

# Country Report - Indonesia

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Ir. Sutarto Alimoeso MM<sup>1</sup>, Ir. Nasikin, MM<sup>2</sup>, and Ir. Nugroho Wienarto<sup>3</sup>

## 1. Background

Indonesia agricultural sector has achieved a significant increase in production to meet the growing domestic demand resulted from expanding population and rising per capita consumption. The per capita consumption of rice, soybean, corn, vegetables and fruits per year increased markedly, resulted from increase in per capita income and their prosperity.

As the major staple food, rice production was centered in the intensively food production program which began in 1969/1970. The successfully of rice production program showed that rice self-sufficiency was reached in 1984. Due to various constraints which faced cause this country can not maintain it and be forced to import of food.

Pests remain a risk of food production. In recent years several pests have caused a lot of damage of food crops. Increasing pest problem are observed particularly in the highly intensified areas, including rice, secondary crops, and vegetable areas.

Indonesia began to implement IPM after relying solely on pesticides failed to control the pests. During the first decade of rice intensification program in 1970's pesticide application as a unilateral technique was implemented as the pest control method. Pesticide was applied at regular interval in time schedule throughout the growing season. The prophylactic system resulted in pest outbreak and the secondary pests change becoming the main pests, i.e. brown planthopper, tungro virus disease and other viral diseases. In addition, other environmental problems were unavoidable such as on non-target species, pesticide residues, and hazard to human being.

IPM policies and objectives are being adopted increasingly in Indonesia and it is an important part of long term sustainable agriculture. IPM is being incorporated into regulatory policies and strategies of government, donor and development agencies. Legislation is increasingly being used to support integration of IPM into farming practices.

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<sup>1</sup> Director of Food Crops Protection, Ministry of Agriculture

<sup>2</sup> Head of Crop Protection Center, Provincial Government of East Java

<sup>3</sup> Indonesia Country Officer, FAO Community IPM in Asia



## 2. Organisations and Funding Arrangements

When the National IPM Programme was established in 1989 as a follow-up of Presidential Decree No. 3/1986, the goals were to increase capacity of farmers and field workers to make sound field management decisions based on IPM principles. The motto at that time was IPM as a human resource development programme at farmer level. In 1994, the Minister of Agriculture established a new decree which very clearly stated that IPM is an ecological approach and farmers themselves are the subject and the central focus of IPM development. The Minister banned 21 active ingredients of pesticide through a sunset clause in 1996.

After more than 10 years of the implementation of the Indonesian National IPM Programme in 1989-1999, the period of 1999-2001 could be called a 'post-national project' phase. The IPM Training Project assisted by the World Bank loan and US grant was closed in November 1999 after one year period of extension. Before the project closed the Minister of Agriculture sent letters to the to the Governors at the province and heads of Regency (Bupati) at the district in 12 rice-bowl provinces, asking them to provide continued support to the IPM farmer field activities. Local government budget support provided to IPM field training activities can be traced back to the year of 1991, the early period of the National Program. Now, the role of district governments in supporting farmer activities has become even more important than before because of the full implementation of decentralization in years of 2000-2001.

Another new development is the establishment of the *Ikatan Petani PHT Indonesia – IPPHTI* (Indonesian IPM Farmer Association) on 21 July 1999 by 461 farmer representatives from 11 project-provinces. Since then local IPM farmer associations have been conducting their own congresses at provincial and district levels. They



have chosen their coordinators and management teams and develop action plans. These associations usually receive strong support from local governments. The governors and heads of districts (Bupati) not just provide some budgets, but they come to the congresses and have a discussion with farmers.

(Appendices 1 and 2 briefly explain the role of national IPM program activities in supporting the birth of the IPM farmer associations).



In summary, there is a broad range of Community-based IPM field activities organised or assisted by different institutions and partners. Some players are as follows:

- a. Ministry of Agriculture's IPM Small-holders Estate Crops Project assisted by Asian Development Bank;
- b. Local Governments' IPM programmes at districts and provinces;
- c. The Indonesian IPM Farmer Associations/Networks field activities in 10 provinces supported by local governments, NGOs and FAO Community IPM. Please read appendix 2;
- d. Community-based IPM/sustainable/organic agriculture programmes organised by NGO networks, e.g. World Education, OXFAM, CRS Indonesia, FADO, JAKER PO (Organic Farming Network), LPTP, Gita Pertiwi, Duta Awam, and other Indonesian NGOs.;
- e. Farmer training in field school model to control cocoa pod-borer infestation by ACDF-VOCA in Sulawesi;
- f. FAO Community IPM Programme.

### 3. Training Achievements

Because there has been such a proliferation of IPM training (e.g. farmer to farmer FFS) that is being undertaken beyond the activities funded or supported by the programmes in Indonesia it is increasingly difficult to document the wide range of activities that are occurring. It is recognised that this is an undercounting of activities.

#### 3.1 Data Provided by Local Government of East Java Province

FFS (@ 25 farmers):	Year 2000	Year 2001
1. Rice FFS	150 units	104 units
2. 2 <sup>nd</sup> Crops FFS	30 units	85 units
3. Vegetable FFS	30 units	
4. Rat FFS	-	9 units

In addition to continued support to FFS dissemination, the local government of East Java provides support as follows:

- a) Encourage IPM farmers to develop their own network in village, sub-district, district and province level with budget support for farmer forums.
- b) Provide support to IPM farmers on marketing of pesticide-free rice. The first contract between IPM farmers and Nusantara Agriculture Cooperative is around 200 tons of rice grains.



- c) Provide support to IPM farmer groups with seasonal credit program to produce pesticide-free rice in area of 2250 ha. Each pest observer/IPM Field trainer facilitates a farmer group to implement IPM in area of 5 ha.
- d) Provide support on development and distribution of pest tolerant HYV seeds to farmers
- e) Provide support to IPM farmers with inputs, e.g. seed and fertilizers. In year 2001, the government gives support to 220 farmer groups in total area of 1,100 ha.
- f) Provide support to IPM farmers with establishment of Rural Bio-Agents Posts, a facility for mass propagation on bio-agents. Up to 2001 there are around 120 Posts established.
- g) Partnership programmes with state universities on development of bio agents technologies.
- h) Upgrading the facilities of 6 field pest control laboratories.
- i) Provision of pesticide outbreak stocks for emergency situation

Right now, the IPM farmer associations in East Java are flourishing with a lot of activities as follows:

- a) Conduct regular meetings/forums at different levels
- b) Organise pest and disease collections
- c) Conduct field studies to solve their problems
- d) Produce organic fertiliser and botanical insecticides
- e) Produce pesticide-free rice
- f) Organise farmer exhibitions at different level
- g) Disseminate IPM through village theaters, radio talk shows among farmers
- h) Organise farmer-led cooperatives

### 3.2 Data provided by the IPM Farmer Associations (IPPHTI)

At the end of year 2000, IPPHTI collected data on farmer initiated activities in 9 of the 11 provinces where the programme is operating.

#### Available Data on IPM Activities in Indonesia 1999 to 2000

Survey by IPPHTI (9 of a total 11 provinces; 66 of a total 122 districts)

Activity	Unit	Approximate Number of Farmers Involved per unit	Remarks
FFS (Farmer Field School)	300	25	FFS on various commodity, facilitated by Farmer Trainer or PHP (Pest Observer)
Training for Farmers	84	varies from 20 – 50	Training on various topics, mainly on bio-agents and facilitating FFS, and also a few on advocacy and gender



Farmer Studies	68	varies from 20 – 50	Studies on various topics: such as soil and fertilizer (incl. Compost, bokashi etc.), bio-agents, variety, agriculture techniques (spacing, sticking, etc), botanical pesticide, etc.
Farmers' Forum	110	Village level 15 - 30, Sub-district 25 - 100, District 30 - 300, Province 200 - 400, National 500; Field Meetings involving non-IPM Farmer 400 – 1000	Various farmer's forum: Provincial/District Congresses; IPPHTI Management Board coordination meeting; Farmer Trainer Workshop; Socialization of IPM
Farmer Action Research	3	15 – 25	Only 3 of 17 Farmer Action Research (supported by FAO and Field Leader) were recorded by the census
Farmer's Cooperatives	4	20 – 40	
IPM implementation in the field	11	15 – 75	Various activities like planting rice without pesticide, breeding rice seed.
Mass Action for Pest or Field Management	14	Village level 35 - 200, Sub-District 25 - 400, District 7000	Various activities like: "rat hunting", mending the irrigation canal, tungro disease control in wide area, doing agro-ecosystem observation and analysis together in a wide area.
Farmer Advocacy	28	Lobbying 2 - 4, Dialogue 10 - 200	Advocacy on various activities: Dialogues between IPPHTI with Legislatures, District and Sub-District Government; Advocacy on: Land Tax, Irrigation Tax, Credit Package, Irrigation Pollution, and Farmer's Rights.
Rural Bio-Agent Posts	200	50	Farmers conduct mass propagation of bio-agents in the villages with support from local governments and Crop Protection Field Laboratories in 5 provinces
Other Activities	7	40	Various activities done by others supporting farmers like: pesticide residue testing by Laboratory, etc.; or activities by farmers like making ID for the member of the organization, making calendar, etc.
Notes on Funding	40 % of activities were funded by Local Government Budget (Provincial, District, Sub-District, Village) 30 % were Self-funded by Farmers 20 % were funded by National IPM Program (only up to November 1999 when the National Project was closed) 10 % were funded by FAO Community IPM		



### **3.3 FFS, farmer field studies and local farmer forums organised by NGOs.**

These NGO network programmes produce around 6,000 IPM farmers which graduate from FFS per year.

### **3.4 Sustainable Cocoa Extension Services for Smallholders (SUCCESS):**

The project seeks to increase the incomes of smallholder cocoa growers in Sulawesi by reducing crop loss caused by the cocoa pod-borer. Cocoa farmers learn about pest management and alternatives to chemical pesticides at field schools and on demonstration plots. Between 2000-2003, more than 30,000 farmers will have benefited from training. This project implemented by an international NGO, ACDI-VOCA in collaboration with local governments of South Sulawesi, Central Sulawesi and South East Sulawesi.

### **3.5 The FAO Programme for Community IPM in Indonesia**

In year 1999-2001, FAO IPM has been supporting the development of community-based IPM farmer activities. Up to now there are more than 15,000 IPM farmers benefitted from the programme through workshops, farmer congresses, field training, field studies, FFS, etc. There are several activities supported by FAO in pilot basis as follows:

- a) to strengthen farmer organisations through a continued dialog with IPM Farmer Association (IPPHTI) representatives across 10 provinces in order to develop local capabilities and cadres (farmers and field trainers) in key aspects:
  - i. improving the management of IPPHTI network at various levels, e.g. refining the organisational structure/mechanisms/ programmes at the national, provincial and district levels; and promoting district level congresses to choose the representatives and improve the organisational processes and mechanism, and to capture the opportunities on decentralisation process.
  - ii. Promote “farmer investigations”/action research sites at village level and a series of refresher workshop at provincial/district levels to share and improve the methodologies and techniques, e.g. soil and ecology.
  - iii. Conduct a pilot on farmer to farmer organising via a local campaign by FFS alumni at community level, e.g. social action research, new FFS, IPM with school kids etc.
  - iv. Provide training on farmer advocacy to strengthen the relative position of farmer to other institutions and to improve the relationship between farmers and others (parliaments, local governments, companies and NGOs).



- v. Conduct pilot activities to refine the gender issues strategies in IPM farmer associations
- b) Develop relationships between IPM farmer associations and other farmer organisations through seminars and meetings, e.g. National Farmer’s Meeting on Farmer Rights and Agrarian Reform in collaboration with the Indonesian Human Rights Commission in 17-20 April 2001.
- c) Support on media development and documentation: At national level, FAO is facilitating the IPPHTI representatives and LP2KP– *Lembaga Pengkajian Pers dan Kebijakan Publik* (Institute for Assessment of Public Policy and Media - a journalist NGO group in Solo) to produce bi-monthly newspaper named **Petani** (Farmer). Up to now the paper is published for the tenth edition with 10,000 copies in each edition and distributed to key policy makers and farmer representatives across district and provinces. At local level, documentation process on community IPM cases is conducted in collaboration with IPM farmers at local/district level.
- d) Provide a “live laboratory” on community IPM activities at farmers level for policy makers, programme planners and trainers both inside the country and throughout the Region. Up to now there are more than 5 study tour groups from Srilanka, Cambodia, Thailand, Nepal, and China visiting Indonesian IPM farmer activities and local governments in 6 provinces.
- e) Provide support to a limited cadre of experienced IPM field trainers to conduct further study on new issues with IPM farmer groups in the field, e.g. soil and ecology.



#### 4. Policy Developments

The economic and political crisis in Indonesia started in early 1997 created a rapid changing of situation both in government and civil society across the country. From 1999-2001, Indonesia led by 3 presidents and 3 ministers of agriculture. Each minister has its different priority on agricultural policies. For example, the massive “Gema Palagung 2001” (intensification programme on rice, secondary crops and maize) implemented between 1998-1999 was not conducive for development of IPM in the agriculture community. During that time, the pesticide policy on restrictions and sunset clause of 21 active ingredients laid out by Ministry of Agriculture in 1996 has been lifted out. But later in late 1999,



the decree was postponed due to a lot of inputs by several government agencies, NGOs, IPM farmers associations and environmentalists.

In year 2000, MOA launched the Corporate Farming programme. Through this programme, a management scheme comprised of around 100 ha paddy field would be set up in order to ensure a certain level of inputs and technological package, some mechanization and marketing organization of the product. He was replaced by Dr. Bungaran Saragih who strongly promotes agri-business as a mean to increase farmer's income.

Based on Laws numbers 22 and 25, passed in 1999 on local autonomy and local budget, the role of technical ministries, e.g. Ministry of Agriculture, has been reduced to providing services on general policy, regulatories, standards and guidelines, to co-ordinate programmes of the provincial/district governments, and to monitor and to evaluate programme implementations. The bulk of responsibilities on programme planning, budgeting and implementation is in the hand of the local governments. All crop protection offices and field staff in the regions are now under provincial governments, i.e. the Agriculture Service Offices.

Although the national project is over, many of the project field staff (IPM Field Leaders) and pest and disease observers (IPM Field Trainers) are still active in providing technical backstopping to IPM farmer field activities. They are working under Local Government's IPM programmes at district or province level. Based on the guidelines by the National IPM Programme in 1994, every local



government at district or province level in 12 rice-bowl provinces has its own IPM Advisory Board set up by Governor or District Head (Bupati) decrees.

Right now, several provincial governments, e.g. West Sumatera, East Java and South Sulawesi are promoting pesticide-free rice productions as a strategy to compete in Free Trade era in near future. For example, East Java provincial government setting up some pilot programmes on organic rice for domestic and export market in order to increase farmer income, to strengthen farmer organisations, to increase government revenues, and to increase the quality of life of their people.



## 5. Developments in Community IPM

There are some achievements at the farmer communities which resulted from the evolution of the Indonesian National IPM Programmes from the last eleven years. In addition, the National Programme has undertaken a range of supporting activities not initially planned for. Specific achievements include the following:

- a. Numerous government officials from different levels, farmers and others have been trained as qualified facilitators of the national IPM program. These facilitators have been actively involved in farmer training, farmer to farmer training, farmer science studies, farmer groups, networking, advocacy, etc. These activities, and the enthusiasm with which they have been undertaken helped to ensure self-sustaining development of IPM and expansion of the program by farmers and local organizations/NGOs based on their interests and concerns.
- b. A range of community IPM activities have been designed and organized at village, sub-district, district, provinces and national levels by farmers, farmer leaders, officials, and project staff. Soil management, through processing and applying composts, water management, biological control with self-made botanical and microbial agents, ecological knowledge enhancement through action research, promotion of capability for dealing with technical and social issues through workshops and forums on results, analysis, planning, sharing, etc. have all been achieved.

- c. Based on a better understanding of farming systems and field ecological issues, many action research facilities in different regions, and Rural Bio-Agents Posts (farmers' laboratories for bioagents and compost production in connection with official district field laboratories and universities) have been established. These activities of "farmer science" are



driven by farmers' interests and confidence in handling their farming systems, field ecosystems, economics and health. In addition, these have led to rapid development of farmers' environmental knowledge, practical methodologies and cooperative relationships within/between farmers, groups, organizations, and the results have had direct relevance to farmers' activities and welfare.

- d. The impact of programme achievements, technical support, backstopping and its interactions with local IPM programmes, as well as with related agencies including NGOs and farmer associations, has mobilized official involvement and support for IPM including policy, funds, staff, materials, etc. Especially the



function of official plant protection (crop protection) agency has been reoriented towards IPM training; resulting in closer relationships between pest observers and farmers at various levels.

- e. The National IPM Farmers' Association (IPPHTI) established at the IPM farmers congress in 1999 is a visible symbol that Community IPM development and broader expansion of IPM is now linked with farmer empowerment. Various farmer groups can now more easily interact, stay informed and be assisted through growing networks and associations, i.e. in some location irrigation issues seem to be moving towards resolution through dialogue with officials.

## **6. Other Developments**

### **6.1 *IPM Smallholder Estate Crops Project***

One project which could be considered a spin-off from the FAO Inter-country IPM Programme is the Indonesian ADB financed IPM Smallholder Estate Crops (IPM-SEC) project. The original formulation mission was sponsored by FAO in 1995-96. The design of the program proceeded, and a Loan Agreement was signed with the Indonesian Government in 1997. Midterm Review of the Project was completed in 2000. The project will continue until 2006.

The main purpose of this project is the training in IPM Farmer Field Schools of about 250,000 estate crop farmers who grow a total of six crops, which are: cashew, cocoa, coffee, cotton, pepper, and tea. In addition, there are project objectives to upgrade the functioning of the Plant Quarantine Service. The project design includes both basic and applied research in IPM for the above crops. This research is carried out by the Agency for Agricultural Research and Development (AARD). The most important function, however, remains farmer training in 12 project provinces.

The approach to FFS training and IPM development in the IPM Smallholder Estate Crops Project is heavily indebted to the National IPM Programme. The Programme provided the stimulus, the example, and the initial trained personnel to carry out TOTs.

### **6.2 *Decentralised Agriculture and Forestry Extension Project (assisted by the World Bank)***

The project's aim is to reform the Training and Visit System with a more responsive programme suitable to local needs. The training model is derived from the lessons learned and results of local Community IPM activities. It has been started in 1998 in 10 districts of five provinces (North Sumatera, Yogyakarta, South Sulawesi, SouthEast Sulawesi and East Nusa Tenggara). Extension Workers and Pest Observers would be based in rural extension centres and work together to support farmer's initiatives in the field.



### **6.3 *The FIELD Indonesia Foundation (Farmer's Initiative for Ecological Livelihood and Democracy)***

In line with the Mid-Term Review recommendations of the Community IPM Programme in Asia, FIELD Indonesia is established to continue provide support on the development and refinement of community IPM activities in the future. Right now there are three Indonesian foundation staff in place and some field activities are initiated. The government supports the foundation activities to assist IPM farmers development activities in order to promote ecological agriculture and farmer empowerment.

## **7. Future Plans and Priorities**

IPM is viewed primarily as a Human Resource Development programme promoting sustainable agriculture, and as such the majority of available resources will be utilized to promote the spread of IPM within farm communities, and to strengthen the local farmer institutions organizations supporting IPM.

To continue provide support to the Indonesian IPM farmers networks on promoting ecological-based agriculture and farmer's empowerment.

To promote and support farmers network to produce pesticide-free agricultural products.

To strengthen the regulatory framework governing pesticide registration, production, and distribution with the objective of reducing the number of compounds and formulations available and phasing out hazardous or unnecessary chemicals.

To continue on research activities in collaboration with research institutes, universities and farmer communities to strengthen the IPM technologies in secondary and vegetable crops, including possible research on the environment impacts of transgenic crops.



Appendix 1:

**Important Benchmarks in Development of Community IPM in Indonesia**<sup>4</sup>

The history of the development of the IPM Programme, supported by a range of donors over the last decade, is illustrated in the table below.

- 1986 Presidential Decree banning use of 57 pesticides in rice production, eliminating pesticide subsidies, and establishing IPM training for farmers
- 1989 First TOT for IPM Field Trainers
- 1990 First FFS
  - First IPM training collaboration with NGO's
  - First Farmer to Farmer FFS, initiated by farmers
  - First IPM provincial policy decrees establishing working groups, defining IPM four principles, identifying FFS as training approach
- 1991 Pilot Action Research Facility in Karawang West Java
  - First Health studies
  - First Impact studies
  - First local government funding for FFS implementation
- 1992 Indonesian trainers support TOT in Vietnam
  - First follow-up activities to FFS – participatory planning, farmers conducting studies, forums for intra-sub district alumni communications.
  - First IPM Gender Studies
- 1993 First full Action Research Facility
- 1994 First national programme supported TOT for Farmer IPM Trainers
  - First programme supported system of alumni communication fora
  - IPM Field Management system established
- 1995 First programme funded farmers studies
  - First sub-district IPM farmer association
- 1996 First Farmer IPM Trainer workshops
  - First provincial IPM farmers congress
  - First alumni areal planning workshops
  - Ban of 28 active ingredients in pesticides
- 1997 First alumni areal planning workshops
- 1998 First participatory impact studies
- 1999 First National IPM Farmers Congress
  - Indonesian IPM Farmers Associations established

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<sup>4</sup> FAO. Mid-Term Review Report of the FAO Programme for Community IPM in Asia, December 2000



Appendix 2:

**Indonesian IPM Farmer Associations**

In July 1999 the first IPM Farmers Congress was held in Yogyakarta sponsored by the National IPM Program of the Ministry of Agriculture, and Local Governments. It was attended by 461 IPM alumni from 11 provinces. One of the results of this congress was the decision to immediately form an Indonesian IPM Farmers' Association (Ikatan Petani PHT Indonesia - IPPHTI). The Vision, Mission and Strategy are summarised below.

- **Vision:** To empower farmers and restore the ecological balance.
- **Mission:** to struggle for farmers' rights such as:
  - Access to land for cultivation
  - Obtaining government services
  - Involvement in deciding the price of agriculture products
  - Receive correct/complete information
  - To live and work in a healthy environment
  - Developing and multiplying healthy seeds
  - Direct involvement in water resource (irrigation) management
  - Marketing of agriculture products
  - Establishing and joining organizations
  - Freedom of expression (speech, culture, religion and art)
- **IPPHTI's Strategies:**
  1. Strengthening organization, through promoting IPPHTI as a network, and strengthening farmers' group at the village level.
  2. Education: improving the knowledge and skills of IPM farmers so they can farm their land optimally, through activities such as IPM FFS, farmer studies, farmer training, participatory planning, etc.
  3. Building a network, through creating partnerships with other organizations, and increasing communication among the core groups of farmers at each level.
  4. Developing farmer studies, through implementation of field experiments in action research centres.
  5. Advocacy, efforts to strengthen farmers' rights and empowerment.