

TERMINAL EVALUATION STUDY

THIRD COUNTRY TRAINING PROGRAM ON PRINCIPLES AND PRACTICES OF APPROPRIATE TECHNOLOGY DEVELOPMENT IN THE REPUBLIC OF THE PHILIPPINES

Final Report

JICA LIBRARY



1180973[8]

Center for Local Development Studies

22 February 2005

PPO
JR
05-002

TABLE OF CONTENTS

SUMMARY

Chapter 1	Outline of the Evaluation	
1-1	Objectives of Evaluation Study	i
1-2	Evaluation Study Team	1
1-3	Period of Evaluation Study	1
1-4	Methodology of Evaluation Study	2
Chapter 2	Outline of Evaluated Training Program	
2-1	Background of the Training Program	6
2-2	Summary of Initial Plan of Training Program	6
Chapter 3	Achievement of the Training Program	
3-1	Implementation Framework of the Training Program	8
3-2	Achievement in Terms of Output	9
3-3	Achievement in Terms of Activity	15
3-4	Achievement in Terms of Input	22
Chapter 4	Results of the Evaluation	
4-1	Evaluation by Five Criteria	26
4-1-1	Efficiency	26
4-1-2	Effectiveness	29
4-1-3	Impact	31
4-1-4	Relevance	33
4-1-5	Sustainability	33
Chapter 5	CONCLUSION	
5-1	Factors Promoting Effects of the Training Program	35
5-2	Factors Inhibiting Effects of the Training Program	35
5-3	Conclusion	36
Chapter 6	RECOMMENDATIONS AND LESSONS LEARNED	
6-1	Recommendations to Approtech Asia	37
6-2	Recommendations to JICA	38
6-3	Lessons Learned	38
6-3-1	Lessons Learned Regarding Situation in Evaluated Country	38
6-3-2	Lessons Learned Regarding Training Program Management	39

ANNEXES



1180973【8】

SUMMARY

SUMMARY

1. Outline of the Project		
Country: Philippines		Project Title: Principles and Practices of Appropriate Technology
Issue/Sector:		Cooperation Scheme: Third Country Training Program
Division in Charge:		Total Cost: PhP 19,022,125
Period of Cooperation	Fiscal year: 2000 - 2004	Partner Country's Implementing Organization: Asian Alliance of Appropriate Technology Practitioners, Inc. (Approtech Asia) Supporting Organization in Japan: JICA
1-1 Background of the Project		
<p>JICA's cooperation along the provision of a regional training program with a specific theme each year on various areas of appropriate technology started 15 years ago, in which participants from developing countries were provided necessary training on the principles and practices of appropriate technology to pursue development work in their respective countries. Because of the positive impacts the first two training programs (1989-1993 and 1994-1998) made among NGO participants, a third cooperation agreement (2000-2004) to continue with the program was again forged between JICA and Approtech Asia. All the training programs had capacitated more than 300 participants from at least 17 countries in Asia on various topics related to appropriate technology development.</p>		
1-2 Project Overview		
<p>(1) Overall Goal: Not mentioned in initial plan.</p> <p>(Reconstructed as: Enhanced level of awareness and knowledge of development workers in the Asian region on the principles and practices of appropriate technology development (ATD) contributes to productivity and well-being of their societies/citizenries.)</p>		
<p>(2) Project Purpose:</p> <p>To deepen the understanding of participants from developing countries on appropriate technology as a strategy for development and to improve the techniques and methods in development work used by trainers of Asian NGOs engaged in appropriate technology development through provision of multi-skills training as response to the Asian crisis</p>		
<p>(3) Outputs:</p> <p>Participants are able to:</p> <p>(a) understand the basic principles and practices of ATD, assessment, transfer, adaptation and evaluation;</p>		

(b) integrate and share learning and insights with their own knowledge and experience; and
(c) assess and evaluate their own work based on their learning from the course for the planning and implementation of appropriate technology programs in their respective areas of operations.

(4) Inputs: Japanese Side:
Short-term Experts: 7 Japanese & 2 Third Country (Thailand & India) experts
Training and Implementation Cost: PhP 19,022,125
Philippine Side:
Training Facilities/ Equipment
Training Staff: 6 Staff
Local Cost: PhP 845,000 (annually)

2. Evaluation Team		
Members of Evaluation Team	JICA Philippines Office contracted out to Center for Local Development Studies (CLDS)	CLDS engaged an M & E Consultant & Team Leader, Ms. Violeta S. Corpus
Period of Evaluation	November 30, 2004 to 22 February 2005	Type of Evaluation Terminal Evaluation by JICA Philippines Office

3. Results of Evaluation

3-1 Summary of Evaluation Results

The study methodology involved:

- (v) Collection and review of the ROD, Country Reports, General Information Brochures, Course narrative Reports, Back Home Action Plans
- (v) Conduct of interviews and Focus Group Discussions with ex-participants from India (3) and Bangladesh (8), key informants and officials of the organizations visited (FOOD- and VIKAS –India, VERC, CDA, NGOForum, GKAP, TMSS –Bangladesh, JICA-Bangladesh and ApproTech Asia-Philippines)
- (v) Site visits to NGOS in India and Bangladesh, and their projects in Sakipara Village, Chaoli Village, and Kusumba Union
- (v) Analysis of survey responses.

For purposes of the study, Survey Questionnaires were sent to all 112 ex-participants of the training courses conducted from JFY 2000 – JFY 2003 and to the implementing organization. There were only 14 respondents from among the ex-participants and 1 from the implementing organization. For the interviews and FGDs, 8 of the ex-participants covered by the study period were met, 2 more ex-participants of earlier courses, 1 participant of the most recent course in JFY 2004, and their management officials. The results of both SQ responses, and interviews/FGDs were used throughout the discussion of the five evaluation criteria: efficiency, effectiveness, impact, relevance and sustainability.

1. Achievement of the Plan

A total of 112 participants from 16 Asian countries attended and successfully completed the four month-long training modules courses, namely: Livelihood Technologies and Micro-Enterprise Development (2000); Water Supply and Environmental Sanitation (2001); Alternative Housing Technologies and Sustainable Cities (2002); and Organic Farming Technologies and Healthy Lifestyle (2003). Based from training completion reports, the participants were able to integrate and share learning and insights with their own knowledge and experience in the numerous lectures, discussions, workshops, group planning and activity sessions, hands-on experiencing on technologies demonstrated during the training courses, and study tours. The participants returned home with a commitment to implement their individual back home action plans prepared towards the end of the training courses. Interview results (11 ex-participants) and survey responses (14 respondents) reveal the same findings and confirmed implementation/realization of their back home action plans, including current involvement in appropriate technology development projects/activities.

2. Efficiency (Highly Efficient)

(Scale Used: Outstanding-Highly Efficient-Efficient-Fair-Poor)

The 4 training rounds were satisfactorily completed according to schedules. Out of a total of 243 nominees from 18 Asian countries, representing Approtech Asia's wide network of international linkages with numerous NGOs, 112 participants from 16 countries were accepted to the courses. All inputs required per ROD were adequately provided to deliver the required outputs. The resource persons and experts were considered generally very good and have provided useful advice during preparation of the participants' back home action plans (BHAPs). The training materials and equipment were sufficiently provided. Based on post-training surveys, the ex-participants gauged the topics to be well-selected, relevant, valuable for community work and applicable to their jobs; simple teaching methods used were easy to understand and replicable; the training staff competent; and the training courses well-managed by the training team in terms of study visit arrangements, time management, food, transportation and accommodation.

3. Effectiveness (Highly Effective)

(Scale Used: Outstanding-Highly Effective-Effective-Fair-Poor)

The training completion reports revealed that a total of 112 participants satisfactorily completed the month-long four training rounds and these participants were able to integrate their learning into the formulation of individual BHAPs as part of the training courses. The participants assessed that the purposes intended by the program (i.e., deeper understanding and improved skills on ATD approaches and strategy for development work) were generally achieved. The same finding was affirmed by the interview results and questionnaire responses. The 11 ex-participants interviewed and 13 survey respondents are actively applying their learning in their work, in assisting communities by providing them continuous advice, in constantly improving upon these technologies to suit local needs based on locally-available materials, in the conduct of advocacy and

sharing of ATD principles and techniques to other partner organizations and their national/local government.

4. Impact (High)
(Scale Used: High-Moderate-Low)

The ex-participants who were visited in India (3) and Bangladesh (8), and 13 out of the 14 respondents said they had various opportunities to apply their learning from the training courses. Survey responses indicate that big impact was largely on poverty alleviation, productivity, participatory development, ex-participants' morale and way of thinking, confidence, motivation and workload, and on the life and mind of the beneficiaries. Some of them realized the impact 1-2 years after training, others 3-4 years after. The positive impacts observed during the visits include: 100% adoption by villagers and unions of hygienic and sanitary practices creating healthy, safe and clean environment (Kusumba Union, Bangladesh); operational community-based garbage disposal and collection system (Vasna, Ahmedabad, India); operational fish processing and marketing system (in coastal areas of Surat and Ahmedabad, India); construction of vacuum flask toilets in bus terminal stations of Tamil Nadu state in India; adoption and integration of organic farming, sanitation and low-cost housing technology principles and practices at community level promoting health, increasing productivity of people, and as additional source of income (Sakipara and Chaolia Villages, Bangladesh); arsenic water detection, community-based rain water harvesting and construction of water tube wells in Bangladesh; and most of the ex-participants were promoted, and are being tapped as trainers, or consultants in their respective fields.

5. Relevance (Very Relevant)
(Scale Used: Very Relevant-Relevant-Not Relevant)

The 11 ex-participants interviewed and the 14 who responded to the questionnaire rated the training program as very relevant and in conformity with the current national and organizational development policies and agenda in their countries. The government of Bangladesh is set to achieve 100 percent sanitation coverage all over the country by 2010; Vietnam has a clear policy and complementary program on poverty alleviation through water supply and sanitation in the rural areas; in India and Indonesia, greater attention is devoted to improvement in the quality of life of the grass-root communities; science and technology is a national strategy of China to propagandize scientific knowledge and practical technologies; Lao PDR has a national policy on poverty reduction. Given such enormous tasks to pursue these goals, the ex-participants view the training program to be more important now than before in carrying out necessary development work.

6. Sustainability (High)
(Scale Used: High-Moderate-Low-Not Sustainable)

The 11 ex-participants interviewed and 13 out of the 14 who have responded to the questionnaire said they are still working under the same organizations, can already plan,

implement and evaluate ATD projects with confidence; half can do research and extension, and can mobilize resources to fund the projects. Half of them were promoted to handle greater responsibilities; the rest were already occupying senior/managerial positions during training, hence implemented ATD activities per back home action plans by the time they return to their organizations or through tie-ups with others, as well as international funding agents. These ex-participants-respondents/interviewed affirmed that they are playing catalyst roles in integrating ATD activities in support of development work in their districts, provinces, local governments and communities. In all of the organizations and work sites visited in India (FOOD & VIKAS) and Bangladesh (VERC, CDA, TMSS, GKAP and NGOForum), there is clear support by the management of the organizations, local government and community beneficiaries. Aside from the ex-participants' expertise, management and political support to innovative ATD approaches as well as updates on latest technologies are the most important factors that contribute to the sustainability of the ATD initiatives adopted on the ground.

3-2 Factors that promoted realization effects

(1) Factors concerning Planning

(a) Approtech Asia's wide NGO network, linkages and advance planning and overall coordination of the program facilitated course formulation, selection of participants, choice and selection of demonstration sites and arrangements for the study visits prior to actual conduct of the training, and ensured that all necessary inputs/materials are sufficiently provided for the training courses.

(b) Timely approval of the course content, sufficient budget provided by JICA, sending of invitations in advance, and closer coordination among approving authorities greatly facilitated participant selection process and travel arrangements, and planning for the efficient conduct of the training program/courses..

(c) Good choice of experts provided by JICA and selected by ApprotechAsia enhanced the learning of the participants and promoted the training effects.

(2) Factors concerning the Implementation Process

(a) Approtech Asia's capability in managing the training program ensured smooth, timely and efficient conduct of the training courses.

(b) Appropriate demonstration sites and hands-on learning activities effectively provided hands-on/practical learning to the participants.

(c) Documentation of course proceedings and participants' evaluation of the course immediately after each training round improved both the planning and implementation processes for the subsequent training courses.

3-3 Factors that impeded realization effects

(1) Factors concerning Planning:

Earlier years' delays in budget approval, training curriculum approval and communication access problems impeded planning ahead, selection and travel arrangements for some participants, but this was resolved in subsequent training courses.

(2) Factors concerning the Implementation Process:

- (a) Some participants were not able to communicate fluently in English as a result of the selection process that did not involve actual interviews of nominated participants.
- (b) A couple of participants were non-practitioners of appropriate technology which were not clearly indicated in their application forms used as the basis for selection of participants.
- (c) The training program tried to cover as much topics for the maximum benefit of the participants but resulted in the tight scheduling of training activities. Some participants felt that to some extent this dissipated training effects.

3-4 Conclusion

The training program is rated as generally successful in increasing the level of awareness and knowledge of participants on the principles and practices of appropriate technology development. Despite a couple of ineffective participants, the program had been highly effective in achieving its intended purpose due to the proper matching of the course themes/topics with the current development needs of the Asian countries, to the proper qualifications of majority of the participants selected, and to the invited resource persons and experts. Based on the survey results and country/organizations/community visited, the ex-participants were able to: initiate their ATD projects and implement their back home plans, advocate ATD application to other organizations and government entities, engage managerial and outside funding support, train others, including beneficiary communities, and develop low-cost but adoptable technologies that suit local conditions and local culture. To create more "spread effects" to the societies of the Asian countries, more development workers must be trained on appropriate technology development.

3-5 Recommendations

For the Implementing Organization (Approtech Asia):

- (a) Implement the training program either through its own, from its alliance (of network NGOs) resources, or from other funding sources and include measures to enhance further effectiveness and impact of future training, e.g., improve the methodology for participant selection, choose mature technologies and encourage the partner organizations to propose relevant topics for their benefit, increase the proportion of practical demonstration to provide participants more time for hands-on experiencing on appropriate technology principles and practice.
- (b) Institute a monitoring mechanism that follows-on the status of implementation of individual participant's back home action plans (mid- implementation, at completion, and 1-2 yrs after completion) and tracks down results and outcomes of AT involvement.
- (c) Develop a resource pool of experts among the ex-participants who may be invited in future courses, and create a network of participants actively engaged in AT development.
- (d) Support the development of an interactive web-based information system that provides updated information on the latest appropriate technologies and allows ex-participants access, or sharing of information on ATD.

For JICA:

(a) To be of greater relevance in its ODA assistance and for cost-efficiency, JICA may integrate in its other ongoing schemes of JICA-supported activities for Asian countries priority and high impact technologies that can be widely-practiced and replicated on a national scale and the responsible ex-participants can be tapped as resource persons/experts.

3-6 Lessons Learned

- (a) Selection of participants who are trainers and practitioners of appropriate technologies greatly aided the choice of, and preparation of feasible, realistic and implement-able back home action plans.
- (b) Strong linkages and network among NGOs facilitated the choice of relevant course topics, and sourcing of right resource persons/experts and demonstration sites.
- (c) NGOs whose mission statements and priority program areas conform with or match the training courses have higher chances of appropriate technology adoption, promotion, design improvement, and getting various funding support.

3-7 Follow-up Situation

N/A

MAIN REPORT

Chapter 1 Outline of the Study

1.1 Objectives of the Evaluation Study

JICA has undertaken a terminal evaluation study to evaluate the Third Country Training Program on the Principles and Practices of Appropriate Technology Development (ATD), implemented between 2000 and 2003, for four topics, namely:

- (1) Livelihood Technologies and Micro-Enterprise Development (2000);
- (2) Water Supply and Environmental Sanitation (2001);
- (3) Alternative Housing Technologies and Sustainable Cities (2002);
and
- (4) Organic Farming Technologies and Healthy Lifestyle (2003).

The objective of the study is to determine the relevance, effectiveness, efficiency, sustainability and impact of the training program to secure recommendations, which will be utilized for the improvement of JICA's planning and management of similar projects in the future, as well as the implementing agency's capacity to carry out projects of similar nature.

The training program, which was conducted by the Asian Alliance of Appropriate Technology Practitioners, Inc.(Approtech Asia) on a yearly basis following specific focus or theme each year, aimed to train and provide the participants from Asian countries with an opportunity for deepening the understanding of appropriate technology as a strategy for development, and sharing and improving relevant techniques and methods for development workers of non-governmental organizations (NGOs) engaged in appropriate technology development in 16 Asian countries (Bangladesh, Bhutan, Cambodia, China, India, Indonesia, Kyrgyzstan, Lao PDR, Myanmar, Mongolia, Nepal, Pakistan, Philippines, Sri Lanka, Thailand, Vietnam)

1.2 Members of the Evaluation Study Team

To ensure objectivity of the evaluation, JICA commissioned the study to the Center for Local Development Studies (CLDS), a local consulting firm based in the Philippines. CLDS engaged the services of Ms. Violeta S. Corpus, a Monitoring and Evaluation Specialist to undertake the study.

1.3 Period of Evaluation Study

The study commenced on 30 November 2004, and ended on 22 February 2005.

1.4 Methodology of the Evaluation Study

The Training Program was evaluated using the five evaluation criteria espoused by the Development Assistance Committee of the Organization for Economic Cooperation and Development (DAC-OECD). These criteria are as follows:

- (a) **Relevance** – examines the justifiability or necessity for project implementation in consonance with the recipient country's and JICA's policies and development priorities, and in terms of meeting the needs of the target group;
- (b) **Effectiveness** – examines whether implementation of the project has benefited the intended beneficiaries or the target society, or the extent the program achieved its purpose;
- (c) **Efficiency** – examines project efficiency, i.e., how economic resource/inputs are converted to outputs or results;
- (d) **Impact** – examines the extent in which the overall goal has been or expected to be achieved, and the project's longer term effects including the ripple effects such as indirect, positive or negative, intended or unintended effects; and
- (e) **Sustainability** – examines whether the produced benefits shall continue after termination of JICA assistance in terms of financial, institutional and environmental sustainability.

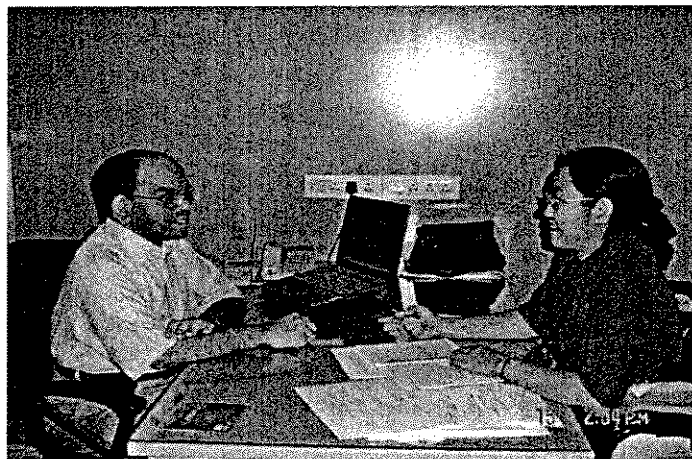
The study applied quantitative and qualitative methodologies enumerated and described as follows:

- (1) Documentation Review. Desk review of all reference materials about the implementation of the Training Program such as original project proposal, Record of Discussions (ROD) between JICA and GOP, Training Course General Information Brochures, Financial Reports, Country Reports, Agreements between JICA and the Implementing Agency, Training Course Narrative Reports, Participants' Back Home Action Plans and Course Assessments by participants.
- (2) Reconstruction of the Project Design Matrix for Evaluation (PDMe). Earlier training courses on Appropriate Technology Development (ATD) were implemented between 1989 -1998. The consultant revisited the PDMe of the previous training program and based on available documents, constructed and formulated a PDMe that aptly describes the current training program. Following this framework, the current training program's accomplishments were compared vis-à-vis the deliverables/targets, which are also reflected in the PDMe (inputs, activities, outputs, purpose, overall goal and assumptions). The reconstructed PDMe is attached as Annex A.

- (3) Preparation of the Evaluation Grid. Prior to the conduct of survey, an evaluation grid was formulated that served as the basis for determining success or failure of the Training Program. The Grid was based on aforementioned evaluation criteria standards currently adopted by evaluation studies. Approval of the evaluation grid by JICA Philippine Office was sought prior to the conduct of the survey. The Evaluation Grid is attached as Annex B.
- (4) Questionnaire and Survey. The consultant designed questionnaires anchored on five evaluation criteria of DAC-OECD. These survey questionnaires are designed for specific groups of respondents that include ex-participants of the four training rounds, the implementing institution (Approtech Asia) and other key informants. Sample Survey Questionnaires sent to the ex-participants and Approtech Asia are provided in Annexes B.1 and B.2.
- (5) Interviews and/or Focused Group Discussions (FGDs) with Program Organizers. The program organizers from the implementing and partner institutions were interviewed through FGD method. This method of data collection produces qualitative data that provide facts, insights related to attitudes, perceptions and opinions of the organizers as well as participants solicited through open-ended questions and through observing respondents during discussions. The conduct of FGD and interviews were complemented with the filling-up of the survey questionnaire.
- (6) Observation of the Working Environment of Selected Ex-Participants. Included in the Scope of Work of the Study Team were travels to two participating countries in the Program, Bangladesh and India. The consultant and Approtech Asia Executive Director visited the work places of the selected ex-participants and conducted actual observation of their current work environment from 14 – 22 December 2004. Prior to this, however, a background study was made by the consultant on the selected participants through information exchange by email. This was made possible through the representation and/or coordination support of JICA Philippines Office and Approtech Asia with the organizations concerned in these countries.
- (7) Interviews and/or Focused Group Discussions (FGDs) with Ex-Participants. At least eight (8) ex-participants from Bangladesh, ten (10) from India, and seven (7) from the Philippines were planned to be interviewed through FGDs. Due to limited time allocated for study visit preparations, as the study was commissioned close to year end towards the holiday break, availability of Approtech Asia Executive Director who knows the whereabouts of the ex-participants, difficulties in getting both the flight

bookings and confirmation by the target participants to be visited in these countries, and unavailability of the participants during site visits, full coverage of the planned participants was not met. Only two (2) participants were interviewed in India, eight (8) participants in Bangladesh and six (6) participants in the Philippines. The consultant used as reference a set of guide questions to manage the discussions. The conduct of FGDs and interviews were complemented with filling-up of survey questionnaires. Assistance of JICA Philippines Office in these countries was constantly sought from preparation until completion of country visits.

- (8) Interviews and/or FGDs with Key Informants. The Study Team likewise interviewed key informants from the visited member/partner organizations (FOOD-India, VIKAS-India, VERC-Bangladesh, CDA-Bangladesh and TMSS-Bangladesh). To further enhance the study, the management officials of the visited organizations were interviewed in place of the participants, as well as three (3) other participants who attended courses before and after the covered period of study but were luckily met in the places visited. An opportunity to discuss with JICA-Bangladesh officials the purpose of the study was likewise taken advantage of. Annex C lists all the persons interviewed and met.



Consultant interviewing Mr. Santosh Narayanan, Chief Coordinator of FOOD in Chennai, India



Meeting with the villagers in Sakipara Village, Savar, Bangladesh, a community being assisted by VERC. Two ex-participants from VERC accompanied the Consultant.

Chapter 2

Outline of the Evaluated Training Program

2.1 Background of the Training Program

In 1989, JICA and the Asian Alliance of Appropriate Technology Practitioners, Inc. (Approtech Asia) forged an agreement to conduct a five year (JFY 1989 –JFY 1993) course on the Principles and Practices of Appropriate Technology under the JICA’s Third Country Training Program. Approtech Asia is a regional appropriate technology service mechanism that promotes cooperation and sharing among its member institutions and partner organizations.

The primary purpose of the Course was to deepen the understanding of participants from developing countries on appropriate technology as a strategy for development. It likewise hoped to improve the techniques and methods used by trainers in development work of Asian NGOs engaged in appropriate technology development. The course followed a specific focus or theme each year on various areas related to appropriate technology.

Midway implementation of said course, an evaluation sponsored by the Canadian International Development Authority (CIDA) was conducted in 1992. Based on the positive results of the evaluation, another five year extension was implemented covering the period JFY 1994 –JFY 1998.

Because of the positive impacts the course has made among NGO participants, a third cooperation agreement was again entered between JICA and Approtech Asia for the JFY 2000-2004 cooperation period. In addition to the earlier purposes, the second purpose of the training program was also enhanced in terms of the provision of multi-skills training to organizational trainers in Asia, as a response to the economic crisis in Asia, mostly felt in 1997-1999. The qualification requirements for participants was also improved in terms of raising the age requirement from 40 years to 55 years old, and the required experience in the field of appropriate technology from two to four years.

In the fifteen years of training program implementation, the training has capacitated more than 300 participants from at least 17 countries in Asia and has covered various topics related to appropriate technology development.

2.2 Summary of Initial Plan of Training Program

The course duration was scheduled to be held once a year for approximately four weeks, between JFY 2000 – 2004, subject to annual consultations between the two governments of Japan and the Philippines.

Per the Record of Discussions signed between the two governments on 15 July 2000, the main topics proposed for the five-year training program were:

JFY 2000	Livelihood Technologies & Micro Enterprise Development
JFY 2001	Technologies on Water Supply & Environmental Sanitation
JFY 2002	Alternative Housing Technologies & Sustainable Cities
JFY 2003	Organic Farming Technologies & Healthy Lifestyle
JFY 2004	Green Health technologies (Plant-Based Cosmetics, Herbal Medicine, Nutritional and Functional Foods, Organic Agriculture)

Each of the 18 member countries of Approtech Asia were invited to nominate their candidate participants: Bangladesh, Bhutan, Cambodia, China, India, Indonesia, Kyrgyztan, Lao PDR, Malaysia, Maldives, Mongolia, Myanmar, Nepal, Pakistan, Sri Lanka, Thailand, Vietnam and Philippines.

It was agreed that the number of participants from the invited countries shall not exceed 25, and the number of participants from the Philippines shall not exceed four. For the initial year, acceptance of participants was based on the following qualification requirements:

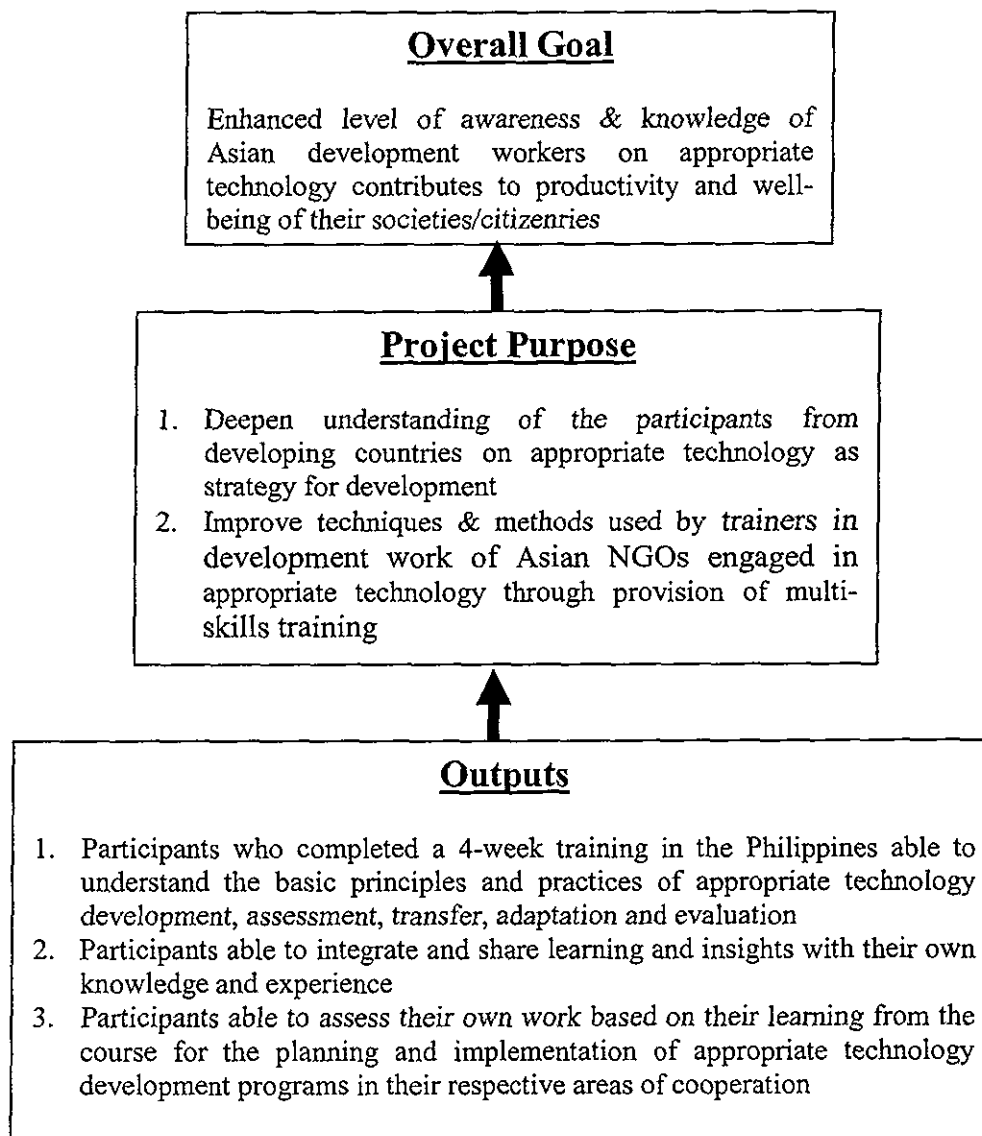
- a) He/She should be a citizen and nominated by Approtech Asia member or partner organizations in any of the invited countries;
- b) He/She should be a livelihood technology trainer with at least four years experience in food processing and paper making;
- c) He/She should be at least 25 years old but not over 55 years old;
- d) He/She should be able to understand, speak and write English very well;
- e) He/She should be healthy to complete the month-long training;
- f) He/She should have a comprehensive plan of how to apply the technologies learned after the training to alleviate poverty by training the poor in food processing and assisting them in putting up food business; and
- g) He/She must have management support in the implementation of his/her back home plan.

The initial course was planned to be held at the Food Development Center (FDC) in Taguig, Metro Manila and in Bacolod City, Negros Occidental. Details on more specific qualification requirements, venues, details on the course curriculum and schedules for subsequent training rounds, including budget estimates became the subject of later discussions and agreements between the two governments, during the cooperation period.

Chapter 3 Achievement of Training Program

3.1 Implementation Framework of Training Program

The GOP, through Approtech Asia, was responsible for implementing the training program with the technical cooperation of the GOJ. Most of the course lectures were conducted in Manila while technology demonstrations and field work were done in selected provinces of the Philippines. Based on the reconstructed PDMe, the implementation framework of the training program is shown in the figure below:



To achieve the outputs, project purpose and goal of the TCTP, the following activities and inputs formed part of the project's implementation framework:

Activities

1. Set up training management office
2. Prepare & finalize training curriculum and General Information Brochure
3. Review & select lecturers/resource persons
4. Request & allocate budget and facilities
5. Invite & select participants
6. Prepare/package training materials
7. Administer pre- and post-tests
8. Conduct of courses (2000-2004)
9. Prepare and submit to JICA completion report
10. Submit statement of expenses
11. Follow-up activities of participants

Inputs

JICA

- Training Costs
- Dispatch of experts

Approtech Asia

- Training team's salaries and wages
- Part of training costs not covered by JICA

3.2. Achievement in Terms of Output

The three intended outputs of the training program were highly achieved, or produced.

On Output 1 of the PDMe, a total of 112 participants were trained and have completed the four-week long courses, for a total of four courses between JFY 2000 - JFY 2003, as follows: 27 participants for the Livelihood Technologies & Micro-Enterprise Development (held on 27 September – 26 October 2000), 28 participants for the Technologies on Water Supply and Environmental Sanitation (held on 29 August – 27 September 2001), 29 participants for the Alternative (Low-Cost) Housing Technologies & Sustainable Cities (held on 4 September – 3 October 2002), and 28 participants for the Organic Farming Technologies & Healthy Lifestyle (held on 17 September – 16 October 2003). A list of actual participants who attended and were able to complete the training courses is provided in Annex D.

For outputs 1 and 2, all participants were able to understand and learn the basic principles and practices of appropriate technology development, integrate and share their learning and insights with their own knowledge and experience in the numerous lectures and discussions, workshops, group planning and activity sessions, hands-on experiencing on technologies demonstrated, and study tours. Proof or basis of this were: the individual country reports (compiled by JICA Philippine Office) prepared by the participants, shared with the others through individual participants' presentations during the training courses; practical hands-on activities on paper-making and designing; hands-on experiencing on food processing technologies (meat, fruit, vegetables, coconut and pili nut), food packaging (labeling and advertising) and plate lamination; hands-on experiencing on water quality testing and leakage detection; community mapping activity with an output presentation of area development plans; product exhibit during the training on organic farming and health products; workshops on problem tree analysis and logical framework approach, among others, as part of the course content/curriculum.

For output 3, proof that participants were able to assess adapt and evaluate their work based on their learning from the course for the planning and implementation of appropriate technology development programs in their respective areas of cooperation and countries were the participants' individual back home action plans (BHAPs) prepared, developed and individually presented towards the end of each training course, and which the participants intended to pursue upon return to their own countries. These plans (or reports) were presented to panels of reactors who provided comments and suggestions to enhance the plans' feasibility, manageability, practicability and impact to the communities. On the overall, the BHAPs embody achievements of the outputs 1-3, as the final requirement to complete the training courses that integrated what the participants learned and how they plan to implement the learning back to their home countries. The following tables list down the individual BHAPs formulated by the ex-participants:

JFY 2001 Water Supply & Environmental Sanitation

Country	Number of Participant(s)	Title of BHAPs
Vietnam	2	<ul style="list-style-type: none"> ▪ Pilot Demonstration on Water Supply & Environmental Sanitation in Quang Binh Province ▪ Drinking Water Supply
Philippines	6	<ul style="list-style-type: none"> ▪ Capacity-Building Enhancement Project for Trainers in WatSan ▪ The Reduction of Unaccounted for Water ▪ Establishment of General Strategy for the Reduction and Control of Unaccounted for Water ▪ Introduction of Rainwater Catchment and

		<ul style="list-style-type: none"> ▪ Treatment to a Community ▪ Rainwater Harvesting an Alternative Quality Water Supply Source ▪ Integration for Community Development Project
Thailand	1	<ul style="list-style-type: none"> ▪ Promoting People to Participate in Water Resource Development and Environmental Sanitation Project
Bangladesh	2	<ul style="list-style-type: none"> ▪ Piloting Community-based Rainwater Harvesting System ▪ Integrated Water Sanitation Hygiene Promotion and Community Institution Building
Nepal	2	<ul style="list-style-type: none"> ▪ Dissemination of Information and Technology Adoption ▪ Rainwater Supply and Sanitation Program
Cambodia	2	<ul style="list-style-type: none"> ▪ Improvement of Sewerage System ▪ Improving Livelihood of Small Farmer
Indonesia	2	<ul style="list-style-type: none"> ▪ Water Supply and Environmental Sanitation for Rural and Community Development ▪ Improvement of Water Utilization in Hargobinangon Village, Sieman District, Yogyakarta
Myanmar	2	<ul style="list-style-type: none"> ▪ Rainwater Harvesting System ▪ Rainwater Harvesting Programme
China	2	<ul style="list-style-type: none"> ▪ Pilot Project on Reusing Wastewater for Irrigation in Liao City ▪ Poverty Alleviation in Mountain Areas of Jiangxi Province
Lao PDR	2	<ul style="list-style-type: none"> ▪ Promoting Rainwater Jar for Health Elimination in Rural Area Project ▪ Human Resource Development on Waste Water Management
Mongolia	1	<ul style="list-style-type: none"> ▪ Rainwater Harvesting Technology
Sri Lanka	2	<ul style="list-style-type: none"> ▪ Water Quality in Rainwater Systems ▪ Increase in the Quantity of Potable Water by Introducing Rainwater Use
India	1	<ul style="list-style-type: none"> ▪ Safe Water Supply through Rainwater Harvesting Systems
Kyrgyztan	1	<ul style="list-style-type: none"> ▪ Support to Rehabilitation and Construction of Rural Water Supply System

JFY 2002 Alternative (Low-Cost) Housing Technologies & Sustainable Cities

Country	Number of Participant(s)	Title of BHAP(s)
Bangladesh	3	<ul style="list-style-type: none"> ▪ Solid Waste Management ▪ Health, Hygiene and Sanitation Programme ▪ Community Solid Waste Management Project
Bhutan	1	<ul style="list-style-type: none"> ▪ Pilot-Testing of Urban Farming Technologies in Bhutan
Cambodia	2	<ul style="list-style-type: none"> ▪ Housing and Community Development Program ▪ Integrated Improved Cook Stove and Household Composting
China	2	<ul style="list-style-type: none"> ▪ Volunteers Training Focused on Communication: Knowledge Learned from the Philippines ▪ Solid Waste Processing Model of Small Community in Nanchang City
India	4	<ul style="list-style-type: none"> ▪ Yogesher Nagar Community Development Project ▪ Village Low-Cost Sanitation and Drainage System ▪ Solid Waste Management, Composting in Semi-Urban Community ▪ Sustainable Tribal Community
Indonesia	2	<ul style="list-style-type: none"> ▪ Low-Cost Housing Project ▪ Improvement of Low-Cost Housing Program
Lao PDR	2	<ul style="list-style-type: none"> ▪ Solid Waste Management Project in Luang Prabang ▪ Human Resource Development for Environment & Sanitation
Myanmar	1	<ul style="list-style-type: none"> ▪ Solid Waste Management in Insein Township
Mongolia	1	<ul style="list-style-type: none"> ▪ Housing Project for Low-Income People
Nepal	1	<ul style="list-style-type: none"> ▪ Networking Low-Cost Housing and Sustainable Cities
Philippines	4	<ul style="list-style-type: none"> ▪ Peter-Paul Community Development Project ▪ Sta. Cruz Community Waste Management Pilot Project ▪ SHELTER for Pag-asa, A Sustainable Habitat Community ▪ Compressed Earth Block (CEB) for Low-Cost Housing
Sri Lanka	3	<ul style="list-style-type: none"> ▪ Create-A-Green City Project ▪ Domestic Composting System for Low-Income Community ▪ Clean and Green City
Thailand	1	<ul style="list-style-type: none"> ▪ Low-Cost Housing Project
Vietnam	2	<ul style="list-style-type: none"> ▪ Housing Policy for Low-Income People

		<ul style="list-style-type: none"> ▪ Pilot Project on Urbanization Toward Sustainable Development
--	--	--

JFY 2003 Organic Farming Technologies & Healthy Lifestyle

Country	Number of Participant(s)	Title of BHAPs
Bangladesh	4	<ul style="list-style-type: none"> ▪ Organic Farming & Healthy Lifestyle through Integrated Approach ▪ Integrated Organic Farming ▪ Strengthening Organic Farming & Healthy Lifestyle ▪ Community Based Sustainable Organic Farming
Cambodia	1	<ul style="list-style-type: none"> ▪ Network for Organic Farming in Cambodia
China	2	<ul style="list-style-type: none"> ▪ Capacity Building Pioneer Project on Sustainable Development ▪ Training for Organic Food in the Jiangxi of China
India	4	<ul style="list-style-type: none"> ▪ Self-Employment for Rural Women through Dairy and Poultry Development Program and Training of Livestock Management ▪ Training on Organic Farming Technologies & Healthy Lifestyle for Women ▪ Initiative of Sustainable Farming System in Bundelkhand Region ▪ Women Empowerment through Entrepreneurship (Focused on Organic Product)
Indonesia	2	<ul style="list-style-type: none"> ▪ Integrated Rural and Urban Project ▪ Bokashi Extension Project
Kyrgyztan	2	<ul style="list-style-type: none"> ▪ Organic Agriculture in Kyrgyztan
Lao PDR	1	<ul style="list-style-type: none"> ▪ Improvement of Rice Production with Poor Farmers
Mongolia	2	<ul style="list-style-type: none"> ▪ An Initiative on the Organic Farming in Mongolia ▪ Contribution of A Mono-Enzyme in Initiation and Development of Organic Farming in Mongolia
Nepal	1	<ul style="list-style-type: none"> ▪ Farming Technologies with Rural Technology Promotion Programs of CRT/N
Philippines	4	<ul style="list-style-type: none"> ▪ Organic Farming Technologies & Healthy Lifestyle ▪ Livelihood Systems Integration Model Founded on Organic Farming Technologies & Healthy Lifestyle ▪ Bio-Intensive mini-Farm Project ▪ Ifugao Alternative Farming Technology Center
Sri Lanka	1	<ul style="list-style-type: none"> ▪ Utilization of Animal Waste and Crop By-

		Products in an Effective Manner
Thailand	1	<ul style="list-style-type: none"> ▪ National Village and Urban Community Fund
Vietnam	2	<ul style="list-style-type: none"> ▪ Development of Organic Agriculture Technology in Ninhtay Cooperative ▪ Capacity Development of Farmers on Organic Farming

Details of the individual BHAPs of the ex-participants for JFY 2000 were missing at the time of the study, but the completion report cited that most of the BHAPs included handmade paper and food processing livelihood activities. Out of the 27 participants, five had planned to start their own business on papermaking.

Some of the highlights of the qualitative assessments made by participants during the post training evaluation at the end of each of the four training courses are described in the following sections.

3.2.1. Livelihood Technologies & Micro-Enterprise Development (JFY 2000)

- Participants felt they learned a lot; the course not only taught them livelihood technologies but the knowledge of other countries' country, language, culture and development.
- Participants also learned how to develop training curriculum and how to manage a training program, being part of the training management team as they were given specific responsibilities and duties to fulfill everyday to harness their training skills as future trainers back to their countries.
- The inputs in planning and preparing business plans were most interesting and these proved very useful to the participants in the preparation of well-organized and feasible back home plans. Most of these action plans include handmade paper making business and food processing livelihood activities.

3.2.2. Water Supply & Environmental Sanitation (JFY 2001)

- The participants were able to integrate their learning into their existing programs, and prepare and clearly discuss their back home action plans during the training.
- By the end of the training course, the participants, as Asian practitioners on WatSan, formulated and signed-off a group statement called the "Manila Statement", in affirmation of their principles and support to addressing the global issues on hygiene, water and sanitation. (See Annex E). They were also inspired to plan a collaborative project contribution to the Third World Water Forum in Kyoto, Japan in 2003.

3.2.3. Low Cost Housing & Sustainable Cities (JFY 2002)

- The training course provided directions to the participants in development approaches using holistic and integrated approach to action planning. Participants who came from varied fields of discipline and organizational focus, were able to share experiences and expertise on each subject matter/topic discussed.
- Participants were also able to formulate appropriate responses to various issues and concerns related to low-cost housing design and construction, as well as building sustainable cities. Some of these relevant issues were: screening and selection of housing beneficiaries, working capital requirement, housing density building restrictions, community involvement, attitude toward beneficiaries, support programs for livelihood activities, and applicability of housing designs given weather/natural conditions, government policies and construction standards.
- The participants through their respective country presentations became resource persons themselves as they discussed their own government and organization's efforts to address issues on housing. The training course provided and offered a vast array of choices or options from actual experiences in doing low-cost housing and development work from the sharing on: existing low-cost housing designs and technologies (India, Philippines, Mongolia, Bhutan, Sri Lanka, Bangladesh); the legal frameworks and policies which mandate the implementation of housing projects (Indonesia, Cambodia and Vietnam); support services to housing projects such as micro-enterprise development (India and Bangladesh), women in development (India), research (China), renewable technologies (Nepal), water and sanitation (Lao PDR), and waste management (Myanmar).

3.2.4. Organic Farming & Healthy Lifestyle (JFY 2003)

- The training provided a venue for participants to shop technologies (from the 14 different organizations and farms visited which demonstrated various models of organic farming and healthy product processing technologies) adaptable to their respective work situations.
- The participants developed and presented their back home action plans that they intended to pursue upon return to their respective countries.

3.3. Achievement in Terms of Activity

All of the activities were satisfactorily undertaken and delivered as planned under the training program.

Under Activity 1, Approtech Asia Philippines was the project management office for the training program. It was able to provide ample staff, its office space and other facilities for the timely conduct of the four training courses. Approtech Asia designated a Training Coordinator and five of its staff to manage and implement the training courses.

For Activities 2 – 7, the major activities that required adequate and advance preparation of the training program were carried out and delivered as planned: course formulation, packaging and design, consultations with JICA/partners/experts working in four course fields, finalization, budgeting, approval by JICA, scheduling, preparation of GI brochures, invitation of participants, meetings and coordination with government and non-government organizations, selection and acceptance of participants, selection/invitation of resource persons, planning for exposure trips to study visit areas, procurement of supplies and materials, printing of training materials, arrangements for transportation, venues, and study tours. These were done and completed from six months to one year before the actual commencement of each training course.

Support from Approtech Asia's partner organizations operating in the Philippines was actively sought by the Training Coordinator to firm up topics, resource persons, and sites to be visited. This involved the conduct of consultation meetings by Approtech Asia with some partner-organizations, and experts working in the fields being considered to be resource persons and/or for specific topics of the training program. Research works were also conducted to develop more responsive training modules aimed to maximize learning among participants. It also involved visits to prospective visitation sites, meetings with resource persons, and putting up together research and reference materials for the training.

Approtech Asia would initially identify the training course content/topics to be covered by the next training round a year in advance, i.e., at completion of the previous training round, but modifications of the training curriculum usually happen based on participants' opinions and course evaluation for improved effectiveness every year and depending on the availability of the resource persons and confirmation of demonstration sites. These propositions were normally included in the narrative reports of each completed training round, and became the subject of further consultations and approval by the two governments.

Participants to the training were nominated by their respective organizations and governments to the GOP through diplomatic channels not later than 60 days before commencement of the course (for each of the four courses). General Information Brochures (GIBs) on the particular training course for each year were sent to the partner organizations and their embassies six months before actual training schedule to facilitate the nomination process. Participant selection went through the rigor of tripartite deliberations of the nominees among Approtech Asia, the Japanese government (JICA) and the Philippine government (Department of Foreign Affairs

and National Economic and Development Authority). Within 30 days prior to start of the course, the governments of the nominated participants were informed by the GOP of their nominees' acceptance.

Of those nominated, the largest number of actual participants came from the Philippines with 18, followed by India with 12, then by Bangladesh with 10, Indonesia and Sri Lanka each with 9, Vietnam with 8, Cambodia with 7, China and Lao PDR with 6, Mongolia, Myanmar, Nepal and Thailand each with 5, Kyrgyztan with 4, Bhutan with 2, and Pakistan had the smallest contingent of only 1 participant.

Invited Countries	JFY 2000	JFY 2001	JFY 2002	JFY 2003	Total
Bangladesh	1	2	3	4	10
Bhutan	1		1		2
Cambodia	2	2	2	1	7
China		2	2	2	6
India	3	1	4	4	12
Indonesia	3	2	2	2	9
Kyrgyztan	1	1		2	4
Lao PDR	1	2	2	1	6
Myanmar	2	2	1		5
Mongolia	1	1	1	2	5
Nepal	1	2	1	1	5
Pakistan	1				1
Philippines	4	6	4	4	18
Sri Lanka	2	2	3	2	9
Thailand	2	1	1	1	5
Vietnam	2	2	2	2	8
Total	27	28	29	28	112

For Activity 8, the activities smoothly carried out during the actual conduct of the courses involved welcoming, orientation and briefing of the participants, issuance of participants' allowances and per diems, conduct of lectures, discussions, workshops, group sessions, hand-on-experiencing by participants and demonstrations, study tours, socialization activities, managing and monitoring the actual conduct of the course, documentation of course proceedings, and sending-off the participants.

The Course Modules, are provided in Annex F, indicating actual lecture topics and activities undertaken during the training courses which varied from year to year.

Meanwhile, apportioning of activities for the 30-day training courses held annually (JFY 2000 -2003) with a different theme each year also slightly varied as follows:

Activities	Proportion (%)			
	JFY 2000	JFY 2001	JFY 2002	JFY 2003
Lecture-Discussion	20	40	45	36
Study Tour	35	25	25	25
Workshops	17	20	15	21
Hands-on Experience	28	15	15	18
TOTAL	100	100	100	100

For the JFY 2000 Livelihood Technologies & Micro-Enterprise Development Training Course, about 35 percent of the course duration was devoted to study tours in Manila to give the participants an appreciation of the livelihood activities and strategies of the government (Bureau of Animal Industry, Industrial Technology Development Institute-Department of Science and Technology, Philippine Coconut Authority and Technology Learning Resource Center) and in Legazpi and Angeles Cities wherein factories and handmade paper plants, and abaca and pili industries were located. Hands-on experiencing of participants which consumed 28 percent of the time was devoted to food processing technologies (meat, fish, fruits, vegetables, coconut and pili nut); food packaging, labeling and advertising; handmade paper-making, designing and paper craft; and plate lamination. Lecture-discussions which was devoted 20 percent of the time covered the following: *Appropriate Technology as Strategy for Poverty Alleviation, Livelihood Technologies and Micro-Enterprise Development, Empowerment of the Community through Food and Nutrition and Enterprise Development, Handmade Paper Industry and Enterprise, Handmade Papermaking and Paper Craft, Food Packaging, Processed Meat Industry, Processed Fish Industry, Processed Fruit and Vegetables, Processed Coconut Industry, Organizing Hawkers and Legalizing the Informal Sector of the Underground Economy (Food Stalls), Advertising, Labeling & Graphic Design in Food Packaging, Preparation of Food Rescue Packages, Plate Lamination, Pili Nut Processing and Export Business, High Grade Abaca Fiber and Processing, Information Technology and Networking with Small Micro Entrepreneurs*. Workshops (17 percent of time) were organized on problem tree, poverty alleviation, business planning and action planning.

Study tours for the three other training programs were each apportioned 25 percent of the course time allocation.

In JFY 2001 Technologies on Water Supply & Environmental Sanitation, site visits to water treatment plants in Batan, Aklan, in Roxas City and Mambusao, Capiz and in San Narciso, Zambales, and visit to LWUA office in Quezon City were conducted, which involved interactions with the project stakeholders (implementers, beneficiaries, local government and organizations) responsible in the planning, implementation, evaluation and maintenance of said facilities. Lecture-discussions on the following topics constituted 40 percent of course time: *Environmental Hygiene, Water Supply Technology, Household-Centered Environmental Sanitation (HCES) Approach, Mainstreaming Gender in Water and Sanitation, WHO/UNICEF Global Water Supply*

& Sanitation Assessment Study 2000 Report, The Asia Regional Resource Center, Vision 21: Vision to Action on Hygiene, Sanitation & Water, World Bank Assessment on Water Supply & Sanitation, Water Supply Technology-Water Quality, Water Analysis and treatment, Water Associations & Community-based Water Projects, Philippine and Asia Policies on Water, Funding Priorities in WatSan Projects, Rainwater Harvesting & Problems/Issues, Problem and Objective Trees on WatSan, Wastewater Treatment Technologies, and Orientation & Preparation for the 3rd Water Forum. Workshops on problem and objective trees, regional plan after the training, and thematic discussions on planning constituted 20 percent of time allocation. Participants' hands-on experiencing on water treatment, water analysis and water sourcing consumed 15 percent of the time allocation for the training.

In JFY 2002 Alternative Housing Technologies & Sustainable Cities Training Course, the participants were able to visit a low-cost housing project initiated by the City Government of Manila, a model integrated Solid Waste Management Program in Carmona, a village-level solid waste and a municipal Material Recovery Facility (MRF) in Bacoor, Cavite and various low-cost housing projects of the Habitat for Humanity-Western Visayas, Pagtambayoyong Foundation and Eversley Child's Sanitarium-Gawad Kalinga Program in Metro Cebu, and Hydroponics (soil-less gardening) farms in Tagaytay and Cavite. Lecture-discussions (45 percent of time) were devoted to the following topics: *City Planning Towards sustainable Urban Communities Perspectives; Philippine Program on Low-Cost Housing; Buhayin and Maynila Program and Pillars of Development of the City of Manila; Municipality of Carmona's Program on Community Integrated Solid Waste Management; Community Solid Waste Management Techniques and Methodologies, Segregation and Composting and Usage/Organic Farming; Orientation on National Program on Noon-Conventional/Renewable Energy, Happy Soil Composting Technology, Concepts and Orientation on Concrete Earth Block (CEB) and Interlocking CEB; AANI Urban Agriculture Projects, Habitat Low-Cost Housing and Development Program, Improved Cook Stove Technology and Pottery Crafts, Hydroponics Technology,* among others. Hands-on experiencing (15 percent of time) was devoted to compost preparation, compressed earth blocks (CEB) and interlocking concrete earth blocks (iCEB) production, and effective micro-organism (EM) formulation and production. Workshops (15 percent of time) were on formulation of community questionnaire for community mapping, processing of study visits, preparation and planning of presentation outputs, and activity/action planning.

In JFY 2003 Organic Farming Technologies & Healthy Lifestyle, participants visited MC-ARI organic farm model in Bacolod; the herbal Geo Farm in Pangasinan; Earth Haven, the Philippine's first ecological park in Rizal; CRTD, an integrated farm in Calauan, Laguna; Leisure Farms in Batangas and Tagaytay Highlands; the Ecological Earth Planner, an agro-ecological farm in Tanauan, Batangas; and the Lacto South Metro Enterprises, a waste management project in Paranaque City. Lecture-discussions which was devoted 36 percent of the time included the following topics: *Organic Food and Personal Care Products: Accreditation and Certification, Gender*

in Agriculture, Personal Hygiene and Sanitation awareness, Alternative Health Care Practices in Asian Region, Science and Art of Aromatherapy, Health Belief Model, Organic Hair and Body Shampoo, Integral Health Awareness for Living and Alternative Healthcare: Philippine Experience Macrobiotics & Nutraceuticals, Introduction to Internal Art of Healing: Qi Gong, Handmade Herbal Soap, Sloping Agricultural land Technology (SALT), Food Always in the Home (FAITH), Basic Principles of Renewable Energy and Connectedness to Nature, Family Health through Clean, Green and Safe Environment, Sustainable Agriculture Related Technologies, Organic Sugar "Muscovado" Production, Planning Theory & Practices, Virgin Coconut Oil Production, Processing and Utilization, and Kerala Gandhi Experience: Eco-Harmonic and Economic Management of Natural Resources (Water and Soil). Hands-on experiencing (18 percent of time) by participants was devoted to herbal soap preparation, processing organic and safe personal care products such as herbal teas and hand sanitizers, acupuncture, and herbal search.

For Activity 9, annual narrative Completion Reports highlighting course proceedings and participants' assessment of the course were prepared by Approtech Asia and submitted to JICA. Highlights of the participants' assessments at the end of the courses in terms of actual conduct of the courses drawn from the narrative completion reports are:

3.3.1. Livelihood technologies (JFY 2000)

- The course was well-organized and prepared in terms of time management, topics discussed, while program activities were systematically designed
- Participants generally commented that the topics selected for the course were very interesting, systematically scheduled, discussed clearly, relevant, useful, applicable and suitable to their work and valuable for community development workers in developing countries and countries in transition economy like Mongolia, Kyrgyztan, Vietnam and the highly-populated India.
- Study visits and hands-on experiences in Metro Manila with BAI, ITDI-DOST, PCA, TLRC and private enterprise as well as the 10-day visit in Albay province for the pili nut and abaca industries and hands-on experience on handmade paper-making were well organized, very much enjoyed by the participants and provided useful information on the livelihood activities and strategies of the government and non-government organizations in poverty alleviation.
- The coordination of activities by the training management team was evaluated to be very good, communication among participants was facilitated by the active participation of everyone in the social and cultural programs

3.3.2. Water Supply & Environmental Sanitation (JFY 2001)

- The study visits to local water districts gave the participants a clear picture of water management, treatment, distribution, tariff rates and connection practices.
- Through the use of water testing kits provided by JICA, the participants learned to analyze water quality for drinking, cooking and other domestic uses.
- Discussions on successful water associations taught the participants the importance of social preparation and community participation in the project development cycle.
- The problem tree and objective tree workshops helped the participants see the relationships of the variables/factors to be considered in analyzing and planning solutions to the hygiene, water and sanitation problems in each community.

3.3.3. Low-Cost Housing & Sustainable Cities (JFY 2002)

- Presentations were made more interesting and interactive through use of video clips, slide projection, power-point presentations and transparencies, photo-exhibitions, map displays, hand-outs and other in-house publications of their organizations.
- Resource persons and lecturers were identified and selected based on their level of involvement and expertise in housing and urban planning and community development, and on their efforts that had impacts on regional and national importance. They brought with them expertise in the field of interest which provided interesting insights and fresh knowledge to the participants.
- The study visits to: the reclaimed area near the Manila Bay showed the participants the realities of slum living and the housing project/assistance being provided by the city government; the integrated solid waste management program of the local government of Carmona (Cavite) provided the participants a good and working model that has realized tangible impacts on both the environment and the community; and the various projects and sites in Cebu showed the participants existing technologies on low-cost housing and selected communities directly benefiting from local and non-government organizations' efforts.
- An added input prior to action plan preparation by the participants was the session on project development and activity planning which presented guideposts for the participants in the formulation of their individual back home action plans.

- Activities and efforts by the training management team on cultural exchange, socialization and team-building, and various forms of assistance to participants to make them feel at home while away from their families, resulted in strong bonding and cooperation among the participants.

3.3.4. Organic Farming & Healthy Lifestyle (JFY 2003)

- The participants actively participated in the sharing of their experiences/expertise especially in the formulation of various issues and concerns related to organic farming technologies and healthy lifestyles. Their varied experiences made the discussions more educational and meaningful.
- The field visits gave the participants opportunity to experience eating safe food from an organic farm, living in a community with less health hazards due to reduced or absence of chemicals, as well as experience more spirituality and peace of mind as they relate with nature.
- The display of printed materials, hand-outs and other documentary materials, photos and real product exhibits, use of videos, slides and power-point, made the presentations more interesting and interactive.

For Activities 10 – 11, properly documented financial reports on the statement and liquidation of course expenses were timely submitted to JICA after the end of each course. Meanwhile, post-training follow-up activities by Approtech Asia on the participants basically involved occasional communications throughout the year via e-mail, telephone conversations and limited visits to participants work environment when there are events and means to do so. These offer opportunities to get updates on how the ex-participants are applying their learning from their training, to gauge the progress of the participants' implementation of their BHAPs, as well as other initiatives on ATD. These updates however, have not been formally reported to JICA.

3.4. Achievement in Terms of Input

Approtech Asia, through its Program/Training Coordinator, was able to efficiently administer all the training rounds. She was ably assisted by five other personnel: 1 Accountant, 1 Information Network Manager, 1 Administrative Officer, 1 Bookkeeper, and 1 Office Utility Worker, all of whom sufficiently provided administrative and technical support to the Training Coordinator. In addition to these regular staff, a training assistant/facilitator and a training documentor were hired on a contractual basis one month before actual start of each course, basically to provide technical support during final preparatory activities and in the day-to-day training activities. The organization itself was lean and yet effective.

A list of lecturers/resource persons and their subject areas/topics for each course is also provided in Annex G. The lecturers and resource persons were quite a mix of international, regional and national/local experts in their own fields.

In particular, seven Japanese experts and two Third Country experts from India and Thailand were tapped to be resource speakers in most of the training rounds. Aside from mastery of subject areas, they came in prepared with interactive learning processes using multi-media presentations, visual aids and samples of equipment and kits.

Dr. Kuniyake Miyake Embassy of Japan, Philippines	Topic: Environmental Hygiene Period: 30 August 2001	JFY 2001 Technologies on Water Supply & Environmental Sanitation
Mr. Ichiro Yokota (JICA Expert)	Topics: Water Sanitation in the Capiz Province vis-a-vis Philippines Facts & Figures, Water Analysis and Treatment (plus visits) Period: 9 – 17 September 2001	JFY 2001 Technologies on Water Supply & Environmental Sanitation
Dr. Makoto Murase (JICA Expert)	Topics: Rainwater Harvesting, Problems and Issues on Rainwater Harvesting Period: 20 -23 September 2001	JFY 2001 Technologies on Water Supply & Environmental Sanitation
Dr. Nao Tanaka (JICA Expert)	Topic: Wastewater Treatment Technologies Period: 23 -24 Sept 2001	JFY 2001 Technologies on Water Supply & Environmental Sanitation
Dr. Hideaki Oda Secretary General, Third Water Forum	Topic: Orientation & Preparation for the 3 rd Water Forum Period: 28 September 2001	JFY 2001 Technologies on Water Supply & Environmental Sanitation
Ms. Miyuki Fujimura (JICA Expert)	Topics: Community Solid Waste Management, Techniques of Segregation & Composting, Organic Farming, plus site visits Period: 6, 7, 9 -10 September 2002	JFY 2002 Alternative Housing Technologies & Sustainable Cities
Mr. Kraileert Taweekul Third Country Expert, Thailand	Topic: Enterprise Development for Sustainable Cities (Sky Irrigation Technology) Period: 21 September 2002	JFY 2002 Alternative Housing Technologies & Sustainable Cities
Mr. Muneo Ishikawa Liaison MG-ARI Japan	Topic: Food Always in the Home (FAITH) visit Period: 25 September 2003	JFY 2003 Organic Farming technologies & Healthy Lifestyle

Mr. Ajith Veneeyor Kerala Gandhi India 1993 Approtech Asia Fellow	Topic: Sharing Kerala Gandhi's Experience, Concept Paper and BHAP workshop facilitator Period: 11 -15 October 2003	JFY 2003 Organic Farming Technologies & Healthy Lifestyle
--	--	---

From JFY 2000 to JFY 2003, a total of PhP 19,022,125 budget for training was approved by JICA, or an average of PhP 4,755,531.25 per year.

JFY 2000	PhP 4,309,650
JFY 2001	PhP 5,231,200
JFY 2002	PhP 4,487,489
JFY 2003	PhP 4,993,786
TOTAL	PhP 19,022,125

For its counterpart, Approtech Asia provided for: the salaries of its six personnel from preparation time to the actual conduct of training rounds; the use of office space, equipment, utilities, supplies and communications; travel expenses for pre-training site-visits, meetings with resource persons, partner implementing organizations; and research and reference materials. Annual estimated and actual budget counterpart by Approtech Asia was P 845,000. The breakdown of comparative estimated and actual training costs for all four training rounds is provided in Annex H.

Chapter 4 Results of Evaluation

Of the 112 participants sent with Survey Questionnaires by post and by email, only 14 responded. The low turnout of responses may be attributed to changes in email and actual addresses, or emails not reaching most of the ex-participants who stay longer in the field or areas of assignment, where there is no email access. In addition, some of those who were reached by post tried to email back and asked soft copies of the questionnaire, but still have not responded. A few of the questionnaires were returned unopened due to wrong addresses. If given longer time for the study, tracking down of these participants may have increased the response rate.

Profile of Survey Questionnaire Respondents:

Country/Yr	JFY'00	JFY'01	JFY'02	JFY'03	Total
Bangladesh		1 (M)	3 (M)	2 (M)	6
Cambodia				1 (M)	1
China		1 (M)	1 (F)		2
Indonesia	1 (M)				1
Lao PDR			1 (F)		1
Thailand	1 (F)		1 (M)		2
Vietnam		1 (F)			1
Total	2 (1M; 1F)	3 (2M; 1F)	6 (4M; 2F)	3 (M)	14 (10M; 4F)

M = Male; F = Female

In addition to the survey questionnaires, interviews and FGDs with the ex-participants, either individually or in groups, were also conducted during country and work site visits in India and Bangladesh from 14 – 22 December 2004. Two ex-participants from India and eight ex-participants from Bangladesh were interviewed and engaged in FGDs. They represent five partner organizations, namely, FOOD (Chennai, India), VIKAS (Ahmedabad, India), VERC (Savar, Bangladesh), CDA and GKAP (Dinajpur, Bangladesh). To further enhance the evaluation study, management officials of four organizations (FOOD, India; VERC, Bangladesh; CDA, Bangladesh, TMSS, Bangladesh), including JICA-Bangladesh officials, were also interviewed.

Site visits to four different work sites of the ex-participants in Bangladesh were conducted to assess whether the training courses created positive effects and impact on the participants, their work environment, and other people they work with. Annex I presents the photo documentation of the interviews, FGDs and sites visited.

Summary results of the Survey Questionnaire participants' responses, and details of the conduct of FGDs were presented in Annex J and Annex K, respectively. These

were used in the subsequent discussions and evaluation analysis of the training program.

Evaluation using criteria of efficiency and effectiveness relied on the narrative completion reports prepared by Approtech Asia, wherein all of the 112 participants were able to come up with assessments of the training courses immediately after each training round. Annex L provides the Evaluation Results: 112 Participants' Assessments @ Training Course Completion.

Evaluation of effectiveness was validated through the survey responses of 14 ex-participants, and FGDs/interviews done in India and Bangladesh with 11 ex-participants (Annexes J and K). Evaluation of impact, sustainability and relevance relied only on the FGDs and interviews conducted by the consultant, and 14 survey responses.

Details of the study findings and analysis of results are discussed in the following sections:

4.1. Evaluation by Five Criteria

4.1.1. Efficiency

In a scale of 1 to 5, where 5 is outstanding, 4 is very satisfactory/highly efficient, 3 is satisfactory/efficient, 2 is fair and 1 is poor, the efficiency (by which the training program inputs and activities were converted into outputs) can be rated as 4, i.e. very satisfactory or highly efficient.

Four training rounds were satisfactorily completed according to schedules. In terms of number of participants, a total of 243 nominees from 18 Asian countries were received by Approtech Asia, and only 112 from 16 countries were finally accepted and able to satisfactorily complete the courses. The high figures on nominees per country indicated a high demand for the training program. Table below presents actual number of participants nominated and selected in all countries for all four training rounds:

Countries	JFY 2000 Nominees/ Selected	JFY 2001 Nominees/ Selected	JFY 2002 Nominees/ Selected	JFY 2003 Nominees/ Selected	Total Nominees/ Selected
Bangladesh	3 / 1	3 / 2	6 / 3	6 / 4	18 / 10
Bhutan	1 / 1	1 / 0	2 / 1	0 / 0	4 / 2
Cambodia	4 / 2	5 / 2	2 / 2	1 / 1	12 / 7
China	1 / 0	5 / 2	4 / 2	6 / 2	16 / 6
India	9 / 3	6 / 1	5 / 4	9 / 4	29 / 12
Indonesia	4 / 3	4 / 2	3 / 2	4 / 2	15 / 9

Kyrgyzstan	1 / 1	1 / 1	2 / 0	3 / 2	7 / 4
Lao PDR	2 / 1	4 / 2	4 / 2	1 / 1	11 / 6
Malaysia	1 / 0				1 / 0
Maldives		1 / 0			1 / 0
Myanmar	2 / 2	7 / 2	1 / 1		10 / 5
Mongolia	1 / 1	2 / 1	2 / 1	3 / 2	8 / 5
Nepal	4 / 1	5 / 2	1 / 1	4 / 1	14 / 5
Pakistan	5 / 1	0 / 4			9 / 1
Philippines	18 / 4	7 / 6	6 / 4	4 / 4	35 / 18
Sri Lanka	5 / 2	7 / 2	8 / 3	8 / 2	28 / 9
Thailand	3 / 2	2 / 1	1 / 1	2 / 1	8 / 5
Vietnam	4 / 2	6 / 2	4 / 2	3 / 2	17 / 8
Total	68 / 27	70 / 28	51 / 29	54 / 28	243 / 112

It appeared that the approved budgets for all the training rounds sufficiently covered the authorized expenses for the training. Out of the PhP 19,022,125 JICA-approved budget, only PhP 17,049,024 was spent. Total savings which amount to P1,973,100, or 10.4 % of the cumulative approved JICA budget was returned to JICA. Proper liquidation of expenses was carried out by Approtech Asia after each training round. Completion reports for each training round were also prepared which efficiently documented highlights of the course proceedings, activities and post-assessments of the courses by the participants. Below is a summary of JICA approved budget and actual expenses for the four training rounds:

Budget Summary:

Training Year	JICA-Approved Budget	Expended Amount	Balance/ Savings
JFY 2000	PhP 4,309,650	PhP 3,733,467	PhP 576,183
JFY 2001	PhP 5,231,200	PhP 3,981,314	PhP 1,249,886
JFY 2002	PhP 4,487,489	PhP 4,359,148	PhP 128,341
JFY 2003	PhP 4,993,786	PhP 4,975,095	PhP 18,691
TOTAL	PhP19,022,125	PhP17,049,024	PhP 1,973,101

The training materials and equipment were sufficiently provided by Approtech Asia during the training proper. Some of these were also provided by the partner organizations visited in the field, and JICA (electric equipment e.g., laptop computer and LCD) during the lectures of JICA experts

On the course design, decision to the focus or theme was based on: participants' evaluation of their respective courses as well as suggestions for the improvements of certain topics in future training. Approtech Asia, in close consultation with its members/partner organizations effectively decided on the experts to be invited, on the

global ATD issues and trends which must be tackled, and on the mature ATD technologies to be the topics for any given year. The course content always included the basic principles of planning, monitoring, evaluation, assessment and diffusion which greatly aided the participants in the preparation of their individual back home plans during the training. These action plans became the basis for putting their learning into action.

The resource persons and experts were considered generally very good, open-minded, responsive to queries, and very accommodating, especially the JICA experts who brought with them demonstration kits to facilitate learning, and who provided very useful advice in the participants' preparation of action plans. They even offered the participants follow-up consultations in the course of action plan implementation.

The participants gauged the training and teaching methods used as simple, easy to understand, replicable and managed by a competent and dedicated team. In general, the participants rated the teaching methods as very good.

Qualitative assessments of the 112 participants from the four training rounds further indicated that curriculum designed for the training rounds were rated just right by 56%, and too broad by 34% of the participants. (See Annex L.)

The course duration was rated by 58% of the 112 participants as just right and by 31% as long. The time allocation for training activities were generally considered as just right by 72% of the participants, broad or much by 20%, and not enough by 8% of the participants. Some (20%) participants who rated that time allocation was broad/much gave different views: too much topics covered which dispersed the training or learning effects, and on less useful or less applicable topics. Those (8%) who rated that time was not enough felt the need for more time allocation for hands-on experience and more practical examples. Nevertheless, participants gauged the topics to be well-selected, well-programmed, very interesting, relevant, valuable for community work, very useful and applicable to their jobs and country situations.

Eleven percent of the participants rated outstanding the arrangements for study visits; 70% rated very good; and the rest rated good. In terms of housing, food and accommodation, 55% rated very good; 27% rated good; 13% rated fair; and 5 percent rated poor.

During course preparation, however, there have been some reported difficulties and delays experienced in terms of:

- (a) Delays in the approval of the Minutes of Discussion and General Information for JFY 2000 training round resulting in (i) member and partner organizations with very good nominees not able to meet the deadline for nomination and (b) a few participants having to shoulder additional costs between Php 1,200 – Php 2,800 unnecessarily for the required visa

extensions because Department of Foreign Affairs had not enough time to advise the Bureau of Immigration of the training duration - Starting on the JFY 2001 training round, however, preparatory activities for course content and selection of resource speakers were done at least one year in advance, GI brochures were prepared 6 months in advance and together with the invitations were sent 3 months before actual selection of participants.

- (b) Delays in the release of budget from JICA which delayed visa application of two participants in 2003.
- (c) Minor communication problems caused by unreliable post, courier, fax and electronic mails in countries like Kyrgyzstan, Myanmar, Indonesia and Vietnam - This caused delays in participant confirmation, ticketing, visa issuances of the Philippine Embassies in these countries.
- (d) Unavailability of the very good lecturers/resource speakers during final stages of course preparation. - They were eventually substituted with equally knowledgeable alternate lecturers.
- (e) Overlapping of some lecture topics and inadequate lecture materials as noted by quite a number of participants -. This was improved on the succeeding rounds.

4.1.2. Effectiveness

In a scale of 1 to 5, where 5 is outstanding, 4 is highly effective, 3 is effective, 2 is fair and 1 is poor, the training program can be rated as 4 or highly effective in achieving the purposes for which the training program was originally intended. This was based on the 112 participants' assessments at completion of each training round (Annex L), and affirmed by questionnaire responses (Annex J), participants interviewed and actual site visits/observations of selected work environment (Annex K), and discussed in the following sections.

In terms of the desired outputs, all 112 selected participants satisfactorily completed the four-week four training rounds on the principles and practices of appropriate technology. They were able to participate and share experiences during lecture-discussions, apply some hands-on experience on technologies, visit Philippine sites and projects with appropriate technology applications, be engaged in workshops and groups sessions and presentations, and share their country reports wherein everyone was able to present their country situation and issues that need to be responded by appropriate technology development.

All 112 participants were able to integrate their learning and assess their individual work, through the formulation of their individual back home action plans which they also presented to a panel of reactors during the training. Their basic understanding on appropriate technology as strategy for the development of developing countries from where they all came from was deepened by their attendance to the course, as was manifested by the BHAPs they individually formulated during the training courses and took back home for implementation. In addition, they were provided with multi-

skills training on ATD as part of the course curricula, through actual sharing of expertise and skills by the resource persons, their own sharing, and through actual hands-on experiencing of technologies demonstrated during workshops and site visits/observations of operational technology sites in the Philippines.

One additional good thing learned by the participants is how to properly develop training curricula and manage training programs, which most of them were expected to do in the future. Overall, the post training evaluation results done for all four training rounds at the end of each course indicate that the participants generally rated the course objectives and expectations satisfactorily met.

Meanwhile, all of the 14 survey respondents enumerated the following benefits which actually happened and which they foresaw at the beginning of the training:

- They gained confidence, developed presentation skills, acquired technical knowledge;
- Learned from experiences of experts and co-participants and understood the need to systematically design projects to improve the living condition of local people, and enabled them to communicate these to the people;
- Able to assist, provide advice and train communities on how to develop self-help/aid solutions to counter poverty;
- Able to apply learning process in the job;
- Learning more by applying learning immediately upon return to the job and in real situation;
- Applied the PDM approach at work;
- Able to meet and make friends with participants from other countries; and
- Able to learn the history and culture of the host country.

According to these 14 respondents, more specific benefits are as follows:

- Their being able to provide assistance to community in being able to shift to hygienic behavior and eating quality food;
- Their being able to share ATD techniques on organic farming and to provide counseling & advocacy to local government and other organizations to initiate waste management & organic farming, i.e., organic fertilizer production;
- They were personally motivated by organic farming technology to ensure healthy lifestyle;
- They acquired knowledge on low-cost housing technologies, solid waste management, and improved cook stove

In terms of the usefulness of acquired knowledge on ATD to various fields/sectors and services, or products produced, the respondents enumerated the following:

- Organic chicken farming

- Waste management, i.e., garbage disposal in hygienic way and household level production of organic waste
- Compost manure production to increase agricultural production
- Promotion of clean courtyard surrounding with the involvement of the communities
- Rain water collection & utilization (e.g., built water tanks for irrigation)
- Promotion of hygienic practices through construction of low-cost sustainable latrines using local resources (developed several design models/options for village adaptation)
- Water supply & sanitation projects, water quality testing and detection of water-borne diseases
- ATD training program implementation for communities
- Micro-credit for communities
- Program management

Achievement of the purposes set for the training courses was also largely due also to the validity of assumptions made at the start which provided for participants to be engaged in NGO development work, for them to have at least four years practical experience in appropriate technology development work, that they must be assigned to similar type of work upon return to their countries, and that their organizations will give full support to their ATD efforts.

4.1.3. Impact

Impact was assessed to be positively felt and actually happening in participants' work areas visited (India and Bangladesh), as discussed during interviews and FGDs, and to some extent from the 14 participants' survey responses. Impact would have been sustained in terms of actual presence of projects/activities applying ATD principles and techniques initiated by the ex-participants, or for which they were able to train people to implement these, and that these are contributing to the productivity and socio-economic well-being of the communities/citizenry in general.

On the (14) survey responses, more than half of the respondents replied that impact was realized 1-2 years after training and others 3-4 years after the training. For the four completed training rounds, same survey results indicate that big impact of all the courses was on: poverty alleviation, productivity, participatory development, on ATD policies of their governments and organizations, environment, on the participants' workload, confidence, motivation, morale & way of thinking, and on the life & mind of beneficiaries/communities; and some impact was on: gender development, national/organizational ATD policies, and organizational efficiencies.

In a scale of high, moderate and low impact, the training program was able to create a high impact in the areas of operations of the ex-participants visited in India and Bangladesh. Specific and noteworthy impacts are discussed in the following sections:

- Within 2 years upon return from the training, 2 Bangladesh ex-participants (of VERC) were able to promote and implement their back home plans in an integrated fashion, i.e., solid waste management, health, hygiene and sanitation program in 3 unions, or a total of 15,000 households thereby achieving 100 % latrine coverage. Community members no longer practice open defecation, but several options of latrine models were built, actually being used and maintained. Increase in enrolment of schoolchildren was also observed and reported by the community members as a result of clean, healthy environment and healthy lifestyle brought about by such intervention.
- A GKAP senior official ex-participant, and Chairman of 33 NGO Federation in Dinajpur District, Bangladesh started to work with 5 smallholder farmer contact groups, which has now grown up to 39, of which 18 already graduated. He taught them “cooperative farming system”, appropriate cultivation techniques using organic fertilizers, vermin-composting, and compost pits to improve their families’ life condition. These families now produce 1-2 types of vegetables, eat their produce, sell the excess and save money to buy other food items, or pay for the pieces of land they cultivate under leasehold agreement with the national government. This is seen to be an effective strategy to cut off the poverty cycle.
- One engineer ex-participant (of NGO Forum) was able to implement his community-based rainwater harvesting system in the coastal area of Chittagong, Bangladesh out of his organization’s funds. A micro-credit or cost-recovery scheme was also integrated with the project and a committee from among the community members is currently managing the operations of the project. The project ameliorates the water availability problem due to arsenic water in the country.
- Another ex-participant who heads the Human Resource and Training of the CDA Training Center in Dinajpur had set up his demonstration plots for composting, garbage segregation, nurseries of medicinal and herbal plants, and latrine construction. He now propagates his learning from the training course through conduct of training courses, and implementation of village projects which integrates the available appropriate technologies, e.g., mud house construction, improved cook stove, and organic backyard farming.
- An ex-participant from VIKAS in Chennai, India implemented her community-level garbage collection and disposal system in one and a half years time for 3 women groups of Vasna district. It entailed house to house collection and taking of garbage, for a fee that households pay these women groups. After collection, the local government takes responsibility of waste disposal from the main collector to the waste treatment facility. A savings and

credit system was also integrated in this garbage collection project to address other financial needs of these women groups.

4.1.4. Relevance

The program is rated very relevant, in a scale of very relevant, relevant, and not relevant. The established objectives of the training program are found to be in conformity with the national and organizational development policies and agenda of the visited participants' respective countries', as well as the survey respondents.

The Government of Bangladesh is set to achieve 100 percent sanitation coverage all over the country by 2010. VERC was presently covering eight out of the 64 districts in Bangladesh, and hopes to cover all of the eight districts by 2008.

Other ex-participant survey responses indicated the following: a) The government of Vietnam has a clear policy and complementary program on poverty alleviation for water supply and sanitation in the rural areas; b) In India and Indonesia, greater attention is being devoted to improvement of the quality of life of the grass-root communities and poor people; c) Science and technology is a national strategy of China to propagandize scientific knowledge and practical technologies; and d) Lao PDR has a national policy on poverty reduction.

Given the enormous tasks to achieve these national goals and targets, the ex-participants from these countries, as well as their organizations, view the training program to be as important, while others more than before.

4.1.5. Sustainability

In a scale of high, moderate and low sustainability, the training program is therefore assessed as highly sustainable in India and Bangladesh where the ex-participants were actually observed to be implementing appropriate technology projects in their areas of operations, transferring knowledge and skills learned to the communities, promoting wider adoption of the principles and practices of appropriate technologies in their areas of operations.

All of the 14 ex-participants interviewed and the survey respondents are still working under the same organizations (except for one who is now a domestic consultant though working on the same field). Seven of them were promoted to handle greater responsibilities, and the other seven who were already occupying senior posts at the time of the training have the same job or moved on to another group within the organization.

The month-long training duration provided these participants the necessary principles and techniques on appropriate technologies which were largely translated to action areas, activities and projects that have benefited their organizations, themselves, and

the beneficiary communities being assisted. The participants have demonstrated considerable capacities, confidence, improved skills, motivation and dedication in applying what they have learned and in sharing to other organizations the learning from the training courses which they attended. They likewise played the integral roles in their respective organizations and districts/provinces as catalysts of appropriate technology development, i.e., employing technology adaptation, design, improvement, and application of locally-available resources, both human and material. Management support of these organizations is present, as suggested in the annual/global work programs which include strategies, plan of action, approaches to be employed, targets and means (resources and budget) to pursue the ATD initiatives/projects/activities.

All of the 14 respondents said that they can already plan, implement and evaluate their ATD projects/activities with confidence; more than half can train, do research and extension with confidence; and some are able to mobilize resources or generate funding assistance for ATD projects (e.g., from PLAN, CARE International, America-India Foundation and UK-DFID).

In addition, sustainability was likewise anchored on community adaptation and ownership of the appropriate technology being promoted by the participants, support of both the local and national government (through endorsements of the locally-adaptable appropriate technologies), and resource mobilization in generating funding assistance from international agencies, or through tie-ups with other local and international organizations to undertake similar or related ATD projects/initiatives. These conditions were found present in all of the organizations and participants' work areas visited.

Chapter 5 Conclusion

5.1. Factors Promoting Effects of Training

Approtech Asia's wealth of experience and network in propagating ATD in Asia was the biggest factor that contributed to the promotion of effects of the training. Approtech Asia was established in 1981 to increase the access of the poor to technologies and processes appropriate to their increasing needs and expanding capacities. Its primary role to facilitate the sharing of appropriate technologies and cooperation among its member and partner-organizations has remained to date. Presently, it has 40 member organizations operating in 11 Asian countries. These member organizations regularly exchange information in the areas of agri-biotechnology, biodiversity, food processing and enterprise, sustainable agriculture systems, agro-forestry, water and sanitation, renewable energy, low-cost housing and sustainable communities, organic farming systems and healthy lifestyle, information and communication technologies for development, among others.

Other factors that contributed to the promotion of training effects are: sufficient training funds provided by JICA; competent training team; selection of the right resource persons and right participants; sufficient lead time in preparatory activities and in selecting participants; good choice of relevant topics and training curriculum that can respond to relevant global issues and trends on ATD; complementary demonstration sites and hands-on learning activities; willingness of partner organizations and Philippine institutions to share their technologies; active network of experts and linkages of Approtech Asia with various organizations implementing ATD activities, or supporting the development and promotion of appropriate technologies; documentation of course proceedings and participants' evaluation at the end of each of the training courses; ability of participants to mobilize funds or get management support to implement their back home plans, or apply the learning directly at work; and organizations having own farms, laboratory or facilities to demonstrate and apply the technologies.

5.2. Factors Inhibiting Effects of Training Program

Some concerns raised by the respondents which they felt had negatively affected the training program are:

(a) A few participants were not able communicate fluently in English (as was not clearly indicated in their application forms) which did not allow their maximum sharing of country experiences on appropriate technology development and full interaction among the participants; and

(b) A few participants were not practitioners of appropriate technology which limited their active participation and contribution to course sharing and learning.

Conclusion

The training program can be rated as generally successful in increasing the level of awareness and knowledge of participants on the principles and practices of appropriate technology development. Its effectiveness may be attributed largely to the proper matching of the course theme to the current development needs of the Asian countries, the proper selection of participants (despite a few ineffective participants who were non-practitioners or non-English speaking), and a good selection of experts and resource persons invited to share their practical ATD knowledge and experience to the others.

Based further on the country visits and survey responses, most of the ex-participants were able to initiate their own ATD projects, advocate to other organizations and government entities the benefits of those projects, engage their support and assistance, generate funding, train other people including the beneficiary communities the same principles and techniques learned from the training, and develop low-cost but adaptable technologies that suit the local conditions and culture. In order to create more positive ripple effects to the citizenry of the participating countries in Asia, training of more development workers in the Asian region must be continued by Approtech Asia and its alliance of NGOs, specifically for wider adoption of the mature appropriate technology project models already initiated by the ex-participants in their own countries. To be of greater relevance, JICA's support or extension of assistance may be considered through the integration in its other ongoing schemes high impact technologies for wider adoption and practice, or through limited individual follow-up assistance, or through small grants assistance studies and researches on appropriate technology development.

Chapter 6

Recommendations and Lessons Learned

6.1. Recommendations to Approtech Asia (Direction of Future Activities)

Pre-Training

- Improve the methodology in the selection of right participants for the training program in terms of stricter requirements on English fluency and appropriate technology practice. Methodology to include also participants' and their organizations' training needs assessment, and proper matching of the needs of the nominee with the theme/training content.
- To further improve the course content, topics on enterprise development and resource mobilization, as suggested by the participants in their post-assessment of the training may be considered.
- In preparing course schedules, as suggested by the ex-participants, increase the proportion of practical demonstration to provide more time for participants' hands-on experiencing on appropriate technology principles and practices.

Post-Training

- Implement the training program either through its own, from its alliance (of network NGOs) resources, or from other funding sources and include measures to enhance further effectiveness and impact of future training, e.g., improve the methodology for participant selection, choose mature technologies and encourage the partner organizations to propose relevant topics for their benefit, increase the proportion of practical demonstration to provide participants more time for hands-on experiencing on appropriate technology principles and practice.
- Develop a resource pool of experts among the ex-participants who may be invited in future courses, and create a strong network among Approtech fellows.
- Encourage the partner organizations to propose relevant themes/topics that would benefit them.
- Institute a mechanism that follows-on the status of implementation of individual back home action plans of the participants (after one year, mid-implementation, and after 6 years).
- Establish a systematic monitoring and evaluation system that would track down the participants, results and outcomes of their ATD activities/involvement beyond training.

- Support the development of an interactive web-based information system that allows the ex-participants to be electronically connected and updated on the latest developments on appropriate technology.

6.2. Recommendations to JICA

- JICA to integrate appropriate technology development activities into other schemes of JICA-supported activities for Asian countries
- JICA may provide small studies grant fund (US\$ 1000 – 2000) to enable the ex-participants on a limited and selected basis to do research/study on ATD in their countries, or through follow-up assistance (JICA-Bangladesh offers this type of facility. See Annex M for Guidelines)

6.3. Lessons Learned

6.3.1. Lessons learned regarding situations in Evaluated Countries and Sectors

- A good understanding and appreciation of the global issues, issues and concerns specific to the participants' respective countries lead to better choice of applicable or doable technologies for adoption back to their home countries.
- NGOs whose mission statements and priority programs areas conform to the training courses have higher chances of appropriate technology adoption, promotion, design improvement, and sourcing funding support for appropriate technology projects.
- A good practice by the NGOs and participants to create "spread effects" is to pilot appropriate technology projects; and if successful, sell the technologies to local government, other government entities, other NGOs, international funding institutions for wider adoption, or replication.
- Success of ATD projects largely depended on ex-participants and their organizations being able to bring the communities to participate before and during implementation, and by making them own the projects themselves, as well as making them responsible for maintenance activities.
- Most of the successful ATD projects have the feature that integrate learning from the various training rounds, e.g., hygiene is being promoted through sanitation practices integrated with water supply, organic farming technologies create safer environment and healthy lifestyle, sustainable and low-cost housing are better integrated with organic farming technologies, and all of these when complemented by enterprise development, or some sort of income-generating activities, result in better quality of life of the communities.

6.3.2. Lessons learned regarding Training Program Management

- Timely approval of course content and budget, sending of invitations in advance, and close coordination among entities responsible for selection of participants and facilitation of their travel arrangements are necessary for the smooth implementation of the training courses.
- Process documentation of the training course, assessment by participants of the training, and follow-ups or trace evaluation after training are rich information sources that help to improve formulation of future courses.
- Selection of participants who are practitioners on appropriate technologies greatly aided the formulation of feasible, realistic, and implement-able back home action plans.
- Maintaining linkages with the network of organizations facilitate formulation of relevant course topics, and sourcing of resource persons/experts, as well as demonstration sites.