voice' power, or scientific power; the stronger and more resilient/sustainable a society will be.

Surprisingly, even in the new millennium, such belief in people and communities is not universally held nor acted upon. We know because what we deem simple beliefs have often been seen as 'heresy' to established political (and agricultural?) elites. Over the last ten years, a legion of 'local heroes' have proven these "heresies" to be, in fact, solid principles upon which a programme can be based. These former "heresies" include:

- ***Farmers As Experts.*** At the outset, few believed that farmers could even identify insects, let alone deal with something as abstract as 'field ecology'. IPM Farmer Field Schools in over 50,000 communities across the region have proven them wrong. Unfortunately, as all new programs know, such doubts remain widespread.

- **Farmers as IPM Trainers.** Currently in some countries more than 50% of IPM Farmer Field Schools are managed by Farmers themselves, a complex task which was daunting initially even to trained field workers and NGO organizers. Many still question 'quality', but from all we can gather Farmer-led training is much the stronger vehicle.
- **Farmers as Researchers/Scientists.** We have always promoted the view that the 'Farmer – Researcher' linkage was not just about having farmers tolerate researchers 'on their farm', nor just being dem-plot watchers. Farmers are now regular presenters at national agricultural research and university forums; and they easily hold their own. At the local level, farmer-run science has had immediate impact in real time over broad areas.
- **Farmers as Organizers, Planners, Advocates, Activists.** IPM Farmer planning and organizing activities now extend from the neighbourhood to the national arena. Vignettes of IPM farmers holding dialogues with ministers and, in some places, prime ministers, are not unusual. Farmer generated 'media' also are no longer limited to effective local bulletins, 'people's theatres', field days, or 'field seminars'. The Indonesian IPM Farmers Association has just founded a new newspaper, "FARMER" which has an initial print run of 10,000.
- **Farmers as Policy Makers.** Farmers, while representing over half of the population of many member countries, have traditionally had little voice concerning policies directly affecting their lives. While far from revolutionized, this is indeed changing. Organized IPM farmers are gaining increasing access, and much greater leverage, over local, regional, and even national policies. 'Who is the spokesman for this group', asked a committee chair of the Indonesian national parliament recently. "We are representing ourselves and speaking for ourselves" came the answer from the IPM Farmers who proceeded to lead a four-hour session with several major factions.

And Empowerment within the Community IPM Programme is not just about farmers. Whereas early in the Programme international experts were the early movers/trainers, the current phase has highlighted the abilities of the 'A-Team', a regional group of experienced field managers, organizers, and trainers that have not only taken over the core duties of organizing Training of Trainers programs, but have pushed the boundaries of the programme and provided the core expertise that has led to the spread of participatory planning/organizing, farmer-led Action Research, and field ecology programs across the region. This group represents one of the most solid resources ever developed for the promotion of sustainable agriculture in Asia... and beyond. 'A-Team' members have also provided assistance to programmes as far a field as Ghana, Ivory Coast, Kenya, Tanzania, Peru, and Iran. One Asian Trainer from Indonesia with a degree 'from the field', not from a

university, replaced an American international expert as an IPM project leader with a major international NGO in Bangladesh.

While we don't have the hubris to declare a 'sea change' in changing 'extension' into farmer education; the efforts of these Asian Trainers testify to at least a recognition of a powerful alternative model that has gained credibility across the region through their work.

Just as Community IPM is about more than 'bugs', it has also proven to be an effective modality for empowerment beyond agriculture.

- ***IPM in Schools.*** In several countries in Asia, IPM Field School methods have found their way into primary, secondary, and even college curricula; revamping teaching-learning processes while bringing schools kids back into the community, and the community back into schools. One of the 'IPM Schools' in Thailand received a national environmental award.
- ***IPM for Disadvantaged Groups.*** In Cambodia, with the help of Handicapped International, disabled farmers not only have gained access to IPM Farmer Field Schools, they have become community leaders and trainers of the non-handicapped. Programmes have also started for demobilized soldiers and even prisoners as part of their rehabilitation.
- ***IPM and Health.*** IPM farmers and school children in several countries are learning to be 'community epidemiologists' capable of learning about, and tackling, problems of pesticide poisoning. In one area of Cambodia, IPM Field School methods have been applied within a 'Farmer Life School' to face the challenge of a burgeoning HIV problem.
- ***IPM and Farmers' Rights.*** In Indonesia the IPM Farmers Association obtained independent funding to conduct a series of workshops for local parliaments and government agencies on local problems and local rights, from land to credit to water to fertilizers.

Throughout, IPM farmers and field trainers have often been the innovators and promulgators of new and broad-based activities and programmes. Our job has been to keep up with them and try to provide relevant and timely support for their activities.

Finally, we must also frankly admit that despite the emergence of thousands of 'local heroes' and despite the success of many programs across the region: we are still swimming upstream. The economic crisis in Asia proved the resilience of agricultural communities and the importance of this often silent rural majority in holding together the economic and social fabric of nations. Still, the dominant paradigm of outside controlled input driven agricultural systems with their requisite technology packages, messages, target groups, target outputs, input subsidies, adoption strategies, coercive incentives, social engineering, and on and on, still loom large in most countries. We believe

that it will be largely up to farmers themselves to transform agricultural systems such that farmers are no longer viewed as 'factor X' or mere 'adopters' for more schemes. We hope that in this struggle that we will be one of the programmes counted as an ally by farmers, their families, and their communities.