

**PROCEEDING  
ARECOP PHASE III SECOND PTA MEETING  
22-25 January, 2007, Chiang Mai, Thailand**

## **APPENDIX 4 (A)**

**PRESENTATIONS OF ARECOP  
SECRETARIAT & COUNTRY CONTACT  
POINTS**



## PROGRAM OVERVIEW PHASE III - 2004-2007

### PRO ACTIVE NETWORKING

- Publications
- Support for Skills and Capacity Building among ICPs (Training and Workshop Support; Exchange of Experts)
- Bridge building for popularization & integrative approaches
- Support for Initiatives on ICS and Related Issues
- Network coordination (partnership cultivation; PTA meeting)

### NATIONAL LEVEL INITIATIVES

- Strengthening National level ICS Networking Program ( in 7 focused countries)
- Strengthening ICP development (in other non focused countries)

### REGIONAL DEVELOPMENT INITIATIVES

- Profile on Asian ICP Structure and Dissemination Methods
- Indoor air pollution, kitchen improvement & health
- Gender and Poverty Sensitive Participatory Planning, Monitoring and Evaluation
- Biomass fuel upgrading (Training on Carbonizing and Briquetting)
- Regional Initiatives on gasification for small scale thermal applications

# ACHIEVEMENTS

## PROACTIVE NETWORKING

### PUBLICATIONS

(Distribution in Asia & outside Asia)

> **Regular publications** (Quarterly publication GLOW; Bimonthly e-newsletter LETTER FROM THE SECRETARIAT)

**WEBSITE**

**PROACTIVE NETWORKING**

**Regional Supports for Training/Workshop/  
Conference/Internship/ Study tour**

- Regional Training on Stove Design and Performance, 9-12 August 2005, Ilo Ilo city, Philippines
- Internship of 2 Philippine potters in Cambodia, December 2005
- Better Air Quality Conference 2004
- WHO Inter-Regional Training Workshop on Indoor Air Pollution and Household Energy Monitoring, Sri Lanka, 2006
- Regional Training on Gasification for Small Scale Thermal Applications, Kunming, China, July 2006
- World Renewable Energy Congress, Jakarta April 2005
- Cambodian potters study tour to Ratchaburi, Thailand, 2005
- ARECOP Planning Technical Advisory Meetings (2004, 2007)

	No of beneficiaries
Bangladesh	3
Cambodia	6
China	1
Indonesia	7
India	4
Lao	2
Nepal	5
Philippines	7
Pakistan	1
Sri Lanka	5
Vietnam	1
<b>TOTAL</b>	<b>42</b>

**PROACTIVE NETWORKING**

**REGIONAL EXCHANGE OF EXPERTS**

- Gasification experts in Regional Training on Gasification for Small Scale Thermal Applications, Kunming, China, July 2006
- Resource person on ICS Program for National Biomass Workshop in Lao, April 2006
- Indoor air quality consultant – Development of IAQ, Health and Kitchen Improvement training module
- MPA resource persons – Pilot project on the implementation of
- ICS commercialization resource person - ICS commercialization guideline development
- Charcoal trainers/experts/biomass charring resource persons - Charcoal Training in Philippine, August 2006, Regional Biomass Upgrading Training, 2007
- ICS program consultant – Profile of Improved Cookstove Programs in Asia – compilation of case studies in Asia.

Gasification experts	•Indian (2)
Indoor air quality expert	•Indian (1)
Resource persons on ICS program	•Cambodian (1) •Vietnamese (1)
MPA resource persons	•Indonesian (3)
ICS technical trainer	•Indonesian (1)
ICS commercialization resource person	•Cambodian based (1)
CDM resource person	•Cambodian based (1)
High quality charcoal trainers/biomass charring resource Persons	•Indonesian (1) •Thai (1) •Japan (1) tentative •Indian (1) tentative
ICS Program consultant	Lao based (1)
<b>TOTAL</b>	<b>16</b>

**PROACTIVE NETWORKING**

**Regional Training on Stove Design and Performance, 9-12 August 2005, Ilo Ilo city, Philippines**



**Organized by:** APPROTECH Asia & Appropriate Technology Institute-Central Philippine University; **Supported by:** PCIA & ARECOP; **Technical resource:** APPROVECHO

The training was organized in order to improve technical knowledge and skills of experienced ICS workers in the network. Several topics were emphasized: combustion, heat transfer, stove materials, indoor air pollution, stove testing methods.

**Participants:** Cambodia, Nepal, Indonesia, Sri Lanka, Philippines, Vietnam. Total participants of the training was 16. The rest of the participants was supported by other donors and the organization of the training was contribution of the local organizations and Approtech Asia.

**PROACTIVE NETWORKING**

**Regional Training on Gasification for Small Scale Thermal Applications**



**Organized by:** ARECOP&Solar Energy Research Institute – Yunan Normal University

**Technical resource:** CGPL-IISC

**Participants :** representatives from various institutions and individuals working in biomass energy sector - GO, NGO, academic institutions, and individual professionals from India, Indonesia, Philippines, Lao P.D.R, Nepal, Pakistan, Philippines, Sri Lanka, U.S.A.

**PROACTIVE NETWORKING**  
**Regional Training on Gasification for Small Scale Thermal Applications**



**Specific objectives of the training are as follows:**

- Participants understand principles of biomass gasification and gasification system designs (up, down and cross draft).
- Participants have knowledge on biomass gasifier stove technology (stove material, stove parts, stove power output/sizing, gasifier stove design considerations)
- Participants are able to assess and select gasifier stove technologies for various energy contexts.
- **Contents:** Class based sessions consisted of **lectures, discussions and workshops on gasification system design and pilot project action planning; visit to Zen Hong Company, a gasifier stove factory**

**PROACTIVE NETWORKING**  
**BRIDGE BUILDING FOR POPULAR SUPPORT & INTEGRATIVE APPROACHES**

**Participation** in regional and international conferences, meetings, workshops, training, case studies – participants, speakers, resource person,

PARTICIPATION IN EVENTS	
No. of events attended	12
No. Case study contribution	1
No. of participation as a resource person/ Paper presentation/poster presentation	10
No. of exhibition conducted	2

**Achievements:**

- Sharing of information and knowledge
- Awareness on HH energy issues among wider development stakeholders
- Increased opportunities for various forms of co operations

**Issues in Bridge building:**

- Advocacy on household biomass energy sector to be put on the agenda of energy policy.
- Advocacy on kitchen improvement as an extension of ICS component
- Building stronger relation with existing as well as nurturing relations with new partners

**BRIDGE BUILDING FOR POPULAR SUPPORT & INTEGRATIVE APPROACHES**

**EVENTS ATTENDED**

1. 2nd International Forum on Partnership for Sustainable Development, Marrakesh, Morocco, 21-23 March, 2005.
2. Climate Change Conference, Winnipeg, Canada, March 2004
3. Technical Meeting: Regional Policy Study on Grassroots Technology, Innovation and Gender mainstreaming, Jakarta, 26 – 27 October 2004
4. World conference on Energy for Sustainable Development, Dec 2004
5. Better Air Quality 2004, India
6. Harmonized Health and Exposure Protocols Workshop, May 2004
7. Pacific Gender and Energy Strategic Planning and Awareness Raising Training Workshop, December 2005
8. World Renewable Energy Congress, Jakarta, April 2005
9. Regional Renewable Energy Technology Transfer Workshop, organized by AIT, October 2004
10. South Asia Regional Workshop on Indoor Air Pollution & Household Energy, Kathmandu, Nepal 27- 28 Feb, 2006
11. WHO Inter-Regional Training Workshop on Indoor Air Pollution and Household Energy Monitoring, Colombo, May 2006
12. Better Air Quality 2006

**CASE STUDY CONTRIBUTION:** Regional Policy Study on Innovative Grassroots Technology and Gender Mainstreaming, July 2005 (compiled by APGEST-UNESCO)

**PROACTIVE NETWORKING**  
**BRIDGE BUILDING FOR POPULAR & INTEGRATIVE APPROACH**  
**Regional/International Partners Phase III**

- Appropriate Rural Technology Institute, India
- CGPL-IISC, India
- CFSP, Cambodia
- China Association of Rural Energy Industry
- UNESCO
- APPROVECHO, USA
- PCIA-US EPA
- The Nature Conservancy Program – China
- Appropriate Technology Association, Thailand
- Practical Action
- Mangrove Action Program, USA
- Energy Research Institute-Panjab University /Rayat & Bahra Institute of Engineering & Bio-Technology, India
- Dian Tama, Indonesia
- Asian People Exchange, Japan
- Solar Research Energy Institute, Yunnan Normal University

## PROACTIVE NETWORKING SUPPORT FOR INITIATIVES ON ICS & RELATED ISSUES

- **Internship** of 2 Philippine potters in Cambodia, December 2005  
An internship on advanced ICS pottery production in an ICS production center in Kompong Chnang, Cambodia. The internship had been facilitated by the Cambodia Fuelwood Saving Project (CFSP). The main objectives of the internship are for the two potters to gain hands on knowledge on their stove production techniques and on large scale ICS production management aspects. The internship training was done from November 20 to December 4, 2005
- **Cambodian potters study tour to production center in Ratchaburi, Thailand, 2005 (11 POTTERS)**  
Organized by : Development of Appropriate Technology

## PROACTIVE NETWORKING

- **NETWORK COORDINATION**
  - ARECOP FIRST Phase III Planning Technical Advisory Meeting, Vietnam, August 2004
  - ARECOP SECOND Phase III Planning Technical Advisory Meeting, Thailand, January 2007
  - ARECOP Country Contact Point meeting, Cambodia, September, 2005
  - ARECOP Country Contact Point meeting, Thailand, January, 2007
  - Country visit and monitoring
    - 5 Country Contact Points (Bangladesh, Cambodia, Nepal, Sri Lanka, Philippines)
    - Other country (Lao)

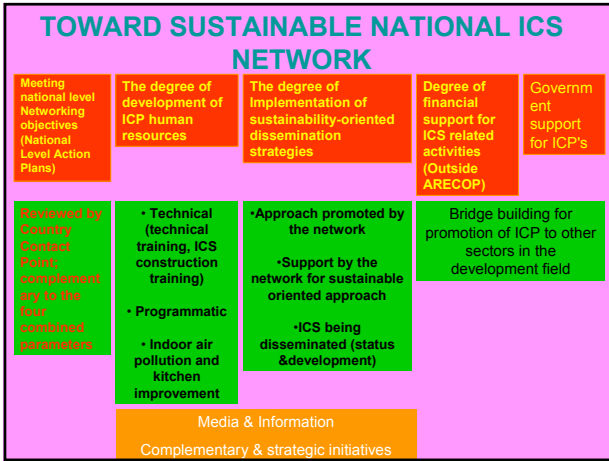
## NATIONAL LEVEL INITIATIVES

**STRENGTHENING NATIONAL LEVEL ICS NETWORKING PROGRAM**  
PHASE II: 1999-2003; PHASE III: 2004-2007



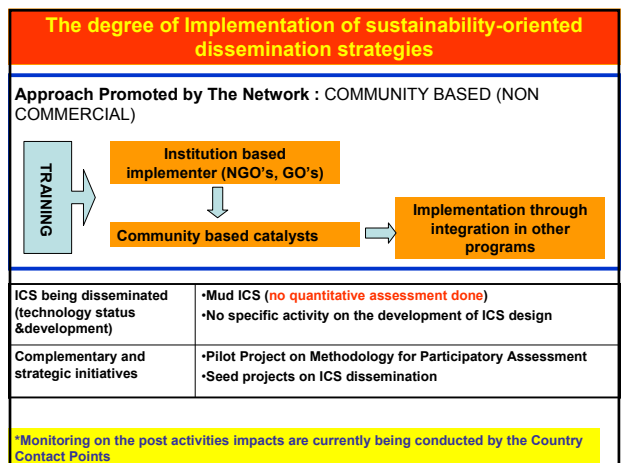
## NATIONAL LEVEL ICS NETWORKING PROGRAM

- STRENGTHEN COUNTRY CONTACT POINT AS A FACILITATOR TO FUNCTION EFFECTIVELY AS A NETWORK COORDINATOR TO FILL EXISTING GAPS AND FULFIL THE NEEDS OF ICP'S WITHIN THE RESPECTIVE FOCUS COUNTRIES
- HEIGHTENING THE EFFECTIVENESS OF ICP'S WITHIN EACH FOCUS COUNTRY
- INCREASE THE LONG-TERM VIABILITY OF ICPS IN GENERAL SUCH THAT ARECOP'S ROLE CAN BE REDUCED IN EACH OF THE RESPECTIVE COUNTRIES, LEAVING A STRONG COOKSTOVE NETWORK INTACT WITH THE CCP AS A FACILITATOR
- ADDRESSING THE ISSUES IDENTIFIED IN THE REGION & AT THE NATIONAL LEVELS
- ADVOCACY WORK WITH A FOCUS AT INFLUENCING BIOMASS ENERGY POLICIES



### The degree of development of ICP human resources

	No. participants		
	Trainer level	Community catalyst	Institution based Implementer
Technical (technical training, ICS construction training)	25	60 (June 2005)	--
Programmatic	--	--	12
Indoor air pollution and kitchen improvement	--	--	25
Complimentary and strategic initiatives	<ul style="list-style-type: none"> <li>• National Seminar on Impact of Biomass Smoke on Health and Technology, November 2004</li> <li>• Workshop on Impact of Indoor Air Pollution Smoke on Mother and Child Health, December 2005</li> <li>• Initiative fund for kitchen improvement implementation (15 units)</li> <li>• Study visit to stove part producers</li> </ul>		
<b>TRAINING:</b> <ul style="list-style-type: none"> <li>• ICS training for community catalysts</li> <li>• Kitchen Improvement training</li> <li>• Training of Trainer on ICS</li> </ul>			
*Monitoring on the follow ups of the training and capacity development capacities are currently being monitored by the Country Contact Points			



Degree of financial support for ICP related activities (Outside ARECOP)		
	PROJECT	CONTRIBUTING ORGANIZATIONS
ICP or related activities directly implemented or facilitated by the network coordinator	Reduction of Exposure to Indoor Air Pollution through Household Energy and Behavioral Improvement - 2 Municipalities in Dinajpur and Nilphamari districts  10 kitchens were improved by organizations received kitchen improvement training	Winrock International, Concern Worldwide  Network NGO partners
ICP or related activities which are spin offs of the network	ICS dissemination	Network NGO partners
Other complimentary ICP activities	-----	-----

## CAMBODIA ICS NETWORK

Country Contact Point : Wood Energy Network of Cambodia

## CAMBODIA ICS NETWORK

### The degree of development of ICP human resources

	No. participants			
	Trainer level	Community builder	Implementer	Producer
Technical (technical training, ICS construction training, exchange visit)		116	35	Development Appropriate Technology (DATE) has a continuous program on & specific facilities for stove producer training
Programmatic	--	--		
Indoor air pollution and kitchen improvement	--	--		
Complimentary and strategic initiatives	<ul style="list-style-type: none"> <li>- Technical assistance to network members (2 technicians)</li> <li>- Student internship on wood energy and ICS (5)</li> <li>- Facilitating support for network members to attend training</li> <li>- Develop kit (flipchart manuals) for ICS trainers</li> <li>- Study tour of stove producers to stove factory at Ratchaburi, Thailand</li> </ul>			

\*Monitoring on the follow ups of the training and capacity development capacities are currently being monitored by the Country Contact Points

### The degree of implementation of sustainability-oriented dissemination strategies

Approach promoted by the network	<ul style="list-style-type: none"> <li>• Commercial builder service – community based builders are trained</li> <li>• Commercial mass produced stoves</li> </ul>
ICS being disseminated (technology status & development)	<p><b>STOVE PERFORMANCE (Potential fuel savings as tested against traditional stoves):</b></p> <p>New Lao stove (22%); Neang Kangrei stove (21.6%); Baby Samaki stove (21.7%); Baphnom stove (25%); Institutional stove (27.6%); Post Combustion stove (50%); Improved Palm Sugar stove- 2 potholes (27.6%); Improved Palm Sugar stove- 1 pothole (32%)</p>
Complementary and strategic initiatives	<ul style="list-style-type: none"> <li>• Pilot project on Methodology for participatory assessment</li> <li>• Small grants for ICS dissemination</li> <li>• Development of stove monitoring system for ICS mud stove dissemination</li> <li>• Support the formation of Improved Cookstove Producer and Distributor Association of Cambodia</li> </ul>

\*Monitoring on the post activities impacts are currently being conducted by the Country Contact Points



Degree of financial support for ICP related activities (Outside ARECOP)		
	PROJECT	CONTRIBUTING ORGANIZATIONS
ICP or related activities directly implemented or facilitated by the network coordinator	Baphnom and Baby Samaki stove dissemination (Baphnom and Kampong Trabek, Prey Veng province)	CEDAC
	Palm Sugar dissemination (Implemented by: Buddhist Development Association and Supporting Environment)	NREM-DANIDA
	School Feeding projects (schools in 6 provinces )	WFP
	Various small scale ICS dissemination	Local NGO's
	Empowerment of Rural Women through Community Development and Credit Scheme (Implemented by PAD)	ILO/Japan-EEOW1
ICP or related activities which are spin offs of the network	ICS dissemination implemented by CADET villages in Kampong Cham province)	Ford Motor Company
	Char Briquetting project, implemented by ASDD	GEF-UNDP
	Large stove in Pagoda, implemented by DKC, HDCO	Private donors
	Mud ICS dissemination (14 villages, Svay Rieng province)	International Volunteer of Yamagata
	Pilot ICS commercialization	Queen of Cambodia
	<b>National scale project:</b> Cambodia Fuelwood Saving Project (ICS commercialization, technical consultancies, R&D, integrated biomass energy management approach)	GERES (primary funding)

## INDONESIAN ICS NETWORK

Country Contact Point : Yayasan Dian Desa

The degree of development of ICP human resources			
	No. participants		
	Community builder	Institution based implementer	Producer
Technical (technical training, ICS construction training)	25	90	7
Programmatic	--	90	--
Complimentary and strategic initiatives	<ul style="list-style-type: none"> <li>•Post training technical assistance</li> <li>•Support/facilitation of network members to attend training</li> <li>•Experience Sharing &amp; Searching for New Horizons on Palm Sugar Supply Chains</li> <li>•Setting up of improved kitchen for demonstration</li> <li>•Dispatch expert for specific request from network members: Oxfam, Koling, YPBB, MAP-Kelola, MAP-PSAP, Kerabat Desa Kota</li> <li>•Student internship</li> </ul>		
<b>TRAINING:</b>	<ul style="list-style-type: none"> <li>•Training on ICS Dissemination – Technical &amp; Programmatic skills</li> <li>•Training for stove producers</li> <li>•Training on ICS construction for community builders</li> </ul>		
*Monitoring on the follow ups of the training and capacity development capacities are currently being monitored by the Country Contact Points			

The degree of Implementation of sustainability-oriented dissemination strategies	
Approach promoted by the network	<ul style="list-style-type: none"> <li>•Commercial builder service</li> <li>•Commercial mass produced ICS</li> </ul>
ICS being disseminated (technology status & development)	<ul style="list-style-type: none"> <li>•Mud stove (Households and Small industrial)</li> <li>•Development of metal stove mould for ICS construction</li> <li>•Mass produced charcoal ICS</li> </ul>
Complementary and strategic initiatives	<ul style="list-style-type: none"> <li>•Pilot project on Methodology for Participatory Assessment</li> <li>•Distribution of stove moulds to organizations</li> <li>•Palm Sugar stove Network</li> <li>•Creation of Regional Focal Points</li> </ul> <p>Java (Dian Desa); Kalimantan (Dian Tama); Sulawesi (Yayasan Kelola); NTT, NTB, Maluku, Papua (Dian Desa); North Sumatera (Bina Insani); South Sumatera (Heifer International and Pansos Bodronoyo)</p> <ul style="list-style-type: none"> <li>•Project planning on carbon credit for stove program (partners with Pelangi Foundation)</li> </ul>
*Monitoring on the post activities impacts are currently being conducted by the Country Contact Points	



Degree of financial support for ICP related activities (Outside ARECOP)		
	PROJECT	CONTRIBUTING ORGANIZATIONS
ICP or related activities directly implemented or facilitated by the network coordinator	Development of Models for Appropriate Biomass Energy Technologies <sup>1)</sup> (Wonokromo village)	Asian People Exchange (Japan Environment Corporation)
	Mud ICS dissemination	Heifer Foundation, Local NGO's
	Experience Sharing & Searching for New Horizons on Palm Sugar Supply Chains	PD Dian Niaga/Kerabat Desa
	Pilot Project on Methodology for Participatory Assessment/Kitchen Improvement, implemented by Network	Mangrove Action project, Center for Asia Pacific Studies
Other complimentary activities	Workshop on Gender Science&Technology	UNESCO
	Gender and Energy network	Energia-DGIS



The degree of development of ICP human resources			
	Trainer level	No. participants	
		Community based implementer	Institutional based implementer
Technical (technical training, ICS construction training)	--	25	5
Programmatic	--	2	5
Kitchen improvement	--	8	
Complimentary and strategic initiatives	<ul style="list-style-type: none"> <li>The network secretariat is also directly contributing as well as facilitating technical back ups for various activities of the Nepal ICS National Program</li> <li>Production of video manual (detail information on ICS construction, operation and maintenance)</li> <li>Student support program: Research on ICS and related issues (7 student projects)</li> <li>Research on " Design and Testing of Mechanical Press for the Production and Commercialization of Beehive Briquettes in Nepal." implemented by Centre for Energy and Environment (CEE)</li> <li>2 Pilot projects on gasification for small scale thermal applications</li> </ul>		
<b>TRAINING:</b> (1) Training on ICS; (2) Training on Methodology for Participatory Assessment; (3) Training on " Lapsi-Processing Stove Construction" ; (4) Training on ICS Construction & Kitchen Management			

The degree of Implementation of sustainability-oriented dissemination strategies	
Approach promoted by the network	<ul style="list-style-type: none"> <li>Commercial builder service</li> <li>Non direct subsidy</li> </ul>
ICS being disseminated (technology status & development)	<ul style="list-style-type: none"> <li>Mud stove</li> <li>Small industrial institutional ICS (efficiency 28-32%)</li> <li>Metal heating stove (37.7%)</li> <li>Semi gasifier stove (23%)</li> <li>Beehive briquette stoves (efficiency 26%)</li> <li>Development of beehive briquette stove ad charring technology</li> <li>Development of gasification stoves for HH and small industry</li> </ul>
Complementary and strategic initiatives	<ul style="list-style-type: none"> <li>Pilot project on Methodology for Participatory Assessment</li> <li>Establishment of 4 district networks</li> <li>Research on " Design and Testing of Mechanical Press for the Production and Commercialization of Beehive Briquettes in Nepal." implemented by Centre for Energy and Environment (CEE)</li> <li>Advocate common policy and commercial approach for stove dissemination among network members</li> <li>Plan for Commercialization of ceramic type ICS in Tarai (Plain) areas and metal stoves in high hill areas</li> </ul>
<b>*Monitoring on the post activities impacts are currently being conducted by the Country Contact Points</b>	

### Degree of financial support for ICP related activities (Outside ARECOP)

	PROJECT / EVENTS	CONTRIBUTING ORGANIZATIONS
ICP or related activities directly implemented or facilitated by the network coordinator	Women in Water and Energy Management, with ICS and kitchen management components (2 villages in Palpa district)	Nepal Red Cross Society
	TOT on ICS and Kitchen Improvement	Energy Sector Assistance Program
	Institutional ICS for School Feeding Project	WWF
	Nominal resource generation through service provision by Resource Centre	Network members
	Various contributions from local partners	Local governments (VDC, DDC)
	Workshop on "Orientation on ICS Policies & Strategies and Sharing of Experiences"	AEPC, ESAP

ICP or related activities which are spin offs of the network	Nepal Indoor air pollution and health forum	NGO's, INGO's and GO in Nepal
	Interlink with other Networks such as ENERGIA, InforSE etc. for cost sharing	ENERGIA, InforSE
	Memorandum of Understanding (MoU) on joint research on rural technologies and renewable energies	Kathmandu University
National scale program: Nepal National Improved Cookstove Program (Non direct subsidy ICS dissemination, mostly in mid hill areas)		DANIDA

### Network coordination & Media development and information dissemination

- Network meeting (Regular)
- Consultative meeting
- Monitoring
- Chulo wall newsletter (biannually)
- Regular Newsletter ICS dispatch (quarterly),
- Kitchen Management posters
- Video Manual
- Website
- ICS resource center (data base & library)

### IMPROVED COOKSTOVE OF PHILIPPINES

Country Contact Point: APPROTECH Asia



The degree of development of ICP human resources			
	Trainer level	No. participants	
		Institution and community based Implementer	Producer
Technical (technical training, ICS construction training, exchange visit)		3	46*
Programmatic	--	36	--
Indoor air pollution and kitchen improvement	--		--
Complimentary and strategic initiatives	<ul style="list-style-type: none"> <li>•Technical assistance to stove producers</li> <li>•Research Study on Kitchen Design (West Negros College)</li> </ul>		
<b>TRAINING CONDUCTED:</b> <ul style="list-style-type: none"> <li>•Stove producer training;</li> <li>•Methodology for Participatory Assessment</li> <li>•Training on High Quality Charcoal Production</li> </ul>			
Monitoring on the follow ups of the training and capacity development capacities are currently being monitored by the Country Contact Points			

The degree of Implementation of sustainability-oriented dissemination strategies	
Approach promoted by the network	<ul style="list-style-type: none"> <li>•Commercial mass produced ICS</li> <li>•Training and post training technical assistance for stove producer</li> <li>•Small grants and Soft loans for stove businesses</li> </ul>
ICS being disseminated (technology status & development)	<ul style="list-style-type: none"> <li>•Pottery ICS (adopted from Sri Lanka Anagi)</li> <li>•Improved charcoal stove (adopted from Thai Bucket)</li> <li>•Ricehusk gas stove (households - 11%, 1 KW)</li> <li>•Ricehusk gas stove (small industries 21%, 25 KW)</li> <li>•Improved rice husk stove</li> <li>•Rice Husk Furnace for Recirculating-Type Palay Dryer – 6 ton capacity (retrofit of diesel furnace, saving US\$ 47.50 per 14- hour operation)</li> </ul>
Complementary and strategic initiatives	<ul style="list-style-type: none"> <li>•Establishment of ICS centers in Bulacan, Ilocos, Ilo-Ilo, Ilocos Sur, Ilocos Norte, Tantangan, Tupi</li> <li>•Financial supports for ICS commercialization</li> <li>•Pilot project on Methodology for Participatory Assessment</li> <li>• Project on Ambulant Food Vendors: energy-efficient stoves and hygienic, healthy food (Integration of ICS with relevant sector)</li> <li>•Charcoal Training, Davao City, Philippines, 9-18 August 2006 – integrated approach on charcoal based cooking energy</li> </ul>
*Monitoring on the post activities impacts are currently being conducted by the Country Contact Points	

Degree of financial support for ICP related activities (Outside ARECOP)		
	PROJECT / EVENTS	CONTRIBUTING ORGANIZATIONS
ICP or related activities directly implemented or facilitated by the network coordinator	Enabling Urban Poor Livelihood Policy Making: Understanding the role of energy services	DFID, Technology Development Group-University of Twente
	ICS commercialization (Panay islands)	TSKI, Fundacion CODESPA
	Baseline data collection on Indoor Air Pollution	Env. and Occupational Health Office, Dept. of Health
	Impact of Renewable Energy Technologies on Women in the Indigenous Upland and Lowland Communities and Their Livelihood Activities” implemented by APPROTECH Asia	SIBAT, Dept. of Energy
	Ambulant Food Vendors: energy-efficient stoves and hygienic, healthy food: A Pilot Project for the Entrepreneurial Poor in the Philippines	UNDP REP-PoR
	Financial supports for stove producers (2 stove production)	TSKI

ICP or related activities which are spin offs of the network	Energy, Water and Gender (ENGENDER)	ENERGIA-DGIS
		GVEP-Philippine

## SRILANKA ICS NATIONAL NETWORK



### The degree of development of ICP human resources

	No. participants			
	Community based implementer	Program management	Institution based Implementer	Producer
Technical (technical training, ICS construction training, exchange visit)	20*	--	50*	40*
Programmatic	--	--	--	--
Indoor air pollution and kitchen improvement	--	--	28	--

#### TRAINING CONDUCTED:

- Stove producer training
- Training on the construction of institutional ICS
- Kitchen improvement training
- Training on Improved brick production technology

\*No. of participants not available from some training reported

\*\*Monitoring on the follow ups of the training and capacity development capacities are currently being monitored by the Country Contact Points

### The degree of Implementation of sustainability-oriented dissemination strategies

Approach promoted by the network	<p><b>COMMERCIALIZATION OF MASS PRODUCED ICS</b></p> <ul style="list-style-type: none"> <li>-Continuous efforts to increase production capacity of ICS, through training more potters, developing stove production technologies</li> <li>-Continuous promotion of mass produced ICS</li> </ul> <p><b>COMMERCIAL BUILDER SERVICE FOR MUD STOVE AND SMALL INDUSTRIAL STOVE</b></p> <ul style="list-style-type: none"> <li>- Training of builders in different localities, with the facilitation of various local NGO's</li> </ul> <p><b>KITCHEN IMPROVEMENT, IMPROVED BRICK PRODUCTION TECHNOLOGY, IMPROVED BAKERY OVEN</b></p> <ul style="list-style-type: none"> <li>-Still at the pilot implementation scale</li> <li>-Partnership with various local NGO's and GO's and integrate KI in the complimentary program of the partners</li> <li>-Emphasis on the contribution of beneficiaries</li> </ul>
Technology being disseminated (technology status & development)	<ul style="list-style-type: none"> <li>•Anagi stove (41.2 % wood saving)</li> <li>•Improved brick making technology (modification of kiln and firing technique, improvement of brick material composition) (produce better quality bricks, shorter production time)</li> <li>•Chimney hood (no quantitative data available)</li> <li>•Improved bakery oven</li> </ul>

#### Complementary and strategic initiatives

- Establish 15 district focal points
- Development of fibre glass moulds to increase production of mass produced ICS
- Initiatives on brick kiln technologies and kitchen improvement project, widened the scope of intervention network beyond stove

\*\*Monitoring on the post activities impacts are currently being conducted by the Country Contact Points

**Degree of financial support for ICP related activities (Outside ARECOP)**

PROJECT / ACTIVITIES	CONTRIBUTING ORGANIZATIONS
Financial support for the production of ICS moulds for distribution to stove producers	Provincial Council of the Wayamba Province
Dissemination of improved institutional/small industrial stoves	Various local NGO's, UNDP Christian Children's Fund
Kitchen improvement installation	GEF-UNDP, Sri Lanka Nature Forum, MONLAR SEVA LANKA
Training : ICS / Kitchen improvement / kiln development/stove producer	GEF-UNDP, Plantation Trust Fund OXFAM
Household/Mud / Anagi ICS dissemination	National Christian Congress, Reef Conservation Fund STRENGTH, Central Provincial Council Australian High Commission, Plan International, GEF-UNDP, Sewa Lanka Organization, British High Commission

**Degree of financial support for ICP related activities (Outside ARECOP)**

ICP or related activities which are spin offs of the network	Contact Point of the International Network for Sustainable Energy (INFORSE)- South Asia supported by Danish Small Grant Facility	Danish Small Grant Facility
	Improved stove for tuna processing (implemented by Integrated Agriculture Development Foundation)	Tsunami Rehabilitation - UNDP

**VIETNAM ICS NATIONAL NETWORK**



**The degree of development of ICP human resources**

	No. participants				
	Trainer level	Cookstove builder	Program management	Institution based Implementer	Producer
Technical (technical training, ICS construction training, exchange visit)	15	70	--	----	----
Programmatic	--	--	--	20	--
Complimentary and strategic initiatives	Development of improved stove for tea drying (AFAP has co-operated with RCAICE to R&D ICS models building for tea leaves drying in Thai Nguyen)				

\*No. of participants not available from some training reported

\*\*\*Monitoring on the follow ups of the training and capacity development capacities are currently being monitored by the Country Contact Points

The degree of Implementation of sustainability-oriented dissemination strategies	
Approach promoted by the network	<ul style="list-style-type: none"> <li>•Decentralization: Develop, implement ICS projects at localities levels and working more with community.</li> <li>•Direct full/partial subsidies on ICS</li> <li>•Trained community based builders</li> <li>•Community participation mobilization</li> <li>•Commercialization (little is implemented)</li> </ul>
Technology being disseminated (technology status & development)	<ul style="list-style-type: none"> <li>•Concrete (cement) ICS with chimney (no performance data/information is available)</li> <li>•Improved tea drying stove (no performance data/information is available)</li> </ul>
Complementary and strategic initiatives	<ul style="list-style-type: none"> <li>•Pilot project on Methodology for Participatory Assessment</li> <li>• Research, survey on portable stove commercialization</li> <li>•Advocacy to establish the national program.</li> <li>•Resources diversification to attract more investment for the ICS program.</li> </ul>
<p>*Monitoring on the post activities impacts are currently being conducted by the Country Contact Points</p>	

Degree of financial support for ICP related activities (Outside ARECOP)		
ICP or related activities directly implemented or facilitated by the network coordinator	PROJECT / ACTIVITIES	CONTRIBUTING ORGANIZATIONS
	Development and implementation of improved Tea drying stove (1000 stoves disseminated)	The Foundation for the People of Asia & Pacific

Degree of financial support for ICP related activities (Outside ARECOP)		
ICP or related activities which are spin off of the network	Forestry Science Technology Application Center (FSTAC) ICS projects: - ICS implementation in mountainous areas - ICS for the poor in the provinces of Quang Tri, Phu Yen, Khanh Hoa, in central Vietnam	World Bank
	VWU provide funds for 64 provinces to conduct the water, sanitation and improved cookstove program : •Builder training •ICS demonstration •Promotion&awareness raising •ICS subsidies for households	Vietnam Women Union
	AFAP has developed the ICS program at mountainous provinces like Yen Bai, Thai Nguyen	The Foundation for the Peoples of Asia & Pacific
	ICS dissemination in Ha Tinh province	Local Authorities of Ha Tinh
Complimentary ICS activities	Dissemination of rice husk briquette and stove at the Cuu Long Delta River region by Institute of Energy	Institute of Energy (SIDA)

## NATIONAL LEVEL INITIATIVES

**STRENGTHENING ICP DEVELOPMENT  
NON-FOCUSED COUNTRIES**

**East Timor**

**NATIONAL TRAINING ON ICS**  
(January 2006)  
- Organized by: Sahe Institute of Liberation & ETADEP; supported by Canadian International Development Agency




**Lao P.D.R**

**STAKEHOLDER WORKSHOP ON BIOMASS APPLICATION AND ITS CONSTRAINTS IN LAO PDR**  
(April, 2006)  
- Organized by: Faculty of Engineering, National University of Lao & ARECOP  
- Support 3 resource persons, from Vietnam Women Union, Wood Energy Network of Cambodia and Cambodia Fuelwood Saving project)




**REGIONAL DEVELOPMENT INITIATIVES**  
**PROFILE ON ASIAN ICP STRUCTURE & DISSEMINATION METHODS**



- Document various ICS program diffusion strategies that can be used as a reference by other organizations, institutions or individuals who want to start an improved cookstove program or want to improve the program they already have
- Encourage the adoption of effective approach to ICSPs in order that adoption rate of improved cookstoves is increased
  - Total 8 case studies from Cambodia (2), India (2), Nepal (2), Pakistan (1), Sri Lanka (1), Vietnam (1)
  - Final editing on case studies from: Nepal (1), India (2), Sri Lanka (1), Cambodia (1)
  - Proposed completion: April 2007

ORGANIZATIONS CARRYING OUT INVESTIGATION	CASE STUDY
Center for Rural Technology, <b>Nepal</b>	Profile of The National Improved Cookstove Program Of Nepal
Rural Community Development Society, <b>Nepal</b>	Improved Cookstove (ICS) Case Study – RUCODES
Center for Renewable Energy & Appropriate Technologies, <b>India</b>	Improved cook stove implementation in India
Technology Informatics & Design Endeavour, <b>India</b>	Dissemination Of Improved Biomass Stoves Through Sustainable Entrepreneurial Networks
Wood Energy Network of Cambodia (WENetCam), <b>Cambodia</b>	Case Study of Self-built Stove Dissemination in Cambodia
Integrated Development Association, <b>Sri Lanka</b>	The profile of stove programme activities in Sri Lanka
Vietnam Women Union, <b>Vietnam</b>	Vietnam Women's Union Improved Cookstove Programs
Institute of Rural Development Policy, <b>Pakistan</b>	A study on the success of improved metal and mud stoves introduced by Pakistan Council for Renewable Energy Technologies

**REGIONAL DEVELOPMENT INITIATIVES**  
**INDOOR AIR POLLUTION, KITCHEN IMPROVEMENT & HEALTH**



- Kitchen Improvement module development : Indoor Air Quality and Health module developed by Prof. S.K. Sharma (Rayat & Bahra Institute of Engineering & Bio-Technology, Punjab, India)
- Regional Training on Kitchen Improvement (Mid 2007)

**Overview of training contents**


- Understanding kitchen realities
- Discover the kitchen (Field exercise)
- Fuel and combustion
- Concepts of cookstove efficiencies
- Pollutants and measurements
  - Estimation of emission factor
  - Estimation of Air exchange rate
- The role of behaviour and believe
- Reading and measuring the kitchen
- Kitchen design and ergonomics
  - Design criteria, solution oriented thinking and priority setting
- Rural and semi urban kitchens
- Social and economic factors in kitchen improvement
- Design application and changing reality
- Country based plan of action

**REGIONAL DEVELOPMENT INITIATIVES**  
**GENDER & POVERTY SENSITIVE PARTICIPATORY PLANNING, MONITORING & EVALUATION**

ARECOP adopts Methodology for Participatory Assessment (MPA) (a methodology employed in World Bank WatSan Programs)

The pilot projects' aims are to test the potential of MPA

- As a methodology that can be used in improved cookstove programs to conduct a sustainable program; and
- As a methodology capable of qualitative and quantitative assessment,
- how the monitoring stage data can be useful to indicate necessary follow up actions by the project in order to heighten sustainability
- how evaluation data can be obtained and can reflect project sustainability level (at the termination phase of the project).





Project coordinator	VERC, Dhaka, BANGLADESH
Project components	<ul style="list-style-type: none"> <li>• Translation and adaptation of training manual from English to Bangla language and make copies for training and field practices.</li> <li>• Training for implementing staff of 4 NGOs/implementation of MPA in cook stoves and household energy programs</li> <li>• Documentation and monitoring</li> <li>• Experience sharing workshop</li> </ul>
Locations of dissemination	Kamalapur/Savar/Dhaka; Chakulia/Savar/Dhaka; Shahpur, Jamalgonj, Sunamgonj; Laxmandia, Shoilakupa, Jhenaidah
Organizations involved in the dissemination	VERC, SDE, IDEA, UD
Capacity building and promotional/awareness raising events and other follow up infrastructure building for stove dissemination	4 Community Catalysts Development Training <sup>(1)</sup>
No. of people trained for ICS related service (ICS builder, promoter, etc)	??
No. of ICS disseminated	71 (breakdown per location is not known) <sup>(1)</sup>
Types of ICS disseminated	??
Community contributions	??
Direct agency contribution to stove provision	??

Project coordinator	Dian Desa, INDONESIA
Project components	<ul style="list-style-type: none"> <li>• MPA training cum baseline implementation (program planning)</li> <li>• ICS construction training for community cadres</li> <li>• Monitoring</li> <li>• Evaluation</li> </ul>
Locations of dissemination	Lempong Pucung/Ujung Alangi/Cilacap)
Organizations involved in the dissemination	Dian Desa, CAPS
Capacity building and promotional/awareness raising events and other follow up infrastructure building for stove dissemination	<ul style="list-style-type: none"> <li>• Training on ICS construction and kitchen improvement</li> <li>• Stove competition</li> </ul>
No. of people trained for ICS related services (ICS builder, promoter, etc)	18
No. of ICS disseminated	25 two pothole HH ICS, 3 palm sugar stoves <sup>(1)</sup>
Types of ICS disseminated	Two pothole household mud stove (made with steel mould) One pothole mud stove for palm sugar processing
Community contributions	Stoves are commercialized
Direct agency contribution to stove provision	Stove moulds (number provided not known)

Project coordinator	Center for Rural Technology, NEPAL
Project components	<ul style="list-style-type: none"> <li>• Translation and adaptation of manual: January 2005</li> <li>• Training on MPA: February 2005</li> <li>• ICS Construction</li> <li>• Refresher Training: 10 days (July 2005 and 2006 respectively; 2 days in each settlements x 5 settlements)</li> <li>• Training on Monitoring</li> </ul>
Locations of dissemination	Gagalphedi – Gagal, Ward No. 1; Sundarijal – Okhreni, Mukharka, Ward No. 1-6; Bajrayogini – Ghumarchok
Organizations involved in the dissemination	Center for Rural Technology; Rural Community Development Society; Gagal Co-operative Society
Capacity building and promotional/awareness raising events and other follow up infrastructure building for stove dissemination	<ul style="list-style-type: none"> <li>• ICS Construction Refresher Training: 10 days (July 2005 and 2006 respectively; 2 days in each settlements x 5 settlements)</li> </ul>
No. of people trained for ICS related service (ICS builder, promoter, etc)	2 local MPA facilitators; 7 stove builders;
No. of ICS disseminated	??
Types of ICS disseminated	Mud based stoves for alcohol, liquor & dhido making as per the demand, with chimney outlet to show the participants & visitors.
Community contributions	In kind and labour (but more specific details is not known)
Direct agency contribution to stove provision	??

Project coordinator	APPROTECH ASIA, PHILIPPINES
Project components	<ul style="list-style-type: none"> <li>• MPA training cum implementation</li> <li>• Training of stove producers</li> <li>• Commercialization of improved cookstoves</li> <li>• Monitoring and evaluation</li> </ul>
Locations of dissemination	Mambatad (Miag-ao), Parara Norte (Tigbauan), Cabassi (Guimbal)
Organizations involved in the dissemination	
Capacity building and promotional/awareness raising events and other follow up infrastructure building for stove dissemination	<input type="checkbox"/> Producer training <input type="checkbox"/> Credit provision for stove producers (details are not known)
No. of people trained for ICS related service (ICS builder, promoter, etc)	??
No. of ICS disseminated	Mambatad (Miag-ao) = 0; Parara Norte (Tigbauan) = 40; Cabassi (Guimbal) = 70
Types of ICS disseminated	Modified Anagi stove (two pothole fired clay stove)
Community contributions	Stoves are commercialized
Direct agency contribution to stove provision	None

Project coordinator	Vietnam Women Union, VIETNAM
Project components	<ul style="list-style-type: none"> <li>Adapt ARECOP MPA training manual into Vietnamese context and field test.</li> <li>5 days training of trainers on MPA for improved cookstoves</li> <li>Introduction of new effective types of ICS Carry out MPA on improved cookstove in 6 communes;</li> </ul>
Locations of dissemination	Xuan Phuong (Than Hoa); Tamson (Ha Tay); Kyson (Ha Tay); Xa (Ninh Binh); Lao (Ninh Binh)
Organizations involved in the dissemination	Vietnam Women Union
Capacity building and promotional/awareness raising events and other follow up infrastructure building for stove dissemination	<ul style="list-style-type: none"> <li>Training for motivators</li> <li>Training for masons</li> <li>Broadcasted a spot in local provincial television ( Bac Kan, Bac Giang )</li> <li>Distributed Leaflets on ICS benefits, design, cost and how to use to 4 000 households</li> <li>Support of ICS demonstration construction: 300 ICS built (distribution not specified per location) <sup>(1)</sup></li> </ul>
No. of people trained for ICS related service (ICS builder, promoter, etc)	120 motivators trained 30 masons trained <sup>(1)</sup>
No. of ICS disseminated	in Xuan Phuong (Than Hoa): 13 No data yet on other areas;
Types of ICS disseminated	Two pothole cement stove
Community contributions	Cash and in kind (only at Xuan Phuong, Than Hoa; not known in other locations)
Direct agency contribution to stove provision	??

**REGIONAL DEVELOPMENT INITIATIVES**

**BIOMASS FUEL UPGRADING : Training on Carbonizing and Briquetting Feb. '07**

**TRAINING OBJECTIVES:**

- Participants will be able to construct different charcoal kilns types and produce high quality charcoal
- Participants will be able to process loose biomass such as leaves to produce char briquettes.
- Participants will understand and be able to practice integrated sustainable forestry management.
- Participants will understand and be able to apply the different uses and application of the charcoal produced as well as its by products.

**TRAINING CONTENTS:**

- Construction of Japanese designs for high quality charcoal production, the Iwate and Yoshimura Kiln
- Construction of Flat Bed charcoal design kiln
- Construction of vertical and horizontal drum kiln
- Operate and produce high quality charcoal from the various kiln
- Construction and operation of loose biomass char briquetting system
- Integrated sustainable forestry
- Wood Vinegar : How to produce, its various uses and utilization, and market potential
- High quality Charcoal market potential

**REGIONAL DEVELOPMENT INITIATIVES**

**REGIONAL INITIATIVES ON GASIFICATION FOR SMALL SCALE THERMAL APPLICATIONS**

- Regional Training on biomass gasification for small scale thermal applications (With the technical consultants from Combustion Propulsion Gasification Laboratory – Indian Institute of Science & co-organizing by Solar Energy Research Institute – YNU)
  - 16 participants from 8 countries in Asia and USA
- Post training pilot projects
  - 6 projects are proposed; currently under different stage

**REGIONAL DEVELOPMENT INITIATIVES**

**PROPOSED PILOT GASIFICATION PROJECTS**

1. Center for Rural Technology & Research Center for Applied Science and Technology, Tribhuvan University	<p><b>TECHNICAL PROPOSAL FOR ACTION RESEARCH ON GASIFICATION FOR THERMAL APPLICATION IN LAPSI CANDY INDUSTRIES</b></p> <p><b>Project components:</b></p> <ul style="list-style-type: none"> <li>Developed R&amp;D I gasifier stove for Lapsi candy industry</li> <li>Field testing of gasifier stoves in Lapsi candy industry</li> <li>Organise ICS Network Meeting to demonstrate and disseminate information on gasifier pilot project</li> </ul>	<p><b>Stove design stage :</b></p> <p>Proposed system - Close coupled gasifier with an electrical blower (31 KWh, 40% efficiency)</p> <p>No. of units to be installed - 3 units</p> <p>Fuel – lapsi seeds, fuel wood &amp; agriwaste</p>
2. Technoogy, Informatics & Design Endeavour, Bangalore, India	<p><b>IMPLEMENTATION &amp; FIELD TESTING OF GASIFICATION STOVES in restaurants</b></p> <p><b>Project components:</b></p> <ul style="list-style-type: none"> <li>Cooperate with CGPL-IISC to design a gasifier stove model</li> <li>Field testing of gasifier stove</li> </ul>	<p><b>Stove design stages:</b></p> <p>Proposed system - two different capacities gasifiers</p> <ul style="list-style-type: none"> <li>a 2 kg/ hr stove and</li> <li>1kg /hr stove 2.</li> </ul> <p>Fuel – chopped wood</p>

REGIONAL DEVELOPMENT INITIATIVES

**PROPOSED PILOT GASIFICATION PROJECTS**

3. Technology Research Institute, Lao	GASIFIER FOR SALT PROCESSING INDUSTRY	Field data and information are still under review
4. Appropriate Technology Center, Central Philippines University	<p>DESIGN DEVELOPMENT AND COMMERCIALIZATION OF RICE HUSK QUASI GASIFIER STOVE</p> <ul style="list-style-type: none"> <li>- R&amp;D of rice husk gasifier stove models, for household and small industrial cooking</li> <li>- Training on the fabrication of gasifier stoves</li> <li>- Promotion and commercialization of gasifier stoves</li> </ul>	<p>Improvement of prototypes developed:</p> <ol style="list-style-type: none"> <li>1. Rice husk quasi gasifier stove with side-in steam injector (11% thermal efficiency; 1KW)</li> <li>2. Rice husk quasi gasifier stove with Center-in steam Injector with 21% thermal efficiency; power output of 25 kW.</li> </ol>

**REGIONAL DEVELOPMENT INITIATIVES**

**PROPOSED PILOT GASIFICATION PROJECTS**

5. Maxpell, Indonesia.	Gasifier for Coconut Oil Production.	Energy assessment has been completed; stove design stage
6. Dian Desa, Indonesia	Gasifier Stove for Palm sugar Processing	Energy assessment stage