

# SAFE-World Project/Initiative Summary

**Country: Indonesia**

Project/Initiative Title: Rice IPM Programme

Nos. farmers: 1,000,000          Hectares: 500,000

Agro-Ecological Zone: I

Improvement types

1x	2	3x	4	5	6x	7	8	9
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## A. Key Impacts

### A1 – Productivity

	Before/Without	After/With	% change
Rice	4300 kg/ha	4515-4730 kg/ha	5-10%

### A3 – Impacts on local community (social capital)

Farmer Field Schools

### A5 – Key changes in farm / regional system

?? Pesticide use down 75-80% (4.7 to 1.3 application/season)

?? Insecticide use down 19% (2.5 to zero applications/season)

## B. Types of Sustainable Agriculture Improvements

Type 1: Better use of available renewable natural capital

Type 2: Intensification of single sub -component of farm system

Type 3: Diversify by adding new productive natural capital and regenerative components

Type 4: Better use of non-renewable inputs and technologies

Type 5: Social and participatory processes leading to group action for making better use of natural capital

Type 6: Human capital building through training-learning programmes

Type 7: Access to Finance

Type 8: Add value by processing to reduce losses and increase returns

Type 9: Add value by direct or organised marketing of produce to consumers

	Yes/No	Narrative
Type 1	x	
Type 2		
Type 3	x	
Type 4		
Type 5		
Type 6	x	
Type 7		
Type 8		

#### D. Contact Point for Project/Initiative

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#### E. Project Narrative

##### **Integrated Pest Management for Rice Programme in Indonesia**

In 1986, a Presidential Decree banned 57 brands of pesticide on rice and established a national IPM programme. A symbol for the programme was created and widely used on placards and t-shirts to increase public awareness. It was recognised that effective pest management required co-ordinated action at community level, and the aim was to make farmers experts in their own fields. They attend farmer field schools (FFSs), which are 'schools without walls'. These are spread over a single rice season, running one morning a week for 12 weeks. In this non-formal learning environment, farmers learn a whole new set of principles, concepts and terms relating to rice, pest and predator management.

Farmers are encouraged to observe their fields carefully, and to use a visual method, called agro-ecosystem analysis, for analysis. Farmers draw the rice plant in the centre of a large piece of newsprint, and include details of tiller number, diseased leaves, water level, rat damage, weed density, and insect pest and predators population density. This drawing is then used as a focus for discussion. After making management decisions for the next week, each presents and defends their summary to the other trainees. This agro-ecosystem analysis allows trainees to integrate their skills and knowledge, and trainers can immediately evaluate trainees' abilities. Dyes are also used in knapsack sprayers to show farmers how much pesticide ends up on them when spraying. Insect life cycles are discovered by rearing insects in what is called the Insect Zoo, which is used to observe predation and parasitism.

By 1993, 110,000 farmers had completed a full session at a FFS. The evidence already indicates significant changes in behaviour. One survey of 2000 of the field school graduates found that rice yields had increased by 0.5 t/ha on average. At the same time, the number of pesticide applications had fallen from 2.9 to 1.1 per season. The cost of pesticide applications fell by more than half, with the greatest savings for farmers in Sulawesi and Sumatra. About a quarter of all farmers are now applying no pesticides. In some villages, more than half use no pesticides.

Many of the FFSs have continued to be active as farmer IPM groups. These groups meet to discuss farming problems; monitor pest and predator populations in their villages; conduct village wide campaigns to control rats (something farmers found possible to accomplish before the programme); and extend IPM management skills to neighbouring farmers and villages. Since 1990, some 20% of the farmer training has been self-funded by farmers. The impact is best described in the words of one farmer graduate, who said "*After following the field school I have peace of mind. Because I know now how to investigate, I am not panicked any more into using pesticides as soon as I discover some pest damage symptoms*" (in van der Fliert, 1993).

With a programme of this size, there are obviously some difficulties. These include when extension workers set up curricula for field studies without involving local farmers, which

leads to reduced attendance by farmers at such sessions; and the selection of IPM participants, which is currently restricted by government only to official members of existing farmers' groups, who tend to be male owner-operators and cultivators.

Data for this project is in hard copy format and is not currently available electronically. If you would like further information please contact Peter Kenmore.