APFED
Asia-Pacific Forum
for
Environment and Development

Asia-Pacific Forum for
Environment and Development
Second Phase: APFED II

Booklet on Good Practices and Innovative Activities

For Achieving Sustainable Development in Asia Pacific

2005 - 2009

Award & Showcase Programme

Ministry of the Environment

Asia-Pacific Forum for
Environment and Development
Second Phase: APFED II

Booklet on Good Practices and Innovative Activities

For Achieving Sustainable Development in Asia Pacific

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March 2011

Table of Contents

Index

by Country Alphabetical order

Area Climate Change 3R Biodiversity & Ecosystem Water Capacity Development Others

Area Climate Change 3R Biodiversity & Ecosystem Water Capacity Development Others

by Area

Climate Change

3R

Biodiversity & Ecosystem

Water

Capacity Development

etc Others

Foreword

Ryu Matsumoto

Minister of the Environment, Japan

Caring for our planet is our imperative. At the 10th meeting of the Conference of the Parties on the Convention on Biological Diversity (CBD/COP10) in Nagoya in 2010, for which I acted as the President of COP10, we adopted a set of decisions and demonstrated our potential to act together for the global benefit. At the 16th session of the Conference of the Parties to the United Nations Framework Convention on Climate Change (COP16) in Cancun in 2010, I reaffirmed that we must tackle climate change toward substantial global reduction of green house gas emissions. The Government of Japan has supported the Asia-Pacific Forum for Environment and Development (APFED) to instigate multi-stakeholder action to foster transformation in the public's perception and behaviour, as well as policies and institutions, for achieving sustainable development. I hope that this booklet will inspire everyone with its accounts of community-based action to act together and live in better harmony with our planet and become more responsible for future generations.

松本 龍

Achim Steiner

UN Under-Secretary General and UNEP Executive Director

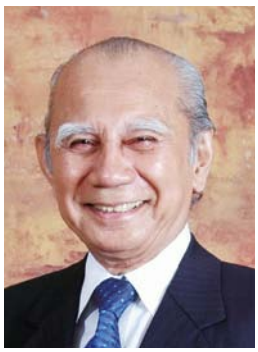
We are again on the Road to Rio, nearly 20 years after the Earth Summit of 1992 that gave birth to the international response to sustainable development. The Asia-Pacific Forum for Environment and Development (APFED) is a key and prominent example involving UNEP and its Regional Office for Asia Pacific and a wide range of collaborators. Much of the success of APFED has been under the Showcase Programme: UNEP has been privileged to host its secretariat. The projects highlighted in this booklet demonstrate the vital triangulation of science, policy and action on the ground in terms of catalyzing positive change. The lessons learnt and insights gained from APFED can in turn assist governments and civil society in terms of a transition to a Green Economy as they prepare for the RIO+20 next year. APFED provides a springboard for a more decisive and defining response to the challenges. I would like to thank the Government of Japan, and its Environment Ministry as we look forward to a new era of collaboration.

Achim Steiner

Yoriko Kawaguchi

Member of the House of Councillors, APFED Chair

The APFED Award and APFED Showcase Programmes were launched in 2006 as a part of the three programme pillars of the second phase of APFED (APFED II) that I had the pleasure of presiding over for the past five years. The Award Programme was designed to commend good practices in promoting sustainable development, while the Showcase Programme was designed to enable stakeholders to experiment with innovative activities for promoting sustainable development. I am sure that the enthusiasm and ingenuity of the people and communities exemplified in the success stories contained in this booklet will not fail to inspire readers to pursue their own innovative action towards sustainable development for the people and environment of our planet.



Emil Salim

Advisory Council to the President, APFED Member

APFED supports the promotion of macro-policy transformation and stakeholder capacity development to complement the Policy Dialogue, Knowledge Initiative and Showcase programmes supported by NetRes. I commend the Government of Japan, particularly the Ministry of the Environment, for its continuous support of APFED over the last decade. This spirit of cooperation and partnership, as harnessed through APFED, will need further bolstering to achieve sustainable development in the years ahead. I believe that all the APFED work that has been carried out this time, as exemplified in this booklet, will remain useful as a guide for future endeavours towards achieving sustainable development.

Hironori Hamanaka

Chair, IGES Board of Directors, APFED Member

APFED has provided a valuable opportunity for IGES to support multi-faceted sustainability policy activities in Asia and the Pacific. Further, IGES has benefited from APFED as it served as secretariats for both APFED and NetRes - the Asia-Pacific Regional Network of Policy Institutions for Environmental Management and Sustainable Development. I would once again like to extend my deep appreciation to all APFED members, who demonstrate such dynamism and compassion in their work, as well as our partners and the Government of Japan, particularly the Ministry of the Environment, for their unfailing and generous support in our collective endeavour towards achieving sustainable development.

Acknowledgements

The Asia-Pacific Forum for Environment and Development, Phase II (APFED II) for 2005–2010 was supported by both the Ministry of the Environment, Japan and 25 leading APFED environment–sustainable development experts, selected from countries within Asia and the Pacific.*1 The projects contained in this "Booklet on Good Practices and Innovative Activities (2005–2009)" either received support from the APFED Showcase Programme or received the *Ryutaro Hashimoto* APFED Award in demonstrating excellence in pursuit of sustainable development in the region. Overall running of the Showcase Programme and the Awards received much inspirational input and guidance from the APFED members.

Special appreciation is expressed to the APFED members who served on the Award Selection Committee and APFED Showcase Panel. The APFED Award Selection Committee was chaired throughout 2006–2009 by Yoriko Kawaguchi and its members were Cielito Habito, Emil Salim, Reza Maknoon and Hans van Ginkel (2006–2007), and Sanit Aksornkoae, Vinya S. Ariyaratne, Myung-Ja Kim and Yuqing Wang (2008–2009).

The APFED Showcase Panel was chaired by Akio Morishima for 2006–2010, and its members were Myung-Ja Kim, Parvez Hassan, Tongroj Onchan and Vinya S. Ariyaratne (2006–2007), Cielito Habito, Emil Salim Parvez Hassan and Reza Maknoon (2008–2009), and Cielito Habito, Emil Salim, Sanit Aksornkoae and Parvez Hassan (2010). Particularly noteworthy support for the Showcase Programme came from United Nations Environment Programme–Regional Office for Asia and the Pacific (UNEP/ROAP), headed formerly by Surendra Shrestha and thereafter by Young-Woo Park.

Support for Showcase project evaluations and Award project case studies came from a wide range of partners, particularly the members of NetRes (the Asia–Pacific Regional Network of Policy Research Institutes for Environmental Management and Sustainable Development) mentioned in the subsequent section of the overview.

Gratitude is also extended to all colleagues and partners who contributed manuscripts to this booklet. Most importantly, we would like to express our deepest respect to all those who have supported the exemplary projects highlighted in this booklet, in both demonstrating and sharing their wisdom and compassion towards sustainable development.

March 2011

*1: Full list of the APFED II members is available at
http://www.apfed.net/apfed2/APFED_II_Final_Report_for_CD.pdf

Acronyms

APFED	Asia-Pacific Forum for Environment and Development
ADB	Asian Development Bank
APP	Asia-Pacific Partnership on Clean Development and Climate
CBD	Convention on Biological Diversity
CDM	Clean Development Mechanism
CISMCS	Committee of International Sound Material-Cycle Society and Environmental Conservation
CITES	Convention on International Trade in Endangered Species of Wild Life Fauna and Flora
CO_2	Carbon Dioxide
COP	Conference of the Parties to the United Nations Framework Convention on Climate Change
CSR	Corporate Social Responsibility
EPR	Extended Producer Responsibility
ESD	Education for Sustainable Development
FAO	Food and Agriculture Organization of the United Nations
FCPF	Forest Carbon Partnership Facility
GDP	Gross Domestic Product
GHG	Green House Gases
IEA	International Energy Agency
IGES	Institute for Global Environmental Strategies
IPBES	Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services
IPCC	Intergovernmental Panel on Climate Change
IUCN	International Union for Conservation of Nature
MEA	Millennium Ecosystem Assessment
NASA	National Aeronautics and Space Administration US
NGO	Non Governmental Organization
OECD	Organization for Economic Co-operation and Development
OPG	Ontario Power Generation Inc.
PA	Protected Areas
PCB	Polychlorinated Biphenyl
PPP	Public-Private Partnerships
PPP	Polluter Pays Principle
RPS	Renewable Portfolio Standard
REDD	Reducing Emissions from Deforestation and Degradation
SCP	Sustainable Consumption and Production
UN/DESA	United Nations Department of Economic and Social Affairs
UNDP	United Nations Development Programme
UNEP	United Nations Environmental Programme
UNEP/ROAP	United Nations Environmental Programme Regional Office for Asia and the Pacific
UNESCAP	United Nations Economic and Social Commission for Asia and the Pacific
UNFCCC	United Nations Framework Convention on Climate Change
US-EIA	US Energy Information Administration
3Rs	Reduce, Reuse, Recycle

Memo

Programme Operations and Achievements

Overview

The Asia-Pacific Forum for Environment and Development (APFED) was launched as a regional group of prominent experts in 2001 to address critical issues and to propose new models for equitable and sustainable development. In its second phase (APFED II), which commenced in 2005, the following Award and Showcase Programme were carried out as a major part of APFED II activities.*1.

Background of the APFED Award and Showcase Programme

APFED Award

The *Ryutaro Hashimoto* APFED Award for Good Practices was launched in 2006 as a part of the APFED II Knowledge Initiative Programme to acknowledge the exemplary practices in promoting sustainable development in Asia and the Pacific. Over the 2006–2009 period, 217 projects were submitted for the Award selection process and Award prizes were given to 27 projects in total. IGES spearheaded case studies of the winning projects in collaboration with the member organisations of the Asia-Pacific Regional Network of Research Institutions for Environmental Management and Sustainable Development (NetRes), or alternatively, local experts with the view to facilitating the dissemination of knowledge and expertise on innovative practices for achieving sustainable development and their potential replication across the region.

Showcase Programme

The APFED Showcase Programme is designed to enable local stakeholders to promote innovation in policy development, technology application, social mobilization and partnership building for achieving sustainable development in the Asia-Pacific region. The Showcase Programme was commenced with two test projects in 2005 and was launched as a full programme in 2006.

The Showcase Programme has been supported by the Ministry of Environment Japan. The United Nations Environment Programme-Regional Office for Asia and the Pacific (UNEP/ROAP) has been coordinating its operations as the Showcase Facility Secretariat. Under the APFED Showcase Programme, a grant of up to 30,000 USD is provided to support a selected project in Asia and the Pacific. UNEP/ROAP, together with IGES, supports the selection process with the APFED Showcase Panel that consists of five APFED members. A NetRes member provides technical guidance for each of the projects, and monitors and evaluates the projects. With the applications for the 2010 Showcase Programme, the total number of applications came to 978, and 59 projects in 20 countries were selected from 2005 to 2010. Climate change, 3R and Biodiversity are designated as priority thematic areas while water and other cross-cutting projects have also been supported. (The following figures and table show the total number of selected projects from 2005 to 2009.)

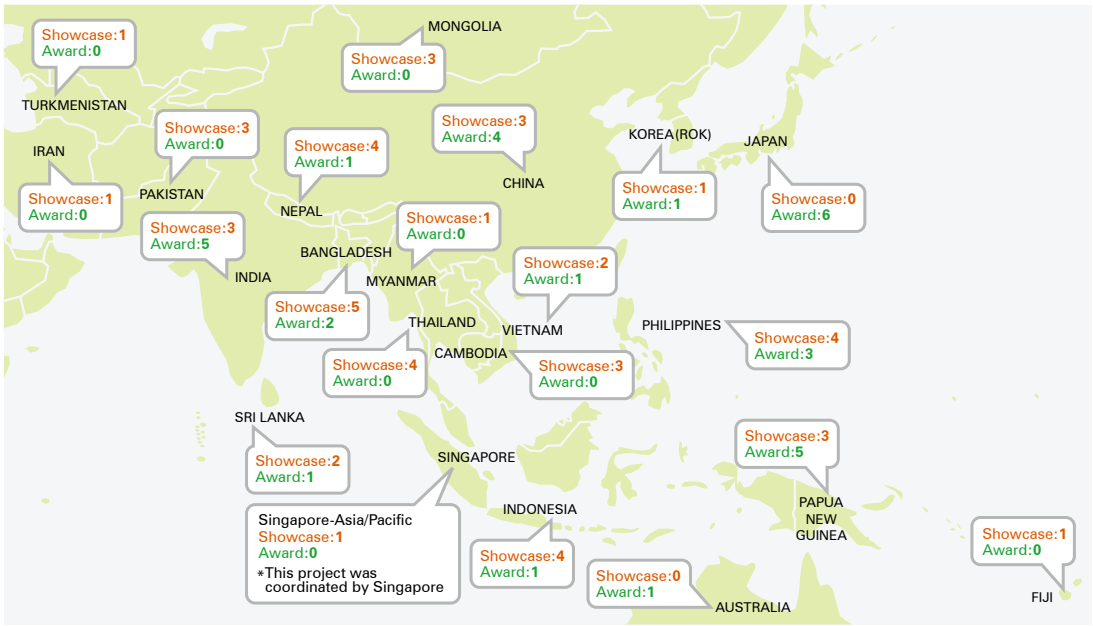
NetRes Members

The following are the NetRes members:

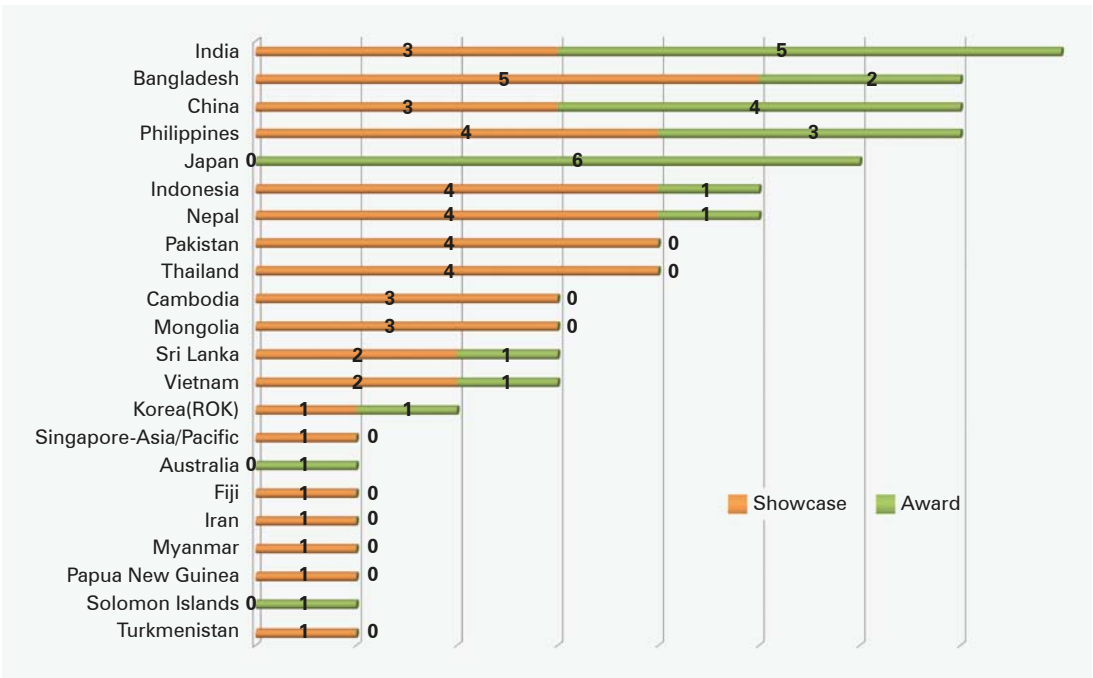
- Chinese Society for Environmental Sciences (CSES), China
- Institute for Global Environmental Strategies (IGES), Japan
- Korea Environment Institute (KEI), Korea
- Sustainable Development Policy Institute (SDPI), Pakistan
- Singapore Institute for International Affairs (SIIA), Singapore
- Thailand Environment Institute (TEI), Thailand
- The Energy and Resources Institute (TERI), India
- University of the South Pacific (USP), Fiji

*1: The overall activities and their achievements of APFED II were described in the APFED II Final Report available at: http://www.apfed.net/apfed2/APFED_II_Final_Report_for_CD.pdf

Selected Award and Showcase Projects, by Country



[Figure 1: Number of Selected Award and Showcase Projects, by Country]

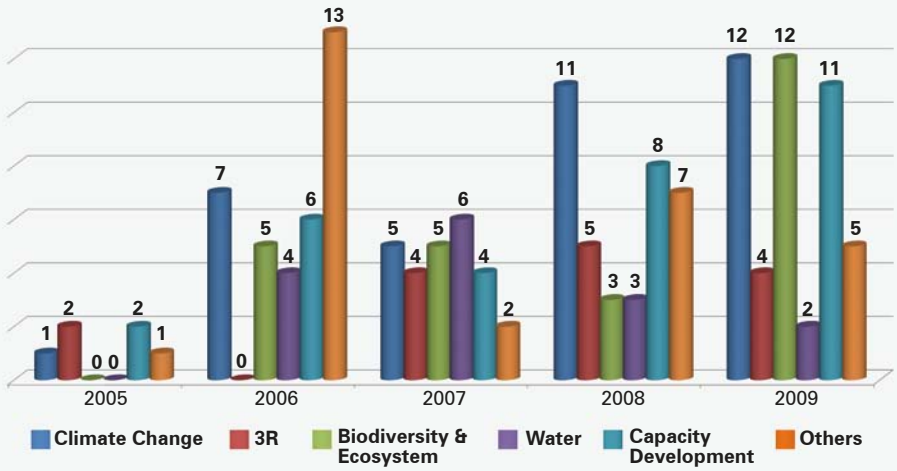


[Figure 2: Distribution of Selected Award and Showcase Projects*2]

*2: Countries were selected from 2006 to 2009 (In the case of Showcase programme in 2005, two countries were selected as "pilot project showcase".)

Thematic Area of Award and Showcase projects

In order to strengthen a focus of the programmes on priority thematic areas of APFED, more weight was given to the projects since 2008 that address climate change, 3Rs and biodiversity without excluding other sectoral or cross-cutting project proposals.*3 In the aggregated portfolio of the Award and Showcase from 2005–2009, 75 projects address one or more priority thematic areas. The priority policy areas designation corresponds to international environmental policy processes such as the United Nations Framework Convention on Climate Change (UNFCCC), Asia 3R Forum and the Convention on Biological Diversity (CBD). Other than these priority thematic areas, APFED Award and Showcase projects address water, capacity development and other sectoral or cross-cutting issues as expressed in "Others". "Others" refer to, for instance, environmental governance/ policies, environmental infrastructure/building, environmental finance, urban/rural development, social development and awareness-raising.



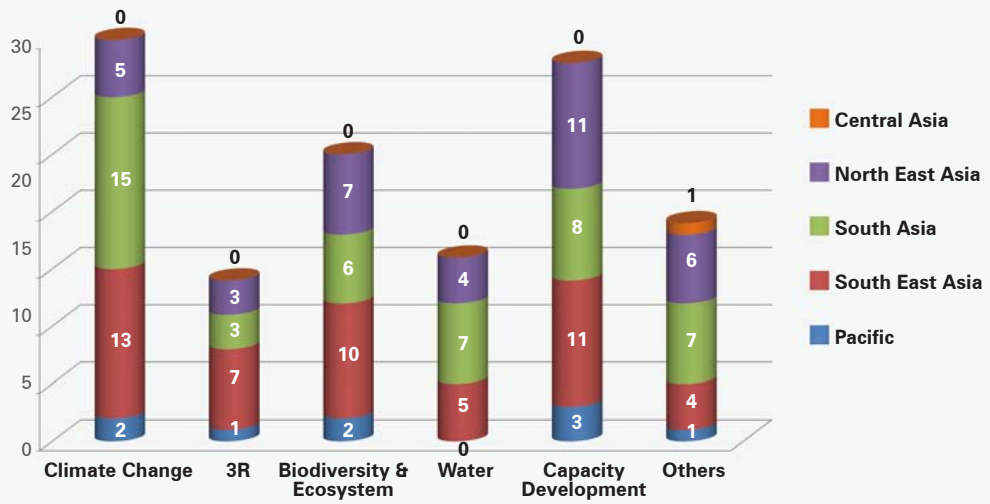
Note

- "Others" is consisted of additional components (i.e. Environmental governance/ policies; Environmental infrastructure building; Environmental finance; Urban/ Rural Development; Social Development; Awareness raising).
- Thematic areas which are distributed to "Others" are shown below: In 2005, Climate Change (1), 3R (1); In 2006, Climate Change (1); In 2007, 3R (1), Water (1); In 2008, Climate Change (1); and In 2009, Climate Change (1), 3R (1), Biodiversity and ecosystem (2), Capacity Development (1). They are counted as specific thematic areas.
- Regarding thematic areas, multiple answers are allowed.

[Figure 3: Distribution of Thematic Area, by Year]

Out of 75 projects, 43 (57.3%) have multiple components addressing more than one thematic area, and various combinations of multiple thematic areas can be found in the APFED Award and Showcase Programme projects. Co-benefit or multi-benefit approaches are commonly applied, such as those that address climate change, biodiversity and ecosystem, or climate change and the 3Rs. Poverty eradication, income generation and community empowerment are prevalent factors of the APFED Award and Showcase Programme projects.

*3: In terms of focus thematic area, "Climate Change" includes "Energy and Air." As for "Biodiversity and Ecosystem," "Land Management," and "Marine and Coastal" are included.



Note

- "Others" is consisted of additional components (i.e. Environmental governance/ policies; Environmental infrastructure building; Environmental finance; Urban/ Rural Development; Social Development; Awareness raising).
- Thematic areas which are distributed to "Others" are shown below: In North East Asia, Climate Change (1), 3R (1), Water (1), Biodiversity and ecosystem (2), and Capacity Development (1); In South Asia, Climate Change (1), Water (1), Capacity Development (1); and In South East Asia, 3R (1), Capacity Development (1). They are counted as specific thematic areas.
- Regarding thematic areas, multiple answers are allowed.

[Figure 4: Allocation of Thematic Area by Sub-region]

With respect to thematic areas or combinations thereof, there are variations that reflect certain national or sub-regional priorities or characteristics. South Asia, for instance, shows a greater emphasis on water issues such as water quality management, flood-drought control and mitigation as well as climate change adaptation. In Southeast Asia, climate change, biodiversity and ecosystem issues share a large proportion of the portfolio that aims to promote sustainable management of different ecosystems, such as tropical forests, wetland, peatland and coastal areas. In Northeast Asia, capacity development and cross-cutting projects appear to be prevalent in the portfolio, such as education and environmental lawyer training. In Central Asia and the Pacific, the number of APFED Award and Showcase projects is rather limited, but it would be wrong to infer that this represents a trend in the APFED portfolio as a whole.

Outstanding Award Winners

The following APFED Showcase projects or people have received prominent international awards:

- Ona Keto Community Reforestation Project in Papua New Guinea (2007 APFED Showcase programme) received the **ENERGY GLOBE 2010 - National Award**
- Setting up Rice Husk Gasification Model Project in Vietnam (2008 APFED Showcase Programme) received the **ENERGY GLOBE 2010 - National Award**
- Sustainable Development of Settlements in Karakum Desert in Turkmenistan (2007 APFED Showcase Programme) received the **ENERGY GLOBE 2010 - National Award**
- The Project Manager of the Promotion of Access to Environmental Information in Bangladesh (2006 APFED Showcase Programme) was awarded the **Goldman Environmental Prize 2009**

The 2010 APFED Showcase Programme – List of Selected Projects

An invitation for applications was launched for the 2010 APFED Showcase Programme. Ninety-three project proposals were submitted, and 11 projects were selected for funding, subject to completion of the project proposal verification process. The following list shows the 11 selected project proposals for which all preparations for project implementation were completed.

[Table 1: Selected Projects for the 2010 APFED Showcase Programme]

	Project Title	Thematic Area	Country
1	Adaptation to Climate Change through Conservative Agriculture for Improving the Food Security of Vulnerable Poor People in the Flood Prone Chalan Bel area of Bangladesh	Climate Change	Bangladesh
2	Community-business Parnership for Conserving Energy and Mitigating Climate Change	Climate Change	China
3	Climate Friendly and Biodiversity Nurturing Community Based Ecotourism and Pastoral Agroforestry in Helen Bayan Ulaan, Henti Province, Mongolia	Climate Change Biodiversity and Ecosystem Water	Mongolia
4	Integrated Rural Energy Development Platform (IRED Platform) Promoting Fuel Efficient Technologies and Agro-Ecological Techniques for Adapted and Affordable Climate Change Resilience and Mitigation	Climate Change	Cambodia
5	Introduction of the Concept of Payments for Ecosystem Services to Uzbekistan	Biodiversity and Ecosystem	Uzbekistan
6	Pollution Mitigation in Coastal Communities via the Multi functional Wetland (Mangrove) Approach with Biodiveristy and Sustainable Agri-business Co-benefits	Biodiversity and Ecosystem	Indonesia
7	Rehabilitating Cadmium Contaminated Paddy Land to be Integrated into Energy Production Landscape through Multi-stakeholder Partnership Actions	3R Biodiversity and Ecosystem Water	Thailand
8	Regional Climate Change Issues and Adaptation Measures for Low Lying Regions in the Context of Future Sea Level Rise	Climate Change	India
9	Application of Green Bio Energy City Concept in Trincomalee City Based on the Integrated Solid Waste Management	Climate Change	Sri Lanka
10	Zero Waste Community Development in Nepal	3R	Nepal
11	The Coron Initiative	Biodiversity and Ecosystem	Philippines

Further details of the APFED Award and Showcase projects are made available for review by various stakeholders with this **Booklet** and **APFED Good Practices Database** at **www.apfed.net/** and **www.apfedshowcase.net/**

Key Accomplishments and Lessons Learnt

Each of the 27 APFED Award-winning projects and 48 APFED Showcase projects in 2005–2009 APFED II demonstrate very interesting and innovative stakeholder driven activities for pursuing sustainable development, and constructive interactions between field action and macro-policy development. The following are some of the highlights of what has been achieved and identified as factors for success:

◆ Demonstrating Policy Nexus

A wide range of projects demonstrate various combinations of policy nexus that include climate change mitigation / adaptation, 3Rs, biodiversity and ecosystem conservation, health and sanitation, poverty eradication and community empowerment. Policy nexus can be found, for instance, in lychee horticulture farms to create emission credits for the carbon market (SC 2006, Vietnam), in methane-removal from solid waste landfills for the Clean Development Mechanism (CDM) project (AW 2008, Indonesia), restraining carbon emissions through sustainable peatland management (SC 2007, Indonesia), mangrove conservation (SC 2007, Thailand; AW 2009, Philippines), sustainable forest management and agroforestry (AW 2008, Nepal), handcraft-making to replace wildlife hunting (SC 2006, Pakistan), adaptive farming practices such as floating vegetable gardens and vegetable-seeding-pot promotion (AW 2007, Bangladesh; SC 2007, Bangladesh), and chemical management for reducing health risks and ecosystem damage (SC 2008, Mongolia).

◆ Promoting Participation in Decision-making and Action for Sustainable Development

Stakeholder dialogues were common features of many Showcase and Award projects. The most notable one was the assessment on public access to environmental information and stakeholder dialogue on environmental conflicts (SC 2006, Bangladesh). A multi stakeholder forum on integrated water management was created as an instrumental body for promoting stakeholder driven natural resource management (AW 2006, Philippines).

◆ Field Action Leading to Standard and Guideline setting, Business Model Transformation and Macro-policy Development

Green procurement guidelines were created for the business sector (SC 2005, Thailand), the national assessment on public access to environmental information led to the development and adoption of the legislation "The Right to Information Act of 2008" in Bangladesh (SC 2006, Bangladesh), and the study of eco-product purchasing patterns and pilot activities for promoting green products in the Korea have helped improve methods to promote green product marketing (SC 2006, Korea).

◆ Developing Markets for Environmentally Sounds Goods and Services

Informational tools such a labelling and certification have been successfully implemented to protect biodiversity and promote consumption of eco-friendly goods. Rice producers who agreed not to convert the forest habitat of the Ibis crane into paddy land can label their rice products with an "Ibis rice" certificate (SC 2008, Cambodia). Certification was a key factor in successfully promoting energy efficient light bulbs under the Efficient Lighting Initiative (AW 2007, China). An eco-enterprise project was established to promote environmentally sound products such as butter oil and other milk products, cactus fruit juice, and traditional medicinal plants as an alternative to resource intensive products which have degraded the land in the area (AW 2007, India-Gujarat).

◆ Building Information, Capacity Development Programmes and Infrastructure

A sustainability information centre was created at a local school for demonstrating forest resources and local livelihoods (SC 2006, Philippines), and at a higher educational institution (SC 2007, Mongolia). Eco-clubs were established as Green college programmes (SC 2008, India). A programme for training lawyers on environmental issues was developed and implemented (SC 2008, China).

◆ Demonstrating Environmentally Sound Technology and its Impacts

Wind-induced aerator systems were introduced for water purification (SC 2006, India). Efficient and cleaner technology was promoted for small and medium sized enterprises and has reduced pollution and energy use and improved profitability (SC 2006, Thailand). Drip irrigation and solar power were introduced (SC 2007, Turkmenistan). A technology park was established to demonstrate biogas plants and composting (SC 2008, Bangladesh). Dry toilets and biogas systems based on animal waste were introduced while applying slurry from biogas systems to farmland as fertiliser (AW 2009, China).

Other notable technologies include solar power (AW 2006, Australia; SC 2006, Nepal), wind turbines (SC 2008, Philippines), direct coconut compressors (called "Direct Micro Expelling technology, AW 2006, Solomon Islands), micro-hydro (SC 2007, Indonesia) and rice husk gasification (SC 2008, Vietnam), pest pheromone traps for integrated pest management (AW 2008, Bangladesh), and biofilters for purifying wastewater currently being replicated by a bilateral donor agency in Africa (SC 2007, Pakistan).

◆ Mobilising Communities for Collective Action on Sustainability

Composting bins and waste segregation stations were installed in the eco village established for tsunami affected communities and villagers were oriented to practice composting for reducing amounts of disposed waste (SC 2005, Sri Lanka). Strong community mobilisation can be found, for instance, in organic farming for protecting a lake (SC 2006, Myanmar), alternative livelihood training for youth and village communities (SC 2006, Mongolia), an illegal-wildlife-trading hotline (AW 2007, Vietnam), organic compost as a substitute for chemical fertiliser (SC 2007, Cambodia), eco-bags for changing the public's behaviour and encouraging the practice of composting (SC 2008, Fiji), training on elephant-deterrent methods (SC 2009, Cambodia), and 3R promotion (AW 2009, Japan-Ishikawa).

◆ Providing Platforms for Regional and Inter-regional Cooperation

The study on green consumerism has proposed mechanisms for Asia and the Pacific to promote eco-products and green consumption (SC 2006, Korea). The "Corporate Sustainable development Responsibility" (CSdR) concept was launched for promoting CSdR in Asia and the Pacific (SC 2006, Asia–Pacific coordinated by Singapore).

*Further details of the project reports are made available for review on the APFED Web site http://www.apfed.net/index.html or http://www.apfedshowcase.net/

Future Challenges

The APFED Award and Showcase projects not only demonstrated their achievements, but also future challenges, as sustainability efforts do not necessarily have an end goal, and may be ongoing processes. To maintain and scale-up community based activities for promoting sustainable development and encourage their replication, the following appear to present key challenges.

Assessing Community Characteristics

- In replicating good practices, it is vital to assess community characteristics in the planning process, including available natural resources and socio-economic conditions, as the higher reliance on local resources and the reflection of local socio-economic conditions enhances the probability of project success. Training for conducting participatory community appraisal is required.

Assuring Consistent Policy Development

- Sustainability policies must be maintained and reinforced to achieve higher effectiveness in policy implementation via strong political and public leadership. Communities need to continue to play a role in assuring a consistent sustainability policy trajectory and in promptly rectifying any attempt to derail policies away from sustainability policy principles.

Participation as a Driving Force

- Participation of stakeholders in decision making and implementation is an essential part in carrying out projects to achieve sustainable development — it enhances the sense of ownership. Continuous public participation remains essential for ensuring continuous and effective project implementation and monitoring, as well as in applying the PDCA cycle.

Information, Education and Communication

- Information access and disclosure, labelling, and certificates are powerful tools for bringing about shifts in behaviour and instilling sustainability policy principles, and such mechanisms need to be continued and expanded.

- Capacity development, outreach and media campaigns need to be sustained, and partnerships need to be built swiftly in order to maintain activities and the necessary funding.

- Effective information, education and communication tools need to be produced utilising a variety of media, including face to face communication in local languages and visual materials.

Incentives

- Income generation and incentives need to be incorporated and sustained that will, for instance, enhance income, reduce expenses or resource use, or improve corporate benevolence image.

Measuring Impacts

- Measuring the impacts will become increasingly important in order to mobilise public support for the project activities, particularly to link activities with international programmes. Technical skills need to improved to ensure effective measuring, reporting and verifying of project impacts.

Creating Constructive Interaction and Partnerships

- Gradual confidence building is essential for external facilitators to operate effectively in assisting local communities to develop and implement sustainability projects. Training is required to develop community leaders and external facilitators who can create such constructive partnerships, particularly for promoting innovative approaches.

Linking Field Action with Macro policy Transformation

- To scale up and replicate good practices, the creation of macro policy and institutional enabling mechanisms are essential. In this respect there are still many gaps, thus multi-stakeholder partnerships need to be catalysed to drive field action movements towards transforming macro policy and institutional frameworks.

Good Practice, Local Knowledge and Technology Sharing

- Upgrading knowledge centres and strengthening features of the APFED Good Practice Database are both beneficial.
- Replication of good practices requires concrete enabling mechanisms that can be built upon.

Designing an Architecture for Regional and International Cooperation

- APFED Award and Showcase projects provide useful empirical studies and materials to foster a variety of activities, including capacity development, and the Rio Earth Summit 2012 process to promote policy dialogue on green economy and institutional frameworks for sustainable development.
- APFED frameworks provide a useful prototype to link policy, science and field action, and such a framework needs to be sustained and expanded.

Award Projects

2006-2009

Year	Number of Projects
2006	5
2007	5
2008	6
2009	5
2009 (Japan Ishikawa Award)	6
Total	**27**

Area	Award
Climate Change	Gold
3R	Silver
Biodiversity & Ecosystem	Bronze
Water	Incentive
Capacity Development	
Others	

Solomon Islands

2006

Rehabilitating a Rural Economy with Virgin Coconut Oil Production

Project Site Location Malaita, San Cristabel and Santa Isabel

Background - Problems Addressed and Policy Responses

Many tropical coastal communities face the threat of rising sea levels, along with social issues. One, Solomon Islands, has experienced much social unrest. In an attempt to improve the socio-economic conditions of the population, a local church-linked company joined hands with an Australian technology company in a joint venture utilizing its Direct Micro Expelling (DME) virgin coconut oil (VCO) technology to form KPSI.

Coconut shells used for making by-products

Project Outline - Objectives and Activities

KPSI has improved the livelihoods of the rural population by more effectively utilising their coconut resources through the production of export-quality VCO, which can also be used as local transport fuel in farms. KPSI integrates marginalised rural populations into the formal economy by providing a full administrative framework for the DME system, finding committed families in rural areas, providing a credit mechanism, training staff and farmers, supervising construction and organising oil collection, quality control and export within full Organic Certification protocols.

Impacts and Achievements

The project has enabled farming communities to produce pure VCO, providing rural populations with a meaningful job, regular income and enhanced QOL*. Fourteen DME units have been installed in three island provinces and the HQ, warehousing and bulk storage has been set up in Honiara. Organic Certification was issued to 255 growers covering 2,622.75 Ha. over 86,000 litres of VCO have been produced since June 2004 (as of 2006) based on an averaged 10-unit output, with 80% being exported, for an income of over 164,000 AUD. Multiplier effects include the emergence of rural markets in the project areas.

* QOL: quality of life

Future Challenges

Some of the challenges are scaling up and replication of the project in other small island nations, while also maintaining demand for Virgin Coconut Oil. Despite the clear benefits, it requires strong-minded entrepreneurs to set up production centres and run them for a community, which has proved too difficult for some people. Further, although donor-assisted at the project outset, up-front equipment costs are high for subsistence farmers, thus a clearer support mechanism is needed to maintain the substantial benefits.

General Information

Name of the Implementing Organisation:
Kokonut Pacific Solomon Islands Ltd (KPSI)

Type of Organisation: Private Company

Contact: Colin Dyer
PO Box 1675, Honiara, SI
Tel: +677 28027 **Fax:** +677 28026 **E-mail:** colindyer@solomon.com.sb
Website: http://www.kokonutpacific.com.au

Project Reviewer (NetRes / Collaborators) that monitors the project:
Shashi Kad, Institute for Global Environmental Strategies (IGES) **E-mail:** apfed@iges.or.jp

Korea (Republic of Korea) — 2006

Resuscitation of the Geumho River

Project Site Location
Daegu Metropolitan city and Basin of the Geumho River

Background - Problems Addressed and Policy Responses
The Geumho River is a main tributary of the Nakdong River, an important source of water for the people living along the river basin. However, the Geumho became polluted, which triggered conflicts between upper and downstream areas. Considering the importance of water quality protection in the Geumho River, Daegu City established a strategic plan to make improvements.


The Geumho River winds through parts of Daegu

Project Outline - Objectives and Activities
Daegu City set a target of improved water quality of the Geumho River to meet National Environmental Standard Grade III - below BOD 6 mg/l. Restoration of the water environment, home to diverse animals and plants, was another quality improvement objective. The construction of sewage treatment plants was incorporated into the city's long-term development plan, for which a large budget was set aside. Roles have also been assigned for corporations, environmental organizations and citizens as part of the improvement plan.

Impacts and Achievements
Wastewater treatment plants were introduced to the city, which raised the Geumho River water quality. Awareness-raising was provided via NGO environmental education programme financed by Daegu City. Ordinary citizens participated in water quality monitoring and reporting and played an important role in maintaining water quality. The goal of National Environmental Standard Grade III was achieved, with water quality maintained up to 4.0 mg/l on average in 2005 and upstream-downstream conflicts over water pollution have been resolved.

Future Challenges
Restoration of the water environment, including conservation of biodiversity on the riverbanks, although partly addressed within objectives of city plans, needs to be further strengthened.
Other cities in Korea may have similar water quality issues, which would require investment in wastewater treatment plants as well as public involvement in education and awareness-raising programmes similar to that undertaken in Daegu City.

General Information

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Daegu, Metropolitan City

Type of Organisation: Governmental Organisation

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Area: Climate Change | 3R | Biodiversity & Ecosystem | Water | Capacity Development | Others
Award: Gold | Silver | Bronze | Incentive

Australia

2006

* etc.=Urban Environment

Christie Walk Ecocity Project

Project Site Location South Australia, Adelaide

Christie walk complex

Background - Problems Addressed and Policy Responses

Christie Walk was designed to demonstrate the concept of building housing which is resource efficient, non toxic, energy and water efficient and which increases biodiversity, as envisaged by the Urban Ecology Australia Inc (UEA) vision and Ecopolis Architects. As the project is situated in Adelaide - the most mixed-use, culturally diverse part of the city - the design had to overcome complex inner-urban contextual issues.

Project Outline - Objectives and Activities

Christie Walk is a research and development project, tasked with the objective of developing a mixed, medium-density community housing project that maximises lifestyle options and minimises environmental impact for a cost comparable to conventional inner-urban developments, and with very low energy bills. In this community-titled development, residents own their own properties and share the common areas. This project demonstrates sustainable development and the importance of urban environments and community processes to overall goals of sustainability.

Impacts and Achievements

Christie Walk was designed to demonstrate the feasbility of addressing key environmental issues via the method by which the built environment is planned and developed, and that social sustainability, the support of community processes and the creation of convivial places are all integral to achieving this. The project has tackled environmental issues such as water conservation, water capture, energy conservation, energy capture, biological productivity, biodiversity, air quality, transport and social sustainability. It has also received much media exposure and welcomed thousands of visitors keen to learn about ecological architecture within the community.

Future Challenges

Future challenges involve ensuring that the wider community is kept informed of the programmes and concepts embodied in Christie Walk. To date this has involved regular site tours, a community mural, videos and an information booklet, as well as the Centre for Urban Ecology, run by the UEA using common facilities and space within the five-storey apartment building. The biggest challenge, however - convincing developers and the government to fully adopt such holistic solutions involving community adaptation to climate change - remains.

General Information

Name of the Implementing Organisation:
Urban Ecology Australia Inc & Ecopolis Architects Pty Ltd.

Type of Organisation: Private Company & NGO/CBO

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Philippines 2006

Institutionalising Local Mechanisms for Integrated Sustainable Water Management and Water Governance

Project Site Location Baguio City

Background - Problems Addressed and Policy Responses

Access to safe drinking water has been increasingly threatened due to growing water demand, over-extraction of groundwater, pollution of water basins and the impact of global warming. The authority over water resource management conventionally rested with various line ministries, and such compartmentalised public administration was a major obstacle to promoting integrated water resource management.

Multi-stakeholder dialogue on water resource management in Baguio

Project Outline - Objectives and Activities

The project aimed at strengthening the water-resource governance mechanisms of Baguio City to enhance the convergence of water-related policies and to promote better policy coordination for improved water resource management at the local level. Under the project, it was intended to reform the vertically compartmentalised water resource management to a horizontally unified mechanism, develop a medium-term water development and investment plan, revise water charges and cost recovery scale and to create multi-stakeholder policy dialogue bodies.

Impacts and Achievements

To address local water management an executive order was adopted to unite the disparate public offices with authorities over water resources in the city's water department, resulting in the creation of the City Water Resources Board (CWRB). A city ordinance was adopted in 2007 that requires the city to issue a permit for well-drillers and water extractors and the city to compel well-drillers and water extractors to submit environmental monitoring reports. Further, a water investment plan was adopted for 2005-2010, valued at 1.3 million USD. Stakeholder dialogues were institutionalised and integrated watershed management and reforestation activities were launched.

Future Challenges

Forests are dwindling and need bolstering to enhance their capacity to store water; Friction between forest conservation issues and the squatters living there needs resolving; A collective consensus on policy options between potable water distributors, well drillers and pipe water suppliers who all have differing interests needs to be reached, in order to conserve water resource use; Sewage treatment fees and collection methods require regular monitoring, and the problem of unlicensed car washers releasing waste water into rivers needs resolving.

General Information

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Type of Organisation: NGO/CBO + Governmental Organisation

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Area Climate Change 3R Biodiversity & Ecosystem Water Capacity Development Others

Award Gold Silver Bronze Incentive

China 2006

Maintaining Environmental Sustainability via Legal Means

Project Site Location Beijing

Background - Problems Addressed and Policy Responses

The Center for Legal Assistance to Pollution Victims (CLAPV) was established in October 1998 by China University of Political Science and Law and registered with the Judicial Ministry of the PRC. They work together with legal experts and scholars to provide free legal advice for pollution victims applying via a hotline, letter or personal visit.

4-Pipes collecting polluted waters

Project Outline - Objectives and Activities

CLAPV aims to safeguard the environmental rights and interests of pollution victims via provision of assistance in court proceedings, which also increases public awareness of environmental and legal rights, thus promoting the enforcement and compliance of Chinese environmental laws. CLAPV's objectives include environmental law enforcement training, raising public awareness and improving environmental legislation and assuring compliance with the Environmental and Natural Resources Law.

Impacts and Achievements

CLAPV offers legal assistance to environmental victims. Through June 2010, CLAPV had assisted in 150 environmental pollution cases, most of which have broadly impacted on society as they closely relate to property, health and even lives of citizens. As a result of CLAPV's activities in securing environmental rights via legal means, the pressure is now on enterprises that have infringed rules or damaged the environment and local governments lax in environmental protection. This raises public awareness of the need to protect their environmental rights. CLAPV is also responsible for enactment and amendment of most of China's environmental laws.

Future Challenges

The challenges are to continue the hotline and ongoing training of legal personel in environmental practice, as well as creation of consultancies and holding of seminars for NGOs and journalists. Although CLAPV has set up an environmental public interest law firm, which will play an important role in training environmental lawyers, more financial and programme support is needed to attract more full-time layers into litigation and research, as well as to help form an overall environmental legal system.

General Information

Name of the Implementing Organisation:
Center for Legal Assistance to Pollution Victims (CLAPV),
China University of Political Science and Laws

Type of Organisation: NGO/CBO

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Bangladesh 2007

* etc.=Shifting rivers and riverbank erosion

Disappearing Land: Supporting Communities Affected by River Erosion

Project Site Location Gaibandha District

Floating vegetable gardens attended by growers during peak floods

Background - Problems Addressed and Policy Responses

A large part of Bangladesh is covered by a network of rivers and tributaries whose courses change due to geo-hydrological factors. Since most of the land is either densly inhabited or put to other economic use, river course variation has historically led to severe socio-economic impacts on the communities living adjacent to these rivers.

Project Outline - Objectives and Activities

1) To provide basic services, through cluster village development and multi-purpose refugee shelters, to the poorer citizens living on riverbanks and vulnerable to natural disasters. 2) To provide alternative livelihood options to persons displaced or at risk of being displaced by riverbank erosion. 3) To improve the social, civil, and political rights of disadvantaged citizens affected by riverbank erosion.

Impacts and Achievements

Four hundred and sixty sandbar farmers have produced 2,244 tons of pumpkins with 359 USD per capita net income in 180 days with secured food supply and income during the lean period; 116 floating vegetable producers have earned 2,137 USD; 2,950 homestead vegetable producer groups have produced 495.6 tons of green vegetables, fetching an income of 48,796 USD; 379 floating fish cage operators have produced 9.4 tons of fish, with an income of 9,825 USD in six months; and a total of 18 community-based fishery groups have earned an income of 14,637 USD.

Future Challenges

Characterising and understanding the causal factors of river erosion and introducing mitigation options; recognition of displaced communities by local governments for providing the state benefits; identification and construction of resettlement areas, enhanced support for capacity-building for resilient livelihood-generating activities; greater access to natural resources, including the sand dunes, for displaced populations; promoting private sector involvement and greater coordination among NGOs and local governments for sustainability of initiatives.

General Information

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Type of Organisation: NGO/CBO

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Area Climate Change 3R Biodiversity & Ecosystem Water Capacity Development Others

Award Gold Silver Bronze Incentive

China 2007

The Efficient Lighting Initiative Quality Certification Institute - Promotion of Energy Efficient and Sustainable Lighting

Project Site Location Beijing, China

A testing laboratory based in Beijing

Background - Problems Addressed and Policy Responses

Improving the efficiency of lighting can be an important means to lower greenhouse gas emissions. The Efficient Lighting Initiative (ELI) was designed as a market transformation programme intended to expand markets for energy efficient lighting, specifically, to increase demand, sales volume, and product availability to induce a downward pressure on prices in the target markets over the long-term.

Project Outline - Objectives and Activities

The long-term aim of ELI is to maintain a self-sustaining, non-profit organisation that facilitates the usage of high quality, high efficiency lighting products in developing countries. ELI focuses on the following critical activities: development and revision of product quality specifications; creation of certified products available to the market; awareness-raising of the ELI brand and benefits to market aggregation groups; and support for adoption of individual or groups of ELI specifications by such market aggregators.

Impacts and Achievements

ELI developed a clearly defined strategy to implement energy-efficient lighting technologies and products targeted at developing countries. The ELI Voluntary Technical Specifications are developed in line with international best practices in consultation with key market stakeholders. The ELI quality certification is fully operational with associated technical and application documentation available and appropriate certification procedures in place. ELI has established a dialogue with manufacturers; 20 manufacturers have applied for certification for over 200 models. ELI conducted two Conferences in China and facilitated three stakeholder meetings in its target regions.

Future Challenges

The ELI experience shows that it is indeed possible to transform markets via market-oriented and voluntary labeling schemes. However, market penetration of high efficiency and high quality products could only be increased owing to the presence of regulatory support and endorsements of high efficiency performance specifications at the national level. Therefore, local representation and replication of the ELI approach makes sense and reinforces the perception of value added by voluntary labeling schemes.

General Information

Name of the Implementing Organisation:
ELI Quality Certification Institute

Type of Organisation: Governmental Research Institute

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India etc. 2007

* etc.=Rural Innovative Enrivonmental Finance

Gram Nidhi: Eco Enterprises for Sustainable Livelihoods in Ecologically Semi-Arid Rural Areas

Project Site Location Gujarat State

Women entrepreneur produce organic goods

Background - Problems Addressed and Policy Responses

Despite extensive efforts by the Indian government and concerned agencies to reduce poverty, particularly in rural areas, over 220 million people in rural India were still under the poverty line in 2004-2005. The recent economic growth has not provided much benefit to such areas, thus practical measures are required to assist in rural development.

Project Outline - Objectives and Activities

This project aims to establish eco-enterprises for supporting rural development. The target villages depend highly on the natural resources from their neighboring Hingolgadh sanctuary, an area that traditionally cultivated water-intensive crops and cotton, but is now subject to severe environmental degradation. The key objectives are to establish eco-enterprises, including production of organic products, through the village-level institution Paryavaran Vikas Mandlas (PVM), and to enhance the capacity of target villagers for effective management of natural resources.

Impacts and Achievements

At the target villages, PVM are now producing valuable organic goods such as butter oil, cactus fruit juice and traditional medicine plants for the market. The introduction of animal husbandry through provision of training to the villages has increased milk production, allowing surpluses to be sold. Money obtained from this and the sale of organic products can be put towards child education or saved for future emergencies. Another major impact of this project is in its challenge to establish female role stereotypes in India's highly male-dominated society.

Future Challenges

The existence of a funding organization and the Centre for Environment Education (CEE) played pivotal roles in this project; without their intervention, particularly at the start of the project, it would have been very difficult to gain the villagers' recognition as to why they should participate in the project. Therefore, it is important to assess what motivations lie behind village institutions and communities.

General Information

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Centre for Environment Education

Type of Organisation: NGO/CBO

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Area Climate Change 3R Biodiversity & Ecosystem Water Capacity Development etc Others

Award Gold Silver Bronze Incentive

India 2007

Transforming Lives and Landscapes - ITC's Integrated Watershed Development Programme

Project Site Location Rajasthan, Maharashtra, Madhya Pradesh, Bihar, Andhra Pradesh, Kamataka, Tami Nadu

The satisfied villagers who are participated in the project

Background - Problems Addressed and Policy Responses

The project sites, Madhya Pradesh and Rajasthan States are located in the west of India, a semi-arid climate zone with average yearly precipitation of 1,043 mm. Despite the prevailing water stress and drought in the region, the primary industry is agriculture. However, yields are unstable, which destabilises the livelihoods of farmers.

Project Outline - Objectives and Activities

The objective of this watershed management programme is to improve the availability of water for agriculture, develop livelihoods and raise environmental sustainability. Under the water and soil conservation programme, check dams and irrigation tanks have been installed in close collaboration with the community. An animal husbandry programme provides low-fee-based door-to-door services for artificial insemination and livestock management training.

Impacts and Achievements

Three major positive impacts on the local community have been observed: increased income level; empowerment of the villagers; and improvement of the environment through groundwater replenishment via the installed rainwater harvesting structures and the adoption of sustainable agricultural practices. Although the actual income figure is unknown, there is an overall perception of raised standard of living. Variation in the types of agriculture practised as led to reduced vulnerability to natural disasters. Further, increased empowerment of the villagers through working on the project has raised their self-confidence and willingness to assist in other voluntary efforts.

Future Challenges

Future challenges for this project are in sustaining the institutional mechanism at the village level for governance and decision-making, livelihood enhancement, encouraging voluntary action, and maintenance and operation of rainwater harvesting infrastructures. Further, interaction between the governmental programme and NGO activities needs to be enhanced.

General Information

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Type of Organisation: Private Company

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Vietnam 2007

Promoting Public Participation in Protection of Vietnam's Wildlife via Education for Nature - Vietnam's Wildlife Crime Hotline

Project Site Location Vietnam

Background - Problems Addressed and Policy Responses

The illegal trade in wildlife in Vietnam is an emerging issue due to growing demand for wildlife products, such as traditional medicines and food soaked in alcohol and pets, itself caused by a trend in society's association of wildlife products as status symbols.

Public bus advertisement depicting wildlife crime

Project Outline - Objectives and Activities

The Wildlife Crime Hotline enables the public to be actively engaged in the protection of wildlife and is used to report on suspected crimes involving wildlife via a free hotline. Those reporting are kept up-to-date with cases. Education for Nature-Vietnam (ENV) has made efforts in educating the public on wildlife protection, and in establishing the Wildlife Protection Volunteer Network and Mobile Wildlife Crimes Unit for investigating wildlife crimes.

Impacts and Achievements

The number of wildlife crimes has decreased since 2005. The number of reports received by the Hotline rose by 42% in its second year, and from 2005 to 2006, 383 crimes had been logged, 314 of which were resolved. Punishments start with a warning issued by ENV staff or the authorities, then, for example, confiscation of animals and loss of the business license. The impacts can be measured by the number of successful cases and use of the Hotline. Public awareness campaigns and university events have attracted youth, some of whom are involved in the Wildlife Protection Volunteer Network.

Future Challenges

Challenges are; 1) creation of a guideline that can effectively implement the law and elucidate the interpretation of the articles of the Biodiversity Law; 2) government involvement through law enforcement that includes the confiscation of wildlife from illegal owners and the prosecution of owners involved in the wildlife black market; and 3) capacity development of volunteers and inspectors for identifying legal and illegal species and for conveying the potential criminal implications to the related parties.

General Information

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Education for Nature-Vietnam (ENV)

Type of Organisation: NGO/CBO

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Area Climate Change 3R Biodiversity & Ecosystem Water Capacity Development Others
Award Gold Silver Bronze Incentive

Nepal

2008

* etc. = Alternative livelihoods

Mitigation of the Effects of the Carbon Dioxide and other Greenhouse Gases by Controlling Slash and Burn Practices

Project Site Location

Manahari, Handikhola, Kankada and Raksirang VDCs, Makawanpur District

The successfully introduced agroforestry, banana planting

Background - Problems Addressed and Policy Responses

Shifting cultivation in increasingly shorter cycles on the steep slopes of the project areas is associated with deforestation, loss of biodiversity, threat of forest fires, emissions of greenhouse gases, and serious soil erosion, leading to a significant decline in land productivity. In addition, local indigenous minority communities lack know-how and make little use of agricultural inputs.

Project Outline - Objectives and Activities

The specific objectives were: 1) development of appropriate land use practices for sustainable production as an alternative to shifting cultivation; 2) introduction of several incentive schemes to motivate the farmers to adopt energy-saving technologies; 3) development of community-based organisations to implement activities; 4) development of skilled human resources. Main activities were: a) institutional development; b) introduction of agroforestry in slash and burn areas; c) promotion of energy-efficient technologies; d) livelihood promotion; e) capacity development.

Impacts and Achievements

The project successfully introduced agroforestry, mainly based on banana planting (also pineapple, cinnamon, broom grass, etc.), while integrating horticulture development, livestock farming and vermicomposting. The most important achievement of the agroforestry component was to improve the livelihoods of local farmers by offering a number of income opportunities. In total, 1,089 households participated in agroforestry over 438 hectares of land during the project period. Most households also benefited from at least one energy-saving technology. Informal and formal local community organisations created by the project have taken the initiative in continuation of project activities.

Future Challenges

Remaining challenges include: 1) extension of the successful activities; 2) linkage of the agricultural cooperatives and the savings and credit groups with existing community-based organisations; 3) addressing unresolved tenure rights in shifting cultivation land; 4) consideration of monitoring of emission reductions on representative test plots; 5) ensuring all poor ethnic groups are involved in accordance with the proportion of the different ethnic communities within the group of shifting cultivators; 6) promotion of a more active role for women in the formal community organisations.

General Information

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Indonesia ♻ 2008

Public-Private Partnership for Improving Waste Management, Mitigating Climate Change and Promoting Community Development

Project Site Location
Pontianak, Bekasi, Palembang , Makassar


Methane transport pipes in Pontianak

Background - Problems Addressed and Policy Responses
Severe sustainability issues have been generated in Indonesia due to the rising volumes of waste it produces. Further, landfills cause conflicts over land use and scavengers working on them face health risks and remain socially marginalised. Landfills also emit methane gas, which has a very high climate change impact - 25 times the global warming potential (GWP) of CO_2.

Project Outline - Objectives and Activities
Gikoko, a private company, developed a plan with the city authority to remove methane in the cities of Pontianak, Bekasi, Palembang and Makassar and registered the project under the United Nations Framework Convention Climate Change Clean Development Mechanism (UNFCCC CDM). Gikoko agreed to share the proceeds from CDM for community development and upgrading waste-collection systems. In June 2007, the first Pontianak Landfill gas-collection and control system was constructed and an emission-reduction purchase agreement was signed with the World Bank.

Impacts and Achievements
The project was successfully registered under the CDM, and demonstrated a methane-removal rate of 55-60%. Validation of methane gas removal for CER in Palembang, Bekasi and Makassar began in January 2008 with the UNFCCC technical review team of validation officials and CERs were issued thereafter. Several large municipal cities, including Jakarta, have stipulated that the CDM shall be promoted through public–private partnerships, building upon Gikoko's business model. Tripartite dialogues have been promoted among Gikoko, local waste management authorities and scavenger communities for improving waste management and promoting community development.

Future Challenges
While methane incineration systems were installed and partially operated, they are not used to generate energy, electricity for instance, due to the subsidised price and exclusive grid control under the national power company. Despite the promotion of 3R policies, waste volumes continue to increase and waste separation at source is underpromoted. Further, scavengers still operate the landfill sites and no plans have materialised to share revenues with local communities as the Certified Emission Reductions have not been sold.

General Information

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Type of Organisation: Govermental Organization, Private Company

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Area Climate Change 3R Biodiversity & Ecosystem Water Capacity Development Others
Award Gold Silver Bronze Incentive

Bangladesh

etc. 2008

* etc. = Agricultural Chemicals

Improving Rural Livelihoods: Promoting Sustainable and Safer Vegetable Production

Project Site Location Bangladesh and India

Background - Problems Addressed and Policy Responses

Eggplant is an important vegetable in South Asia. In its cultivation, pesticides are increasingly used due to increased damage by arthropod pests such as the eggplant fruit and shoot borer (EFSB). However, many of the pesticides are classified by WHO as extremely hazardous and banned or severely restricted due to their accumulative negative impacts on human health and ecosystems.

Pheromone trap used as integrated pest management

Project Outline - Objectives and Activities

Under the project for promoting integrated pest management (IPM) in Bangladesh, the Bangladesh Agricultural Research Institute (BARI) has undertaken measures to eliminate the use of pesticides and to promote alternative pest control methods, such as insect pheromone traps. The measures included prompt cutting and removal of pest-damaged shoots, development of EFSB-resistant eggplant cultivars, biological control with locally-available natural enemies, and sex pheromone traps using female pest pheromones to attract male pests and kill them in water-filled containers.

Impacts and Achievements

Demonstrations and training were conducted on IPM technology for rural farmers and the EFSB IPM technology was adopted by 9,984 eggplant growers in Bangladesh and India over the past six years. This reduced pesticide use by up to 75%, the cost of production by 30% and eggplant infection by up to 40%, and increased the net income of the IPM adopters by 60%. A documentary film was produced in English and then dubbed into Bengali, Gujarati, Hindi, Khasi and Oriya and telecast multiple times, and three multi-lingual follow-up brochures were produced. Reduced health hazards and resource degradation were also observed.

Future Challenges

It is important to increase the number of IPM-practicing farmers by demonstrating the multiple merits of reduced infection rates, reduced health and ecosystem hazards and increased profits. It is also vital to inform consumers of the production process of eggplant, particularly pesticide use and IPM implementation, and develop markets and partnerships for promoting IPM-cultivated eggplant. Further, law enforcement and compliance need to be strengthened on pesticides, taking into account the Rotterdam Convention on Persistent Organic Pollutants.

General Information

Name of the Implementing Organisation:
AVRDC - The World Vegetable Center

Type of Organisation: NGO/CBO, Governmental Research Institute

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Building Zero Energy Development Communities to Mainstream Sustainability - T-Zed Homes

Project Site Location
White field, Banglore, Karnataka

Background - Problems Addressed and Policy Responses
As Bangalore city grew it engulfed the surrounding villages, which has placed pressure on basic facilities such as sawage and water supply. Overtaking of the villages also led to loss of natural drainage channels and sources of water provided by a wide network of lakes, which are now either repositories for sewage or development sites for real estate projects.

T-Zed apartment blocks showing projecting and receeding massing creating shading for the lower floors

Project Outline - Objectives and Activities
The purpose of BCIL is essentially to mainstream sustainability, which means utilising so-called 'alternate' technologies and establishing them as cutting-edge systems needed in the marketplace. BCIL's work on energy and water led it towards implementing projects like T-Zed. In order to reduce CO_2 emissions, activities such as setting targets for optimal social and environmental standards and sourcing alternative "eco-friendly" modes of energy use were implemented.

Impacts and Achievements
Green homes are available at almost the same initial cost as conventional buildings and, due to changing attitudes toward the environment, buying into such houses has led to a redefinition of where consumers now place value in life. Also, pilot communities have awakened members to the new sensitivities of rational views of water and energy without having to compromise on comfort and convenience. Furthermore, 20,000 tonnes of CO_2 capital savings (approx. $240,000), and 1,500 tonnes of CO_2 operational savings (approx. $180,000 for annual) were achieved.

Future Challenges
Although the concept of T-Zed can be applied to any income group, the civil construction cost is not affordable. T-Zed assumes that if the state government can provide the land by purchasing it at a subsidy from municipalities, such houses should be affordable, and provide the same, or comparable level of service, quality, comfort and functions for those in the lower, and low-middle income groups.

General Information

Name of the Implementing Organisation:
BCIL (Biodiversity Conservation India Limited)

Type of Organisation: Private Company

Contact: Varshaa, Associate Architect
#397, 13 cross, sadashiva nagar,, bangalore, india 560080
Tel: (+91) 89 40184018 **Fax:** (+91) 89 40184019 **E-mail:** varshaa.arch@ecobcil.com
Website: http://ecobcil.com/

Project Reviewer (NetRes / Collaborators) that monitors the project:
Ikuyo Kikusawa, Kitakyushu Urban Centre, IGES
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Area: Climate Change, 3R, Biodiversity & Ecosystem, Water, Capacity Development, Others

Award: Gold, Silver, Bronze, Incentive

China 2008

*etc.=Environmental technologies, Rural development

Capacity Building for Sustainable Construction

Project Site Location

Three northeastern Chinese provinces and the Inner Mongolia Autonomous Region

Strawbales building

Background - Problems Addressed and Policy Responses

Every year, over 400,000 people die prematurely in China due to poor air quality. China is now the largest global greenhouse gas emitter, with approximately half of emissions being attributable to the construction and operation of buildings. Sustainable construction in China is therefore a topic of international concern.

Project Outline - Objectives and Activities

The ultimate goal of the project is to enable the construction of architecturally sound buildings using environmentally-preferable and locally-sourced materials, labour and financing. In this concern, ADRA China has introduced strawbale construction technology.

Impacts and Achievements

Training has been held for 120 building technicians. External to the project's aims and objectives, a number of secondary benefits have also been realised: Rural strawbale homeowners and builders are showing interest in other aspects of sustainable construction, such as passive solar, rainwater capture, efficient lighting and efficient stoves. These same homeowners, builders, straw farmers and government officials are becoming increasingly aware of other sustainability issues such as organic farming practices and resource conservation.

Future Challenges

As brick production will be gradually phased out, loss of employment in this field has been recognised, but not ameliorated at the governmental level. Taking into account the conventional reliance on brick for housing, a large number of workers will lose their livelihoods. Another anticipated concern is that along with the expansion in strawbale house construction, improperly trained builders may become involved in the process. Thorough training and education therefore needs to be provided to all the stakeholders involved.

General Information

Name of the Implementing Organisation:
Adventist Development and Relief Agency (ADRA) China

Type of Organisation: NGO/CBO

Contact: Linda Zhu, Country Director for ADRA China, Jacob Liu, Project Coordinator for Straw Building Project
Room 103, Building E, Roman Garden 18 Hui Xin Xi Jie, Chao Yang District Beijing, 100029, China
Tel: + 86-10-6495-7189 (Ext.801) **Fax:** +86-10-6495-7153
E-mail: lindazhu@adrachina.org / jacobliu@adrachina.org

Project Reviewer (NetRes / Collaborators) that monitors the project:
Ikuyo Kikusawa, Kitakyushu Urban Centre, IGES **E-mail:** kikusawa@iges.or.jp

Philippines ♻ 2008

Ecological Solid Waste Management Programme [ESWM]

Project Site Location
Santo Tomas Municipality, Davao del Norte

Background - Problems Addressed and Policy Responses
The waste generated in Santo Tomas is mainly organic; and in 2003, 368 tons were generated, with 89% from agro-industrial sources followed by recyclable waste from residential sources. The lack of proper collection and disposal facilities has exacerbated the waste problem. Thus, the ESWM programme was established to promote waste reduction, through enhanced public participation.

The itinerant buyers of recyclable wastes, such as plastics and bottles around the municipality

Project Outline - Objectives and Activities
A ten-year plan composed of education, engineering, enforcement and entrepreneurship was established as a guiding framework. The education component promotes information and education to introduce the programme to the public; the enforcement component lays out the regulations on non-segregated waste disposal; and the third component, engineering, supports infrastructure and technical requirements such as collection, transportation and disposal. Entrepreneurship supports various income-generation projects from waste management, such as composting and recycling.

Impacts and Achievements
After four years of implementation, waste generation has decreased to 75% of the original 368 tons. This reduction is attributed to the treatment of agro-industrial waste through composting as well as waste segregation and recycling at the household level. Improved recycling facilities have also led to a 45% waste diversion rate and have generated income from the sale of compost products and construction materials made from waste. The success of the ESWM programme has earned Santo Tomas recognition as a model SWM implementer. As such, it has attracted neighboring communities, municipalities, cities and organizations to adopt the same SWM strategies.

Future Challenges
Although the municipal government has been successful in adopting practical strategies to address the increasing amounts of waste generated and gained popular public support in its waste endeavours, the sustainability of the programme remains a challenge. Institutionalisation of the ESWM programme and its activities is needed in order to sustain the achievements.

General Information

Name of the Implementing Organisation: Municipality of Santo Tomas

Type of Organisation: Governmental Organisation

Contact: Mayor Maximo Estela
Municipality of Santo Tomas Municipal Hall Building Government Center, Fd. Rd. 3 Sto. Tomas, Davao del Norte 8112 Philippines
Tel: (084) 829-0290 **Fax:** (084) 829-0290 **E-mail:** lgu_stt@stotomas.gov.ph

Project Reviewer (NetRes / Collaborators) that monitors the project:
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Area Climate Change 3R Biodiversity & Ecosystem Water Capacity Development Others

Award Gold Silver Bronze Incentive

India 2009

* etc. = Alternative livelihoods

Promoting the Ingenious Use of a Plant Invasive, Lantana Camara, to Enhance the Livelihood of the Forest Dwelling Communities

Project Site Location

Malai Mahadeshwara Hills (MM Hills), Karnataka State

Background - Problems Addressed and Policy Responses

Extensive felling of native forest vegetation in the MM Hills, especially bamboo, led to rapid spread of *Lantana camara* (Lantana), one of the world's most invasive weeds, over nearly 80% of the forest land. The livelihood of the local tribal community, the Soligas, was affected from 1996 when the district forest officials imposed a ban on bamboo felling.

Varnishing faniture made of *Lantana camera*, invasive weed

Project Outline - Objectives and Activities

Specific objectives were to 1) train tribal artisans in the use of Lantana as a substitute for bamboo in fabricating furniture, 2) design appropriate Lantana products for rural and urban clients, 3) develop rural and urban market strategies and linkages for Lantana products, 4) evaluate the diffusion of Lantana technology among the tribal communities and its impact on their livelihoods. The main activities involved: identification of beneficiaries, awareness creation, exposure trips, training programmes, product design inputs and marketing.

Impacts and Achievements

The programme has significantly impacted, socially and economically, those families who have made Lantana furniture making their main source of livelihood. Based on interviews with male and female artisans, there appears to be a high level of satisfaction linked with the income obtained from Lantana furniture making. Environmentally, the project has created an alternative to livelihoods based on firewood chopping. However, interviews conducted with the forest officials suggest that the Lantana used by the artisans is usually collected from the shady slopes, whereas the major Lantana invasion is in the open areas.

Future Challenges

Interviews with the participants revealed that there is a certain amount of resistance to the new type of work from the older generation. Another challenge is the high trainee dropout rate of this project, the primary cause of which is competition from quarry work. There is also a time lag of about 45 days from the start of training to actual sale of products, which is financially challenging for those whose livelihood is usually based on a daily wage.

General Information

Name of the Implementing Organisation:
Ashoka Trust for Research in Ecology and the Environment (ATREE)

Type of Organisation: Academic/Research Institute

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Tel: 91 80 23635555 **Fax:** 91 80 23530070 **E-mail:** kannan@atree.org **Website:** http://www.atree.org

Project Reviewer (NetRes / Collaborators) that monitors the project:
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Remarks: Shashi Kad **E-mail:** shashi.kad@gmail.com

Philippines 2009

*etc.=Gender

The Working Ducks with Women Power for Agriculture Governance and Rice Sufficiency

Project Site Location Mindanao Island

Background - Problems Addressed and Policy Responses

High chemical inputs to the rice farming industry are causing health problems and a debt cycle among farmers in the Philippines. The Integrated Rice-Duck Farming system (IRDF), on the contrary, minimises chemical inputs while maximizing the ecological features of rice paddies. Facilitated by PARFUND, an agrarian reform NGO, IRDF is particularly promoted and valued by the women leaders.

Ducklings eating pests and weeds after rice transplanting

Project Outline - Objectives and Activities

PARFUND facilitates the efficacy and practical implementation activities of the IRDF system. The main activities of PARFUND are:

-Support of the IRDF system throughout the entire Philippines
-Dissemination and upgrading of analysis and other related information
-Provision of training for the farmers, technicians, and other workers of partner agencies
-Conducting and facilitating monitoring and research
-Constructing a holistic IRDF network both nationally and internationally
-Promotion of market mechanism of IRDF industries

Impacts and Achievements

-Raised food security via sustainable farming and yield improvements
-Increased savings as a result of less agrochemical inputs
-Alternative income generation from duck eggs and meat
-Reduced labor for rice farming
-Improved food varieties and nutrition

Future Challenges

PARFUND acknowledges that there are a hundred approaches to a hundred regions, meaning that the IRDF project needs to respect each region's characteristics and select outstanding champions (or leaders) in each region in order to effectively enhance the project. Currently, IRDF implemented by PARFUND is estimated to cover 1,000 hectares around the Mindanao region and their target is to expand IRDF areas to 5,000 hectares by 2015.

General Information

Name of the Implementing Organisation:
PARFUND (Philippines Agrarian Reform Foundation for National Development, Inc.)

Type of Organisation: NGO/CBO

Contact: Apollo PACAMALAN
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Website: http://www.parfund.com/

Project Reviewer (NetRes / Collaborators) that monitors the project:
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Area: Climate Change, 3R, Biodiversity & Ecosystem, Water, Capacity Development, Others
Award: Gold, Silver, Bronze, Incentive

Sri Lanka 2009

Establishing Private, Public and Civil Society Partnerships for Ensuring Long-term Sustainability of Off-grid Community-based Renewable Energy Power Projects

Project Site Location

Sabaragamuwa, Southern, Uva and Central Provinces, in the off-grid areas in the up country

Background - Problems Addressed and Policy Responses

Sri Lanka is a country with rich biodiversity but also many poor off-grid communities suffering from lack of access to educational and professional opportunities. The Energy Forum and the Federation of Electricity Consumer Societies (FECS) took on the challenge of improving community livelihoods by facilitating access to energy sources, whilst safeguarding natural resources and minimising dependence on fossil fuels.

One light bulb can light the living room for a cozy evening

Project Outline - Objectives and Activities

The Energy Forum and FECS (awarded by APFED in 2009) have facilitated access by off-grid communities to environmentally-sustainable energy, such as micro-hydro and biogas. They have provided technical assistance for the construction of such facilities and fund provision via national financing mechanisms. Furthermore, the FECS has contributed to protecting local interests by voicing members' interests at the national level. It has also contributed to capacity-building and skill-sharing among off-grid energy consumer societies in Sri Lanka.

Impacts and Achievements

FECS, acting as an umbrella organisation, has over 200 member societies, with 300 micro-hydro schemes providing electricity to some 10,000 off-grid households, and has conducted capacity-building workshops on leadership and operation of power plants and trained 578 village leaders attached to 321 societies. Access to electricity has allowed many income-generating activities such as tailor shops, hair salons and grinding mills. In particular, children benefit greatly from electrification, as they can study more effectively. Today, the Energy Forum acts as an off-grid sector representative at the Board of the Sri Lanka Sustainable Energy Authority which was established in 2007.

Future Challenges

There are areas of Sri Lanka where the potential for micro-hydro power is unexploited. It is anticipated that use of sustainable energy will be key to the resettlement process under way since the end of the civil war. The development of dendro-power and biogas power will also create opportunities for off-grid dry zone communities to access modern technology. These practices need to be replicated in other developing countries and emerging economies as an alternative development model to counter climate change.

General Information

Name of the Implementing Organisation: The Energy Forum (Guarantee) Ltd (EF)
The Federation of Electricity Consumer Societies (FECS)

Type of Organisation: NGO/CBO

Contact: Asoka Abeygunawardana
441/6, Highlevel Road, Gangodawila, Nugegoda, Sri Lanka
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Project Reviewer (NetRes / Collaborators) that monitors the project:
Sana Okayasu, Kitakyushu Urban Centre, IGES **E-mail:** okayasu@iges.or.jp

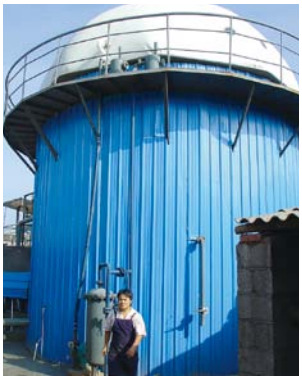
Puzhehei Watershed Eco-Sanitation Project Phase II

Project Site Location

Qiubei County, Wenshan Prefecture, Yunnan Province, China

Background - Problems Addressed and Policy Responses

The Puzhehei Lake is an agglomeration of small lakes providing drinking water to the local population. Monitoring data shows that the water quality of the lake has deteriorated over the past ten years. The adoption of a household-centered approach has improved the water quality by the dissemination of nutrient recycling knowledge and the introduction of feasible and adaptive eco-sanitation technologies.



200m^3 integrated biogas plant for animal waste treatment in Badaoshao

Project Outline - Objectives and Activities

The overall objective of the project is to alleviate water pollution of the Puzhehei watershed by the diffusion of eco-sanitation practices. The main activities include: establishment of 78 household urine-diverting dry toilets in two villages; establishment of one semi-public dry toilet in a primary school; construction of a pilot biogas generation facility with a fermentation volume of 200m^3 for animal waste disposal; and various education and capacity-building activities for local communities and schools.

Impacts and Achievements

The established dry toilets and animal waste treatment facility are all put to good use. The lifestyle of the villages has been changed, and sanitation habits are gradually forming. Slurry from the biogas system is utilised by farmers as organic fertilizer. An enlarged biogas generation facility is under construction for disposing of more animal waste from surrounding livestock breeding households. Examples of the several additional outcomes are the start of a new course focusing on environmental protection at three primary schools and a junior middle school and the production of a 30-minute video for disseminating the project experiences.

Future Challenges

A large gap exists between the limited impact of this project and the actual needs for further improvement of water quality of the lake. A master plan to tackle the problems of pollution of the entire watershed is needed, which should involve the combined efforts of local governments at different levels in its preparation and implementation, building on and expanding the participatory model and experience achieved through this project.

General Information

Name of the Implementing Organisation:
Yunnan Environment Development Institute (YEDI)

Type of Organisation: NGO/CBO

Contact: Yun Liu
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Tel: 86-871-4635039 **Fax:** 86-871-4635039 **E-mail:** yedi@vip.km169.net

Project Reviewer (NetRes / Collaborators) that monitors the project:
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Area Climate Change 3R Biodiversity & Ecosystem Water Capacity Development Others

Award Gold Silver Bronze Incentive

India 2009

Promoting Coconut-Based Agro-Ecosystem and Efficient Product Utilization for Augmenting On-Farm Income, Improving Quality of Environment and Conserving Natural Resources

Project Site Location Alappuzha District, Kerala

Background - Problems Addressed and Policy Responses

Kerala is a coastal state in southern India where land holders plant coconut as a monocrop. Coir spinning is an alternative coconut-based income for 60% of residents in the project area, around 80% of whom are below the poverty line (<1.5 USD/day). The women engaged in coir processing are exposed to laborious and hazardous working conditions without commensurate income.

Integrated farming (multicrops)

Project Outline - Objectives and Activities

The project seeks to 1) Increase carbon sink in the community, 2) Strengthen ecology-based farming, 3) Ensure continuous availability of biomass for energy sources, 4) Augment income and employment at the farm-household and community levels through efficient utilization of locally available materials, 5) Improve the working conditions of the women in the coir spinning sector, and 6) Improve the capacity of local residents in income generation and environmental conservation.

Impacts and Achievements

This project has enhanced sustainable development in terms of improving rural livelihoods, poverty alleviation, resource efficiency, and environmental rehabilitation, with the following results: 1) Improved agro-biodiversity in 15,000 farm-households (345 hectares), 2) Improved on-farm biodiversity via integrated farming, which generates income and employment, 3) Provision of full time employment for 116 women and part-time employment for 58 men at the Vayalar Fibre Mills, 4) Provision of regular full time employment through improved spinning wheels for around 740 women and part-time employment for around 370 men, 5) Approx. 2,260 men and 1,475 women have benefited from capacity-building programmes.

Future Challenges

The project has made some changes, but lacks in maintaining data, records and scientific impact analysis. Benchmark data needs to be correlated with clear-cut improvements and development, to assess the total socio-economic transformation and impact on ecosystems. Data monitoring needs to be incorporated as a built-in mechanism. Seed money and microfinance may be essential to enhance replication on a larger scale. Market assistance is also required to enhance trainees engaged in income-generation activities.

General Information

Name of the Implementing Organisation: Peekay Tree Crops Development Foundation

Type of Organisation: NGO/CBO

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Japan-Ishikawa

2009

＊etc.＝coastal area / satoyama

Rehabilitating the Misogi River via Company-NPO Linkage

Project Site Location
Noto Region, Misogi River Basin

Background - Problems Addressed and Policy Responses
The Misogi River, which is located in one of the urban development areas of Nanao City, is polluted, and every summer it has an usual odour. It is very important, therefore, to improve the environmental condition of the river to enable continued urban development of the area.

Cleaning the Misogi River

Project Outline - Objectives and Activities
The purpose of this project is to cleanse the polluted river and to implement urban development through the creation of a water-depuration system and various activities related to urban development.

Impacts and Achievements
Achievements realized through the project are: (1) increased harmony between the people of the city and the river, and (2) the successful cleaning of the river water by local companies.

Future Challenges
The future challenges are: (1) to create an intern programme in Noto by which students can join various companies to resolve several environmental and community-development issues in Noto; (2) to implement social enterprises via exchange students; and (3) fundraising for development and improvement of the community.

General Information

Name of the Implementing Organisation:
Misogigawa Co. Ltd.

Type of Organisation: Private Company

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16-4, Ikumacho, Nanao City, 926-0804, Ishikawa, Japan
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Website: http://www.mas.ac.mn/en/

Project Reviewer (NetRes / Collaborators) that monitors the project:
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Area Climate Change 3R Biodiversity & Ecosystem Water Capacity Development Others

Award Gold Silver Bronze Incentive

Japan-Ishikawa 2009

*etc.=Environmental Technologies, Environmental Information

Paying Back Mother Earth through Hakui High School's Energy Saving Activities

Project Site Location Ishikawa Prefecture

Background - Problems Addressed and Policy Responses

This project was designed to disseminate environmental conservation activities carried out by schools throughout the locality. Through the dissemination of environmental information, especially the importance of environmental conservation actions carried out by schools, such actions and activities are intended to be expanded upon within the local community by its citizens.

Well-managed: A pond for Killifishes

Project Outline - Objectives and Activities

The purpose of this project was to build an educational 'space' comprising two environment zones - one for biodiversity and one for conservation of energy and natural resources - with the goal of promoting citizen-based action. The activities of this project aim at (1) Reduced use of electricity, water, paper and fuel, (2) Increased recycling and reduced amount of waste, (3) Promotion of Green purchasing, and (4) Awareness-raising about the environment.

Impacts and Achievements

Awareness-raising was achieved gradually, through the following two means: (1) implementation of Environmental Studies at the "Eco Study Zone" for learning about the importance of the natural environment in rural areas - as Hakui is a technical high school, students are given the opportunity to build memorial objects such as biotopes and ornamental bridges as graduation outputs. Such activities can visually impact on, and be passed onto junior students. (2) implementation of case study symposiums for environmental education. Further, an approx. 6.3% reduction in CO_2 emissions and 17.4% reduction in water usage were achieved in FY 2008.

Future Challenges

No major problems were observed in the case of Hakui as most activities are already embedded within the school's daily activities and carriculum. However, for replicating the project in other schools, much consultation between the stakeholders as regards organisational agreement on the integration of eco-activities into school practices would be required. Another challenge lies in connecting like-minded environmentally-conscious teachers, as they are few and far between, and their voices are often not heard.

General Information

Name of the Implementing Organisation:
Hakui High School

Type of Organisation: Other (High School)

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Project Reviewer (NetRes / Collaborators) that monitors the project:
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In 2009, four additional projects were selected for the Japan-Ishikawa Award

Local Cooperation Work on Forest Management and Satoyama Conservation Activities

Ishikawa Forest Supporters Club

This club works with volunteers in the Noto, Kanazawa and Kaga areas in activities that include forest conservation, such as clearing away underbrush, cropping and cutting branches, as well as capacity development via education and dissemination.

Seiko Eco Project – Aiming to Be the World's Top Eco School

Ishikawa Prefecture Daiseiji High School

In 2002 Daiseiji High School initiated the Seiko Eco Project in order to tackle environmental issues as a school and to solve the problem of an unkempt forest due to aging of the forest workforce. One of the projects has targeted a yearly reduction in CO_2 of 5% and another aims to support forest management. As of 2008, the project had reduced the usage of electricity, water and paper, as well as amount of waste by 15%-47%. The volunteers also tidied up a 100 ha forest.

Countering Global Warming through Financial Business Operations

Noto Kyoei Shinkin Bank

Noto Kyoei Shinkin Bank created a fixed-deposit financial product, the Noto Credit Eco Plan, to contribute to and invest in CO_2 Reduction, CO_2 Sequestering and Forest Conservation. More than 800 families have invested in the product, which is presently valued at around 2 billion JPY. Over 10 million JPY of this was released for utilisation in forest management and awareness raising in the local community. Noto Kyoei Shinkin Bank was officially certified by Ishikawa Prefecture for its activities in absorbing 37.5 tons of CO_2.

Duck Pond Rice Paddy Club

Kaga-City Rice Paddy Observatory Club

The Duck Pond Rice Paddy Club started its activities in 1996. They educate the local community in the benefits of traditional rice paddy management, pesticide-free farming and organic rice farming for biodiversity and health. This style of farming also involves using the paddies as a winter resting area to increase the populations of duck and wild geese. Contracts with farmers have assisted in sales of "duck rice", and profits have been utilised to cover the running costs of the club.

Area Climate Change 3R Biodiversity & Ecosystem Water Capacity Development etc Others

Award Gold Silver Bronze Incentive

Memo

Showcase Projects

2005-2009

Year	Number of Projects
2005	2
2006	12
2007	12
2008	13
2009	9
Total	**48**

Area

- Climate Change
- 3R
- Biodiversity & Ecosystem
- Water
- Capacity Development
- Others

Sri Lanka

2005

*etc.=Environmental Education

Waste Management and Environmental Education for Damniyamgama Tsunami Resettlement Village

Project Site Location

The APFED project was carried out in Lagoswatta, now renamed as Damniyamgama1, in the Kalutara District in the Western Province of Sri Lanka. The village is approximately 4 km from the coastal town of Kalutara which is the district centre and around 40 km south of Colombo, the commercial capital of the country.

Colour-coded bins for metal/glass/paper/ plastic and polythene

Background - Problems Addressed and Policy Responses

Waste management is a serious environmental concern in Sri Lanka. Solid waste management is a burden to local authorities, and involvement in such at the household and community levels in urban and semi-urban areas is insufficient. The project was an attempt to incorporate a community-based waste management system including recycling, reducing and reusing while enhancing environmental awareness in the village.

Project Outline - Objectives and Activities

The project's objective was to provide a long-term, localised solution to the issue of waste management in housing settlements with minimal burden on the local authority. Through educational seminars and demonstrations, the community was made aware of the importance of waste separation, reuse of organic material as compost, maintaining a clean, and litter-free environment, importance of home gardening with the produced compost and the benefit of segregation and recycling of non-biodegradable waste such as plastic, glass and metal.

Impacts and Achievements

The project's most positive impacts to the site have been the establishment of the collection centre, funding of composting bins for each household, fostering and sustaining a change in mindset and encouragement of organic farming. Damniyamgama has established a very progressive, cooperative, inclusive system that effectively allows residents to dispose of all types of solid waste within their village in a safe, manageable manner which leaves the environment clean and healthy. Therefore, the project has greatly contributed to the aesthetics of the village.

Future Challenges

Continuation of the collection programme depends on the commitment of the volunteers and improvements to sorting practices; therefore, the future challenges are: Continuing awareness programmes to advocate correct sorting methods; Carrying out door-to-door inspections of the composting systems to identify problems; Offering incentives through society to best-kept gardens; Developing a small village market place for organic produce; and Utilising the recycling finances to benefit the majority of the public.

General Information

Name of the Implementing Organisation: Sarvodaya Shramadana Movement

Type of Organisation: NGO/CBO

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"Damsak Mandira" 98, Rawatawatta Road Moratuwa Sri Lanka.
Tel: -2647076 **Fax:** -2656429 **E-mail:** vinya@sarvodaya.org **Website:** http://www.Sarvodaya.org

Project Reviewer (NetRes / Collaborators) that monitors the project:
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Thailand

2005

* etc.=Sustainable Consumption and Production, Green Procurement

The Green Purchasing and Green Procurement Initiative

Project Site Location Bangkok

Background - Problems Addressed and Policy Responses

Green procurement is viewed as an alternative means towards attaining sustainable consumption. As the largest purchaser in the country, the Thai government declared adoption of green procurement by launching a pilot project in the Pollution Control Department (PCD). However, green procurement is not widely adopted yet, especially for small private organisations.

The Memorandum of Understanding signing ceremony for "The green purchasing and green procurement initiative" project on 27 February 2008

Project Outline - Objectives and Activities

This project aims at strengthening the implementation of green procurement in both public and private sectors by enhancing capacity, indicating key factors for pursuing green procurement, streamlining the green procurement network and knowledge sharing between organisations. Key activities include arranging workshops on green procurement, launching green procurement pilot projects in many organisations, developing and disseminating green procurement handbooks and conducting surveys and interviews on green procurement in public and private organisations.

Impacts and Achievements

The project has resulted in clarification of the factors governing green procurement in Thailand, and the publishing of a green procurement handbook for public and private organisations. Pilot projects in both public and private organisations demonstrated that green procurement can be implemented in small and medium-sized organisations. The activities of this project have also increased cooperation between members of the green procurement network in Thailand.

Future Challenges

Even though this project has succeeded in its objectives in strengthening the implementation of green procurement through activities and pilot projects, green procurement in Thailand still needs further development and dissemination to wider audiences in both public and private sectors. Another key challenge is to stimulate green demand by addressing green consumption at the level of individual citizens, which is needed in order to achieve sustainable consumption throughout Thai society.

General Information

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Thailand Environment Institute (TEI)

Type of Organisation: NGO/CBO

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Area Climate Change 3R Biodiversity & Ecosystem Water Capacity Development Others

Nepal

2006

*etc.=Community development, innovative technologies

Supporting Farmers via Promotion of Solar-assisted Sericulture

Project Site Location Bandipur, Tanahun

Background - Problems Addressed and Policy Responses

The sericulture promotion initiative was established by the government to generate jobs and reduce poverty. Farmers earn 12,000-16,000 NRS annually. Sericulture is practiced especially in the hilly and mountainous areas of Tanahun district, as they are most suitable for sericulture. To develop the economy, innovative solar-assisted silkworm rearing houses were constructed in the district.

Women engaged in collecting cocoon

Project Outline - Objectives and Activities

Objectives: Technical promotion and adoption of renewable energy based solar-assisted silkworm rearing houses to sericulture farmers; Support of local people for sericulture infrastructure development, building capacity and institutional development; Local employment creation for raising economic status of farmers in remote valleys; Establishment of logistical support to farmers (technical, equipment, medicine, etc.). To achieve this, capacity building, infrastructure development, revolving fund mobilisation and renewable energy applications are implemented.

Impacts and Achievements

Fund mobilisation enabled smooth setup of a framework for sericulture promotion. Sericulture improves employment opportunities in rural areas which help reduce poverty. Improved rearing houses are designed and constructed using local material and labor. The project is implemented in highly remote areas, only accessible by offroad vehicles. Farmers have benefited from improved rearing houses and silkworm rearing. Support from the local silk association greatly assisted in sericulture training and provision of various facilities for silkworm cocoon production for farmers. Silkworm rearing houses, home solar systems and revolving funds are provided by "Energy and Environment, Nepal". Farmers earn about 12,000 to 16,000 NRS annually.

Future Challenges

To enable the programme to be sustainable via wide scale replication, and raise incomes of those in remote villages, as well as the country as a whole, the following are needed; (1) Increases in the number of silkworm rearing houses, mulberry cultivation, and opportunities for local populations, (2) Establishment of a sustainable market for cocoons produced and of new post-cocoon markets such as silk-yarn reeling, weaving, dyeing, and (3) Export of silk products (yarn/fabric).

General Information

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Energy and Environment, Nepal

Type of Organisation: NGO/CBO

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India

2006

*etc.=Innovative technologies

Water Quality Monitoring and Low Cost Purification Strategies for Inland Waterways of Low-lying Areas

Project Site Location

Meenachil River canals of upper Kuttanad, Arpookara Panchayat, Kerala, India

Well developed reparian vegetation bio-wall

Background - Problems Addressed and Policy Responses

Kuttanad is a low-lying area with backwaters, canals and stream networks in coastal SW India, where uncontrolled dumping of solid waste has resulted in pollution of water bodies. The project aimed at improving the water quality of central Kerala's Meenachil river canals in the upper Kuttanad region, via implementation of low cost purification strategies.

Project Outline - Objectives and Activities

Baseline studies were conducted on water quality of the study region, Meenachil river canals and adjoining water bodies to prepare an overview of the present water quality and current practices. Low cost water purification materials were identified - coconut shells and herbs from natural resources available in the region - to suppress further deterioration of water quality. Water purification methods were implemented in a pilot plot and suitable plant species were planted to reduce erosion.

Impacts and Achievements

A wind-induced aerator system for water purification was used for sites with no access to electricity supply. Comparison of water samples from before and after inception of phytoremediation techniques/ vetiver system have demonstrated the efficacy of this project. Riverbank erosion at selected sites of the canal banks was controlled by reparian vegetation and bio-wall construction and reduction in suspended sediment load in the water.

Future Challenges

The future challenges for the project include maintaining the motivation of the local population in sustaining the high degree of cleanliness and preventing solid waste from entering the water streams in the area. It is also important to minimise silting of the water networks and to maintain a minimum flow, which facilitates navigation.

General Information

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Type of Organisation: NGO/CBO

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Area Climate Change 3R Biodiversity & Ecosystem Water Capacity Development Others

Sri Lanka

2006

*etc.=Environmental technologies, Rural development, Community development

Enhanced Generation and Utilisation of Bio Energy

Project Site Location

Gurugoda, Nikewaratiya, (Situated in the Rasnayakapura Divisional Secretariat Division)

Fresh jatropha produce

Background - Problems Addressed and Policy Responses

The power generation mix in Sri Lanka is comprised of energy generated from hydro, petroleum and biomass with strong dependence on fossil fuel. However, due to escalating fuel prices, limited and uncertain supply and over 4 million inhabitants still living in off-grid areas, the country requires alternative energy sources such as bio energy to facilitate decentralised generation.

Project Outline - Objectives and Activities

Jatropha demonstration plantations were established as live fences with selected communities and about 7,000 plants were planted. Energy plantation was done at the household level and a plot at the University of Ruhuma. Oil extraction, processing and engine testing was completed at the NERD Centre* and University of Peradeniya, with the Castor, Jatropha, Rubber, Domba and Neem seeds. A bio diesel processing machine was installed at Gurugoda LBF centre and used to produce bio diesel.

*The National Engineering Research and Development Centre

Impacts and Achievements

Community-level awareness programmes were conducted around the project site to gain public understanding of the energy plantation work. Oil extraction and processing into biofuel was carried out at the biofuel centre and operation of internal combustion engines was demonstrated.

Future Challenges

The key challenge for the study is to increase the cost-benefit of the biofuel produced to make the price comparable to commercial fossil fuel, as lower biofuel prices would ensure lower power generation costs. Further, decentralised biofuel power generation would ensure power for populations residing in off-grid areas.

General Information

Name of the Implementing Organisation:
Practical Action South Asia (Intermediate Technology Development Group)

Type of Organisation: NGO/CBO

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Myanmar 2006

Integrated Multi-Stakeholder Ecosystem Approach at Inle Lake Based on Zoning Principles and Integration of Ecorestoration and Agrofarming Practices

Project Site Location

Inle Lake in Nyaungshwe Township, Taungyi District, Southern Shan State

Inthar community leader is rowing his boat with regional style

Background - Problems Addressed and Policy Responses

Inle Lake has been providing various forms of ecosystem services, based on which the Inthar people have survived for centuries. However, their survival is now under serious threat. The wetland ecosystem and the flora and fauna have suffered continuous damage due to the use of chemical pesticides and fertilizers for floating agriculture and forest clearance on the higher plateau.

Project Outline - Objectives and Activities

The main objective is to engage the five village tracts comprising 31 villages of the project area in biodiversity conservation, sustainable and effective natural resource use and ecorestoration by developing a zoning plan, experimenting "Village Lake Restoration" and promoting organic farming in floating agriculture.

Impacts and Achievements

In spite of political turmoil, there have been signs of improvement: the environmental condition of the three visited villages is orderly and clean; a number of new toilets have been constructed; organic rice planting has been initiated; a large number of illegal fishing and hunting gear has been confisticated; community development and religious activities have been actively participated.

Future Challenges

Increased use of chemicals and low water quality are real threats, and an overall land-use and strategic conservation plan are urgently needed to save the lake. Wells need digging to reduce use of bottled water. Use of chemical insecticides and fertilizers in farms needs to be reduced, and land-use zoning needs to be implemented. Organic rice and vegetable farming practices require continuous support. Carefully planned ecotourism activities should be promoted in order to preserve the environment and culture.

General Information

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Biodiversity And Nature Conservation Association (BANCA)

Type of Organisation: NGO/CBO

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Area Climate Change 3R Biodiversity & Ecosystem Water Capacity Development etc Others

Thailand

2006

Enhancing Eco-efficiency and Sustainability in Primary Industry Sector

Project Site Location

Implementation sites are located in 7 provinces.

Background - Problems Addressed and Policy Responses

The majority of factories in Thailand are small and medium enterprises (SMEs), which lack the resources needed to address environmental management and social responsibility. Through linkage to governmental policies intended to empower SMEs, this project intends to reduce energy consumption and cut greenhouse gas emissions from the industrial sector.

Installation the pressure gauge to measure loss at Multi Dry Filter

Project Outline - Objectives and Activities

This project aims at enhancing eco-efficiency and sustainability for small and medium-sized factories in Thailand by introducing cleaner technology (CT) and corporate social responsibility (CSR) concepts. The participating factories received technical assistance and training in order to improve their eco-efficiency and contributions to society. Project activities included factory surveys, CT training, small group activity (SGA) training and CSR training.

Impacts and Achievements

The impacts and achievements of the project can be seen within the factories and society. Reductions in pollution, resource use and energy costs represent key improvements contributing to eco-efficiency in the factories, which has resulted in a reduction in greenhouse gases (GHGs) of approx. 1,985 tons of CO_2 equivalent/year. CSR activities initiated by the SMEs in this project, such as reforestation, check-dam building and CT implementation in schools had positive impacts throughout society at large.

Future Challenges

The main challenge this project faces is in its ability to continue providing assistance and training to SMEs to build knowledge, understanding and capacity on eco-efficiency and social responsibility, as such improvements and activities - especially the implementation of CSR activities - do not generate direct financial gains for the companies. A further challenge is to secure technical and financial assistance from large enterprises to enable the SMEs to achieve eco-efficiency.

General Information

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Society for the Conservation of National Treasure and Environment (SCONTE)

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Bangladesh

2006

Promotion of Access to Environmental Information

Project Site Location All over Bangladesh

Background - Problems Addressed and Policy Responses

Effective environmental law enforcement is a prerequisite for protecting the environment in Bangladesh. The Right to Information Act of 2008 was expected to ensure public access to such information, but the administrative processes involved make this very difficult. It is therefore essential to raise public awareness, prompt proactive participation, and train lawyers and environmental leaders.

Syeda Rizwana Hasan, Director of BELA

Project Outline - Objectives and Activities

The project is intended to promote stakeholder dialogues on public access to environmental information, to undertake an assessment of policy and institutional frameworks and to conduct case studies and provide training for environmental lawyers, practitioners and environmental leaders. The Bangladesh Environmental Lawyers Association (BELA) has undertaken activities including 12 studies to cover issues such as mining, waste, aquaculture, and participatory resource management, and to provide the government with recommendations for improving environmental legal systems.

Impacts and Achievements

The assessment delineated gaps and challenges in enabling the public to obtain environmental information, to promote participatory decision-making and to ensure social justice in proceedings; Twelve case studies elucidated the driving forces in environmental damage and depletion of natural resources and provided countermeasures; Societal and community-based network organisations were strengthened; Awareness of decision makers, officials and stakeholders on ways to promote effective environmental law implementation was raised; Platforms to build partnership for undertaking collaborative activities were created; and the 2009 Goldman Environment Award was awarded to the BELA Director.

Future Challenges

The Right to Information Act of 2008 must be operationalised to foster the flow of environmental information to the public; Legislative or administrative measures need to be strengthened to compel agencies and businesses to disclose environmental information; The mechanisms need to be strengthened to eliminate corruption in environmental law administration; Legal provisions on public participation must be further elaborated; Compliance with information-disclosure requirements and development of enforcement procedures need to be monitored.

General Information

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Area Climate Change 3R Biodiversity & Ecosystem Water Capacity Development Others

Vietnam

2006

*etc.=Poverty alleviation

Sustainable Community Forestry and Poverty Reduction - Linking Natural Resource Accounting of Ecosystem Services to Carbon Financial Markets

Project Site Location Luc Ngan District, Bac Giang Province

Woman carrying tools at APFED project agro-forestry site

Background - Problems Addressed and Policy Responses

Climate change and poverty are two of the greatest threats faced by the world today. The only way for farmers in developing countries to increase productivity is to expand the surface area by clearing forests, which releases carbon into the atmosphere. As a means of removing this carbon dioxide from the atmosphere, reforestation activities are conducted in the selected district.

Project Outline - Objectives and Activities

The objectives of this project are; (1) instigation of appropriate land use, (2) linkage to external markets, and (3) creation of conditions for poverty reduction and GHG mitigation. In relation to these, (1) introduction of improved carbon accounting tools used by advanced technologies, (2) introduction of market rules for carbon accounting for delivering benefits to the rural poor, and (3) creation of linkage between farmers and buyers are conducted through capacity development and knowledge transfer.

Impacts and Achievements

Through this project, an overall agro-forestry system and carbon project development were achieved. The knowledge transfer provided biotic carbon as a commodity and climate change mitigation. Advanced technologies for identifying and detecting changes in carbon storage at the village level were developed. A new forestry protocol that includes the accounting and trading of community carbon was developed. In terms of benefit for farmers, market linkage regarding carbon trading was created between farmers and buyers. This project led to poverty alleviation and environmental sustainability.

Future Challenges

Development of the carbon market is crucial for this project, even if done on a voluntary bases, as in this project. Generating the basic data for trees such as the lychee tree would enable estimation of the carbon stock, and creating recognition of this at the local level via project activities is key to smooth project implementation.

General Information

Name of the Implementing Organisation: Ministry of Agriculture and Rural Development

Type of Organisation: Governmental Organisation

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Pakistan

2006

Protection of Wildlife via Social Mainstreaming, Capacity-building and Cooperation with the Indigenous Hunting Tribal Communities of Tharparkar

Project Site Location Tharparkar District

Background - Problems Addressed and Policy Responses

Tharparkar is a semi-arid area in southeastern Pakistan, on the border with India. Kolhi and Bheel - indigenous non-Muslim socially marginalised communities - were previously engaged in illegal wild animal hunting. With awareness-raising and training on alternative income-generating activities under the project, local communities banned hunting to protect endangered wildlife such as antelope, Siberian cranes and peacocks.

A woman growing vegetables as alternative income sources

Project Outline - Objectives and Activities

The project is aimed at enabling local communities to conserve wildlife via hunting bans and alternative-income creation. The Society for Conservation and Protection of Environment (SCOPE) works with local organisations to promote awareness, set up community-based organisations (CBOs), conduct baseline surveys and training on alternative income-generating jobs such as production of clothes and hand crafts and provide micro-credit.

Impacts and Achievements

i) Creation of 32 CBOs, covering a total population of 15,204. ii) Provision of training sessions in Kolhi and Bheel communities - 4 on management, 14 on carpentry (239 attended), 18 on cap-making (214), 9 on animal vaccination (12), 4 on shawl-making (26) and 6 on carpet weaving (25). iii) Creation of revolving funds and default-free loans provided to 25 persons. iv) Banning of hunting and logging in Dec. 2008 by villages, and instigation of fines of 200,000 PKR for illegal hunting. v) Reduced hunting and logging, and increased wildlife and vegetation cover, and vi) Increased incomes, with women commanding greater respect.

Future Challenges

Greater effort is required to transform mindsets away from hunting and into alternative income-generating activities; The scale of wildlife conservation needs to be expanded and a decision is needed on whether to turn the areas into national parks, which would promote ecotourism as tourist destinations; The APFED Showcase project has evolved into a newly launched project supported by the GEF-UNDP Small Grant Programme to address forest conservation and local community empowerment where ecosystem management and livelihood improvement need to be persued in greater convergence.

General Information

Name of the Implementing Organisation: Society for conservation and protection of environment (SCOPE)

Type of Organisation: NGO/CBO

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Area Climate Change 3R Biodiversity & Ecosystem Water Capacity Development Others

Mongolia

2006

Rehabilitating Desert Zone Ecosystems and Promoting Sustainable Alternative Livelihoods in Gobi Protected Areas, Buffer Zones and Peripheral Communities

Project Site Location South Govi Province

Background - Problems Addressed and Policy Responses

Climate change poses an increasing threat to Mongolia - its variable climate, rising mean temperatures, declining average precipitation and drought and desertification coupled with over-grazing hamper local livelihoods. It is therefore vital to promote sustainable natural resource management in the Gobi desert area, through agro-pastoralism and managing protected *saxaul* woodland areas.

Youth exavating soil to lay pipes for irrigating farmland

Project Outline - Objectives and Activities

The project is aimed at raising community awareness of sustainable natural resource management - specifically, through (i) optimal use of pasture land, (ii) restoration of degraded pasture land, (iii) small scale farming, (iv) efficient water resource management, (v) protected *saxaul* woodland conservation, and (vi) partnership building. Activities included awareness-raising campaigns, target group discussions, irrigation pipe installation, fencing protected areas, and mobilising watchdog groups.

Impacts and Achievements

Assessments were conducted on natural resource management and its impacts; Workshops were held for local herders, villagers and youth groups to raise awareness of optimal water and pasture use, and for managing fenced windbreak zones; Irrigation systems 750 m in length were restored in the windbreak fenced zones; A 50 x 50 meter square area of *saxaul* forest was fenced off, with a conservation sign board added; Focused group discussions were organised for local communities to play a watchdog role against illegal goyo collection; and alternative livelihood options such as use of solar cookers and hand craft making were introduced.

Future Challenges

Options for promoting optimal pasture and water use to simultaneously increase productivity and income need to be further explored and verified; Alternative livelihood options need to be made available for illegal goyo collectors while also enforcing measures against illegal goyo collection; Agreements need to be forged between communities over water and land use in the process of expanding vegetable farming in the communal areas; and inter-community and multi-stakeholder collaboration have to be further strengthened for promoting collective action.

General Information

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Type of Organisation: Governmental Research Institute

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Philippines

2006

Reducing Poverty via Promotion of Sustainable Development and Resource via Regional Centre of Expertise on Education for Sustainable Development

Project Site Location

Experimental Forest Station in Camp 7, Minglanilla, Cebu

Background - Problems Addressed and Policy Responses

A forest area in Minglanilla was declared a protected area in 2004 to promote natural resource conservation. However, squatters occupy dwellings in the protected area and entrenched poverty increases the risk of illegal logging and natural resource destruction. Therefore, poverty eradication and creating income generation opportunities are deemed prerequisites to promoting sustainable natural resource management in the area.

Composting for organic fertilizer to generate income

Project Outline - Objectives and Activities

The Regional Centre of Expertise on Education for Sustainable Development established at the University of the Philippines, Visaya College, Cebu (RCE-CEBU) initiated collaboration with stakeholders in (i) assessing local natural resource endowment and poverty, (ii) raising awareness of natural resource conservation and sustainable development, (iii) providing training on income generation through sustainable use of non-timber forest products, (iv) pursuing options for improving the environment and livelihoods, and (v) exploring multi-stakeholder partnerships.

Impacts and Achievements

A map inventory on natural resources, biodiversity and poverty was prepared and a livelihood survey was conducted; Income generating activities have been promoted to develop skills of squatters and villagers to produce honey, broom, furniture, herbs and medicinal plants, seedlings, cut flowers, and organic fertiliser; A sustainability information centre was created at a local school; Stakeholder networks centred around RCE-CEBU were strengthened; Public awareness and collaboration were promoted; Stakeholder consultations were held on options for sustainable livelihoods, such as installation of sewage treatment facilities and water purifiers and promotion of ecotourism.

Future Challenges

Knowledge on sustainability needs to be transformed into concrete action and behavioural changes, such as in the installation of sewage treatment and water purification facilities; Productivity of non-timber forest products needs to be stabilised. Bee swarms need to be restored and conserved; Ecotourism must be promoted in a sustainable manner; Partnership is expected between squatters of Camp 7 and residents in urban areas who depend on water supply and flood control measures in the camp and neighbouring forests.

General Information

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Type of Organisation: Other (collaboration of the Government, organizations including NGO)

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Area Climate Change 3R Biodiversity & Ecosystem Water Capacity Development Others

Korea (Republic of Korea)

etc. 2006

＊etc.=Green consumption

Supporting Green Consumer Initiatives

Project Site Location Korea (ROK)

Background - Problems Addressed and Policy Responses

To establish green consumption initiatives and consumerism mechanism development plans applicable to Asia, case studies that verify factors related to facilitation of green consumption and consumerism need to be conducted, for which it was considered Korea exemplified good potential as a testbed.

The Korean Government E-Procurement System

Project Outline - Objectives and Activities

Considering the example of Korea, this study analysed Korean consumer recognition and use of eco-products and examined eco-product production and consumption to help address the necessity of universal green purchasing initiatives applicable to the Asian region. In order to investigate product purchasing and use among consumers, this study utilised FGI (Focus Group Interviews), CLT (Central Location Tests), gang surveys, and other analytical methodologies.

Impacts and Achievements

This study involved analysis of Korean consumer recognition and use of eco-products and examined their production and consumption in general to help address the necessity of universal green purchasing initiatives applicable to the Asian region. Verification of the primary factors related to green consumption was conducted via a pilot project, which led to development of initiatives, mechanisms and strategies for promotion of green consumption in the various regions of Asia.

Future Challenges

The results of this project need to be diversely exploited to establish a green procurement policy and marketing strategies to publicise eco-friendly products in Korea and other countries in Asia.

General Information

Name of the Implementing Organisation:
Korea Environmental Industry & Technology Institute (KEITI)

Type of Organisation: Other (Semi-Governmental Organisation)

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Singapore-Asia/Pacific 2006

Corporate Sustainable development Responsibility [CSdR]

Project Site Location Singapore

Background - Problems Addressed and Policy Responses

Contributions to sustainable development from the corporate sector, as part of CSR activities, is widely considered a viable direction to pursue; however, no standards related thereto exist. As an answer to this, the present project proposes the creation of a holistic set of implementable and objectively assessed standards under an umbrella concept entitled Corporate Sustainable development Responsibility (CSdR).

Davis, Langdon & Seah offices in 2010: still fighting the good fight to reduce paper waste

Project Outline - Objectives and Activities

The project intends to develop a framework of standards that corporate stakeholders can identify with and effectively adopt, enabling them to contribute to the sustainable development of their communities. The project objectives are: 1) Examining the current status of CSR and guidelines (if any); 2) Formulating a list of indicators to measure the state of sustainable development; 3) Encouraging companies based in Singapore to co-refine these indicators with the research team; and 4) Engaging the wider audience of stakeholders through public education.

Impacts and Achievements

A framework comprising six categories: Social Sustainability, Social Environmental Sustainability, Social Economic Sustainability, Company Structure, Profile of CSdR Standards Within Organizations, and Implementation of CSdR was piloted with three companies: Senoko Energy, Davis Langdon & Seah, and SKF Asia Pacific. The project also led to the Singapore Ministry of Foreign Affairs inviting Dr. Kua to the following conferences held in two developing countries: 1) "Climate Change: Governance, Risk Management and Mitigation" (10-14 August 2009, Hanoi, Vietnam); 2) "Climate Change and Sustainable Development: Challenges, Solutions and Governance" (22-25 September 2009, Yangon, Myanmar), in furtherance of CSdR.

Future Challenges

Although implementation of CSdR in these three companies and in Vietnam and Myanmar was a success, very high time and effort burdens were placed on the parties involved. Provision of core teams of experts within companies to facilitate the adoption of guidelines and oversee verification processes would greatly assist in this process, and to this end a "CSdR Institute" needs to be established to provide training for professionals in the Asia-Pacific region interested in becoming sustainability consultants.

General Information

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Climate Change Organisation (CCO)

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Area Climate Change 3R Biodiversity & Ecosystem Water Capacity Development Others

Turkmenistan

etc. 2007

* etc.=Sustainable Development of desert settlements

Sustainable Development of Settlements in Karakum Desert

Project Site Location

Karakum desert, 120km north of Ashgabat, Turkmenistan

Background - Problems Addressed and Policy Responses

Turkmenistan, which joined the UNCCD In 1996, is an agrarian country undergoing desertification and droughts which has resulted in widespread poverty. Therefore, measures are needed to restore and improve the agricultural system based on sustainable use of rangelands and oasis agriculture.

Solar-thermo Panel Installation (exterior, shower premise, School Bahardock)

Project Outline - Objectives and Activities

The aim of this project was to enable development of small sustainable settlements in Turkmenistan in the remote Karakum desert, 120km north of Ashgabat. The main activites are drop irrigation for school gardens, space heating of schools via alternative energy, awareness surveys, dune stabilisation, improvement of pasture land, use of solar energy for pumping water and lighting of shepherd cabins, establishment of small gardens for vegetables and medical plants and holding workshops.

Impacts and Achievements

This project represents a prime example of combating desertification in Turkmenistan and the Aral Sea basin. In carrying out this project local authorities soon realised the potential for sustainable development, which involved a new combined-activity approach towards sustainable management of desert-based settlements.

Future Challenges

Future challenges for sustainable development of settlements in the Karakum desert are to create policy and administrative structures for more decentralised decision-making processes, create mechanisms for land-user consultations, expand local-level action and to develop local management plans.

General Information

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Type of Organisation: Governmental Research Institute

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Cambodia 2007

Study on Linkage of Sustainable Development Between Agricultural Sector and Environment/Human Health

Project Site Location Kampong Chhnang Province


Participation of local people

Background - Problems Addressed and Policy Responses

Solid waste has become an environmental problem in Cambodia, and also caused further problems, including ill health, water contamination and climate change. Although the Government of Cambodia attempted to alleviate the solid waste problem via the issuance of regulations such as the Sub-Decree in Solid Waste Management, no regulations related to the 3Rs or solid waste composting are in place.

Project Outline - Objectives and Activities

This project aims at alleviating the solid waste problem - as well its concomitants - by demonstrating the usefulness of organic waste composting to local stakeholders, especially farmers. Composting improves solid waste management, reduces open burning and usage of chemical fertilisers and alleviates water contamination. To demonstrate such benefits, a pilot composting scheme involving application of organic compost to pilot vegetable and rice plantation sites was initiated, and training and site visits were arranged for stakeholders.

Impacts and Achievements

The project was a success in terms of demonstrating a win-win approach for managing solid waste; through composting it reduced organic solid waste from households and markets, and the organic compost obtained proved usable as a substitute for chemical fertiliser. Additionally, reductions in solid waste and use of chemical fertiliser offer the potential for alleviating related human health and environmental problems.

Future Challenges

Although the project in Kampong Chhnang province successfully demonstrated the feasibility, as well as benefits of reducing solid waste via composting, broadening the scope of this activity to effect widespread uptake by the local farmers - crucial to solving the organic solid waste problem - remains a challenge.

General Information

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Type of Organisation: Governmental Organisation

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Area Climate Change 3R Biodiversity & Ecosystem Water Capacity Development Others

Nepal

2007

Promoting the 3Rs [Reduce, Reuse and Recycle] for Sustainable Solid Waste Management in Gokarneswor Village Development Committee [VDC] of Kathmandu Valley

Project Site Location Bagmati, Kathmandu

Locals dump solid wastes

Background - Problems Addressed and Policy Responses

Gokarneswor Village is located on the outskirts of Kathmandu city, and the village had no agency for waste management. Some households with agricultural land made compost using traditional methods, and others generally disposed of waste into the Bagmati River. This resulted in interference of the natural river flow and severe environmental and human health problems.

Project Outline - Objectives and Activities

To achieve the project objective of achieving effective solid waste management, the following activities were undertaken: Awareness-raising campaign of composting at the household level; Support for income generating activities; Establishment of Waste Management Demonstration Park; Benchmark study of waste disposal in streets and environment; Assistance for Business Incubation of Waste Recycling Enterprises; Schemes for Motivation, Incentives and Rewards; and National Workshop on Waste Management.

Impacts and Achievements

After a series of awareness-raising campaigns and training sessions on solid waste management and compost bin distribution, the following were achieved by the local population: Separation of organic, inorganic and plastic waste, with organic waste made into compost; Use of jute bags instead of plastic bags (poly bags) to reduce plastic waste; and Reuse of mineral water bottles and beverage bottles for storing drinking water. One of the biggest impacts of this project is raised incomes of the local community from mushroom cultivation. Previously, the major source of income was knitting of wool, which was problematic and caused respiratory illnesses.

Future Challenges

Project activities have resulted in positive changes not only in the surroundings but also the mindset of the local residents for adoption of hygienic practices and willingness to recycle solid waste. However, these activities need to be continued on a sustained basis, and once MARDO withdraws from the project site the population will not have sufficient financial resources to enable this. Therefore, a long-term solution for providing support with a focus on livelihood issues is recommended.

General Information

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Type of Organisation: NGO/CBO

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China

2007

* etc. = Waste management

Collection and Treatment Schemes for E-waste

Project Site Location Suzhou city, Jiangsu Province

Background - Problems Addressed and Policy Responses

China has been experiencing rigorous challenges regarding waste electronics and electric equipment (WEEE) since the drastic increase in e-waste from 2003. The government has focused on e-waste management, and in recent years has approved a series of regulations. However, there are many socio-environmental problems related to e-waste; e.g., in Suzhou, most e-waste is collected by individual merchants.

E-waste recycling

Project Outline - Objectives and Activities

In order to create a systematic e-waste recycling and disposal system at the city level, a series of activities has been conducted, including: establishing e-waste collecting demonstration sites in two communities; carrying out e-waste collection and publicity activities in the demonstration city; carrying out laboratory research and facilitating to set up a used/old computer dismantling and recycling pilot project; and establishing an information system platform in BCRC China to support the e-waste collection system in the demonstration city.

Impacts and Achievements

This project has proposed two schemes; one for collecting e-waste from different organisations in the demonstration city and one on best-available technology on e-waste recycling for developing countries. Informational seminars covering experiences related to the managerial and technological aspects of recycling e-waste have been delivered to other cities at the city level. During the seminars, schemes for e-waste collection and on the best-available technology for e-waste recycling in developing countries were disseminated between the different cities and specialists.

Future Challenges

Pressures resulting from a profit-driven market involving unregulated e-waste recycling was one of the key challenges for effective operation of the e-waste collecting sites, for which two countermeasures were adopted. The lack of related policies and regulations on e-waste collection presents another challenge, one key response to which is to enhance the management of and focus on e-waste collection within local governments so as to promote establishment of the policies.

General Information

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Type of Organisation: Other (National organization with regional function)

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Area Climate Change 3R Biodiversity & Ecosystem Water Capacity Development Others

Papua New Guinea 2007

Ona Keto Community Reforestation Project

Project Site Location
Eastern Highlands Province-Daulo District Community Council Wards 1, 2 and 3


Area for Planting

Background - Problems Addressed and Policy Responses
The targeted area consists of two tribes of people, Ona and Keto, both of which grow coffee and practise small-scale subsistence farming for household consumption. However, it is important to take into account the unique land tenure system that allows land ownership only by clans or communities, and not by individuals. The area also faces a heat problem, water shortages and forest and grass fires during dry seasons.

Project Outline - Objectives and Activities
This project is an initiative of the Ona and Keto communities, and is aimed at combating the spread of grassland via engaging the community in tree planting (reforestation) on their communual land. In the pilot scheme, community members were trained in tree planting, tending and weeding. They then jointly planted tree seedlings on the collectively-owned land, with the ownership thereof confered upon the landowners.

Impacts and Achievements
Trees were planted on all infertile grassland; Land management via individuals provided land owners with tree management responsibilities; Small income generation activities were established; Awareness-raising was improved.

Future Challenges
One of the challenges will be in maintaining the community's interest in the project over the long term, as the benefits themselves are not realised over the short term. A further challenge will be to ensure that the future harvest of the plantation will be appropriately managed to provide equitable benefit for the members of the community.

General Information

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Type of Organisation: NGO/CBO

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Indonesia 2007

Improving Agricultural Practices in Peat Soil in West Kalimantan

Project Site Location
District of Kubu Raya, West Kalimantan, Pontianak

Background - Problems Addressed and Policy Responses
Peatland provides benefits to society by controlling floods, hosting a diversity of species and in its potent action as a carbon sink. In West Kalimantan, peatland is rapidly declining due to human activity, including agriculture. The Indonesian government has attempted to promote innovations in the agricultural sector to cope with the several related problems, which include fertilizers and the environment.


Field trip

Project Outline - Objectives and Activities
The aims of this project are to promote the construction of a standardised on-farm irrigation system, reduce zero burning and reduce the use of organic fertilisers and pesticides, thereby reducing the negative impacts of agricultural activities on the peatland, which are over-drainage, peat subsidence, destruction of peatland hydrology and reduced carbon sink potential. Activities in the project include construction of demonstration plots, training, field visits and cross-site visits, and publication of leaflets and posters.

Impacts and Achievements
The implementation of the project created a number of successful results, which had positive impacts on the peatland. One example is turning arid land into cultivatable land via construction of an on-farm irrigation system and use of organic fertiliser. The participating farmers demonstrated high motivation for reducing the use of chemical fertilisers and growing new varieties of crops. The project improved dialogue and cooperation between governmental staff and the local farmers, and also led to a policy recommendation for the government of the District of Kubu Raya to create a programme to increase the availability of organic fertilisers.

Future Challenges
This project showed that a combination of training, demonstration sites, and cooperation among different stakeholders shows promise as regards improvement of agricultural activities with minimal impacts on the peatland. The challenge for this project is to disseminate the practices to other farmers utilising peat soil to grow crops on. The provision of education modules to educate farmers on suitable practices and the tropical peatland ecosystem is one means of disseminating information and knowledge from this project.

General Information

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Area Climate Change 3R Biodiversity & Ecosystem Water Capacity Development Others

Pakistan

2007

Access to Safe Drinking Water via Nadi Water Filter in Remote Rural Areas

Project Site Location Taluka Jati, Thatta District, Sindh

Background - Problems Addressed and Policy Responses

As households in target villages use unfiltered canal water there is a high incidence of water-borne and gastric diseases, compounded by a lack of awareness and means by which to control them. Further, women travel 1-2 km or more to fetch water, but have no awareness of the need to filter it or filtration means.

Nadi filter brings new hope for village communities to have access to clean wate

Project Outline - Objectives and Activities

Twenty CBOs from vulnerable villages in the coastal area were organised within a year; Access to safe, clean drinking water for 1,000 families and 12,000 individuals was provided on a sustainable basis via 1,000 Bio-Sand Nadi filter units from September 1, 2007 to August 30, 2008; Twenty capacity-building training workshops on health - and hygiene-awareness were held among 100 women leaders in 20 villages and 4 TOT (Training of trainers) workshops on the Nadi filter were held among the women CBO members.

Impacts and Achievements

Through provision of 1,000 Nadi filter units, sustainable access to safe and clean drinking water for 1,000 families and 12,000 individuals was achieved. Familys that previously drunk canal water were trained in use of Nadi filter units at the household level in 22 villages in rural areas. The project was successful as Nadi water filters procured in the village communities suppressed outbreaks of gastritis and diarrhea. Also, the number of hosptial visits by infants and children has been lowered. Multi-stakeholder cooperation was the key to success of this project.

Future Challenges

As a result of severe flooding during Aug 2010, the Jati area became submerged, which severely damaged all homes, agriculture, roads and infrastructure. Therefore, support to reinstall Nadi filter units is needed in flood-affected villages to provide drinking water for the afflicted women and children inhabitants.

General Information

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Type of Organisation: NGO/CBO

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Bangladesh 2007

Field Testing of Innovative Farming Practices Related to Climate Change in Vulnerable Areas

Project Site Location Bangladesh

Background - Problems Addressed and Policy Responses

In Bangladesh, catastrophic flooding, temperature changes and strong cyclones in early and late summer coupled with tidal surges cause extensive crop damage in the coastal zone. Conversly, after dry winters the country suffers from drought. The project is aimed at identification of innovative practices developed by farmers as coping strategies, as well as demonstration of their scientific credibility.

Farmer Convinced with the Relay Cropping of Potato and Maize

Project Outline - Objectives and Activities

1) Identification of the various innovative practices undertaken in the vulnerable areas and demonstrations and field trials of promising innovative farming practices in different locations. 2) Awareness-raising among the farmers and affected communities of coastal zone, flood and drought prone areas of innovative farming. 3) Generation of food, fodder, fuel and feed for the affected communities in the drought, flood and tidal surge and haor basins. 4) Motivating the affected communities to follow through with the adaptation activities.

Impacts and Achievements

Adoption of the above innovative practices would lead to the following positive impacts: Utilisation of residual moisture and fertiliser, thus reducing requirements in these areas while also combating the drought problem; reduced expenditure for land preparation; saving of 30 crop days; and premium prices for early harvest.

Future Challenges

Due to the challenge of replicating the test modules on a large scale, it is recommended that the project be supported for a further two years.

General Information

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Area Climate Change 3R Biodiversity & Ecosystem Water Capacity Development Others

Thailand 2007

Demonstrating Ecological Mangrove Restoration at Krabi Estuary RAMSAR Site

Project Site Location

Bang Lang Da village, Tambon Ta Ling Chan, Muang district, Krabi province

Pond land preparation work

Background - Problems Addressed and Policy Responses

Mangroves are disappearing at a fast rate in Thailand due to human activity, including shrimp aquaculture. However, the majority of shrimp aquaculture ponds now lay abandoned due to the poor economics allied with the practise and recurring disease outbreaks, which has led to large areas of unproductive former shrimp aquaculture. The Thai government has responded by instigating a mangrove rehabilitation programme.

Project Outline - Objectives and Activities

The project aims at creating a demonstration site for mangrove rehabilitation by using the Ecological Mangrove Restoration (EMR) approach. To implement EMR, an abandoned shrimp pond is selected to study its ecology and hydrology, assess possible modifications, design a rehabilitation programme, restore the appropriate hydrology, and utilize natural processes for its rehabilitation. A multi-stakeholder approach is adopted for the entire process to ensure implementation sustainability and to empower the local people at the site.

Impacts and Achievements

The project has demonstrated positive results for the regeneration of mangroves at the current site. However, mangrove rehabilitation monitoring has to be continued in order to evaluate the usefulness of EMR in terms of biodiversity, raised level of income of the local people and benefit-sharing in the local community.

Future Challenges

A future challenge for this project is to ensure monitoring of the implementation site continues. Determination of successful implementation hinges on the survival of the mangroves and the livelihood of the local people. Future challenges for implementing EMR in Thailand are to identify ownership of the degraded land, obtain permission to start rehabilitation, and continue the monitoring activity.

General Information

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Type of Organisation: NGO/CBO

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Philippines

2007

Solid Waste Management as a Social Enterprise: A Community-based 3R Approach

Project Site Location Bago City

Background - Problems Addressed and Policy Responses

Bago was once adjudged as one of the dirtiest cities in the region, with a high incidence of poverty and malnutrition, as well as health problems arising from lack of solid waste management (SWM). This project was initiated in line with the city's community-based SWM programme to address the issues and establish a financially self-sustained community waste-collection and compost system.

A junk dealer loading recyclables collected from households and a landfill site

Project Outline - Objectives and Activities

As the first city to adopt the Takakura composting method in the Philippines, Bago became the focus for demonstration and training of this method. A composting centre within it started producing quality compost using organic waste from vegetable markets, provided to farmers and residents for free. Household-based composting was also practiced in model communities, where compost containers with seed compost were provided for free by the city. The project was assisted by local NGOs, housewife groups, schools and other citizens.

Impacts and Achievements

Key outcomes of the project were a 50% reduction in waste (from 40 to 20 tonnes/day), recognition and endorsement of the method by the National SWM Commission and transfer of the practice to other cities via city-to-city cooperation. Many households have also adopted the method and use kitchen waste compost on their land. Educational workbooks for primary and secondary schools were also made and an educational notebook was distributed to pupils as part of an informational campaign, which they use daily at school.

Future Challenges

One of the remaining challenges is to replicate composting centres throughout the city and expand the household-based composting practices to other communities. Another is in raising incomes from the sale of compost and recyclables to sustain composting centre operations and material recovery facilities (MRF). Maintaining Bago City as the national training centre for the composting method and continuing technology transfer to other key areas, as well as reproduction of workbooks for all schools within the city will remain ongoing challenges.

General Information

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Type of Organisation: Governmental Organisation

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Area Climate Change 3R Biodiversity & Ecosystem Water Capacity Development Others

Indonesia

2007

Community-based Educational and Partnership Action - Carbon Neutral Initiative for Community Empowerment and Climate Change Mitigation

Project Site Location Lombok and Bogor

Background - Problems Addressed and Policy Responses

Indonesia is undergoing a rapid increase in energy demand, projected to grow by 20% from 2010-2015. At the same time, President Yudhoyono has announced intentions to reduce the country's greenhouse gas emissions by 41% with international assistance by 2020, with renewable energy being one of the key policy measures to achieve this target. Indonesia has vast potential for micro-hydro power generation.

Micro-hydro power generation in Bogor

Project Outline - Objectives and Activities

Under this project, it was proposed to (i) review policy measures and projects that address mycro-hydro power generation, (ii) assess the potential of micro-hydro power generation in Bogor and Lombok, undertake stakeholder discussions on the pilot project plan of micro-hydro power generation, (iii) create mechanisms for benefit-sharing of micro-hydro power generation, (iv) document achievements and challenges to share information, and (v) promote awareness-raising and education on sustainability and micro-hydro power generation activities for project replication.

Impacts and Achievements

A policy review and case studies on micro-hydro power generation were conducted, and in 2009 a micro-hydro power generation station was set up in Sukaharja village in Bogor, rated at 5,500 W, with power distribution grids installed in 2010; Three beneficiary groups were set up, consisting of 18 households and a set of three public lighting locations; Agreements were made for payment of 35,000 IRP/month by each household, 27% less than the national power utility company, PLN; Public awareness and outreach activities were undertaken to inform the public; A preliminary feasibility study was conducted in Lombok to review local conditions.

Future Challenges

To reduce dependancy on fossil fuel, power generation needs to be switched from PLN to micro-hydro in both on- and off-grid communities, but installation costs and subsidies makes it difficult to attract investment, as power prices would need to be raised above those set by PLN. Further, other renewable energy sources need to be utilised to complement micro-hydro, in accordance with precipitation, sunlight and topographical conditions in the various areas. Plans addressing such would also need to integrate income generation.

General Information

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Mongolia

2007

Multi-stakeholder Partnership Building to Promote Education for Sustainable Development

Project Site Location Ulaanbaatar, Hustai, and Khelen Bayan

Background - Problems Addressed and Policy Responses

Sustainability, within the context of rapid socio-economic transformation, needs to be further mainstreamed to raise public awareness and prompt behavioural changes. As part of the UN Decade of Education for Sustainable Development of 2005 -2014 initiative, it is intended to strengthen the policy, institutional and programmatic framework in Mongolia in order to promote education in sustainability.

Comic booklet on dryland management

Project Outline - Objectives and Activities

To forge social capacity on ESD*, it was proposed to (i) promote multi-stakeholder policy dialogue on developing social capacity to undertake ESD, (ii) conduct assessment of ESD activities particularly in higher education, (iii) develop a national action plan on ESD, (iv) support ESD curriculum development for higher education, (v) establish a national network of educational institutions for promoting ESD, (vi) promote media campaigns and (vii) undertake pilot activities for ESD activities at the National park and tourist camps.

*ESD: Education for Sustainable Development

Impacts and Achievements

Multi-stakeholder dialogues were convened and a National Action Plan on ESD was developed; Gaps and challenges were clarified through a questionnaire survey; A network of universities and educational institutions was established; The *Handbook for Environmental Auditing* was published and Environmental Management for Enterprises and Business Entities documentation was developed; The Club of Environmental Journalists was established to promote media coverage and awareness-raising; *Reporting the Environment: A Handbook for Journalists* was translated into Mongolian and published; Workshops were held and educational panels were set up in Khustai and Terelj National parks.

Future Challenges

Further efforts are required to transform policy documents and training materials into concrete activities to bring about a sustainability-oriented mindset; Knowledge and experience in sustainability issues needs to be recognized as an asset for those seek employment opportunities; Impacts of ESD on human behaviour and environmental performance need to be discerned via numerical indicators; Pilot waste-water recycling and organic fertilising projects need to be further pursued at the National park and campsites.

General Information

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Area Climate Change 3R Biodiversity & Ecosystem Water Capacity Development Others

China

etc. 2008

*etc.=Environmental Awareness and Environmental Legal Aid

Enhancing Professional Ability of Volunteer Lawyers for Environmental Protection via Training Programme

Project Site Location Beijing

Member of All China Environment Federation

Background - Problems Addressed and Policy Responses

Though China boasts a great number of lawyers, only a small minority deal with environmental cases. To enable deployment of more of such lawyers within society, from 2007 ACEF started environmental volunteer lawyer recruitment and training, gradually forming a body of professional lawyers knowledgeable in environmental protection and law, which facilitated legal practice.

Project Outline - Objectives and Activities

The volunteer lawyer training seminar in this project lasted three days. Guest lecturers came from state legislature, administrative units and leading environmental jurists; at the same time, discussions proceed in connection with many cases accepted by the Center for Environmental Legal Service, integrating theory with practice, which produced a body of lawyers appropriately qualified to deal with environmental law, thereby laying the foundations for improved handling of environmental disputes.

Impacts and Achievements

As the largest environmental NGO within China, ACEF has actively cooperated and assisted the Chinese government in completing tasks on environmental protection, and sets out to safeguard public and social environmental rights and interests. Through centralised and systematic learning, participants have acquired further knowledge of current environmental conditions. The training class offered rich and diversified content, from environmental legal theory to lawsuit case practice, enabling volunteer lawyers from all around the country to be closely involved with the problems and issues surrounding environmental rights protection.

Future Challenges

The biggest challenge is how to recruit more volunteer lawyers into the training programme to deal with environmental issues. A further challenge lies in the need to increase public awareness of the availabliity of legal recourse in respect of infringements pertaining to environmental rights.

General Information

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Fiji

2008

Youth Leaders for Waste-wise Communities

Project Site Location Hapmak and Motusa (in Rotuma)

Background - Problems Addressed and Policy Responses

Although an international port of entry was recently established, enabling better access to Rotuma, the island's remoteness limits its access to many services and no proper waste management system exists. The mainland also provides no assistance for waste management and farmers rely on chemical fertilisers to enhance agricultural production, which impact on the ground water systems and marine environment.

Young people setting up their model organic farm

Project Outline - Objectives and Activities

Effecting waste-wise communities through simple, innovative and sustainable waste management and minimisation practices through youth-based action, this initiative promotes environmental ethics and a sense of shared responsibility for better resource management in the general community. Part of the initiative involves the creation of special waste-management information packs, translated into the local language for use by youth leaders to facilitate learning and mobilize action within the community. The initiative also serves as a model, especially for other remote oceanic islands facing similar challenges.

Impacts and Achievements

Hapmak is now a plastic-free community, an outcome of youth mobilization, and eco-bags are produced and sold by the young community members to support this initiative. Model organic farms are set up at target sites and produce there from supplements family meals, with any surplus produce sold at local markets - a model that could be replicated throughout Rotuma. The youth group involved intends to purchase solar panels for the community, and a portion of sales (from eco-bags and agricultural produce) is set aside for this cause. Further, educational materials have been translated into two local languages.

Future Challenges

Waste management is complex, and shipment and disposal of solid waste such as metals (from machinery, housing, food packages) is costly, presenting a real challenge for the communities within developing small islands such as Rotuma. Establishment of waste-free communities under such circumstances cannot be realised without education in practical, innovative solutions, as well the creation of support structures, enabling an holistic response. Governmental support in establishing national policies to address such issues is one strategy that could assist the islanders.

General Information

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Area Climate Change 3R Biodiversity & Ecosystem Water Capacity Development Others

Indonesia 2008

Gianyar Waste Recovery Project

Project Site Location
Town of Temesi, Regency of Gianyar, Province of Bali.

Background - Problems Addressed and Policy Responses
Bali, Indonesia's primary travel destination, faces an escalating waste problem that already affects its tourist sector. In the formerly pristine environment, waste is now burned roadside or disposed indiscriminately in rivers and canals, thus polluting also beaches and coral reefs. The waste problem in Bali, like elsewhere in Indonesia, needs urgent attention.


Compost made from organic waste

Project Outline - Objectives and Activities
The goal of this pioneering waste-recovery project is to contribute to a cleaner environment with a viable model for solid waste management that can be replicated in most of Indonesia's 457 Regencies and smaller cities. By composting organic waste, about 250,000 tons CO_2 equivalent of the greenhouse gas methane will be avoided. An important complementary component of the project is an educational environment theme park - the first of its kind in Indonesia - next to the Waste Recovery Facility.

Impacts and Achievements
The planned and expected outcome is a low-cost and low-tech decentralised model for environmentally friendly solid-waste processing that is sustainable and can be replicated elsewhere. The achievements were: Centralisation of "Waste-to-Energy" facilities as a low-risk waste recovery model; reduction in climate change, waste volume, and emission amount of hazardous substances; recovery of non-renewable resources; awareness-raising of a model large scale waste recovery facility; and establishment of a theme park focused on climate change, solid and liquid waste management, renewable resources, alternative energy and the like.

Future Challenges
The challenges are: dealing with the delay between paying for external CER verification (20,000-40,000 USD) and the payback, which takes 3-5 years; reducing the percentage of garden waste (90%; mainly *Chanan* flower offerings on square palm leafs, which slows down the compost process), and kitchen waste (10%); and tackling the problem of overflow from the facility that needs to be landfilled when the 60 ton capacity of the facility - the largest and first of its kind in Indonesia - is insufficient.

General Information

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Thailand

2008

* etc.=Rice cultivation

Preparedness for Climate Change and Increased Water-use Efficiency for Rice Cultivation via SRI [System of Rice Intensification]

Project Site Location Central Thailand, Ratchaburi Province

Farmers in Ratchaburi examing the newly harvested crops of System of Rice Intensification (SRI)

Background - Problems Addressed and Policy Responses

In Thailand, rice is the most important crop grown (55% of cropped area), consumed (42% of daily calorie intake) and exported (40% of global share in 2008), but is problematic due to emission of large amounts of GHG and methane and the low water-use efficiency. Therefore, improved production systems, such as SRI are needed to combat climate change.

Project Outline - Objectives and Activities

The objectives are to strengthen the capacity, at the farmer level, to deal with location-specific heterogeneity and develop area-specific green technologies for rice production systems that focus on sustainable water use to address the challenges of climate change and economic development. Development of innovative location-specific crops and water-management techniques with active involvement of farmers along with experts at selected farming fields, and creation of a knowledge base and awareness for information dissemination are implemented.

Impacts and Achievements

This project can help rice farmers become partners in climate-change mitigation and adaptation – so-called preparing for and coping with strategies–through adapting and adopting improved water-management practices such as intermittent irrigation, a well-known and scientifically-proven technique to reduce CH4 emission. A proven concept like SRI, on the other hand, would boost water productivity and crop health to prepare farmers for sustainable production with less water and in less favorable climates. The resulting higher yields would be both an incentive and reinforcement for the behavioural changes involved in transforming crop, soil, water and nutrient-management practices.

Future Challenges

Value-added alternative production systems that involve reductions in water, chemicals and other inputs are required to sustain climate-friendly crop-management practices such as SRI. Existing agricultural policies need to be revised in the context of climate change to benefit farmers, consumers and the environment.

General Information

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Area Climate Change 3R Biodiversity & Ecosystem Water Capacity Development Others

Mongolia

2008

Livelihood Improvement of Informal Gold Miners in Zaamar Goldfield

Project Site Location Tov Aimag, Zaamar Soum

Artisanal and small scale miners called "Ninja"

Background - Problems Addressed and Policy Responses

Drought, snow storms and pasture degradation have undermined rural herder livelihoods, resulting in artisanal mining. The number of these miners-known locally as ninja, a Japanese term referring to medieval warriors - has reached 100,000. They work in harsh conditions with no land entitlement or health insurance, and are regularly exposed to toxic chemicals such as mercury and cyanide.

Project Outline - Objectives and Activities

The project is intended to improve the safety and livelihoods of artisanal and small-scale miners, including youth, women and children. Activities were undertaken to (i) provide information and training on the risks involved in mining, (ii) train on proper storage and management of toxic chemicals, (iii) inform of alternative livelihood opportunities, (iv) develop a database on wildlife and the environment, and (v) promote policy dialogue towards amendment of the mining law and to legislate rights and obligations of artisanal miners.

Impacts and Achievements

A survey was conducted on the artisanal miner households and the local environment; Training sessions were conducted on artisanal miners regarding the safety measures and proper mining methods to prevent accidents and exposure to toxic chemicals; A mining law amendment recognising the rights and obligations of artisanal minders was drafted and heard at the parliament, then promulgated in July 2010 - artisanal miners and their communities are now organised to promote safe, environmentally-sound and sustainable mining; Training was provided on alternative livelihoods and scholarships for youth, and a database on local wildlife, environment and sustainable mining was developed.

Future Challenges

Compliance monitoring and enforcement measures need to be strengthened on safety measures and management of toxic chemicals; Mechanisms need to be built to reduce detrimental environmental impacts caused by excavated soil; Measures need to be enhanced in the treatment of effluent and wastewater from washing soil; Multi-stakeholder dialogues need to be facilitated on environmental management and mineral resources to ensure long-term equity and sustainability, and benefit-sharing mechanisms need to be pursued among miners and local non-mining communities.

General Information

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Bangladesh 2008

Appropriate Technology Park for Climate Change Adaptation and Environment-friendly Coping Strategy

Project Site Location

South West (Jessore) and North West (Dinajpur) regions of Bangladesh

Biosand filter being constructed

Background - Problems Addressed and Policy Responses

Historical data and future projections have indicated a broad range of climate change impacts on the food and energy security of Bangladesh. Being a developing country, its purchasing power and access to various climate friendly technologies are poor, which necessitates penetration of low-cost technologies for the rural poor in Bangladesh.

Project Outline - Objectives and Activities

The primary objective of the "Seeing is Believing" project - via establisihment of a technology park-is to demonstrate low-cost technologies for coping with changes in climactic and environmental conditions to rural communities, and urge their adoption. The project involves showcasing appropriate technologies, including a bio-sand filter, solar water purifier, solar desaliniser, rainwater harvesting, efficient stove, solar drier, and biogas plant, and providing usage instructions and supply chain information therefor.

Impacts and Achievements

The project has implemented two approaches; a cluster-based Technology Park and diffusion based on a visit system, which have resulted in 256 adoptions of the various technologies within a year – the most popular being biogas slurry and biogas plants, followed by urea super-granules and composting. The project has raised the awareness among various stakeholders of the importance of these low cost technologies, facilitated private sector penetration into rural areas, and helped shape government policies by promoting greater investment in low-cost technology development and diffusion.

Future Challenges

Designing mobile and diffusion-based systems as against fixed technology park need to be considered. The robustness of the low-cost options needs to be improved, with more research and development by government and private agencies, hands-on training for rural artisans, greater incentives by government to promote private sector participation, and instituting a mechanism that continuously identifies local innovations and introduces them into formal research and development schemes.

General Information

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Area: Climate Change | 3R | Biodiversity & Ecosystem | Water | Capacity Development | Others

Philippines 2008

Community-based Wind Energy System

Project Site Location Lamag, Quirino, Ilocos Sur

Background - Problems Addressed and Policy Responses

Selected communities are in remote areas with poor access to education, health care, transport, markets and electricity, low levels of industrialisation, and little investment and support from the local and national government. The communities produce brown sugar and syrup for satisfying household needs, so little cash income is created. However, there is a high potential for wind power generation.

A wind turbine designed and developed by SIBAT

Project Outline - Objectives and Activities

The project aims to demonstrate the suitability of small-scale wind power generators installed in an off-grid village in Northern Luzon, Philippines. This technology is a tool for sustainable development within the framework of SIBAT's community-based renewable energy system (CBRES), and for developing local livelihood opportunities and sustainable social practices.

Impacts and Achievements

Various demands and concerns were discussed by the residents during the consultation and implementation period, which was proceeded smooth execution of the project activities. Technical training on tower construction and turbine assembly was given to the members, and installation of a wind turbine (1 kWh) was completed. Further, solar panels (75 kWh×4), a power house and electric sugarcane press have been installed as of November, 2010.

Future Challenges

Problems such as the lack of pans for cooking sugarcane juice, assigning staff and distribution of profits may arise. There are now two large and one small pan (153 L, 102 L), for making 30 kg and 15 kg of sugar, with another one possibly needed depending on the amount of juice obtained in the future. The community as well as SIBAT need to determine appropriate time schedules for use of the motorized press, penalties, profit distribution, and other factors.

General Information

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Pakistan

2008

Climate Change Mitigation: Greening Organisations to Reduce Ecological Footprint

Project Site Location Islamabad, Karachi and Lahore

Participants of EF Workshop (January 2010)

Background - Problems Addressed and Policy Responses

Following the unequivocal evidence of Climate Change (CC) accepted by the Intergovernmental Panel, climate change has become a major global environmental and development concern. But as much as action is required from all quarters to address the issue, multi-stakeholder support is still missing in countries like Pakistan to undertake efforts on resource conservation and climate change mitigation.

Project Outline - Objectives and Activities

The objective of the project was to initiate low-carbon, resource-conserving trends among the corporate and private sectors in Pakistan for climate change mitigation and environmental conservation. Envisaged as an innovative resource management project, the initiative mainly involved customisation of an Ecological Footprint (EF) assessment tool for medium to large sized local organisations in Pakistan, to raise awareness of the environmental impact of their office operations and also to help them plan and manage the adoption of sustainable office policies and practices.

Impacts and Achievements

The project introduced EF assessment technology in Pakistan and provided an innovative method for educating target groups on environmental and sustainability issues. LEAD used the assessment tool to measure the EF of its head office in Islamabad, which enabled more efficient and sustainable consumption of resources. The whole exercise was documented as a case-study and showcased at training sessions in Lahore, Karachi and Islamabad where over 50 organisations were sensitised to the concept of EF and green offices. Participating organisations were able to conceptualise simple action plans for reducing the EF of their offices as a result of this training.

Future Challenges

To date, awareness-raising campaigns have been limited to certain groups of stakeholders and individuals; however, it is extremely important to effectively utilise this tool in raising climate change mitigation awareness within society at large, especially among the younger generation. The target groups and sectors - transport, students, government buildings, schools, households, and offices - also need focusing on to spread awareness of EF and to elicit support in making the world livable for future generations.

General Information

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Area Climate Change 3R Biodiversity & Ecosystem Water Capacity Development Others

Vietnam

2008

Setting up a Demo Technical and Financial Model for Application of Rice Husk Gasification

Project Site Location Sa Dec, Dong Thap


New kiln

Background - Problems Addressed and Policy Responses

The Mekong Delta houses about 4,500 rice-husk-fueled traditional kilns producing bricks and ceramics, with each kiln owner employing 10 to 100 workers. Traditional kilns have very low energy efficiency and emit polluting smoke that degrades human health and lessen agricultural productivity. To resolve the air pollution, the Central Government issued Decision 15/2000/QD-BXD in 2000, stipulating closure of all traditional kilns by 2010.

Project Outline - Objectives and Activities

A new kiln type was introduced for rice husk gasification; a continuous four-compartment kiln, eliminating air pollution and improving the quality of ceramic products. The project also introduces an energy service business model in order to effect adoption of the new technology. A feasibility study was conducted wherein under the project investment scheme, users arrange financing, including equity and debt, to develop rice husk gasification with the new kiln system. A pilot project was selected for application of this scheme.

Impacts and Achievements

Technical assistance was provided to Mr. Luat, the pilot project owner, in setting up the new rice husk gasification and kiln system, in liaising with government agencies to certify the feasibility of the gasification system and in establishing contacts with a bank to secure funding. The project was selected as National Winner of the ENERGY GLOBE Award 2009 and showcased by Dong Thap officials as a promising solution to transform the local kiln industry.

Future Challenges

While the project follows a model of providing assistance to potential users in terms of technical know-how (designing, technology identification, analysis for decision making) and mobilizing a source of commercial finance, the role of Energy Service Companies (ESCOs) is critical in the replication stage to lessen initial investment burdens on the poorer small and medium-sized kiln owners. Diffusion of the project activities to more kiln owners is needed, together with government assistance to facilitate capacity-training in business management.

General Information

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Nepal

etc. 2008

*etc.=Energy and Air

Change the Bulb Campaign

Project Site Location Kathmandu

Background - Problems Addressed and Policy Responses

In Nepal, demand for electricity is increasing at a faster rate than supply, resulting in a power deficit. To manage demand in the country, load shedding is carried out. The effect of an energy shortage has impacted on all sectors of society, thus efficient usage assumes paramount importance. One answer is to replace incandescent lamps with compact fluorescent lamps (CFLs).

A compact fluorescent bulb to replace a incandescent bulb

Project Outline - Objectives and Activities

The objective was to advocate, raise awareness and create a favorable environment regarding efficient usage of energy by replacing incandescent bulbs with energy-efficient CFLs. The activities included tagging of model CFL households; selection and training of an "EnviroCorps" to increase awareness across society; establishment of a CFL Revolving Fund for those unable to afford CFLs; organizing a CFL Concert to promote the usage of CFLs and designing awareness-raising materials for distribution during various promotional events.

Impacts and Achievements

Twenty-five hundred CFL Model Houses were tagged, in which 1,500 incandescent bulbs were exchanged for CFLs. A number of other households also replaced incandescent bulbs as a result of a mass awareness campaign and distribution of promotional materials. More than 30 environment volunteers (including 10 from EnviroCorps) were trained for the programme. A revolving fund of 1,500 USD was also created to support those households and institutions unable to purchase CFLs. The ceaseless efforts of the project team and other supporting agents resulted in a reduction of tax on CFLs to 1% in FY-10.

Future Challenges

Project objectives were met in general, though reducing energy consumption at the household level remains a challenge. The high initial cost of CFLs remains a hurdle for households, and limits their widespread uptake. Although budgetary and other resource constraints limited the impact of the project to those in the selected cities, the positive outcome of the project indicates that replication of project activities on a larger scale would be beneficial.

General Information

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Area Climate Change 3R Biodiversity & Ecosystem Water Capacity Development Others

Iran

2008

Rainwater Harvesting for Sustainable Water Resource Development and Climate Change Adaptation

Project Site Location Khorsan province, City of Mashhad

Background - Problems Addressed and Policy Responses

Mashhad city has low rainfall and uses groundwater as the main source of city water, which has been highly contaminated with chemicals released from the traditional sewerage system. As the national countermeasure policy demands that groundwater utilisation be greatly reduced in both urban and agricultural sectors, a new approach to water management is needed.

University students visiting the site

Project Outline - Objectives and Activities

The purpose of the project is to demonstrate and evaluate the potential of rainwater harvesting as a water resource development programme by building, operating and monitoring a well designed rainwater harvesting system in Masshad city. During and after the project, technical discussions were held to exchange experiences and provide supporting material for the decision makers at the technical and political levels. A permanent exhibition centre was also established for local people and visiting pilgrims, to raise public awareness of the project.

Impacts and Achievements

This project demonstrated that rainwater can be a reliable water resource in the dry area, as the reservoir was almost full at the end of rainy season in 2010, with no leakage, enabling about 60% for use as bathroom washing water. Public awareness of the project was raised through presentation of the monitoring results at an international conference and establishment of an exhibition centre, frequented by many university students and government officers.

Future Challenges

The future uses of harvested rainwater depend on needs and the quantity and quality monitoring data. Further, discussions with relevant stakeholders at the technical and political levels should be implemented in order to achieve sustainable water management by disseminating the rainwater harvesting system throughout the city.

General Information

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Cambodia

2008

*etc.=Securing local livelihood

Wildlife-friendly Products: Linking Community Agricultural Cooperatives to Biodiversity Conservation

Project Site Location

Kulen Promptemp Wildlife Sanctuary and Preah Vihear Protected Forest, Preah Vihear Province

Ibis rice

Background - Problems Addressed and Policy Responses

In Cambodia, forests are habitats for large mammals and water birds, but these forests are disappearing due to rapid population growth and associated pressures on land and resources. In the targeted area, agriculture has limited use for livelihood due to the low prices offered by traders. Wildlife and habitat conservation is the key for socio-economic development in such communities.

Project Outline - Objectives and Activities

This project provides a solution to break the poverty cycle for sustainability through producing ibis rice via establishment of a responsible certification agency that bypasses middlemen, facilitating contracts on price premiums whilst respecting land use and wildlife protection regulations by farmers, investigation of the certification process and links to a "wildlife-friendly" brand, and implementation of training for farmers in order to add value to their products and raise farming incomes.

Impacts and Achievements

Through this project, both environmental conservation and poverty alleviation are achieved. For poverty alleviation, marketing materials were developed and disseminated to other areas. Some villages built proper infrastructures for storing paddy ibis rice, and others target villages are under construction. Also, possible markets for ibis rice have been identified. In terms of wildlife conservation, wildlife numbers are increasing, and climate change mitigation has been achieved. These achievements have led to incentives to protect habitable land, as well as rice premiums of at least 25% to 50% over the 2007/8 baseline for farmers.

Future Challenges

The project led to successful contracts with several restaurants and hotels in Siem Reap for selling ibis rice at premium prices. The next step, expanding the market, is crucial. Application of this pilot project to a wider area and increasing the participating villages needs to be considered. Activities are linked with securing protected area management. In terms of global warming and sustainable forest management, REDD+ could also be introduced.

General Information

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Type of Organisation: NGO/CBO

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Area Climate Change 3R Biodiversity & Ecosystem Water Capacity Development Others

India

2008

Setting up Model GREEN Colleges

Project Site Location Gujarat, Ahmedabad

Plantation at Gov Science College, Valod 1

Background - Problems Addressed and Policy Responses

In DESD*, it is important for youth while studying to obtain experience in sustainable development, to lead sustainable lifestyles and to acquire a sustainable development perspective. Youth participation is essential for initiating action to reduce climate change, and in making colleges green, in areas such as efficient energy and water usage, proper waste management and green management on-campus.

*"DESD": the UN Decade of Education for Sustainable Development.

Project Outline - Objectives and Activities

To establish Green Colleges in urban, rural and tribal areas, via implementation of (1) orienting youth in aspects of climate change through sustainable consumption practices in lifestyle, (2) identifying issues and actions for making Green Colleges, (3) promoting action among youth to combat climate change (e.g., establishing rainwater harvesting structures, efficient energy/waste management systems), and (4) developing documentation on adaptation/replication of the Green Colleges project for the Asia region.

Impacts and Achievements

Through "Eco Clubs" in all three participating colleges in the project, the following are the impacts and achievements at the end of the two-year project: (1) The creation of groups of students and teachers skilled in sustainable lifestyle and consumption practices, (2) Provision of assistance in Initiatives in sustainable campus practices in the three project colleges, (3) Production of documents for replication of projects in developing model green colleges in similar Asian contexts, and (4) Involvement of other global youth-based organisations for initiating action-based sustainable practices promoted via SAYEN newsletters and website.

Future Challenges

(1) Maintaining youth enthusiasm for actively advancing sustainable practices through running Eco Clubs in colleges, (2) Assuring appropriate maintenance of facilities and systems established in college campuses under the project, and (3) To successfully scale-up the project.

General Information

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Type of Organisation: NGO/CBO

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Indonesia ♻ 2009

Pursuing a Chemical-free Bamboo Treatment Process via Biomass-fired Kilns to Develop Small and Medium scale Rural Bamboo Industries

Project Site Location Ubud, Bali and East Java

The current bamboo treatment system in operation – each bamboo is stacked vertically and filled with a treatment solution while being smoked

Background - Problems Addressed and Policy Responses

Bamboo, through its benefits to ecosystems and economic value, holds tremendous potential to support sustainable development in Indonesia. However, it remains underutilised in the construction and handicraft industries because of its image as "poor man's timber" and the need for costly chemical treatments for preservation against pests and fungal rot. Hence, a safe and easy treatment method was called for.

Project Outline - Objectives and Activities

The goal of this APFED-funded project is to develop a cost-effective, environmentally-friendly and replicable method to treat bamboo for use in construction, furniture, and household products. Through collaboration between experts, the Environmental Bamboo Foundation (EBF) aims to design a bamboo treatment kiln that can be disseminated widely in order to enhance rural livelihoods in Indonesia, Asia and beyond. In working toward this goal, EBF and its partners will also develop markets for sustainably cultivated, harvested and preserved bamboo products.

Impacts and Achievements

The major hurdle to industrial takeup of bamboo is the slow and costly preservation process. As a result, bamboo is mostly used in an unpreserved form, leading to inferior quality products. However, the EBF project is now in its final stages in designing a bamboo treatment kiln that uses low-cost, low-tech and low-environmental-impact chemicals to effect preservation. Being closely linked with bamboo manufacturers, the project's results have been verified in actual bamboo product lines. Furthermore, the Ministry of Forestry in Sulawesi has expressed interest to support the dissemination of this technology if it proves to be successful.

Future Challenges

Although the results obtained on bamboo preservation are promising, the current treatment method developed by EBF still requires faster and less labor-intensive processes, for which ideas will continue to be tested. Furthermore, in order to achieve the ultimate goal of livelihood enhancement among rural populations, EBF will need to make efforts in disseminating the new technology and in providing both financial and technical assistance to bamboo producers across Indonesia and beyond.

General Information

Name of the Implementing Organisation:
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Type of Organisation: NGO

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Area Climate Change 3R Biodiversity & Ecosystem Water Capacity Development Others

Nepal 2009

Mentha [*Mentha arvensis*] Cultivation for Livelihood Enhancement and Biodiversity Conservation

Project Site Location

Buffer Zone of Bardia National park, Bardia, Nepal

Mentha farming contiguous to park boundary

Background - Problems Addressed and Policy Responses

The population of mammals and birds is expanding in the Bardia National park, which has led to insufficient supply of grass and a severe threat to local agriculture. Breeches into agricultural land leads to destruction of crops and underuse of arable land due to fear of crop damage and livestock degredation, as well as harassment and injuries to local people.

Project Outline - Objectives and Activities

The aim is to find a solution for the crop destruction as well as improvement in the economic conditions for the indigenous people and establishment of a positive attitude towards the park. There are three objectives; (1) mitigation of the wildlife-human conflict by replacing traditional crops with unpalatable crops and improvement of motivation of wildlife conservation; (2) development of local guardianship for biodiversity conservation through conservation education, and (3) enhancement of the livelihoods of the poor and disadvantaged people.

Impacts and Achievements

To promote unpalatable crops among local communities, eight community-based distillation units were established and seedlings, training and cultivation toolkits were provided to new farmers. In 2010, 535 farmers were involved in commercial cultivation of alternative crops (providing an additional 97,258 USD), and this number rose to 1,092 this season. Further, a conservation education programme was conducted with local school children, youth groups and community members to increase knowledge of wildlife and natural resources. To date, 56 conservation sessions have been held, 10 eco-clubs were supported and 2,414 local communities were made aware of the importance of biodiversity conservation.

Future Challenges

Alternative crops (mentha and chamomile) are grown in the winter/spring season. Crop raiding by rhino, elephants, prey species of tigers and other wildlife, including birds, has been minimised as all the adopted crops, with the exception of paddy, are unpalatable. There is thus an urgent need to replace paddy by alternative crops that can be grown in the rainy season. Further, increases in leopard-tiger related conflicts need to be addressed, due to the high number of livestock causalities.

General Information

Name of the Implementing Organisation: National Trust for Nature Conservation (NTNC)

Type of Organisation: NGO/CBO

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India

2009

Prevention of Global Warming and Climate Change via Rainwater Harvesting, Afforestation and Bio-Moss Growth for Drought-avoidance

Project Site Location West Bengal State- Purulia District- Hura Blocks

Background - Problems Addressed and Policy Responses

The Hura block, within the Purulia district, is a drought-prone area comprising expanses of degraded, unproductive wasteland and a very poor socio-culturally oppressed population. Project activities include use of 50 acres of model multi-cropping plantations for training (compost fertilizer preparation, rainwater harvesting, etc) of the local youth community.

Project Outline - Objectives and Activities

The objectives of the study are; (1) implementing multi-cropping plantations in degraded wasteland to prevent global warming and climate change, and (2) to raise the rainwater-holding capacity and groundwater level in selected areas. In order to achieve these objectives, various types of training (soil testing, vermin culture, compost fertilizer preparation, nursery raising, soil and moisture conservation, rain water harvesting, groundwater recharging and organic farming) were provided to the youth members of the community.

Impacts and Achievements

As this project is ongoing, the impacts and achievements are still uncertain, but the project is anticipated to create a bio-moss and improve the fertility of the wasteland, reduce the occurrence of droughts, provide drinking water for the local population and generate income through regular sale of medical herbs, vegetables, and fruit, as well as timber. This project is also intended to provide stable employment, various livelihood possibilities and a sustainable environment.

Future Challenges

The main challenge of the project is to sustain key activities related to rainwater harvesting, replenishing the groundwater and to some extent plantation activities in the periods of low rainfall or years of drought.

General Information

Name of the Implementing Organisation: Liberal Association for Movement of People

Type of Organisation: NGO/CBO

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Area Climate Change 3R Biodiversity & Ecosystem Water Capacity Development Others

Cambodia

2009

Community Conservation of Asian Elephants

Project Site Location

Four villages affected by Human Elephant Conflict (HEC)

Recording elephant crop damage

Background - Problems Addressed and Policy Responses

Habitat degradation and losses, civil war and illegal poaching have led to a significant reduction of wild Asian elephants in Cambodia. Forest conservation and sustainable resource management are crucial for the protection of elephant habitats. Thus, effective management of land use and improvements in farming practices among the rural and indigenous communities will help stabilise the elephant population.

Project Outline - Objectives and Activities

The project will secure, protect and conserve the Asian elephant and its habitat in the Cardamom Mountains of southwest Cambodia through community-based capacity building. The project will assist selected poor rural communities affected by human-elephant conflict to coexist with wild elephants by improving farming practices to increase productivity and income and awareness raising on elephant conservation. The project has four components; 1) Human-elephant conflict reduction, 2) Community-based land use planning, 3) Livelihood improvement, and 4) Primary level education.

Impacts and Achievements

The Cambodian Elephant Conservation Group has been working since 2005 to stabilise the national wild Asian elephant population. In cooperation with Fauna & Flora International, the Ministry of Environment and the Forestry Administration, it has helped 30,000 people in farming communities to coexist with wild elephants by improving their farming practices, by providing elephant deterrent methods and education to raise awareness of elephant conservation.

Future Challenges

Population growth and development is a future challenge that is likely to contribute to increasing use of natural resources. Encroachment into forests will lead to habitat fragmentation and reduce the elephant population. Population increases may also lead to intensive farming. Communities may not follow sustainable methods of resource utilisation and farming practices may required further improvements.

General Information

Name of the Implementing Organisation:
Fauna and Flora International

Type of Organisation: NGO/CBO

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China

etc. 2009

*etc.=Environmental awareness and environmental legal aid

Public Participation in Environmental Rights Protection

Project Site Location

Ganyugou Village, Tangshan City, Hebei Province

Background - Problems Addressed and Policy Responses

Ganyugou is a small village of 240 inhabitants in 92 households, with 500 mu* of arable land supporting perennial agricultural crops. However, life was decimated upon exposure to flooding of contaminated water and coal dust pollution discharged by the neighbouring Douhe Electric Power Plant. The education and environment protection ministries pledged to investigate and provide assistance.

*mu=Chinese acre land measurements

Women of Ganyugou village attending the small symposia held for the publicity of the round-table meeting

Project Outline - Objectives and Activities

The main objective of this project is, via a round-table dialogue*, to solve the long-lasting conflicts between the power plant and the villagers on the issue of environmental pollution. It is designed to help the two sides reach a common understanding through the building of a public alliance on environmental rights protection, and provides training for alliance members in Beijing and Chengdu based on the theme of public participation in environmental protection.

*Round-Table Dialogue on Flooding and Coal dust Pollution Problem of Ganyugou Village - Public Participation

Impacts and Achievements

Douhe Electric Power Plant offers reasonable compensation for the problems it creates, and has pledged to pursue clean production methods via improvements to production facility infrastructure. Successful implementation of the project has provided an innovative dispute-solving mechanism to local government and the rest of China by advocating public participation and communication, and as such has the potential for resolving other environmental pollution-related cases. It is a clear example of improvement in the living environment via an innovative environmental dispute-solving mechanism.

Future Challenges

Since the resolution of the power plant dilemma involved many setbacks along the way, the provision of expert support in the formulation of environmental policies, laws and regulations and gathering of evidence would be highly valued. Further, monitoring via news organisations and the media, as well as environmental supervision and monitoring should also be utilised, as appropriate.

General Information

Name of the Implementing Organisation: All-China Environment Federation

Type of Organisation: NGO/CBO

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Area Climate Change 3R Biodiversity & Ecosystem Water Capacity Development etc Others

Bangladesh 2009

Climate Change Adaptation in Sundarbans via Bamboo Cage Crab Fattening and Mangrove Restoration

Project Site Location Shyamnagar Upazilla Satkhira district


2 week-old Sundarbans Crabs

Background - Problems Addressed and Policy Responses

The rise in sea level poses many threats to coastal populations; it reduces the stability of ecosystems and jeopardise the livelihoods of those dependant on coastal fisheries. Further, the increasingly frequent natural disasters exacerbate the current situation, causing irreversible losses and damage to marine life and disrupting the process of mangrove restoration.

Project Outline - Objectives and Activities

This project aims at engaging local people and all stakeholders to collaborate on effective countermeasures to the existing problems, part of which involves bamboo-cage crab-fattening and mangrove restoration. The objectives are: (1) Increasing the number of local communities participating in the project, (2) Reducing the impact of natural disasters through local resources and mangrove restoration, and (3) Setting up cooperation between related organisations and the public.

Impacts and Achievements

The impacts or outcomes are (1) Increased income of beneficiaries through applying appropriate technology for crab fattening, (2) Protecting and reforesting mangrove areas in order to create a more productive marine system, and (3) Creating a buffer zone via mangrove restoration to act as a protective barrier against natural disasters.

Future Challenges

While the project has mainly proceeded according to schedule, potential risks affecting progress include natural disasters and tiger attacks, the latter of which can be solved through provision of security protection. A further challenge for the project is in its replication in other areas, as well as gaining cooperation and commitment from beneficiaries to raise their income and increase their quality of life. Concurrently, local communities need to be urged to take better care of their natural resources.

General Information

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Type of Organisation: NGO/CBO

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Bangladesh 2009

New Climate Risk Management Project

Project Site Location Faridpur District

Background - Problems Addressed and Policy Responses

Bangladesh is traversed by several rivers and tributaries, along which large areas of sand deposits, called char lands, form as a result of changing river courses and varying levels of flow and sedimentation. The many people living on these char lands face a number of natural disasters, the causes of which are becoming increasingly complex due to climate change.

Seeds beneficiary taking care of her paddy

Project Outline - Objectives and Activities

The objectives are to reduce the vulnerability of communities living on char lands to various natural disasters resulting from climate variability and change, to enhance the resilience of rural livelihoods, and to enhance the disaster capacity of communities. These objectives are met through the introduction of hydroponics/floating gardens, capacity building, disaster management planning, micro-insurance, soil-less agriculture and awareness-generation activities on related areas. The project involves communities, local governments, NGOs, and insurance agencies.

Impacts and Achievements

The project has trained 705 stakeholders on skills needed in the above, reached 962 direct and indirect beneficiaries through awareness-generation on climate change, disaster risk reduction, climate resilient livelihoods and health and hygiene; provided improved paddy seeds and tree saplings to 600 beneficiaries; and assisted in the preparation of rescue and evacuation plans for floods and cyclones for several villages. As a result, the Climate Change Management Committees, Union and District-level Disaster Management Committees observed improved performance during flooding in 2010 and a number of community members have reported reduced income loss and steadier food availability during stress periods.

Future Challenges

Due to the lack of focus the above problems at the national and local government level, there is a real need for additional human and financial resources to expand these activities. A further challenge to address is the lack of basic information available to communities concerning future climate change, due to the highly generic nature of the problems. There is also a very limited mandate for local governments to initiate specific projects to deal with climate change.

General Information

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Type of Organisation: NGO/CBO

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Area Climate Change 3R Biodiversity & Ecosystem Water Capacity Development Others

Pakistan 2009

Environmental Improvement and Greenhouse Gas Reductions via Use of Fuel-efficient Technologies and Reduced Woodcutting

Project Site Location Kohistan District, KPK, Pakistan


Tree plantation

Background - Problems Addressed and Policy Responses

Ninety percent of the population in Kohistan live in an area that receives 81% of the rainfall and rely on the abundance of natural resources for their existence. In particular, women collect large amounts of fodder for livestock and wood for kitchen fuel. However, the expanding population is depleting the forest areas and being affected by environmental problems.

Project Outline - Objectives and Activities

This project is intended to improve livelihoods and environmental conditions in the target area via (1) introduction of fuel and energy efficient stove technologies (e.g., smokeless stoves), and (2) awareness-raising through social mobilisation and training (e.g., training of women on household use of stoves and maintenance of fuel-efficient stoves). In total, 300 households within the 11 council union in Kohistan were targeted for this project.

Impacts and Achievements

This project has resulted in several impacts: Forest conservation in Kohistan; Reduction in women's workload in fetching wood and improvement in empowerment of women in forest conservation; General improvement of health for several generations due to improved environmental conditions; Improved household economy; General increase in forest productivity through reduced use of wood and timber for energy and tree plantation; and general improvement in air quality through reduction in CO_2.
Futher, activities implemented via the project compliment the aims of the National Forest Policy 2002 and National Environment Policy 2005.

Future Challenges

In July 2010, Pakistan received much rain, resulting in heavy flooding throughout the country, including the project areas. The floods caused extensive damage in the project area, cutting off roads and communications for a period of two months. Based on these circumstances, we suspended project activities for three months, and informed Khwaja Mehmood at SDPI of this. These were the key challenges faced by the project during the implementation period.

General Information

Name of the Implementing Organisation:
National Integrated and Development Association (NIDA-Pakistan)

Type of Organisation: NGO/CBO

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Philippines 2009

Innovative Community Development and Good Governance in Integrated Coastal Resource Management

Project Site Location Sultan Naga Demaporo, Lanao del Norte

Background - Problems Addressed and Policy Responses

The project site is valued for its rich marine resources. However, there are enormous environmental and social problems within the coastal communities. Poverty, religious conflicts between Muslims and Christians and lack of community involvement in planning and enforcing coastal resource management laws are causing illegal fishing, overexploitation of mangrove forests, and improper disposal of waste products.

Growing mangroves which are planted by the coastal community

Project Outline - Objectives and Activities

The project seeks to enhance the Marine Protected Area (MPA) through mangrove reforestation projects in collaboration with stakeholders such as government officials, the Department of Agriculture in Sultan Naga Dimaporo, Barangay captains, and coastal communities. The following outcomes are anticipated: 1) a sustainable fish catch as a source of livelihood; 2) reduced competition for marine-based natural resources in the area; and 3) a raise in incomes of those in peoples' organisations and the coastal communities.

Impacts and Achievements

Although the outcomes of this two-year project are still under observation until the end of February 2012, the project seeks to achieve following:

-Establish institutions for resource management of the MPA through involving both Muslims and Christians
-Reforest mangrove areas totalling 10 hectares
-Capacitate10 peoples' organisations in managing livelihood projects
-Identify and develop socio-economic enterprise projects
-Establish partnerships and coordination with local government units and other institutions in managing the MPA
-Reduce cases of illegal fishing
-Ensure sustainable food sources and additional incomes for the local communities

Future Challenges

The project aims to conserve the environment, enhance livelihoods, build capability and advocate governance. It seeks to strengthen the relationship and lessen the conflicts between Muslim and Christian communities via active participation in managing the MPA and restoring the mangroves. Ethnic and cultural differences may impinge upon project goals but this could be mitigated by increased cross-cultural and cross-gender dialogue, leading to increased mutual understanding and less alienation and misunderstanding.

General Information

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Type of Organisation: NGO/CBO

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Area Climate Change 3R Biodiversity & Ecosystem Water Capacity Development Others

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Booklet on Good Practices and Innovative Activities

For Achieving Sustainable Development in Asia Pacific

2005-2009

This booklet carries information correct as of March 2011.

Ministry of the Environment, Japan
http://www.env.go.jp/en/