Rewards for, Use of, and Shared Investment in, Pro-poor Environmental Services schemes (RUPES)

Phase Two

"Introducing the concept of rewarding people to protect or enhance environmental services that benefit businesses and the wider population"

Project Report

World Agroforestry Centre

Completion Report: ICRAF-1032

March 2013

Rewards for, Use of, and Shared Investment in, Pro-poor Environmental Services schemes (RUPES) Phase Two

October 2008–September 2012

Agroforests along a river in Jambi province, Indonesia

World Agroforestry Centre
TRANSFORMING LIVES AND LANDSCAPES

RUPES
REWARDS FOR USE OF AND SHARED INVESTMENT IN PRO-POOR ENVIRONMENTAL SERVICES

IFAD
Enabling poor rural people to overcome poverty

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List of Abbreviations

3PAD	Pro-poor Partnerships for Agroforestry Development
AusAID	Australian Agency for International Development
BITO	Bakun Indigenous People's Organization
CES	Commoditised environmental services
CHARM	Cordillera Highland Agricultural Resources Management project
CIFOR	Center for International Forestry Research
CIS	Co-investment in (environmental) stewardship
COS	Compensation for opportunities skipped
CPM	Country Project Manager
DARD	Department of Agriculture and Rural Development, Viet Nam
DONRE	Department of Natural Resources and Environment, Viet Nam
DOST	Department of Science and Technology, Viet Nam
ES	Environmental services
FAO	Food and Agriculture Organization of the United Nations
FKDC	Forum Komunikasi DAS Cidanau (Cidanau Watershed Communication Forum)
FKKt HKM	Forum Komunikasi Kelompok Tani Hutan Kemasyarakatan (Community Forestry Farmers' Group Communication Forum)
GEF	Global Environment Facility
HKH	Hindu Kush Himalayan
ICIMOD	International Center for Integrated Mountain Development
ICRAF	International Centre for Research in Agroforestry (rebranded in 2002 as World Agroforestry Centre)
IFAD	International Fund for Agricultural Development
IUCN	International Union for the Conservation of Nature
KONSEPSI	Konsorsium untuk Studi dan Pengembangan Partisipasi (Consortium for Study and Participatory Development)
LEI	Lembaga Ekolabel Indonesia (Indonesian Eco-label Institute)
LGU	Local government unit
LP3ES	Lembaga Penelitian, Pendidikan dan Penerangan Ekonomi dan Sosial (Institute for Socio-economic Research, Education and Information)
MARD	Ministry of Agriculture and Rural Development, Viet Nam
NGO	Non-governmental organization
PES	Payments for environmental services
PFES	Payments for forestry environmental services
PLN	Perusahaan Listrik Negara (State Electricity Company, Indonesia)
READ	Rural Empowerment and Agricultural Development project
RES	Rewards for environme+ntal services
RHA	Rapid Hydrological Assessment
SANREM CRSP	Sustainable Agriculture and Natural Resource Management Collaborative Research Support Program
TEEB	The Economics of Ecosystems and Biodiversity
TKPD	Tim Kerja Pemulihan Dieng (Save Dieng Work Team)
TULSEA	Trees in Multi-Use Landscapes in Southeast Asia
UNESCAP	United Nations Economic and Social Commission for Asia and the Pacific
VCM	Voluntary Carbon Market
WARSI	Indonesian Conservation Community
WWF	World Wide Fund for Nature

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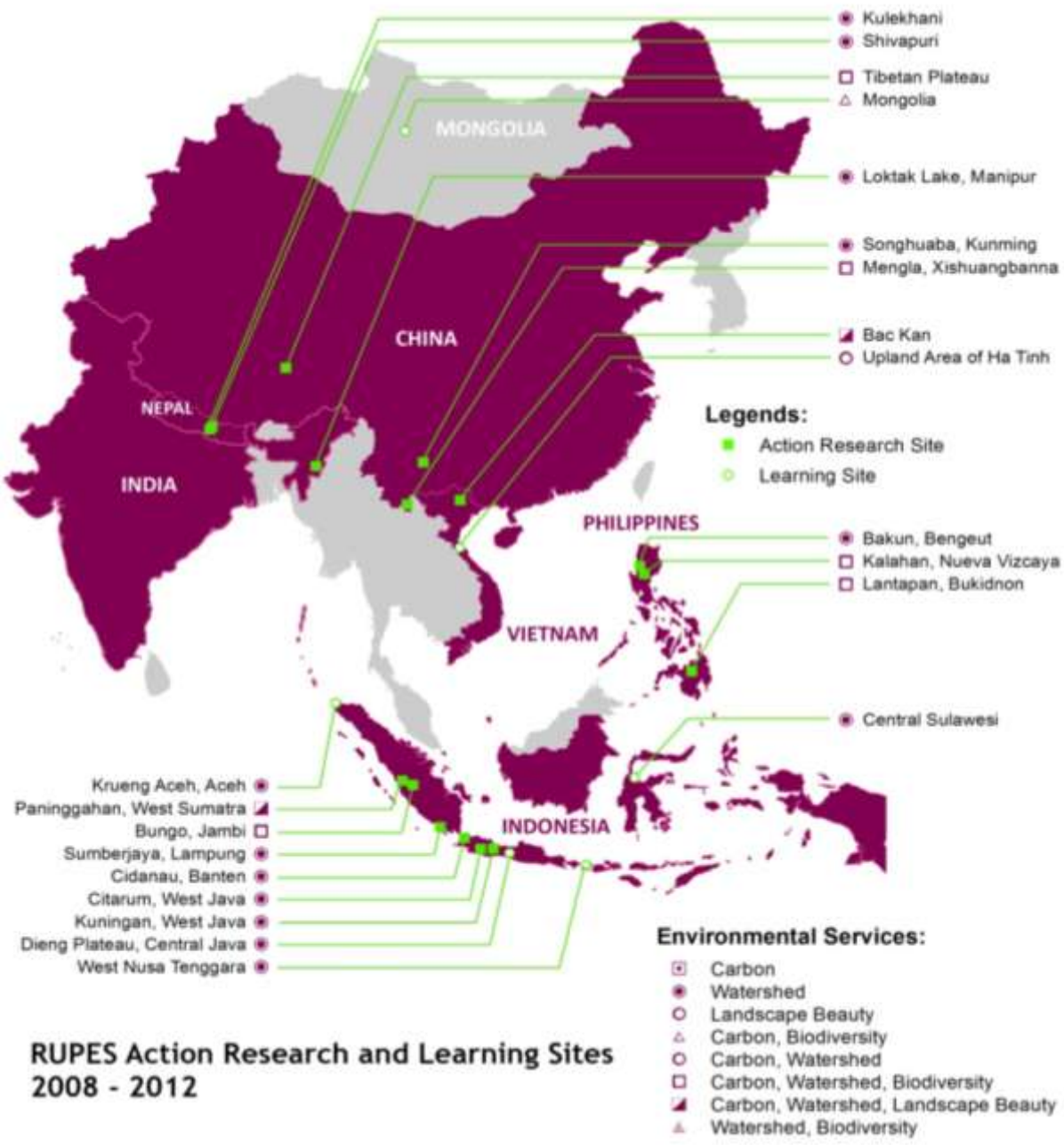

RUPES 1 (2002–2007): six action research sites in three countries	Partners
Indonesia: Bungo, Jambi; b) Singkarak, West Sumatra; c) Sumberjaya, West Lampung	WARSI, Yayasan Danau Singkarak,
Philippines: a) Bakun, Benguet; b) Kalahan, Nueva Vizcaya	CHARM, Ikalahan Foundation
Nepal: Kulekhani, Makwanpur	Winrock Nepal
RUPES 2 (2008–2012): 16 action research sites in six countries	**Partners**
China: a) Tibetan Plateau (Alpine Ecosystem); b) Songhuaba, Kunming; c) Xishuangbanna, Yunnan	ICIMOD, Yunnan University, Xishuangbanna Botanical Garden, Xishuangbanna Prefecture Government, AusAid
India: Lake Loktak, Manipur	Wetland International South Asia, Loktak Development Agency
Indonesia: a) Cidanau, Banten; b) Citarum, West Java; c) Kuningan, West Java; d) Sumberjaya Lampung; e) Bungo, Jambi; f) Paninggahan Singkarak, West Sumatra	FKDC (Watershed Forum), Rekonvasi Bhumi, LP3ES, Kanopi, Indonesian Power Company (PLN), Forestry Service of West Lampung District, FKKT-HKm, WARSI, LEI, Solok District Government, NagariPaninggahan, Yayasan Danau Singkarak, CO^2 Operate BV
Nepal: a) Kulekhani; b) Shivapuri	ICIMOD, IUCN
Philippines: a) Kalahan; b) Bakun; c) Lantapan	Kalahan Educational Foundation, IFAD Philippines, Bakun Indigenous People Organization (BITO), LGU Manupali watershed, SANREM
Viet Nam: Bac Kan	IFAD Viet Nam Project, IFAD-GEF, BacKan DOST, DARD, DONRE
RUPES 2 (2008–2012): six learning sites in three countries	**Partners**
China: a) Tibetan Plateau (Alpine Ecosystem); b) Songhuaba, Kunming; c) Xishuangbanna, Yunnan	ICIMOD, Yunnan University, Xishuangbanna Botanical Garden, Xishuangbanna Prefecture Govvernment, AusAid
India: Lake Loktak, Manipur	Wetland International South Asia, Loktak Development Agency
Indonesia: a) Cidanau, Banten; b) Citarum, West Java; c) Kuningan, West Java; d) Sumberjaya Lampung; e) Bungo, Jambi; f) Paninggahan Singkarak, West Sumatra	FKDC (Watershed Forum), Rekonvasi Bhumi, LP3ES, Kanopi, Indonesian Power Company (PLN), Forestry Service of West Lampung District, FKKT-HKm, WARSI, LEI, Solok District Government, Nagari Paninggahan, Yayasan Danau Singkarak, CO^2 Operate BV

Beneficiaries	
Direct (participants)	607 (94 women)
Indirect	1867 (789 women)
RUPES Country Coordinators	
Indonesia	Mr Rachman Pasha (r.pasha@cgiar.org)
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India	Mr Ritesh Kumar (ritesh.kumar@wi-sa.org)
Web links	
RUPES website: http://rupes.worldagroforestry.org/	The purpose-built site succumbed to malicious attack at the end of 2012. The data will be reinstated within the secure domain of the World Agroforestry Centre's site (www.worldagroforestry.org) as part of the site's renovation, which is underway at time of writing.
IFAD Asia website: http://asia.ifad.org/web/rupes	RUPES information is available on the IFAD Asia site

Executive Summary

The Rewards for, Use of, and Shared Investment in, Pro-poor Environmental Services (RUPES) project, phase 2 (2008–12), coordinated by the World Agroforestry Centre, was the second stage of the introduction of the concept of rewarding people to protect or enhance environmental services that benefit businesses and the wider population. The programme was designed to follow-up and expand on the lessons learned in RUPES 1 in Indonesia, the Philippines, Viet Nam, Nepal, India and China. The ultimate target group for RUPES 2 was indigenous forest dwellers and smallholding farmers in less productive environments that were vulnerable to environmental degradation and climate change. Activities aimed at national policies and the 'buyer' and 'broker' part of the 'rewards for environmental services' (RES) value chain were aimed at long-term sustainability of benefits for the primary target group. RUPES 2 gave ample consideration to innovative approaches that targeted fair and efficient schemes for RES.

The RUPES 2 project was one of the frontline activities that will allow IFAD to focus on the poverty aspects of climate change (on the interface of 'adaptation' and 'mitigation') and extract lessons for mainstream-to-rural development. The design of RUPES 2 responded to IFAD's Asia and the Pacific Division's interest in programmes to combat the problems of land degradation and empower the poor in upland areas. RUPES 2 helped find new solutions for a prominent determinant of rural poverty in Asia and provided opportunities for sustainable RES, especially in IFAD's rural development projects.

RUPES 2 supported policy makers and existing institutions, such as governments and NGOs, to develop policies and services that benefit the poor through a RES approach. In Indonesia, the National RES Protocol, as the operational document of Law 32/2009 on Environmental Management and Protection, included lessons from RUPES' action research and learning sites. In Viet Nam, RUPES contributed to the national policy formulation of Decision No. 99/2010 and its circularised guidelines. In China, China's State Council and the Government of Xishuangbanna Prefecture adopted the lessons from a RES scheme for grasslands, which was initiated by RUPES, for designing ecological land-use plans. In India, RUPES' main partner, Wetlands International India, provided three scenarios of wetlands' management—to balance human needs with ecological requirements—to India's National Environment Policy on the role of economic incentives for environmental conservation. In the Philippines, the RUPES team was involved in drafting the Philippine Climate Change Act of 2008 and conducting a final review of the Sustainable Forest Management Act in 2008. In Nepal, the RUPES team influenced a policy shift in recognition of PES among Hindu Kush Himalayan (HKH) countries through its major partner, the International Center for Integrated Mountain Development (ICIMOD).

The RUPES team successfully facilitated the engagement of international, national and local ES beneficiaries as investors in RES schemes. RUPES provided information as sources for site business cases, such as quantifying and identifying ecosystem services, informing smallholders of the feasibility of ES payment schemes to improve local livelihoods, conducting participatory ES monitoring, particularly for water quality and carbon stock. RUPES contributed to preparing local intermediaries, mostly NGOs and government officers, to design and facilitate efficient and fair rewards for environmental services' schemes. RUPES supported these local actors by providing a series of tools and lectures, engaging them in formal training and involving them in applying the TUL-SEA tools for identifying environmental services as the basis for PES design. The RUPES partners were also active in advocating enabling policies for PES implementation at regional level and pioneering independent institutions as centres of PES initiatives in their regions. Good practices of RUPES have been published globally by the Food and Agriculture Organization of the United Nations (FAO), Forest Trends, and The Economics of Ecosystem and Biodiversity initiative (TEEB).

At the site level, RUPES has supported partners to renegotiate and expand schemes to cover more ES providers, in addition to new sites joining RUPES. The partnership between the IFAD investment projects and RUPES has been strengthened. The IFAD Grant Coordinator has facilitated several meetings and contacts and the RUPES team and the IFAD Country Programme Manager and Facilitators have organized joint activities, especially in Indonesia, the Philippines and Viet Nam. In Nepal and China, the RUPES team, partners and IFAD

CPM have undertaken several contracts and planned some follow-up activities. This situation has raised opportunities for further technical support by the Centre and RUPES team at IFAD investment project sites.

Finance

Financial projections were reviewed and consulted with IFAD on an annual basis taking into account inputs from IFAD supervision missions. During the project implementation, ICRAF as the implementation agency was able to secure and to manage co-funding from several sources totalling US$ 2,436,000. The timing of all these funds was appropriate to enable integrated activities to contribute to the RUPES activities that involved many scientists/specialists with national policy makers on payments and rewards for environment services mechanisms.

The outputs the RUPES project achieved were over and above what IFAD funding could have supported, although they were not all as per the work plan schedules. RUPES resources were sufficient to meet the immediate and initial objectives even though there were a relatively low number of personnel to achieve the tasks required at site level. The funds from IFAD were enough to cover the requirements of the work plan, while community requirements for additional information on improving reward projects were drawn from other resources. At the site level, the internal evaluator observed that the money from IFAD alone was quite enough to address all the site requirements that were planned. However, in the sense that the project could expand to accommodate community needs as desired by the site collaborators, RUPES involved other resources to collaborate in programmes that were established at the sites.

Innovation

RUPES has been examining a broader class of mechanisms that pursues enhancement of environmental services through compensation or rewards. Such mechanisms can be analysed on the basis of how they meet four conditions: realistic, conditional, voluntary and pro-poor. The team examined three paradigms: commoditised environmental services (CES); compensation for opportunities skipped (COS); and co-investment in (environmental) stewardship (CIS). The primary difference between CES, COS and CIS is the way in which conditionality is achieved, with additional variation in the scale (individual, household or community) at which the voluntary principle takes shape. The team supported other international partners in conceptualizing and implementing RES schemes at local and national levels with at least seven national programmes in Indonesia, the Philippines and Viet Nam. Three site-level RES schemes have been expanded, reaching wider landscapes and the rural poor.

Regreening degraded lands under voluntary carbon scheme in Indonesia

Sustainability

The team supported other international, national and local partners in conceptualizing and implementing RES schemes at local and national levels. RUPES' supported countries have integrated environmental services into their legal policy frameworks. Moreover, RUPES' case studies provided lessons to rationalize conflicting policies on access to, and use of, natural resources in the rural areas.

RUPES and its partners supported communities by building trust among stakeholders (e.g. community, government, NGO, private companies, donor) involved in rural development and environmental conservation. Good practices from grass-root settings for RES implementation were demonstrated. To ensure sustainability, the process was established through community empowerment, fair communication and negotiation with intermediaries and potential buyers, and participatory monitoring involving local communities. Communities of practice and interest on ES and RES were established in RUPES' target countries. This has created a movement that responds to community needs through bottom—up to design of RES schemes and creating enabling policies at national level.

Lessons

Major lessons have been captured for the application of similar initiatives: 1) National policies and regulations on ES and RES schemes should embrace broader perspectives of RES while becoming the basis for nationwide adoption and sustainability of RES schemes; 2) RES schemes will be sustainable with support from government, either central or local; 3) RES schemes are designed to be performance-based, voluntarily and pro-poor; 4) The dissemination of information at a community level through direct mentoring and facilitation is more effective than usual channels of communication; 5) Research on RES schemes requires broad multi-disciplinary knowledge and expertise; 6) Particular efforts are needed to fill gaps of knowledge among related stakeholders in order for them to fully understand the concept of rewards for environmental services; 7) Exposing pilot sites and business cases to potential buyers through coordinated events increases the possibility of interested investors or buyers engaging in schemes; 8) Intermediaries who act as champions guarantee that RES schemes will become operational; 9) The establishment of an ES multi-stakeholder forum as the intermediary can be a good alternative for bridging and communicating the needs of various stakeholders involved in a RES scheme; 10) Capacity, confidence and commitment of RES intermediaries, especially NGOs, need more elaborate mentoring to be ready for expanding existing RES schemes; 11) Further analysis of gender aspects is needed to effectively mainstream gender equality into programme implementation.

Introduction

Asia is emerging as the main engines of economic growth in the world. Despite this new-found wealth, two-thirds of the Earth's poor still live in this region. Large and rapidly growing populations are placing pressure on fragile ecosystems. Efforts to protect the environmental value of these ecosystems through preventing their use have not only failed but tended to exclude the poor from the very resources they relied on for their livelihoods: forests, water and land. The World Agroforestry Centre (ICRAF) recognizes that there is an indelible link between the livelihoods of poor rural people and the state of the environment. Therefore, it views decreased environmental/ecosystem services—or benefits provided by ecosystem for human wellbeing—and changing patterns of climate as serious threats to overcoming poverty. Effort must be made not only to help poor rural people cope with decreased ecosystem services and climate change but also enable them to be a part of the solution.

The RUPES project, phase 1 (2002–07), introduced the concept of rewarding people to protect or enhance environmental services that benefit businesses or the wider population, that is, to be rewarded for the provision of environmental services based on negotiated contracts. Lessons from RUPES 1 show that payments for environmental services (PES) mechanisms need to have pro-poor characteristics and demonstrated fairness when aiming for effectiveness and efficiency. The term 'rewards for environmental services' (RES), which uses the broader concept of 'rewards' as opposed to only financial payments, recognizes that this is necessary to enhance fairness and equity while also striving for effectiveness and efficiency. When designing RES approaches, local conditions must, therefore, be taken into account in order to be effective and identify rewards that match people's needs and expectations. From ICRAF's analysis of RES, non-financial rewards—adding to human, social and physical capitals—were identified as a preferred form of reward. Non-financial incentives have also proven to make important marginal contributions to local livelihoods as well as helping to reduce the costs of a scheme's implementation, such as transaction costs.

RUPES phase 2 (2008–12 was the second stage of the programme, designed to follow-up and expand on the lessons learned in RUPES 1 in Indonesia, the Philippines, Viet Nam, Nepal, India and China. The ultimate target group for RUPES 2 was indigenous forest dwellers and smallholding farmers in less productive environments, vulnerable to environmental degradation and climate change. Activities aimed at national policies and the 'buyer' and 'broker' part of the RES value chain were aimed at long-term sustainability of benefits for the primary target group. Naturally, the project components were arranged in accordance with the nature of those whose behaviour needed to be influenced: regulators (national policy), (potential) buyers, intermediaries and potential environmental services' sellers among the rural poor. RUPES 2 gave ample consideration to innovative approaches that targeted fair and efficient schemes for environmental services' rewards.

Rain shelter with drip unit as an incentives for environmental services provision in Lantapan, the Philippines

Grant Description and Implementation Arrangements

The RUPES 2 programme sought to provide rewards for environmental services to poor people in Asia through five components.

- Component 1: National policy frameworks
- Component 2: Engaging international and national buyers
- Component 3: Enabling environment services' intermediaries
- Component 4: Promoting innovations in effective, efficient and pro-poor RES mechanisms.
- Component 5: Mainstreaming RES into IFAD's rural development strategies

RUPES 2 objectives were based on the five components.

- National policy makers shall be enabled to design, develop, and implement policy frameworks for voluntary, realistic, conditional and pro-poor RES, and to actively participate in international fora on environmental agreements.
- International, national, and local environmental services (ES) beneficiaries shall be engaged as buyers in RES schemes that address rural poverty as well as secured environmental services.
- Brokers, certifiers, and other intermediaries shall be enabled to effectively facilitate environmental services rewards' schemes without excessive transaction costs.
- Rural poor and associated project implementers shall be enabled to select from, and engage in, a wider array of established and contextualized RES mechanisms.
- IFAD and other agencies shall increasingly incorporate RES into rural poverty alleviation strategies and programmes.

RUPES 2 was involved in a total of **16 action research sites in six countries** (China, India, Indonesia, Nepal, Philippines and Viet Nam) as well as **associated learning sites**.

The action research carried out at RUPES 2 sites aimed to develop RES schemes that would directly benefit poor households who provided environmental services related to water, carbon and/or biodiversity. This approach was underpinned by four principles for fairness and efficiency in enhancing environmental services.

- **Realistic**: based on identified environmental problems and services
- **Voluntary**: willing engagement of providers and beneficiaries in a negotiated scheme
- **Conditional**: benefits received by ES providers are performance-based
- **Pro-poor**: design, access, and outcome bias toward poor stakeholders for long-term sustainability

Rewards could include payments as well as non-market incentives, for example, secure tenure for ES providers. Monetary incentives might have actually been counterproductive if they undermined existing socio-cultural norms or if they were not sufficient for offsetting opportunity and transaction costs borne by the providers. RES schemes had, therefore, to be linked to a livelihoods' approach that considers the five capitals (human, social, physical, financial and natural) in building assets to reduce poverty.

During RUPES 1 and 2, ICRAF and partners contributed to the development, refinement and testing of a conceptual framework and assessment tools for RES.

Grant Implementation and Arrangement

The first four objectives and associated intended outcomes refer to the key components of a 'working' RES value chain. The overall strategy of the project was to invest in all parts of the chain with special attention for what appeared to be the weakest part in the local/national context. RUPES 2 targeted the development of processes and the formation of an enabling environment for RES. True to the philosophy of action research, the identification of the annual activity plans was done in direct consultation with local stakeholders and was a 'moving target'. The approach and methodology was differentiated by the four main stakeholder groups that were necessary for realizing the poverty alleviation potential of RES in Asia.

National policy framework

The project contributed to policy frameworks for voluntary, realistic, conditional and pro-poor RES that built on RUPES 1's support of national policy dialogues, especially in Indonesia, the Philippines, and Viet Nam. Establishment of independent national networks, where opinion leaders from different backgrounds met to pave the way for future interdepartmental cooperation and official decisions on ES issues, has proven to be effective. In China, Nepal and India, RUPES explored opportunities to inform policy on the PES concept.

In partnership with international and national NGOs, RUPES 2 supported national, provincial and local governments to develop RES schemes and examined institutional constraints, such as conflicting jurisdiction over the regulation of environmental services, land-use zoning and benefit distribution. Having a board range of partners across Asia enabled RUPES 2 to build networks of practitioners and academics in providing policy advocacy. The resulting policy recommendations were packaged and communicated by the national partners who were able to effectively reach the targeted policy makers. RUPES 2 facilitated dialogues among the stakeholders to enhance the adoption of policy and institutional options for support of RES schemes. Mainstreaming in government policies together with strengthening of local capacity and bargaining power of the rural poor provided an exit strategy for project-level interventions.

International and national buyer and investor engagement

Long-term relationships are needed with appropriate levels of conditionality to make RES sustainable. In order to engage in long-term relationships with international and national buyers and investors, RUPES 2 paid attention to the various aspects of environmental services as parts of the 'business case' for private and public sector entities to become buyers in RES schemes. In the context of compensation mechanisms for REDD+, RUPES 2 engaged in testing innovative institutional arrangements for international investment in reducing the driving forces of deforestation through partnerships with forest-based communities. This component assisted in research and developed mechanisms to make carbon markets and finance accessible to IFAD's clientele.

RUPES 2 publicized opportunities for buyers to participate in rewards' schemes and provided technical assistance to sellers to develop their business cases and draw up contracts. Experience from RUPES 1 and 2's partners in other regions were shared to promote the ideas of ES rewards to private companies and other potential buyers.

Environmental services' intermediaries enabled

RUPES 2 provided support to brokers of RES, such as interested local NGOs and local governments, in order to cost-effectively link ES supply to demand. RUPES 2, with co-funding from the German Development Agency (BMZ) through the Trees in Multi-Use Landscapes in Southeast Asia: A Negotiation Support Toolbox for Integrated Natural Resource Management (TUL-SEA) project also managed by ICRAF, further developed the rapid assessment methods pioneered in RUPES 1. Working with universities in the region, the project helped build local capacity for cost-effective brokerage of RES in the scoping and negotiating stages. Documentation of 'good practice' in ES rewards' negotiations supported emerging concepts and global standards. RUPES 2 was able to benefit from the synergy with other rewards for environmental services' projects funded by IFAD, such as the ICRAF-led Pro-poor Rewards for Environmental Services in Africa (PRESA). The synergies were in

the form of sharing lessons learnt, joint capacity building and training, as well as global connections. At the local level, the project provided technical assistance to NGOs and project implementers to facilitate the articulation of the sellers' business cases, entering negotiations and drawing up contracts.

Innovations in effective, efficient and pro-poor RES mechanisms

RUPES 2 continued its partnerships with the action research sites in Indonesia, the Philippines and Nepal because site-level activities had produced very important lessons in the implementation of RES schemes. Forming these RUPES 1 action research sites into centres to assist buyers, sellers and intermediaries enriched by RUPES 2's partners' experiences assisted in spreading exemplary RES practices across Asia and ensured the sustainability of schemes already established. Monitoring and evaluation of each capacity-building activity was undertaken in order to assess their effectiveness. RUPES 2 also tested new options for RES, including financial and non-financial rewards' mechanisms, at community and household levels, in line with poverty reduction mechanisms. The project also tested new in-kind rewards and their mechanisms, such as micro-hydropower plant rewards' projects and market access for organic products derived from well-managed landscapes.

Mainstream RES into IFAD's rural development initiatives

In consultation with the IFAD Asia division, the target was formulated that at least 20% of new projects in Asia would actively consider incorporating RES into their strategies. To reach this goal, RUPES 2 disseminated communication materials and lessons, including Technical Advisory Notes (TANs) to national governments, IFAD CPMs, country teams and projects to raise awareness of the potential for RES. RUPES 2 provided opportunities for workshops and capacity building and also offered to provide input at the design stage of new IFAD projects. RUPES contributed to IFAD's knowledge on pro-poor RES and linked its activities on knowledge management to IFAD Asia. IFAD Asia is a web portal that offers stakeholders and partners a platform in which they can work together and increase operations' effectiveness through networking and the sharing of information. RUPES developed a communications framework, including annual communication plans that catered to a cross-section of audiences such as partners, governments, the private sector and civil society.

Assessment of Relevance

The RUPES 2 project was one of the frontline activities that will allow IFAD to focus on the poverty aspects of climate change (on the interface of 'adaptation' and 'mitigation') and extract lessons for mainstream-to-rural development. The direct impacts of climate change are usually expressed through a higher frequency of 'extreme' rainfall and droughts that give new challenges and new impetus to watershed management and biodiversity conservation. Climate change thus interfaces with all environmental services targeted by RUPES and influences all pathways by which RES can reduce poverty.

The design of RUPES 2 responded to IFAD's Asia and the Pacific Division's interest in programmes to combat the problems of land degradation and empower the poor in upland areas. RUPES 2 helped find new solutions for a prominent determinant of rural poverty in Asia and provided opportunities for sustainable rewards for environmental services, especially in IFAD's rural development projects. There are interesting new options for multi-scale solutions where (local) governments derive income from international markets, such as involvement in newly designed carbon markets that secure local environmental benefits and reduce poverty.

At the national level, IFAD aims to ensure that poor rural men and women have better and sustainable access to natural resources (land and water), which they are then able to manage efficiently and sustainably. Hence, the **Objective 1. National policy framework** of RUPES 2 offered support for active participation by national policy makers in international fora on environmental agreements and contributed to development and improvement of policy frameworks for voluntary, realistic, conditional and pro-poor RES. Operationally, IFAD

strives for a strengthening of in-country capacities for agricultural and rural development, in terms of: increased private-sector investment in the rural economy and enhanced capacity for programme development and implementation (government, NGOs and the private sector). 'Increased private-sector investment in the rural economy" was supported by **Objective 2: 'International and national buyers**: Articulate and increase recognition of the "business case" for investment in pro-poor environmental service schemes'. 'Strengthened organizations and institutions for, or supporting the interests of, poor rural people' was supported by **Objective 3**: '**Environmental service intermediaries enabled**: Document good practices and support capacity building for intermediaries, such as interested local NGOs and local governments, in order to cost-effectively link ES supply to demand'.

If poor rural people are to overcome poverty, they must have the opportunity to build the assets, knowledge, skills and confidence they need to pursue their own economic agenda better, yet, individually, poor rural people remain marginalized. By building their own collective organizations they can better manage assets, negotiate with market intermediaries, and access economic opportunities, service providers and government officials. The primary driver for effective RES has to be the empowerment of rural poor to engage in new voluntary, conditional and realistic agreements. **Objective 4: 'Innovations in effective, efficient and pro-poor RES mechanisms'** was to support rural poor as ES local providers to engage in RES and identify conditions for success of established and new types of RES mechanisms.

IFAD's role is to establish partnerships or developing innovative approaches to rural poverty reduction at the local level, testing methodologies, institutional arrangements, partnerships or technologies that are new within the context in which they are being applied. All elements of IFAD's country programmes are expected to be innovative. Yet innovation without expansion is of little value: all engagements are thus expected to have internal learning arrangements. In this case, RUPES 2 made efforts to **mainstream RES into IFAD's rural development strategies (Objective 5)** by disseminating communication material and lessons, including TANs, to national governments, IFAD CPMs, country teams and projects to raise awareness of the potential for RES.

The large number and diversity of partners of RUPES 2 offered a direct opportunity for IFAD to engage and learn along with other stakeholders. The financial resources IFAD invested helped support the continuation of the position of RUPES as a convening platform for effective learning at the interface of the 'development' and 'environmental conservation' sectors. The substantial co-funding, mostly for site-level activities, allowed IFAD's investment to focus on adding value through synthesis and exchange, facilitating shared learning.

Grassland ecosystem in China

Review of Performance and Achievement by Component

Review of Main Activities and Outputs

Narrative Summary	Verifiable Indicators
Goal/Impact	
Rewards for provision of environmental services flow to poor people in an Asian context	At least 607 rural poor (in which 94 persons are women) as the RES participants and about 1867 rural poor (in which 789 persons are women) as the non-participants directly and indirectly benefit from the schemes.
Purpose	
Dissemination of appropriate RES mechanisms via national policies, buyers of ES and rural development initiatives.	At least 29 action research pilots on RES have been conducted in which at least 16 RES schemes were established.
Outcomes, by Component	
A. National Policy Framework National policy makers enabled to design, develop, and implement policy framework for voluntary, realistic, conditional and pro-poor RES, and to actively participate in international fora on environmental agreements	From 6 countries supported by RUPES 2, at least 4 countries have been developing national policies that considered RES principles, and the other 2 countries have been promoting RES to their national policies. In total, 179 government officers (of whom 65 were women) were reached by the end of project.
B. International and National Buyer and Investor Engagement International, national, and local ES beneficiaries engage as buyers in RES schemes that address rural poverty as well as secured environmental services	At least 23 companies have been informed on RES promoted by RUPES 2.
C. Environmental Services Intermediaries Enabled. Brokers, certifiers, and other intermediaries enabled to effectively facilitate environmental services reward schemes without excessive transaction costs	Over 30 intermediaries have been supported to reduce their transaction costs in developing RES through capacity building and technical advice, and 12 of them received direct financial support from RUPES 2.
D. Innovations in effective, efficient and pro-poor RES mechanisms Rural poor and associated project implementers enabled to select from and engage in a wider array of established and contextualised RES mechanisms	At least 8 approaches to RES developed and tested with partner organisations.
E. Mainstream RES into IFAD rural development initiatives IFAD and other agencies increasingly incorporate RES into rural poverty alleviation strategies and programs	At least 6 of 33 IFAD projects in Asia consider RES in their strategies.

Outputs, by Sub-Component	Achievements
Sub-Component 1.1: To support active participation by national policy makers in international fora	Over 60 policy briefs and other relevant policy publications produced. 6 synthesis reports on RES policy and institutional aspects produced. 9 policy working papers produced.
Sub-Component 1.2: To contribute to development and improvement of policy frameworks for RES at local and national level	16 national workshops conducted. Over 120 meetings of national networks attended and conducted.
Sub-Component 1.3: To evaluate RUPES-II policy impact	1 report on rapid gender assessment of RUPES 2 produced.
Sub-Component 2.1: To support engagement of ES buyers and investors at all levels	14 site working papers produced. 23 potential buyers informed.
Sub-Component 2.2: To collaborate with organizations with an interest in promoting and supporting special marketing for environmental friendly products, including carbon	25 provincial/district workshops attended and conducted. 18 provincial/district meetings attended and conducted.
Sub-Component 2.3: To execute marketing plan with lessons learned recorded and suggestions for needed modifications	6 business case and environmental conservation. contracts developed
Sub-Component 3.1: To develop lecture notes/training materials explaining concepts of RES schemes and technical manual for field workers	3 lecture notes developed. 21 applications of TULSEA tools conducted. 4 manuals for identifying ES produced.
Sub-Component 3.2: Capacity building for different partners	15 national trainings attended and conducted. 1 regional training conducted. 6 international trainings attended and conducted. 11 provincial/district trainings attended and conducted.
Sub-Component 4.1: To participate in and support demonstration sites on new approaches to RES, including on REDD, voluntary CDM, microhydropower projects, eco-labelled products, and micro credits	16 action research sites and 6 learning sites joined the RUPES network. 29 action research studies conducted. 2 booklets and 1 poster of site profiles produced. 5 videos related to RES produced
Sub-Component 4.2: To ensure ES providers have the capacity and sustainable institutional arrangement	2 manuals for monitoring ES produced. 3 translations of manuals produced. 22 community trainings attended and conducted. Over 120 community meetings attended and conducted. 11 community workshops attended and conducted.
Sub-Component 5.1: To actively communicate project progress and sharing lessons	Databases and communications plan designed and updated periodically as well as work plans and reports submitted annually. 32 international workshops attended and conducted. 55 national workshops attended. 6 IFAD investment projects supported.

Assessment of Project Effectiveness

National policy framework

RUPES 2 supported policy makers and existing institutions, such as governments and NGOs, to develop policies and services that benefit the poor through a RES approach. In Indonesia, the National RES Protocol, as the operational document of Law 32/2009 on Environmental Management and Protection, included lessons from RUPES' action research and learning sites. The Indonesian Ministry of Environment, which is the key agent coordinating the national PES scheme, considered the RUPES team as core members providing substantial input to the drafting of Government Regulation on Environmental Economic Instruments, where PES and RES are parts of those economic instruments. In Viet Nam, RUPES contributed to the national policy formulation of Decision No. 99/2010 and its circularised guidelines. The guidelines of Decision No. 99/2010 were reviewed and applied to PES pilot sites coordinated by the Pro-poor Partnerships for Agroforestry Development (3PAD) project, which is funded by IFAD. The pilot sites included RUPES' action research sites in Bac Kan province. In China, China's State Council and the Government of Xishuangbanna Prefecture adopted the lessons from a rewards for ecosystem services' scheme for grasslands, which was initiated by RUPES, for designing ecological land-use plans. In India, RUPES' main partner, Wetlands International India, provided three scenarios of wetlands' management—to balance human needs with ecological requirements—to India's National Environment Policy on the role of economic incentives for environmental conservation. The Loktak Development Authority of India adopted these scenarios for short- and long-term wetlands' management in the province. In the Philippines, the RUPES team was involved in drafting the Philippine Climate Change Act of 2008 and conducting a final review of the Sustainable Forest Management Act in 2008. The team also contributed to drafting the Executive Order on RES with the National RES Technical Working Group, which solicited viable policy options for RES, such as a Department of Environment and Natural Resources' Administrative Order or Joint Orders of the different government offices. In Nepal, the RUPES team influenced a policy shift in recognition of PES among Hindu Kush Himalayan (HKH) countries through its major partner, the International Center for Integrated Mountain Development (ICIMOD). ICIMOD is also supporting national initiatives, such as policies on royalties from the hydropower sector in HKH countries, on watershed protection through government finance and on carbon trading under the climate accords.

International and national buyer and investor engagement

The RUPES team successfully facilitated the engagement of international, national and local ES beneficiaries as investors in RES schemes. RUPES provided information as sources for site business cases, such as quantifying and identifying ecosystem services, informing smallholders of the feasibility of ES payment schemes to improve local livelihoods, conducting participatory ES monitoring, particularly for water quality and carbon stock. In Indonesia, RUPES 2 helped improve rubber quality and examined the feasibility of smallholders' rubber eco-certification, assisted with the maintenance of agrobiodiversity and helped improve the livelihoods of smallholding rubber farmers in Bungo district, Sumatra, and assessed the hydrological aspects of watersheds for PES establishment. This information increased engagement, leading to contractual agreements between the communities and ES investors. The investors were mostly para-statal companies with water as their main business, such as hydropower companies, industrial and drinking water companies, and international social enterprises for voluntary carbon markets. The programme also supported public investors, such as national and regional governments acting as beneficiaries of ES, as in the cases of Viet Nam[1] and the Philippines[2].

[1] In Viet Nam, RUPES supported the 3PAD project by facilitating the development of a community contract between Ba Be National Park as ES beneficiary/forest owner and Leo Keo community as ES provider. The community contract was signed in 2012 and will become a pilot PES model for the 3PAD project.

[2] In the Philippines, the National Power Corporation will provide support to the Local Government of Lantapan by funding rehabilitation, reforestation and protection of the Alanib sub-watershed. The memorandum of understanding has been completed, which will formally

Intermediaries enabled and good practices documented

RUPES contributed to preparing local intermediaries, mostly NGOs and government officers, to design and facilitate efficient and fair rewards for environmental services' schemes. RUPES supported these local actors by providing a series of tools and lectures, engaging them in formal training and involving them in applying the TUL-SEA tools for identifying environmental services as the basis for PES design. Moreover, in Viet Nam, the team also supported the Faculty of Forestry at Thai Nguyen University of Agriculture and Forestry in developing an academic curriculum introducing payments for forestry environmental services (PFES) as a new subject for undergraduate students, including a teacher's manual on PFES. The RUPES partners were also active in advocating enabling policies for PES implementation at regional level and pioneering independent institutions as centres of PES initiatives in their regions. Good practices of RUPES have been published globally in, *Payments for Ecosystem Services and Food Security,* published by the Food and Agriculture Organization of the United Nations (FAO), *Charting New Waters: State of Watershed Payments 2012,* published by Forest Trends[3], The Economics of Ecosystem and Biodiversity initiative (TEEB)[4], and the upcoming *Innovation for Financial Sustainability: learning from experience in PES,* by FAO in 2013.

Innovations in effective, efficient and pro-poor RES mechanisms

In Indonesia, the River Care approach was an innovative RES mechanism combining direct measurement of soil and water conservation with development activities as the rewards, such as goat breeding, nursery development, rattan planting, training farmers in rattan home industries and a coffee plantation demonstration plot. In China, RUPES introduced the basic concepts of market-based mechanisms (specifically environmental benefits' metrics and reverse auctions). In India, the RUPES partner supported integration of an ecosystem services approach to wetlands' management planning. In the Philippines, RUPES initiated an ES-based organic farming project embracing vegetable farming, agroforestry and conservation in one scheme, while also pioneering facilitating the implementation of the Lantapan Incentive-Based Policy Program. Land uses covered by the project ranged from upland smallholders' agroforestry based on specific main commodities—such as coffee, rubber, clove, native fruit and timber trees—in Indonesia, the Philippines, Nepal and Viet Nam; national parks in Nepal and Viet Nam; mountainous grasslands in China; and wetlands in India.

Mainstream RES into IFAD rural development initiatives

The collaboration of RUPES with the 3PAD project of IFAD Viet Nam led to the development of the first PFES project established in northwestern Viet Nam that bundled three ES: watershed function, carbon sequestration and landscape beauty. In Indonesia, RUPES connected a 'good practices' PES activity in Sumberjaya with farmers' groups involved with the IFAD READ Programme in Parigi Muotong through a training of trainers on land and water issues. The RUPES team was also involved in impact assessment of IFAD grants' activities and evaluation of IFAD investment projects and country programme reviews.

establish the partnership to develop and implement a rewards for watershed services' scheme between the communities and the corporation, with the provincial Government of Bukidnon (through the Bukidnon Environment and Natural Resources Office), and the local Government of Lantapan, with the Department of the Environment and Natural Resources and ICRAF as intermediaries.

[3] http://www.forest-trends.org/documents/files/doc_3308.pdf

[4] http://www.teebweb.org/

Assessment of Impact

This section describes the impact on local livelihoods at various RUPES sites. RUPES assessed the impacts through a series of focus group discussions with participants and non-participants and through interviews with implementing agencies.

Physical and Financial Assets

The communities at RUPES sites earned their incomes from planting of tree crops supported through the PES scheme. For example, in Cidanau, Indonesia, the annual PES income of USD 120 per hectare contributed around 3% to participants' household incomes. The PES scheme stimulated local business, mostly because of additional business development support from NGOs and government agencies involved in the PES scheme. Further, the Cidanau group invested 5% of its PES payments to build a 100 m pipeline for clean water to serve about 50 households. This water pipeline also served non-participants but they were required to pay a service fee of USD 0.30 per month or 1 kg of rice. Some groups planned to collectively build village facilities from funds collected through the PES contract.

Social Capital and Empowerment

The PES contract brought opportunities for participating communities to interact more with other external stakeholders, which expanded the external networks of the communities to include: 1) researchers conducting studies on PES; 2) local NGOs who facilitated the PES contract; 3) the buyers, with some of them coming from foreign countries; 4) multi-stakeholder institutions as the intermediary; 5) other government agencies besides the Agriculture and Forestry services, such as the Natural Resource Service.

The focus groups with PES participants revealed that they had written rules to guide members of their farmers' group towards meeting their collective obligations under the PES contract: if one member defaulted on the agreement this would become the responsibility of the whole group. Communities usually participate in regular collective action events to produce public goods and services, such as maintaining roads, bridges, community buildings and water supply systems. These activities are an important aspect of rural social capital in Asian countries. Government officials shared the view that the existence of the PES scheme had increased their communication with stakeholders as well as demonstrated a need for greater inter-agency communication. They expected that PES could assist the government in conducting its conservation programmes and in improving the communities' livelihoods.

Human Assets

The PES schemes had a particular impact on the capacity, skills and knowledge of participants because of their regular interaction with NGO staff and researchers. PES participants were more aware of environmental issues, such as the causes of erosion, landslides and downstream sedimentation, as well as management measures, such as erosion reduction, prevention of illegal cutting of trees, waste management, and the role of trees in water and soil conservation.

PES participants also reported improved capacity and skills in managing the farmers' organization, including networking to improve local businesses and to improve implementation of the PES scheme. This capacity-building occurred through interaction with the members of intermediary institutions. Interviews with the members of intermediary institutions indicated that their knowledge about PES issues increased, such as the

principles of PES, how to design community-based forest management, how to strengthen local institutions, global issues, such as global warming, the Clean Development Mechanism, and Reducing Emissions from Deforestation and forest Degradation.

Environmental and Common Resource Base

At some RUPES sites, the PES scheme only targeted individual farmers, and restrictions on land use only applied to private land, so there was no change in access to common resources. Before such schemes and after their beginning, communities utilized non-timber products from nearby forests, such as water, wild boar, fish, firewood, medicinal plants, herbs, fruits and leaves. In Indonesia, communities have been involved in various rehabilitation activities (both government-initiated and locally organized) before and after the PES schemes. Government programs included planting trees, such as mahogany, clove, *Albizia* and *Calliandra*, forest fire prevention activities, forest patrols for the prevention of illegal logging, and terracing steep lands. In Sumberjaya, Indonesia, River Care contributed to a 20% decrease of sedimentation in a particular sub-watershed. In Singkarak, the voluntary carbon scheme targeted 3110 ton CO_2 in 5 years on a 49 ha area.

Capturing women's aspirations and needs in payments for environmental services' schemes

Project Costs and Financing

RUPES' management implemented the activities within the approved budget. The table below reflects the variance report of actual versus projected funding.

Table 1. Financial report of RUPES, 15 October 2008–30 September 2012

Budget Line	Funding received from IFAD: Oct 2008–Sep 2012	Actual expenditure: cumulative, Jan 2008–Sep 2012	Variance (over- or under spend)	Funding from other donors
Personnel	USD 236,000	USD 236,032	(USD 32)	
Operational	USD 213,000	USD 213,056	(USD 56)	
Consultations and Workshops	USD 468,000	USD 468,114	(USD 114)	
Action Research / Technical Assistance support	USD 420,000	USD 422,083	(USD 2,083)	
Overhead	USD 163,000	USD 160,715	USD 2,285	
GRAND TOTAL	**USD 1,500,000**	**USD 1,500,000**	**USD 0.00**	**USD 2,436,000**
Total Project Cost*				**USD 3,936,000**

*Total from IFAD and other donors' for RUPES

Financial projections were reviewed and consulted with IFAD annually taking into account inputs from IFAD supervision missions. An annual work plan and budget was submitted to the IFAD Project Sponsor for review, discussion and approval. From the table above, the overspending on Action Research/Technical Assistance Support happened at the end of project, and it was covered by Overhead that was designed flexibly to cover other budget lines. During the project implementation, ICRAF as the implementation agency was able to secure and to manage co-funding from several resources such as the BMZ, the Southeast Asia Network of Agroforestry Education, Bridgestone, WWF, CO^2 Operate BV, and ICRAF, totalling US$ 2,436,000. The timing of all these funds was appropriate to enable integrated activities to contribute to RUPES that involved many scientists/specialists.

Project financial management followed ICRAF's Financial Management Guidelines that were developed following the CGIAR Financial Management Guidelines Series, No. 1, which provides particular governance aspects of the financial responsibilities of the Board of Trustees, Centre management and staff in managing resources in ICRAF's custody. The accounting policies are bound by the *CGIAR Accounting Policies and Reporting Practices Manual*, Financial Guidelines Series No. 2[5].

Financial controls were exercised throughout the overall financial management cycles: overall financial plan, implementation, monitoring and reporting. In managing the project, ICRAF develops medium-term and annual financing plans, and cash flow analyses, and submits them to the CGIAR. The project's annual work plan and budget approved by IFAD formed part of ICRAF's annual detailed Operating and Capital Budgets, called the Program of Works and Budget, which guides the Centre and project financial activities in the fiscal year January–December.

The financial controls are ensured by the maintenance of timely and accurate management accounts and automated financial management system. The SUN Financial System (commercial financial software) and the

[5] This provides guidelines to develop a standard set of accounting policies and reporting practices, which enhance relevance, understandability and comparability of financial statements issued by all CGIAR Centres. These guidelines are drawn from the International Financial Reporting Standards (IFRS) issued by International Accounting Standards Board (IASB) and Financial Accounting Standards (FAS) 117 of US GAAP.

expenditure coding system is designed to enable the Centre to produce timely Statement of Accounts (Balance Sheet), Statement of Expenditure (Statement of Surplus and Deficit), and to record and monitor expenditures against individual grants. The system supports the production of grant reports periodically to meet donors' reporting timelines for each fiscal year and for the life of the activity in the case of multi-year projects. ICRAF is audited by external and internal auditors. The external auditor is responsible for forming an independent opinion of the financial statements based on international auditing standards, which focuses on reviewing the risk of material misstatements in ICRAF's annual financial statements. ICRAF's current external auditor is Ernst & Young Nairobi. The internal auditor focuses on other risks that are not covered by the external auditor (accounting system, internal controls, economy, efficiency and effectiveness of operations/functions or the use of ICRAF resources), with recommendations for improvements. There is a mutual interest by the external and internal auditors to ensure that there are no important gaps in review coverage across the range of risks facing ICRAF.

Assessment of Efficiency

The outputs that RUPES produced were over and above what IFAD funding could have supported, although they were not all as per the workplan schedules. RUPES' resources were sufficient to meet the immediate and initial objectives even though there were a relatively low number of personnel to achieve the tasks required at site level. The funds from IFAD were enough to cover the requirements of the workplan, while community requirements for additional information on improving reward projects were drawn from other sources.

At the site level, the internal evaluator observed that the money from IFAD alone was quite enough to address all the site requirements that had been planned. However, in the sense that the project could expand to accommodate community needs as desired by the site collaborators, RUPES found other resources to collaborate in programs that were established at each site. For example, in Sumberjaya, Indonesia, the RUPES budget was considered relatively small in comparison to overall River Care Programme activities. Fortunately, PT PLN as ES buyer undertook to provide some operational budget for the activities, not including the micro-hydropower plant that they subsequently provided as reward.

RUPES efficiently utilized its financial inputs. The major funding for the project came from IFAD but many of the outputs and outcomes of the project have been funded from other sources. Since ES has been one of the thematic programs within ICRAF, ICRAF itself contributed substantial amounts to RUPES. Further, the RUPES project staff wrote, or jointly contributed to, 15 proposals and concept notes in 2008–2012 to international and national bodies. In total, eight of these were successful, four are still pending and three were unsuccessful.

Farmers' nursery for improving watershed functions (Sumberjaya, Indonesia)

Assessment of Grant Management and Partners' Performance

IFAD

Better management of partnerships between IFAD grants and investment projects is necessary to assure that staff time is allocated more effectively. There were problems allocating staff time to provide technical assistance for the on-going activities of IFAD projects. Requests for technical assistance from ICRAF scientists often came suddenly when related scientists, who had expertise in specific technical assistances needed (for example, carbon specialist, hydrologist) had not allocated their time for supporting RUPES-related activities. As a solution, RUPES proposed to IFAD projects to communicate their work plan before the beginning of each fiscal year.

The IFAD Asia Pacific Division has actively improved its system in coordinating and managing grants. In 2002, when RUPES 2 was just set up, IFAD adjusted some its documentation templates to match the needs of grants. Before that period, grants usually applied the IFAD project-investment template for its reporting and monitoring. In this case, RUPES provided some substantial inputs based on its experience of RUPES 1 particularly in testing the template for the IFAD Technical Advisory Notes. Moreover, active communication and feedback has been nurtured by the Project Sponsor who provided inputs for high quality reporting.

Cooperating Institutions

RUPES partners require increased capability in documenting, analysing and synthesising the RES process. RUPES partners were very effective in social mobilization, sensitising the issues at the local level and organizing dialogue with governments. However, these partners often lacked the capability to report the process systematically and provide good analyses and syntheses of lessons from the pilot sites. RUPES has facilitated some socio-economic and biophysical work and provided reporting formats.

Project delays occurred owing to obtaining official permissions, such as for permits to conduct research and activities at the pilot sites. This was an external factor that was difficult to influence. RUPES usually conducted a regular check with the relevant government officers to accelerate the process.

Co-financiers

ICRAF co-financiers were very effective in supporting the project. In total, 15 proposals and concept notes were approved to support the project over four years, to a total amount of co-finance of US$ 2,436,000.

Project Management

The management of a nested partnership is beneficial for the progress of the RES concept. This is because it allows for a bottom–up process in sharing lessons and experiences in the implementation of RES. Furthermore, it helps to influence higher level policy of RES issues. There were some issues faced in managing nested relationships.

- Different partners have different agendas and objectives in being involved in a network.
- Difficulty in finding agreement (scheduled time, place) in organizing a collaborative event.
- Institutional conflict of interest might occur.
- Delays owing to partners not meeting deadlines.

To overcome these issues, the RUPES management team formed small teams at each level of the partnership to further formulate each activity and plan. The small teams mostly involved other organizations, such as local and national NGOs in the RUPES sub-grants. For national networks, there was an idea to establish a national secretariat coordinated by a national NGO and facilitated by the RUPES project.

Innovation, Replication and Scaling-up

Innovation

RUPES has been examining a broader class of mechanisms that pursue enhancement of environmental services through compensation or rewards. Such mechanisms can be analysed on the basis of how they meet four conditions: realistic, conditional, voluntary and pro-poor.

The RUPES team examined three paradigms: commoditised environmental services (CES); compensation for opportunities skipped (COS); and co-investment in (environmental) stewardship (CIS).

- CIS has a focus on assets (natural + human + social capital) that can be expected to provide future flows of environmental services.
- CES, equivalent to a strict definition of payments for environmental services, may represent an abstraction rather than a current reality.
- COS is a challenge when the legality of opportunities to reduce environmental services is contested.

The primary difference between CES, COS and CIS is the way in which conditionality is achieved, with additional variation in the scale (individual, household or community) at which the voluntary principle takes shape. CIS has the greatest likelihood of being pro-poor, as both CES and COS presuppose property rights that the rural poor often do not have. CIS requires and reinforces building trust after initial conflicts over the consequences of resource use on environmental services have been clarified and a realistic joint appraisal has been carried out. CIS would often be part of a multi-level approach to the regeneration and survival of natural capital alongside respect and appreciation for the guardians and stewards of landscapes.

Our experiences in Asia suggest that payments for environmental services' schemes may need to address a livelihood approach that considers the five capital types (human, social, physical, financial, and natural) in their interactions across scales. The interactions of all livelihood capitals address the preconditions for the CES and COS paradigms and may well have to be the foundation for all such efforts.

A language of CIS, 'co-investment' and 'shared responsibility' may be more conducive to the type of respect, mutual accountability and commitment to sustainable development that is needed. It retains reference to social exchange rather than financial transactions.

Yet, there are opportunities for phased strategies. After creating a basis of respect and relationships through the paradigm of CIS, there may be more space for specific follow-ups in the paradigm of CES for actual delivery of environmental services to meet conservation objectives. The simple conceptual scheme of buyers, sellers, intermediaries and regulators that was used in many initial developments of payments for environmental services' schemes may need to be modified to incorporate a more holistic livelihoods perspective and the combined efforts through moral persuasion, regulations and rewards to modify local resource-use decisions in the uplands.

Scaling-up

The team supported other international partners in conceptualizing and implementing RES schemes at local and national levels (Table 2).

Table 2. List of projects replicating RES schemes introduced by RUPES

Country	Project	Funding and/or implementing agency
Indonesia	Agroforestry and Forestry in Sulawesi: Linking Knowledge to Action	Canadian International Development Agency
	Assisted Natural Regeneration in West Sumatra	FAO
	Integrated Citarum Water Resources Management and Investment in West Java	Ministry of the Environment
	Environmental Service Program in West Java	Danish International Development Agency
	Strengthening Community-based Forest and Watershed Management	UNDP-GEF managed by Ministry of Forestry
Viet Nam	UN-REDD Viet Nam Programme	Government of Viet Nam
The Philippines	Capacity building programme in Lantapan as part of INREMP, including Payments for Environmental Services	Asian Development Bank

RUPES was invited by the CARE-WWF Global Project on Equitable Payments for Watershed Scheme to become involved in and review its projects in Tanzania and Kenya. This request reflected the partners' trust in RUPES with regard to its vigorous conceptual thinking and empirical experience.

Expansion

A successful RES scheme in Buluh Kapur village, Lampung, which rewarded the community for their efforts to implement soil conservation and reduce sedimentation in the river, has been replicated in Talang Anyar village, Lampung (Figure 3), and promoted FKKT-HKm, a local farmers' group in Lampung Barat, as intermediary in the scheme in 2011. In an earlier scheme, FKKT-HKm was the partner of ICRAF as intermediary, and now they have become an independent intermediary facilitating all processes in the scheme.

In June 2010, the Cidanau team successfully renegotiated with PT Krakatau Tirta Industry (a water company, which is the current buyer) to continue the PES scheme in the upstream Cidanau area for the next five years (2009–2014), providing US$ 27 800 annually. This represents an annual increase of US$ 11 100 compared to the first five-year agreement when the company made an annual payment of only US$ 16 700.

RUPES supported in facilitating a contract negotiation process for the first phase of about 28 ha for the voluntary carbon market (VCM) in Singkarak, West Sumatra. Currently, the VCM scheme is involving 50 farmers covering an additional of 49 ha.

Left: Participatory watershed monitoring. Right: River Care farmers were proud of their micro hydropower in Talang Anyar, Sumberjaya

Sustainability

Political sustainability

The team supported other international, national and local partners in conceptualizing and implementing RES schemes at local and national levels. As the impact, RUPES' supported countries have considered and integrated the environmental service and RES issues into their legal policy frameworks. Moreover, RUPES case studies provided lessons to rationalize conflicting policies on access and use of natural resources in the rural areas.

Social and institutional sustainability

RUPES and its partners supported the communities by building trust among stakeholders (e.g. community, government, NGO, private companies, donor) involved in rural development and environmental conservation. The project transparently facilitated the process in building RES schemes by clarifying authorities, roles and responsibilities of each stakeholder, and formulating scientific analysis of environmental problems and relevant management at both local and landscape levels. These conditions avoid conflicts among stakeholders and assist in reaching common needs and goals for preserving ecosystem services. Through continuous multistakeholder dialogues, the team assisted the relevant stakeholders to agree on replication and expansion of existing RES schemes initiated by the RUPES project.

Good practices in grass-root settings for RES implementation have been demonstrated. To ensure sustainability, this process was established through community empowerment, fair communication and negotiation with intermediaries and potential buyers, and participatory monitoring involving local communities.

Knowledge sharing

Communities of practice and interest in ES and RES were established in RUPES' target countries. This creates a movement that responds to community needs and bottom—up approaches in designing RES schemes and setting enabling policies at national levels. The project has supported academics to develop teaching manuals for RES issues and training manuals for practitioners. Knowledge sharing has been conducted through various media, targeting different audiences, such as theatre, radio, websites and printing materials. However, our research has shown that the most preferred and effective form of communication and knowledge sharing is face-to-face meetings and seminars that allow personal interaction between all participants. Accordingly, we began to use a more comprehensive range of knowledge-sharing techniques, which were provided by the Project Sponsor, at project events.

Major Lessons Learned

Learning for national-level application and role of government

- National policies and regulations on ES and RES schemes should embrace broader perspectives of RES while becoming the basis for nationwide adoption and sustainability of RES schemes.
- RUPES' experience tells us that understanding of broader paradigms of RES schemes (commoditization, compensation and co-investment) could accelerate the adoption at national and provincial/district levels. A prescriptive definition (that is, rewards for environmental services should be based on market principle of ES supply and beneficiaries' demand) would limit implementation, especially at the lower levels of government. A strict list of RES criteria is difficult to fulfil because schemes need long-term investment (both financial and social) and commitment. Introducing RES is an evolving process for ES conservation and poverty alleviation that will facilitate the process towards a measurable flow of ES.
- RES schemes will be sustainable with support from government, either central or local. In some countries, like Viet Nam and China, RES schemes will be sustainable when central government adopts the schemes and proceeds to recreate similar programs in various provinces. In other countries, like Indonesia and the Philippines, the most successful sites in implementing RES schemes are Cidanau and Lantapan, where local government has been supportive of the schemes. Here, the adoption of RES schemes moved from a successful local experience to the national level. Furthermore, governments' role in convincing the private sector to include such schemes in company's operational cost, beyond its corporate social responsibilities seems also to be relevant in most countries.

Designing efficient and fair RES schemes

- RES schemes are designed voluntarily and pro-poor. Each stakeholder engages in a negotiated scheme of RES through free and informed choice. In this case, poor farmers as ES providers are not an object of enforced restriction, such as government regulation over their decisions regarding land practices, while the beneficiaries are not compelled to payment, such as taxing. The RUPES case studies in Indonesia, Viet Nam and the Philippines show that this condition ideally can generate greater trust and collaboration amongst stakeholders. This happens because the voluntary aspect of RES schemes balances their rights, obligations and commitments towards increasing awareness about environmental services and poverty alleviation, not as pressured by regulations or elites.
- The dissemination of information at a community level through direct mentoring and facilitation is more effective than usual channels of communication. Usual channels of communication to stakeholders such as brochures, journal articles, television, websites, policy briefs, manuals and books are not sufficient in reaching communities. RUPES has learned that communities prefer to learn through practice and therefore direct mentoring and facilitation has been shown to be more applicable.
- Research on RES schemes requires broad multi-disciplinary knowledge and expertise. The RUPES project acknowledged the ICRAF team's contribution in solving the need to have interdisciplinary experts. RUPES coordinated different projects with similar or complementary issues to work together in achieving each project's goals.
- Particular efforts are needed to fill gaps of knowledge among related stakeholders in order for them to fully understand the concept of rewards for environmental services. The RUPES team produced policy briefs, leaflets and brochures in different languages to develop a common understanding of the concept of environmental services and payment or rewards for environmental services. The team also engaged in workshops, seminars and conferences at national and international levels.

- Exposing pilot sites and business cases to potential buyers through coordinated events (for example, the ES Fair in the Philippines) increases the possibility of interested investors or buyers engaging in schemes. However, if RES is not formally mentioned in companies' internal policies, 'commitments' from buyers may only be lip service. This may be discouraging for local communities. In such cases, the role of the intermediary is important in negotiations between ES providers and beneficiaries.
- Related to the point above, intermediaries who act as champions guarantee that RES schemes will become operational. The Cidanau and Vietnamese cases proved how both could embrace multi-stakeholder engagement in schemes. A specific program focusing on increasing the capability of intermediaries may be needed as a follow-up action of RES projects in Asia because in many instances the intermediary needs more knowledge in project management and planning besides the technical knowledge about RES and conservation.
- The establishment of an ES multistakeholder forum as the intermediary can be a good alternative for bridging and communicating the needs of various stakeholders involved in a RES scheme. As in Cidanau, an ES multi-stakeholder forum can also monitor and evaluate the implementation process of a scheme to assure transparency of the program, in terms of activities and financing, and prevent any possible conflicts among stakeholders. Together with government, such a a forum can help convince the private sector to mobilize their investment in ES schemes.
- Capacity, confidence and commitment of RES intermediaries, especially NGOs, need more elaborate mentoring to be ready for expanding existing RES schemes. The role of intermediaries is highly important for effectively facilitating RES schemes. However, the levels of confidence, capability and commitment of intermediaries as implementing agencies are diverse. Technical assistance and deep mentoring to new intermediaries might be needed in order to prepare them in negotiation and facilitation in various interests.

Gender and PES

Further analysis of gender aspects is needed to effectively mainstream gender equality into program implementation. The RUPES project found it challenging to mainstream gender equality in program implementation given the complexity of the project (that is, covering a broad range of sites in Asia with nested and multiple partners).

Paddy field along the river functioning as sedimentation filter

Best Practices

- In Viet Nam, training activities and 'training of trainers' sessions were organized and manuals for field implementers produced. Sustainability of the sites was ensured by the IFAD investment project in Bac Kan (3PAD) through the innovation of 'bundling' watershed function, carbon sequestration and landscape beauty into a single RES scheme. Bundling of environmental services is possible since a well managed landscape or watershed is multifunctional in producing both ecosystem goods and services. For example, tree-based farm lands can contribute to a healthy watershed by acting as buffer to heavy water flow—and avoiding floods downstream—while trees also can sequester and store carbon. A very good gender inclusive monitoring and evaluation system was developed, PhD students helped with data collection and monitoring of activities. The students undertook comparison studies among PES sites in Africa, Latin America and Asia considering different types of rewards, different ways to include minorities, to reduce transaction costs, and how to define clear roles and responsibilities among providers, beneficiaries and intermediaries.
- In Indonesia, Mr np. Rahadian, head of Rekonvasi Bumi, an environmental NGO in Cidanau, supported a very successful RES scheme. A networking body that included representatives from beneficiaries, the private sector and NGOs worked as an intermediary to prevent any conflict among all involved, assisted farmers with administrative issues and in monitoring soil rehabilitation and water sanitation. A successful RES scheme in Buluh Kapur village, Lampung, which rewarded the community for their efforts to implement soil conservation and reduce sedimentation in the river, was been replicated in Talang Anyar village, Lampung, and promoted a local farmers' group in Lampung Barat as intermediary in the scheme. In an earlier scheme, the group was the partner of ICRAF as intermediary and subsequently became an independent intermediary facilitating all processes in the scheme.
- In the Philippines, RUPES facilitated the local government of Lantapan in enacting Municipal Ordinance 114, which provides incentives to encourage farmers and farmer organizations to invest in or shift to sustainable land use practices, such as organic farming, agroforestry and tree farming among others embracing livelihood development and conservation in one scheme.
- Some of the RUPES sites applied hydrological assessment employing the Rapid Hydrological Approach (RHA), a tool developed by the World Agroforestry Centre to assess hydrological functions in a watershed. The approach is based on building effective communication between local, scientific and public/policy knowledge to identify problems related to watershed functions and their degradation and to support finding solutions based on local opportunities rather than blueprint standardized ones. Therefore, the activities of the RHA focus on gathering information and synthesizing the three knowledge systems. The 'rapid' term in RHA refers to the ability of the approach to use the existing data available in the public domain, thus, expediting the study by avoiding the need to conduct measurements of hydrological data that often take time. It also refers to the generic characteristics of the approach, ensuring it can be repeated across sites within different climatic zones.

Annex 1. Achievements in each country

The information below is excerpted from the book, Rewards for, Use of, and Shared Investment in Pro-poor Environmental Services project phase 2: Research sites in Asia 2008–2012, which will be published later in 2013.

RUPES research sites in China

Since 2002, China has implemented some of the largest schemes in the world that provide rewards for environmental services.

For example, the Sloping Farmland Conversion Program provided grain and cash payments to farmers and financial support to local forestry agencies to convert arable land on sloping land into forests. Following a ban on commercial logging in the upper reaches of the Yangtze River in 1998, the Natural Forest Protection Program has been financing the transition of state-owned forestry enterprises to forest conservation and supporting forest conservation activities in an area equivalent to around half of China's total natural forest area. Other market-based programs for watershed services have also been implemented locally and regionally.

The early work of RUPES in China focused on building the capacity of researchers and local forest departments in documenting and understanding the impact of forest-sector programs, identifying issues, developing innovative ways to address the issues, and supporting dialogue with policy makers at different levels. This included convening workshops, training in research methods, supporting field assessments and experiments and publishing information. More recent work has expanded from this early focus on forest resources to include assessment of the potential for rewards' schemes in watersheds and rangelands.

Schemes that involved recurring payments for improving land management practices in China:

- Sloping Farmland Conversion Program
- Annual payments for afforesting or planting grass on degraded lands. Mostly central government funding with some minor funding from local governments
- Grassland Retirement Program (2005)
- Grassland covered about 40% of China's land area
- Overgrazing was the main issue
- Annual payments for exclosure, seasonal or rotational grazing. Mostly central government funding with some minor funding from local governments
- Grassland Conservation Rewards Program
- Annual payment per hectare for not exceeding stocking capacity of grasslands

Key findings

A review of payments for environmental services' schemes distinguished between four types of payments:

- **Type 1:** Provision of technical support for adoption of improved management practices
- **Type 2:** investments to support initial costs of improving grassland management but without enforcing links between payments and adoption of improved practices
- **Type 3:** Payments for land users that are conditional on adopting improved management practices but without tying payments to environmental outcomes
- **Type 4:** Payments to land users that are conditional on environmental services delivered

The Chinese Government implements a range of scheme types, from government investment and extension support but without strong monitoring of adoption (types 1 and 2) through schemes that make incentive payments for adoption of improved management practices (type 3). Payments conditional on delivery of measured environmental services are mostly limited to market-based schemes, such as voluntary carbon markets.

Some large-scale schemes, such as the Grassland Retirement Program, initiated in the early 2000s, sought to increase environmental services by targeting degraded grassland areas, but monitoring of activities beyond the initial investment phase has been limited. In 2009, the Tibet Autonomous Region began to pilot a scheme to reward herders for improved grazing practices on both degraded and non-degraded grassland. In 2011, this was expanded throughout China's grassland areas. The national Grassland Ecological Conservation Rewards Scheme makes payments on a per unit of land area basis for herders that maintain sustainable stocking levels on their land. New mechanisms for monitoring compliance are being developed.

Market-based investments, such as carbon sequestration projects, depend on monitoring of activities and methodologies that estimate the environmental services delivered. Monitoring mechanisms being developed in a pilot grassland carbon project may have lessons for government schemes.

Policy influenced

- Rewards for ecosystem services' schemes for grassland, State Council, 2008–2010
- Ecological land-use plan, Xishuangbanna Prefecture, 2010

Follow-up

Songhuaba

- Changes in the water quantity and quality of the watershed through a rewards' mechanism: according to the team's calculations, suitable compensation should go directly to local farmers who sacrifice their own economic gain by providing ecosystem services. To achieve this, beneficiaries and providers need to be more closely linked and the role of government should be clarified and enhanced.
- The rewards' mechanisms need to be refined, especially, the amount of compensation for market-based ecosystem services. The team has identified potential providers and beneficiaries of services in the watershed and further work is needed to link them together.
- Changes in local farmers' incomes and livelihoods should be mapped through a further survey, along with the 'willingness to accept' of farmers and the sustainability of funding.

Tibetan Plateau

- In 2011, with support from the Ministry of Finance, the Ministry of Agriculture began to implement a schemes, many design elements in the new scheme were decided at the provincial level, providing greater flexibility to implementing agencies to design incentives that fitted with local conditions. The scheme also allows provinces to add locally relevant technical support to promote improvements in livestock management that complement grassland management.
- RUPES has been building on emerging markets for greenhouse gas emission reductions in China to design a grassland carbon finance project that will support implementation of the Government's grassland programs by strengthening targeting, planning and monitoring. The initiation of seven provincial pilot emissions trading schemes in 2012 indicates high potential support for development of complementary approaches between government- and market-funded rewards for environmental services' schemes.

Xishuangbanna

- Awareness of the importance of environmental protection among local stakeholders who are involved in any rewards' scheme should be evaluated through a further survey.
- The 'willingness to accept reforestation' of farmers should be investigated and the proportion of land devoted to monoculture rubber plantations and the associated reforestation rate should be monitored.

Landscape of Xishuangbanna, a critical watershed in southwestern China

RUPES research sites in India

India is bestowed with rich biodiversity and ecosystem services, which form the basis of the nation's ecological and economic security.

The National Environment Policy 2006 focuses on the nexus of environmental degradation with poverty in its many dimensions and, hence, economic growth. The dominant theme of the policy is that while conservation of environmental resources is necessary to secure the livelihoods and wellbeing of all, the most secure base for conservation is to ensure that people dependent on resources obtain better livelihoods from conservation rather than degradation of the resource.

The regulatory frameworks for conservation of natural resources have evolved over the years, with the most recent being the Coastal Regulation Zone Notification 2010 (providing a framework for regulating development in the coastal zone based on hazard vulnerability and ecosystem services) and Wetland (Conservation and Management) Rules 2010 (creating a regulatory regime for wetlands).

The national environmental policy strongly emphasizes the role of economic instruments in various forms to achieve sustainable development. Achieving economic efficiency in natural resource use is one of the core principles of the policy. The role of economic instruments, which aim to rationalize incentive structures and promote sustainable use of natural resources, is also emphasized.

Despite this, environmental services rewards schemes are still in their early stages. There are some watershed-scale applications, which highlight various challenges in environmental services' descriptions, measuring additionality, maintaining conditionality and accounting for transaction costs.

A capacity-assessment survey for implementation of environmental services' schemes to repair land degradation showed that while an understanding of environmental services does exist, there is insufficient capacity to value incremental change, which limits the application of any such schemes.

In 2012, the Ministry of Environment and Forests launched an assessment of the economics of ecosystem services and biodiversity (TEEB India) along the lines of international TEEB, focusing on the roles ecosystem

services and biodiversity play in sustaining economic development and the means of ensuring their inclusion in developmental planning and decision making.

As a pilot, the focus was on three ecosystem types: forests, inland waters and coastal and marine waters. The project was expected to lead to specific evidence from ecosystem services and the means of capturing these in economic decision-making processes.

Key findings

RUPES India focused on an incentive system for Lake Loktak with the objective of promoting sustainable water management for ecological restoration and sustaining livelihoods.

Loktak and its associated wetlands, located within the northeastern state of Manipur, are multifunctional systems providing food and water security for the entire region. Sustained provision of ecosystem services derived from the wetlands is critically linked to hydrological regimes. At the core of lake degradation is a lack of integration of ecosystem services into developmental planning processes leading to over-provisioning of tangible ecosystem services while severely undermining relatively intangible regulating, cultural and supporting services of the wetlands ecosystems.

The annual benefits from Lake Loktak (2006–2007 prices) totalled Rs 600 million (± USD 11 300 000), which is equivalent to nearly 2% of the state's gross domestic product. Direct benefits through provisioning of fisheries, water for hydropower generation and vegetation for use as fuel, food, fodder and raw material for handicrafts accounted for 48% of the overall benefits. Water use for hydropower generated 74% of the direct benefits accrued. Fisheries and vegetation accounted for 18% and 8% of the benefits respectively. Indirect benefits based on regulating, supporting and cultural features accounted for 52% of the overall benefits derived from the lake. The nutrient-retention functions of the 'phumdis' (unique floating islands of vegetation) formed the basis of 12% of non-use benefits. As more than half of the total benefits derived from Lake Loktak do not have marked-based prices, there is a significant underestimation of the overall contribution of the water body to the regional economy and a dominance of the more tangible uses of lake resources, that is, for hydropower generation.

While water used for hydropower is the source of the maximum benefit, there are also costs owing to the present form of water management, such as the degradation of biodiverse habitats, loss of fisheries, proliferation of phumdi, inundation of peripheral areas and sedimentation of link channels, all of which ultimately have an impact on the livelihoods of wetland communities and the overall sustainability of ecosystem services. The hydropower pricing mechanism in place at present does not account for lake water as an input to production processes. Current water management practices, by not properly accounting for environmental impacts, subsidize an environmentally inefficient process and shift the impacts onto wetlands-dependent communities.

Water management at Lake Loktak needs to address nine objectives apart from hydropower generation. Ecological needs—such as maintenance of biodiversity habitats, management of aquatic vegetation and fisheries—are aligned to the natural regime of water that existed prior to construction of the Ithai barrage. But the human demand for water must be met by a regulated water regime. It is impossible to meet all the objectives of water management under the current scenario. In particular, there are trade-offs between water allocation for hydropower generation and maintenance of habitats in the national park (which covers part of the lake area) in drier seasons.

Based on scenario evaluations and existing water regimes, it is possible to reduce the trade-offs and ecological impacts by changing the current barrage operation rules and integrating the need for reducing water levels during drier seasons. The impacts of these changes would need to be monitored and alterations made accordingly. As the current levels of water resources would be insufficient to meet all water management objectives, and that with each passing day the scenario worsens, demand and supply management has assumed a critical role in determining availability of water. On the demand side, opportunities include enhancing efficiency of water use for hydropower generation and managing phumdis to reduce water losses.

Supply side options include enhancing connectivity between the wetlands complex and optimizing water use upstream through better management of water storage structures.

Application of a payments-based instrument linked to water management could help fund maintenance of wetlands ecosystem services. Linked to the hydropower pricing mechanism, such a scheme would ensure that adequate components of revenues realized from sale of hydropower were reinvested into wetland management while ensuring that the water allocation system ensured sustainability of wetlands ecosystem processes.

Policy influenced

RUPES supported development of a water allocation policy for Lake Loktak, balancing human needs with ecological requirements. The policy has been endorsed by the Steering Committee of the Loktak Development Authority and modalities are being worked out for its implementation in participation with various stakeholder agencies. In conjunction with restoration efforts undertaken so far under the Short Term Action Plan for Conservation of Loktak Lake, the authority, with support of Wetlands International South Asia, is working for removal of the wetlands from the Montreaux Record of the Ramsar Convention, which is a list of wetlands undergoing or having undergone negative changes in ecological character and requiring priority action by the Government. The lake is no longer considered necessary for listing as a site of high degradation with no response mechanism in place.

Follow up

The steering committee recommended implementation of the revised water allocation policy. Based on the outcomes, an integrated wetland inventory and assessment initiative has been launched that will enable integration of ecosystem services with management planning, in particular, identifying conservation–development trade-offs. Under the ambit of the forthcoming five-year plan, the management of the associated wetlands of Loktak is also being integrated into river basin management, which, amongst other outcomes, is also expected to contribute to enhanced water availability within the system as well as improve hydrological connectivity. Payments for ecosystem services are being integrated into the institutional design as a means of sustaining financing for wetland management.

Floating phumdi, an endangered ecosystem of Lake Loktak, India

RUPES research sites in Indonesia

The environmental services debate in Indonesia gained more attention after the RUPES project organized a national seminar in February 2004. Conducted at the office of the National Development and Planning Agency (Badan Pembangunan dan Perencanaan Nasional/Bappenas), the seminar was attended by environmental services' practitioners from many parts of the country. At the end of the seminar, the participants agreed to form a national-level network (Community of Interest to Empower Environmental Services/COMMITTEES) to encourage design and application of environmental rewards' schemes to protect the environment and improve the welfare of poor farmers in upstream areas. The COMMITTEES members worked with a number of parties to pass a regulation on environmental services in Indonesia. At the national level, members organized regular meetings with several key government agencies, such as the Presidential Advisory Council, Ministry of Environment, Ministry of Forestry, Coordinating Ministry for Economic Affairs, Bappenas and other government agencies at district and province levels. COMMITTEES also consistently supported the Ministry of Environment in drafting an environmental services law and its regulations that can be used as an umbrella regulation for all such initiatives, through several seminars and a workshop.

At the field level, a number of new partners and collaborators from non-governmental organizations have been carrying out pilot environmental services rewards' projects, such as the Institute for Research, Education and Economic and Social Affairs (Lembaga Penelitian, Pendidikan dan Penerangan Ekonomi dan Sosial/LP3ES) (in West Java province), Kanopi (in Kuningan district) and Rekonvasi Bhumi (in Banten province), together with existing RUPES Indonesia partners since phase 1: Forum Komunikasi Kelompok Tani Hutan Kemasyarakat Lampung Barat (West Lampung Community Forestry Farmers' Groups' Communications Forum/FKKT HKm) (in West Lampung), Yayasan Danau Singkarak (in West Sumatra) and the World Agroforestry Centre's Bungo, Sumatra, office. They helped local water users and upstream farmers at each site reach agreement to protect the watershed.

During 2003–2012, RUPES Indonesia conducted six action-research projects at a number of sites.

1. Bungo (Jambi province): examined the possibility of eco-certification of rubber from agroforestry systems managed by smallholders.
2. Singkarak (West Sumatra province): established better management of Lake Singkarak and its watershed, a voluntary carbon scheme, an environmental education centre and revitalized the coffee 'ulu' plantation.
3. Sumberjaya (Lampung province): community forestry schemes and a 'river care' program.
4. Cidanau (Banten province): cash transactions for reforestation schemes on farmers' private land.
5. Lembang (West Java province): established payments for environmental services' transactions between intensive-agriculture farmers and the state-owned drinking water company to change their commodity crop to coffee agroforestry as well as facilitating the establishment of a provincial environmental services' working group for Citarum watershed.
6. Kuningan (West Java province): developed multi-stakeholders' forum for Mt Ciremai National Park as the intermediary for the water services' transaction between the drinking water company and the national park as well as piloted cash transactions for water services between upstream and downstream parties at village level.

The Cidanau team successfully renegotiated another five-year contract with PT Krakatau Tirta Industri, a drinking water company. The Sumberjaya team also successfully renegotiated the contract with PT PLN, a state-owned hydropower company, to continue and improve the 'River Care' program. The Sumberjaya team also established an agreement with 'Strengthening Community-based Forest and Watershed Management', a project funded by the United Nations Development Program and the Global Environment Facility, to develop a community action plan for watershed management which was in line with the RUPES project. And the second phase of contracts for a voluntary carbon market in Singkarak are, at the time of writing, still under negotiation and awaiting the monitoring, reporting and validating phase.

In Citarum, two mechanisms for innovative watershed management were identified: 1) encouraging the private sector to undertake 'green' businesses; and 2) reallocating some of the existing budget of the Integrated Citarum Water Resources Management and Investment project for rehabilitation of the catchments using environmental services' scheme principles, with a pilot site selected. These mechanisms were triggered by meetings, a seminar and a workshop about Citarum watershed that were conducted by LP3ES with representatives from many different sectors to seek support to save Citarum.

Other activities included establishing a working group on payments for environmental services for Citarum and West Java as an alternative vehicle to promote and maintain availability of environmental services. At site level, another village was identified as a model for payments for environmental services' replication in Citarum.

The Kuningan team identified three villages as pilots for implementation and conducted a series of meetings and facilitation events with them. The team also conducted preliminary research on rapid hydrological appraisal as well as research on the economic valuation of water and the socio-economics of land use. Documentary films were also produced.

The RUPES partner, FKKt HKm Lampung Barat, facilitated a series of meetings to strengthen the institutional capacity of other community forestry groups. They also sought ways of collaborating with other potential partners on Way Besai watershed management. The voluntary carbon market program in Singkarak received a lot of appreciation and support from both national and local governments.

Today, environmental services in Indonesia play an increasingly significant role in national discourse, as witnessed by the increasing number of collaborative programs—both pilots and full implementation—involving various stakeholders, including the government (especially the Ministry of Forestry), local NGOs, and national and international research and development agencies.

Key findings

Case studies of rewards for environmental services' schemes (RES) in many places in Indonesia demonstrated us that it is can support to the development of RES regulations at the higher level, such as national or provincial regulations. PES scheme have to be in harmony with regulatory approaches to better manage the environment and alleviate poverty. In Cidanau, with support from their local government through Governor Decree, the current RES initiatives have possibilities to be expanding to the wider coverage of area and participants. It is also help to ensuring the other potential ES buyer to have willingness to join with the scheme in the particular area. In many cases, some substantial amounts of public funds are currently allocated to reforestation in Indonesia. These programs mostly do not generally meet their objectives since it mostly derived from the top-down mechanism. Therefore, such funds could be more effectively deployed in flexible RES schemes in order to ensure its effectiveness and efficiency by integrating the local knowledge into rehabilitation/conservation program. This will increases the chances of contract accomplishment. Governments should set the optimal level of acceptable environmental services' protection as a baseline within their regulations that allow voluntary actions to improve environmental qualities. Strong political will from them is important to ensure expansion of schemes.

Beyond that, establishing an intermediary's role as an 'honest and trusted intermediary' is one of the key factors for an established scheme. The involvement of the community in participatory environmental services' monitoring also needed to increase the accountability of the results and reduces potential conflicts in the future.

Policy influenced

COMMITTEES, which consisted of voluntary members from government, universities, practitioners and non-governmental organizations who had an interest in rewards for environmental services' schemes, helped mainstream and institutionalize rewards for environmental services in Indonesia through several programs, such as:

- improving the commitment and capacity building of activists in environmental services;
- strengthening understanding of environmental services from different points of view and scientific disciplines;
- building the capacity of stakeholders in developing rewards' mechanisms for environmental services; and
- implementing dissemination and advocating strategies at local, national and global levels to develop sensible transactions for environmental services.

To contribute to the development and improvement of policy frameworks for rewards' schemes at local and national levels, the RUPES team and partners in Indonesia were actively involved in developing national and local regulations. At the national level, RUPES actively participated in the drafting the government regulation on environmental services, Law No. 32/2009. This regulation had three broad categories for economic instruments in environmental conservation: a) planning for environmentally friendly development and economic activities; b) funding for environmental management; and c) incentives and/or disincentives for conservation. At local level, the RUPES team facilitated the development of the Province of Banten Governor's Regulation on Integrated Watershed Management based on the rewards' scheme implemented in Cidanau watershed. At the time of writing, the draft is waiting for final approval before it can be implemented.

The team also disseminated information about environmental services and rewards' schemes at local, national and international events and made recommendations to government policy makers on developing regulations for, and implementing, such schemes.

Follow up

Bungo

At the end of the project, RUPES and LEI conducted a workshop, 'Land-use-change dynamics', that involved local stakeholders who were interested in sustainable forest management, such as the forestry agency, members of parliament, business people, university staff and students, NGOs and community representatives. One recommendation was that everyone agree to establish a task force to support sustainable forest management in Bungo district. This task force is expected to become a centre that can support the capacity-building process towards eco-labelling certification in agroforests by the communities, inside (village forest, customary forest etc) or outside forest areas (community forests, farming).

Cidanau

After the RUPES project ended, development of payments schemes in Cidanau continue, as can be seen in the workplan for 2010–2014 of the Forum Komunikasi DAS Cidanau (FKDC), a communication forum for Cidanau watershed, where they committed to rehabilitate a further 300 hectare through a rewards' contract as well as developing and strengthening the economy and livelihoods' aspects of the surrounding community. Some programs were ready to be launched, such as a multistakeholder program on sanitation and clean water funded by the national government (Ministry of Public Works); Green Village program, which consisted of several activities (freshwater fish farming, organic farming, 'jabon' (*Anthocepalus* sp) nursery, biogas and microhydropower). This program was funded by PT Perusahaan Listrik Negara (PLN/State Power Company) Unit Pelayanan Jaringan (UPJ/Network Service Unit) Banten Utara. Last but not least, FKDC planned to continue to seek support from other water users (companies, communities) in order to increase the environmental services fund and expand the rehabilitation area.

Citarum

- The process is still continuing and has provided many important lessons, both to improve the future mechanism and to be replicated in other places. Below are some follow-up actions for after RUPES.
  - A social engagement process and building awareness of the concept of compensation schemes needs to be carried out at the beginning of any scheme.
  - Better facilitation and lobbying of stakeholders, in particular, the leading government line agency, would improve participation.
  - A community-driven approach is strongly advised for the implementation of environment conservation programs that link to local people's livelihoods.
  - Strong partnerships are needed with a strong local authority that is able to influence other stakeholders to support the initiative. In this case, the West Java Environmental Management Agency (Badan Pengelolaan Lingkungan Hidup Daerah Jawa Barat/BPLHD) played an important role in regular public meetings.
  - Adoption of a compensation mechanism for watershed protection services is important for community empowerment. A successful conservation program also depends on the social and economic aspects of the local community.

Kuningan

- At the time of writing, Forum Kemitraan Pengelolaan Kawasan Lindung Gunung Ciremai (FK-PKLGC/Mount Ciremai Protected Area Partnership Forum) had not fully embraced all of the neighbouring districts. Its membership was only derived from Kuningan and Cirebon districts. Therefore, FK-PKLGC planned to expand the scope of its territory to Majalengka and Indramayu districts and develop a strategic plan for 3–5 years to gain the support of the four regions up to the provincial level (West Java province). In

addition, FK-PKLGC planned to design an environmental services cooperation mechanism that was more in accordance with the conditions of Mt Ciremai.

- The mechanism was expected to improve environmental services' scheme cooperation between users and service providers in the future, both for existing procurement agreements and those still being developed. In addition, it was also expected to show how an environmental services' scheme can be applied between villages, that is, at a relatively non-commercial level, as well as to show the bigger mechanism at district level with commercial users.
- The mechanisms are intended to further build awareness among the users and providers of environmental services, including policy makers from the governments, of the importance of preserving natural resources while also improving the livelihoods of communities.

Paninggahan

The completion of the RUPES project in West Sumatra was marked by a one-day seminar. The workshop examined a variety of research studies and results produced by the World Agroforestry Centre and its partners in West Sumatra, including recommendations for further action. The event ended with a handover of the final research reports to provincial forestry services, symbolizing the transfer of responsibility for further implementation of environmental services' schemes to the Government of West Sumatra. It was agreed that each program would continue, led by stakeholders such as Andalas University, Singkarak Lake Managemen Body, Forestry Services, and the Planning and Development Agency of Solok district.

Sumberjaya

Post-project action will focus on continuing the work that had been developed by the World Agroforestry Centre and RUPES over the last 10 years in Sumberjaya. The Community Forestry Farmers' Groups Communication Forum (FKKT HKm) has demonstrated their ability to be an effective local institution that can act as an intermediary for environmental services' schemes. They successfully built mutual trust among the parties in Sumberjaya, providing a strong basis for them to become a centre of environmental activities in the future. To maintain this will need substantial commitment from their members. In anticipation of the potential challenges in coming years, the FKKT HKm has broadened its collaboration with several other partners, at district, provincial and national levels.

Latex production supporting the livelihoods of rubber agroforestry smallholders (Jambi, Indonesia)

RUPES research sites in Nepal

The ecosystems in the Hindu-Kush Himalaya (HKH) region are endowed with rich biodiversity, immense and unique beauty; and are important watersheds and sinks of carbon. The services provided by these ecosystems are important and can be linked to provision of food, energy and other essential services for the wellbeing of humans and nature both upstream and downstream. The 'Himalayan water tower', as it's known, is a lifeline to nearly 1.3 billion people. The people living in these mountains protect watersheds, biodiversity and forests. However, there are limited economic and institutional incentives to the local communities who manage these important ecosystems. There are numerous examples from Nepal and India that reflect the potential of payments for environmental services' schemes to improve the management of natural resources, such as local schemes in the hills where downstream communities and water consumers in towns and villages make regular payments (in cash or kind) to community forestry groups upstream for protecting water sources and supply. However, policies that are required to mainstream environmental rewards' schemes in resources management and development initiatives are almost non-existent among all the HKH countries (Afghanistan, Pakistan, India, Nepal, Bhutan, China, Bangladesh, Myanmar) where RUPES' partner the International Centre for Integrated Mountain Development (ICIMOD) operates.

In the early days, in collaboration with Winrock International, RUPES implemented a project in Kulekhani watershed. It set out to develop an appropriate rewards' mechanism for the communities living in the catchment to support their environmental service of reducing siltation in the reservoir of the Kulekhani hydropower plant and increasing dry season flows in streams.

Different awareness-enhancing and community-mobilization activities led to successful negotiations with the government for using some of the hydropower royalty money as an incentive for upland communities. An environmental management special fund was established under the Makwanpur District Development Committee that facilitates the allocation of a higher proportion of the royalty budget for the upstream villages. National policies related to hydropower revenue were reviewed and the perspectives of the local people about payments for environmental services' mechanisms were also explored.

In Sundarijal catchment of Shivapuri Nagarjun National Park in Kathmandu valley, an assessment of the socioeconomic situation of the villagers residing inside the park, land-use changes and potential payments for environmental services' mechanisms was carried out. The results showed the high value of water services to state-owned companies (public water company and hydropower plant) and the cost of the national park's existence being borne by the villagers. Based on the review, a framework of a potential mechanism was developed. This framework proposes incentives to local communities for their role in conservation and the revenue is collected through state-owned companies, private companies and national park visitors into a local environment fund to be used for poverty-alleviating activities and park management. The framework can also be an effective local financing mechanism for managing protected areas that are usually managed with limited state funding. An assessment of the national buffer zone policy indicates potential for integrating environmental services' principles into policy on protected areas. The current buffer zone policy allows benefit sharing from protected areas with local and surrounding communities.

Key findings

Working through appropriate government agencies in pilot programs can lead to developing policies favourable to the implementation of payments for environmental services' mechanisms.

- Existing policies can be improved to make them pro-payments for environmental services.
- Local politics and conflict between groups can constrain proper implementation of environmental services' schemes.
- It is necessary to increase awareness among all stakeholders (local people, government officials, hydropower companies and community-based organizations) for effective implementation.
- Local institutions can be used to manage funding from environmental services' schemes and to determine community activities to support them.
- In the context of poor governance and local politics, there is a big risk of environmental services' money being diverted to fund activities that can reduce ecosystem services.
- The strategy of building pressure from the bottom up is good for raising awareness and developing a consensus about ecosystem services.
- In the context of environmental services' schemes in protected areas, there is potential for conflict between national park authorities and local communities.
- Lack of policies about ecosystem services and payment mechanisms severely hampers efforts to develop schemes.

Policy influenced

Based on the work of RUPES in Kulekhani, the Hydropower Royalty Distribution and Use Directive (2005) was issued by Makwanpur District Development Committee, allocating 50% of royalties it receives from the central government to the Village Development Committee where the hydropower plant is located. A significant portion of this money is provided to villages in the upstream area for conservation activities. This directive was circulated to all districts in the country to adopt a similar approach of paying a higher proportion of hydropower royalties to upstream communities.

Follow up

Kulekhani

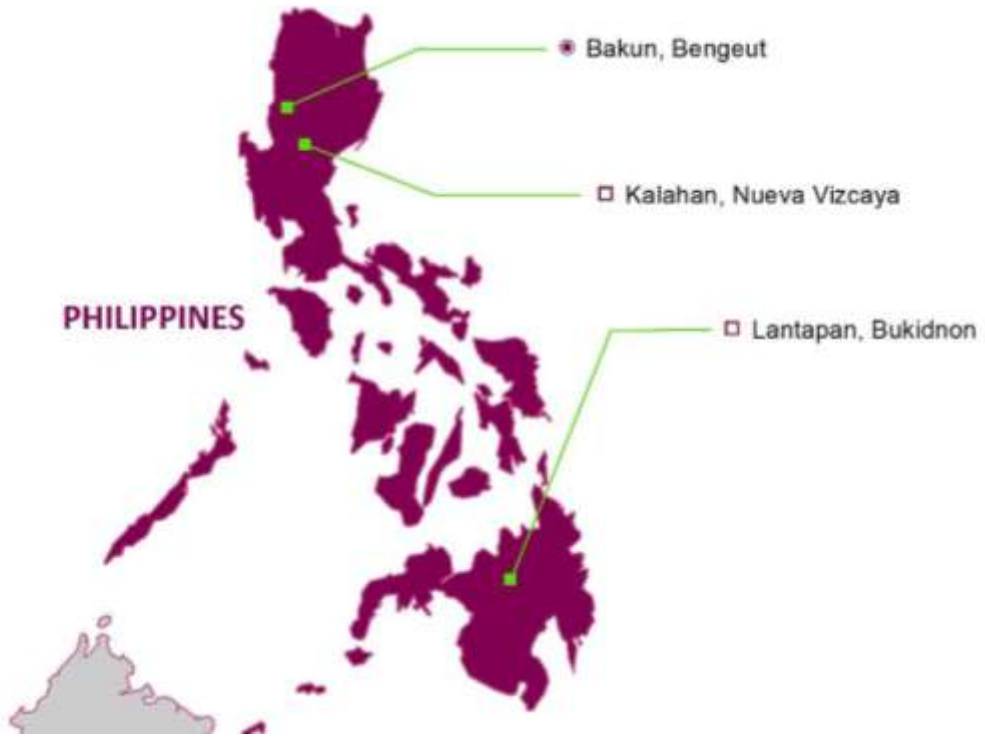
- Ensuring the proper use of reward money is a challenge compounded by political instability and conflict at local level.
- While there was a need for continued support as requested by Makwanpur District Development Committee, the project was halted owing to funding problems. A post-scheme study revealed that the momentum developed during development was waning and the environmental services' scheme money was being diverted to other activities (mainly construction of new roads) that lead to further degradation in the catchment. However, the payment for environmental services' initiative in Kulekhani has become a learning site for many national and international visitors.

Shivapuri

No rewards' scheme has yet been developed although a framework for a feasible scheme has been proposed based on a series of studies. The locally formed Sundarijal Environment Committee with support from Nepal Environment and Tourism Initiative Foundation and ICIMOD is taking a proactive role in approaching various ecosystem beneficiary groups and government agencies to implement the scheme. The progress is relatively slow, mainly due to the unstable political situation, unclear intentions and confidence of key beneficiary groups.

Women from Kulekhani, Nepal, discussing benefit distribution from PES

RUPES research sites in the Philippines



The Philippines has severely degraded natural resources. The situation has adversely affected the environmental services they provide. In the early 1900s, it was estimated that 70% of the country was covered with 21 million hectare of forests. However, only 6 million hectare remained as of 2004. Thus, in the last century alone, the Philippines lost almost 15 million hectare of tropical forests.

Since the early 1970s, when extensive reforestation efforts began in the Philippines, various incentive schemes have been implemented to encourage people to plant trees on private and public land. However, after more than three decades of support, reforestation efforts in the Philippines have largely been ineffective partly because the incentives provided were either inappropriate or did not consider the long-term nature of reforestation.

Partly in response to the limited success of government-initiated programs, a number of local governments, research organizations and NGOs in the Philippines began testing various environmental services rewards' schemes as a way of reversing environmental degradation.

The RUPES Philippines project was designed to test water (RUPES Bakun and Lantapan) and carbon sequestration (RUPES Kalahan) environmental services' schemes. In 2003, Kalahan was selected as an action research site in the country to develop a carbon sequestration payments mechanism; while in 2004, Bakun was selected to test the mechanism for watershed payments. In 2006, Lantapan was identified as a RUPES associate site and later became an action research site for watershed services' payments in 2008. Through these sites, RUPES hoped to establish rewards mechanisms to encourage people's participation in protecting and conserving the environment and improving their livelihoods.

Key findings

- At all RUPES' sites, the project worked with community-based organizations as the main stakeholders, who were themselves identified as local resources managers and providers or sellers of environmental services. Community support was highly important in the proper implementation of the project. Aside from that, the initiative of the community was vital for the sustainability of the project's goals as they were the ones who would ensure the continuity of what RUPES had started once the project ended.
- There are existing national and local policies and legal frameworks which could be utilized to enable mechanisms locally. However, these legal frameworks could only help if the local government units (LGU) or communities opted to allow them to work in favour of establishing a rewards mechanism for conservation and poverty alleviation. The LGUs are mandated by national law to protect and nurture the natural resources under their jurisdiction for the benefit of present and future constituents and, thus, are capable of exercising actions accordingly. But due to lack of political will they were unable to do so.

Policy influenced

- RUPES Philippines organized the Payments for Environmental Services Technical Working Group, which consisted of members from government and non-governmental organizations intent on advocating payments for environmental services. The working group aimed to mainstream and institutionalize payments for environmental services' schemes in the Philippines by conducting research and documenting and disseminating results; advocating policy to support implementation in the country; establishing networks with national and international organizations; and supporting workshops, training and capacity building activities; as well as mobilizing resources.
- RUPES Philippines contributed to the formulation of the Philippine REDD+ Strategy, which included environmental services' schemes as one of the financial mechanisms to be used in the implementation of REDD+ in the country.
- RUPES provided the framework for localized RES initiatives in the Lantapan Municipality by supporting the the enactment of Lantapan's Municipal Ordinance 114, entitled 'Incentive-support system for farmers adopting or investing in sustainable farming system'.

Follow up

Bakun

Post-RUPES, the World Agroforestry Centre will follow up on the implementation of the plan, as well as the proposals made for the hydropower companies, and support further negotiations. The Centre will also continue to promote environmental services' mechanisms in the development of watershed programs in Bakun.

Kalahan

The World Agroforestry Centre will continue to assist the Foundation to search for buyers for their environmental services, particularly for the carbon. The project idea note can be presented at national and international forums. Dialogue between the Foundation and the hydroelectricity company will also be supported.

Lantapan

- Farming communities have been trained to develop project proposals as well as negotiate these with potential buyers. The Working Group in Region X will continue to facilitate negotiations that are already underway as well as support the integration of environmental services rewards' schemes in land-use programs in the region. The group expects that integration with the implementing rules and regulations of the Bukidnon Environment Code and Bukidnon Watershed Framework Plan will lead to watershed-wide collective action for co-investment in environmental services and equitable and fair benefit-sharing.
- Collective action and property rights in the context of the allocation of water rights will be further explored as a prelude for effective coordination between water management institutions and complementary policies.

Degraded lands as potential areas for carbon market scheme in Kalahan

RUPES research sites in Viet Nam

Viet Nam was the first country in Southeast Asia to integrate payments for environmental services into national strategies and policies. In 2008, the Government of Viet Nam started a pilot program (under Decision 380 QD-TTg) for Payment for Forest Environmental Services, with full implementation in the whole country starting in January 2011 through the issuing of Decree 99. Decree 99 laid the legal foundation for provinces to ask hydropower plants, water companies and tourism businesses to pay a certain percentage of their income to relevant environmental services' providers, that is, landowners and forest protectors. Services explicitly recognized by the policy are 'water provision', 'aesthetic landscape', 'forest products', 'genetic resources', 'biodiversity' and 'prevention of erosion and flooding'.

The World Agroforestry Centre had significant field presence in the province, including a technical collaboration with the 'Pro-poor partnership for agroforestry development' (3PAD) project, funded by the International Fund for Agriculture Development (IFAD), and action research sites under RUPES.

RUPES assessed the potential for schemes in Bac Kan province, compiled lessons learnt in Son La and Lam Dong, analysed eco-tourism in Viet Nam's northern highlands, and evaluated carbon stock in Bac Kan province. As well, RUPES supported the 3PAD project by facilitating the development of a community contract between Ba Be National Park as the environmental services beneficiary and forest owners and Leo Keo community as providers. The community contract is expected to be signed in 2012 and has already become a model for the 3PAD project. Further, Decision 99 and its guiding circulars were reviewed and applied to three sites coordinated by 3PAD, including RUPES' action research sites in Bac Kan province.

Key findings

- In line with designing a RES scheme, it is necessary to have detailed guidelines on PFES implementation, which is most needed at the local level.
- PFES schemes need to be designed in a participatory manner, in ways that generate greater support and commitment amongst stakeholders. In addition, PFES must be supplemented by continuous education, training and awareness-building by governmental and non-governmental organizations and the private sector.
- Compliance with conditionality is a challenge. PFES needs to be directly linked to service delivery and will require monitoring of criteria and indicators.

- Collective action in schemes has lower transaction costs than individual payments
- The amount paid to a single ES is not economically attractive; there is a strong demand for bundling ES payments
- Payment should be in cash and non-cash forms. However, non-cash payments through public works or public social investments will better include the poor and landless people in the payment scheme. 'Voluntary' is a necessary factor ensuring people's commitment to participate in any scheme
- People's and farmers' associations should obtain legal identities, for example, a 'cooperative', to be able to transact business with buyers.
- PFES planners/designers need to be reflexive to effectively address rapidly changing local realities. Top-down PFES procedures also need to be linked with bottom-up approaches in designing PFES scheme.
- Rewards for environmental services is a new concept and understanding it takes time. According to the results of stakeholders' workshops and consultations, the team recommends indirect payments for Bac Kan province, as illustrated in the figure below.

Policy influenced

- RUPES contributed to national debates on rewards for environmental services' concepts and principles and analyzed the potential and challenges of REDD+ implementation in Viet Nam.
- Lessons were drawn from study of the payments for forest ecosystem services' scheme. The team and partners participated actively in several national workshops and meetings to share experiences related to rewards' scheme development in order to contribute to a better policy framework.
- Through active participation in advocating policy at local and national levels, and dissemination of lessons learnt and recommendations to national policy makers, the RUPES team and partners contributed to national policies that are increasingly conducive to realistic, conditional, voluntary and pro-poor approaches.
- Promoted schemes to potential public and private buyers.
- More than 600 people, including government officers, projects officers, village leaders and farmers, in Bac Kan were consulted and trained.

Follow up

Bac Kan

To sustain the environmental services' schemes initiated by RUPES, the World Agroforestry Centre Viet Nam will continue to provide technical assistance to the 3PAD project in piloting environmental services' schemes in the districts of Ba Be and Na Ri. Payments from environmental services will also fund development of best practices on agroforestry system, forest plantation and cooking stoves improvement. The People's committee of Bac Kan province has approved the PFES pilot proposal for implementation.

Annex 2. List of RUPES publications

No.	Period	RUPES Outputs	Category	Country Network	Publication
Policy briefs and other relevant policy publications: 62 publications					
1	2008 - 2009	1.1.1	Policy briefs and other relevant policy publications	Viet Nam	Hoang MH, Nguyen NL, Doan D, Do Trong H, Thuy PT, Thomas D, Nguyen TH. 2009. *Reducing emissions from all land uses - REALU: What will Viet Nam's path be? Initial findings of the scoping study*. Hanoi, Viet Nam: World Agroforestry Centre (ICRAF).
2	2008 - 2009	1.1.1	Policy briefs and other relevant policy publications	Indonesia	RUPES. 2009. *Konsep Jasa Lingkungan dan Pembayaran Jasa Lingkungan di Indonesia*. Bogor, Indonesia: World Agroforestry Centre (ICRAF).
3	2008 - 2009	1.1.1	Policy briefs and other relevant policy publications	Viet Nam	Thuy PT, Hoang MH, Campbell BM. 2009. *Pro-poor payments for environmental services in Viet Nam*. Hanoi, Viet Nam: Center for International Forestry Research (CIFOR) and World Agroforestry Research (ICRAF). Available in two languages: English and Vietnamese
4	2008 - 2009	1.1.1	Policy briefs and other relevant policy publications	Viet Nam	Thuy PT, Campbell BM, Hoang MH. 2009. *The roles of intermediaries in payment for environmental services: establishment, implementation and monitoring in Viet Nam*. Hanoi, Viet Nam: Center for International Forestry Research (CIFOR) and World Agroforestry Research (ICRAF). Available in two languages: English and Vietnamese
5	2008 - 2009	1.1.1	Policy briefs and other relevant policy publications	Viet Nam	Hoang Minh Ha, Pham Thu Thuy, Suyanto, Ho Dac Thai Hoang, Vu Tan Phuong, Do thi Ngoc Bích, PhUm Xuân Hoàn , Ngo Trung Thanh, 2008. How to apply PES experience and lessons leant to Bac Kan project 'Pro-poor Partnerships for Agro-forestry development'. ICRAF Viet Nam and RUPES-II working paper. (AR p.10)
6	2008 - 2009	1.1.1	Policy briefs and other relevant policy publications	Philippines	Lasco RD. 2008 Tropical Forests and Climate Change Mitigation: The Global Potential and Cases from Philippines. *Asian Journal of Agriculture and Development*. Vol. 5, No 1. pp 81-98.
7	2008 - 2009	1.1.1	Policy briefs and other relevant policy publications	Philippines	Villamor GB, Lasco RD. 2009. Rewarding Upland People for Forest Conservation: Experience and Lessons Learned from Case Studies in the Philippines. *Journal of Sustainable Forestry*. 28. (3-5)P. 304 – 321. DOI: 10.1080/10549810902791499

No.	Period	RUPES Outputs	Category	Country Network	Publication
8	2008 - 2009	1.1.1	Policy briefs and other relevant policy publications	Philippines	Catacutan D. 2009. *Voices of water users in Manupali watershed*. Malaybalay City, Philippines: World Agroforestry Centre (ICRAF).
9	2008 - 2009	1.1.1	Policy briefs and other relevant policy publications	Philippines	Catacutan D, Pinon CD. 2009. The policy environment of vegetable-agroforestry (VAF) system in Philippines: Are there incentives for smallholders?. International Journal for Ecology and Development (IJED). 14(F09):P. 47-62.
10	2008 - 2009	1.1.1	Policy briefs and other relevant policy publications	Viet Nam	Thuy PT, Hoang MH, Campbell, BM. 2008. Pro-poor payments for environmental services: Challenges for the government and administrative agencies in Viet Nam. *Public Administration and Development*, 28: 363–373. doi: 10.1002/pad.513.
11	2008 - 2009	1.1.1	Policy briefs and other relevant policy publications	Viet Nam	Thuy PT, Campbell BM, Garnett S, Aslin H, Hoang MH. 2010. Importance and impacts of intermediary boundary organizations in facilitating payment for environmental services in Viet Nam. *Environmental Conservation*, 37, pp 64-72 doi:10.1017/S037689291000024X.
12	2008 - 2009	1.1.1	Policy briefs and other relevant policy publications	Viet Nam	Hoang MH, Quan NH, van Noordwijk M, Leimona B. 2009. Rewards, use and shared investment in pro-poor environmental services - an experiment in doing PES in Viet Nam. *Forest Sector Support Partnership (FSSW) Newsletter.*
13	2008 - 2009	1.1.1	Policy briefs and other relevant policy publications	Viet Nam	van Noordwijk M, Wulandari D, Quan NH, Hoang MH. 2009. *Trees in Multi-Use Landscapes in Southeast Asia (TULSEA). A negotiation support toolbox for Integrated Natural Resource Management (INRM).* Hanoi, Viet Nam: World Agroforestry Centre (ICRAF). Available in two languages: English and Vietnamese
14	2008 - 2009	1.1.1	Policy briefs and other relevant policy publications	Viet Nam	Hoang MH, Yen Mai H, Eds. 2009. *Linkages of Forest Protection, Economic Growth and Poverty Reduction - Issues and Approaches in Viet Nam.* Hanoi - Viet Nam: World Agroforestry Centre. 144 p (National Workshop Proceeding)
15	2008 - 2009	1.1.1	Policy briefs and other relevant policy publications	Viet Nam	Hoang MH, van Noordwijk M, Thuy PT,eds. 2008. *Payment for environmental services: experiences and lessons in Viet Nam*. Hanoi, Viet Nam : World Agroforestry Centre (ICRAF). 34 p.
16	2008 - 2009	1.1.1	Policy briefs and other relevant policy publications	Viet Nam	Quan NH, Hoang MH, Leimona B. 2009. *Rewards, Use and shared investment in pro-poor environmental services "RUPES second phase (RUPES II) in Viet Nam"*. Viet Nam: World Agroforestry Centre (ICRAF). Available in two languages: English and Vietnamese

No.	Period	RUPES Outputs	Category	Country Network	Publication
17	2010	1.1.1	Policy briefs and other relevant policy publications	Indonesia	Leimona B, de Groot R. 2010. Payment for Environmental Services: The Need for Redefinition? *Mountain Forum Bulletin*, Volume X, Issue 1, January. Nepal: Mountain Forum.
18	2010	1.1.1	Policy briefs and other relevant policy publications	Indonesia	Wendland K, Naughton L, Suarez L, Suyanto. 2010. Rewards for Environmental Services and Collective Land Tenure: Lessons from Ecuador and Indonesia. *Mountain Forum Bulletin*, Volume X, Issue 1, January. Nepal: Mountain Forum
19	2010	1.1.1	Policy briefs and other relevant policy publications	Indonesia	Laura K, Sunita C. 2010. Environmental Services, Equity and Productivity: Interview with Dr. Meine van Noordwijk, Global Science Advisor at the World Agroforestry Centre (ICRAF). *Mountain Forum Bulletin*, Volume X, Issue 1January. Nepal: Mountain Forum.
20	2010	1.1.1	Policy briefs and other relevant policy publications	Philippines	Catacutan D, Villamor GB, Pinon CD. 2010. Local Government-Led PES for Watershed Protection: Cases from the Philippines. *Mountain Forum Bulletin*, Volume X, Issue 1, January. Nepal: Mountain Forum.
21	2010	1.1.1	Policy briefs and other relevant policy publications	India	Kumar R. 2010. Payment for Environmental Services for Sustainable Water Management in Loktak Lake, Manipur. Mountain Forum Bulletin, Volume X, Issue 1, January. Nepal: Mountain Forum.
22	2010	1.1.1	Policy briefs and other relevant policy publications	Philippines	Lasco RD, Abasolo EP, Villamor GB. 2010. Payments for Carbon Sequestration in the Philippines: Lessons and Implication. *Mountain Forum Bulletin*, Volume X pp 55-57, Issue 1, January. Nepal: Mountain Forum.
23	2010	1.1.1	Policy briefs and other relevant policy publications	Philippines	Lasco RD and Villamor G. 2010. *Payments for Ecological Services: Experiences in Carbon and Water Payments in the Philippines*. Published as a book chapter of Sustainability Science for Watershed Landscapes by the Institute of Southeast Asian Studies and Southeast Asian Regional Center for Graduate Study and Research in Agriculture.
24	2010	1.1.1	Policy briefs and other relevant policy publications	Philippines	Vickers, B, Kant P, Lasco RD, Bleany A, Milne S, Suzuki R, Ramos L, Pohnan E. 2010. *Forests and Climate Change in the Asia Pacific Region*. Forests and Climate Change Working Paper 7. Rome: FAO.

No.	Period	RUPES Outputs	Category	Country Network	Publication
25	2010	1.1.1	Policy briefs and other relevant policy publications	Philippines	Catacutan D, Pinon CD. 2010. Local Incentive-Based Policy for Vegetable-Agroforestry: a locally-appropriate adaptation and mitigation action (LAAMA) to climate change. VAF Policy Brief Series, Issue No. 3. Laguna, Philippines. SANREM and the World Agroforestry Centre (ICRAF-Philippines). 4 p.
26	2010	1.1.1	Policy briefs and other relevant policy publications	Indonesia	Leimona B, Jack K. 2010. Indonesia: A pilot PES auction in the Sumberjaya watershed. In: *OECD book chapter* : *Paying for Biodiversity: Enhancing the Cost-Effectiveness of Payments for Ecosystem Service*. p 161-176.
27	2010	1.1.1	Policy briefs and other relevant policy publications	Indonesia	Amanah S, Sumarti T, Purnaningsih N, Purnomo AM, Hadi AP, Defina. 2010. Gender Analysis in Agroforestry as a Basis Strategy to Promote Rewards for Environmental Services Schemes in Three Sites in Indonesia. Final Report. Bogor: IPB, RMI
28	2010	1.1.1	Policy briefs and other relevant policy publications	Indonesia	Leimona B, Pasha R, Rahadian NP. 2010. The livelihood impacts of incentive payments for watershed management in Cidanau watershed, West Java, Indonesia In: Luca Tacconi , Sango Mahanty , Helen Suich (Eds). 2010. *Payments For Environmental Services, Forest Conservation And Climate Change: Livelihoods in the REDD?*. Cheltenham, UK: Edward Elgar Publishing. p 106-129.
29	2010	1.1.1	Policy briefs and other relevant policy publications	Indonesia	Van Noordwijk, M., and B. Leimona. 2010. Principles for fairness and efficiency in enhancing environmental services in Asia: payments, compensation, or co-investment? Ecology and Society 15(4): 17. [online] URL: http://www.ecologyandsociety.org/vol15/iss4/art17/
30	2010	1.1.1	Policy briefs and other relevant policy publications	Indonesia	ICRAF. 2010. RUPES: An innovative strategy to reward Asia's upland poor for preserving and improving our environment (Khmer Language). Bogor: ICRAF
31	2010	1.1.1	Policy briefs and other relevant policy publications	Viet Nam	Thuy PT, Campbell BM, Garnett S, Aslin H, Hoang MH. 2010. Importance and impacts of intermediary boundary organizations in facilitating payment for environmental services in Viet Nam. *Environmental Conservation*, 37, pp 64-72 doi:10.1017/S037689291000024X.
32	2010	1.1.1	Policy briefs and other relevant policy publications	Viet Nam	Hoang MH, Hoan DT, Palm M, Xuan NT, eds. 2010. *Can REDD alone protect the forest.* (presented at the forum named 'Market-based instrument in Natural Resources Management organised by Charles Darwin University CDU).
33	2010	1.1.1	Policy briefs and other relevant policy publications	Philippines	Pinon CD, Catacutan D, Leimona B, Abasolo EP, van Noordwijk M, Tiongco L. 2010. Conflict, Cooperation, & Collective Action: Land use, water rights, and water scarcity in Manupali watershed, southern Philippines. (presented at CAPRi Workshop on Collective Action, Property Rights, and Conflict in Natural Resources Management, June 28 – July 1, 2010. Siem Reap, Cambodia).

No.	Period	RUPES Outputs	Category	Country Network	Publication
34	2010	1.1.1	Policy briefs and other relevant policy publications	Indonesia	RUPES. 2010. *Environmental Service Rewards for Watershed Management*.Video. Bogor, Indonesia: World Agroforestry Centre (ICRAF). Available in two languages: Indonesian and English
35	2010	1.1.1	Policy briefs and other relevant policy publications	Thailand	Sidthinat P, Chairat N, Ratnamhin A, Thanompun K, Thomas D. 2010. *Rewarding Community Participation in Managing Environmental Services Provided by a National Park; A case study of Doi Inthanon National Park, Chiang Mai, Thailand.* RUPES Report.Chiang Mai: ICRAF
36	2010	1.1.1	Policy briefs and other relevant policy publications	Indonesia	RUPES. 2010. *RUPES Supporting IFAD's Investment Projects in Many Countries*. Poster. Bogor, Indonesia: World Agroforestry Centre (ICRAF).
37	2010	1.1.1	Policy briefs and other relevant policy publications	Indonesia	RUPES. 2010. *RUPES's Approach to Bridge Institutional Constraints*. Poster. Bogor, Indonesia: World Agroforestry Centre (ICRAF).
38	2010	1.1.1	Policy briefs and other relevant policy publications	Indonesia	ICRAF. 2010. *Environmental Service Rewards for Saving Rangeland.* Poster. Bogor: ICRAF
39	2010	1.1.1	Policy briefs and other relevant policy publications	Indonesia	ICRAF. 2010. *Revealing the True Values of Jungle Rubber*. Poster. Bogor: ICRAF
40	2010	1.1.1	Policy briefs and other relevant policy publications	Indonesia	ICRAF. 2010. *Voluntary Carbon Trade Now Come True!*. Poster. Bogor: ICRAF
41	2010	1.1.1	Policy briefs and other relevant policy publications	Viet Nam	Hoang Minh Ha, Do Trong Hoan, Matilda Palm, Nguyen Thanh Xuan, Doan Diem, Hoang Thi Van Anh, Meine van Noordwijk and Peter Akong Minang. 2010. *Can REDD payment alone protect the forest?* Poster presentation at World Agroforestry Centre's Science Week, 6–8 September, 2010, Nairobi, Kenya. Poster. Hanoi: ICRAF - Viet Nam

No.	Period	RUPES Outputs	Category	Country Network	Publication
42	2010	1.1.1	Policy briefs and other relevant policy publications	Viet Nam	Viet B D, Do Trong H, Perez-Teran AS. 2011. *Carbon rich land use models in Bac Kan province*. Report. Hanoi, Viet Nam: World Agroforestry Centre (ICRAF).
43	2010	1.1.1	Policy briefs and other relevant policy publications	Viet Nam	Hoang Minh Ha, Dinh Ngoc Lan, Hoang Van Giap and Nguyen van Nam. 2010. Bundling of payments/rewards for environmental services: A viable incentive system under development in the uplands of Northern Viet Nam. Hanoi: ICRAF - Viet Nam
44	2011	1.1.1	Policy briefs and other relevant policy publications	Indonesia	Pasha R, Leimona B. 2011. PES and multi-strata coffee gardens in Sumberjaya, Indonesia. In: Ottaviani D and Scialabba NE,eds. *Payments for ecosystem services and food security.* Rome, Italy: FAO. p. 275-281.
45	2011	1.1.1	Policy briefs and other relevant policy publications	Indonesia	Joshi L, Pasha R, Mulyoutami E and Beukema HJ. 2011. Rubber agroforestry and PES for preservation of biodiversity in Bungo district, Sumatra. In: Ottaviani D and Scialabba NE,eds. *Payments for ecosystem services and food security*. Rome, Italy: FAO. p 114-135.
46	2011	1.1.1	Policy briefs and other relevant policy publications	Indonesia	Leimona B, van Noordwijk M. 2011. *Principles for fairness and efficiency in enhancing environmental services in Asia: payments, compensation or co-investment?. RUPES Brief.* Bogor, Indonesia: World Agroforestry Centre (ICRAF).
47	2011	1.1.1	Policy briefs and other relevant policy publications	Indonesia	Leimona B, van Noordwijk M, Joshi L. 2011. *Can rewards for providing environmental services benefit the poor? Lessons from Asia. RUPES Brief*. Bogor, Indonesia: World Agroforestry Centre (ICRAF).
48	2011	1.1.1	Policy briefs and other relevant policy publications	Viet Nam	Hoan DT, Saray-Teran A, Viet Bac D, Hoang MH. 2011. *Questions & Answers about Payments for Forest Environmental Services: Basis for creating Payments for Environmental Services mechanism to adapt to local circumstances*. Viet Nam: World Agroforestry Centre (ICRAF). 12p.
49	2011	1.1.1	Policy briefs and other relevant policy publications	Indonesia	Pasha R, Leimona B, Rooswiadji TA. 2011. Reward for ecosystem services schemes: Lessons from Indonesia. (Presented at 3rd SEA Regional Workshop on Payment For Ecosystem Services Banda Aceh, 13-14 June 2011).

No.	Period	RUPES Outputs	Category	Country Network	Publication
50	2011	1.1.1	Policy briefs and other relevant policy publications	Philippines	Pinon CD, Catacutan D, Leimona B, Abasolo EP, van Noordwijk M, Tiongco L, Palma NA, Egnar CM. 2011. Understanding Land Use, Water Balance and Water Rights for Rewards on Watershed Services: Experience from Manupali watershed in southern Philippines. Presentation in First International Sustainable Watershed Management Conference in Instanbul, Turkey on 19-23 September 2011.
51	2011	1.1.1	Policy briefs and other relevant policy publications	Indonesia	Leimona B. 2011. *Fairly efficient or efficiently fair: success factors and constraints of payment and reward schemes for environmental services in Asia.* (Presented at Danone Meeting 10 October 2011, Paris).
52	2011	1.1.1	Policy briefs and other relevant policy publications	Indonesia	Pasha R. 2011. *Implementasi skema jasa lingkungan sebagai alternatif pengelolaan DAS dan SDA.* (Presented at Lokakarya Sosialisasi Jasa Lingkungan dan Wisata Alam Di Taman Nasional Gunung Ciremai Kuningan, 26 September 2011).
53	2011	1.1.1	Policy briefs and other relevant policy publications	Indonesia	Pasha R, Pratikno, Purwanto. 2011. *RUPES Imbalan Jasa Lingkungan Bagi Masyarakat Hulu Atas Upaya Konservasi yang dilakukan*. Presentasi. Bogor. World Agroforestry Centre.
54	2011	1.1.1	Policy briefs and other relevant policy publications	Indonesia	van Noordwijk M, Hoang MH, Neufeldt H, Oborn I, Yatich T. 2011. *How trees and people can co-adapt to climate change: reducing vulnerability through multifunctional agroforestry landscapes*. Nairobi, Kenya: World Agroforestry Centre (ICRAF). 133 p.
55	2011	1.1.1	Policy briefs and other relevant policy publications	Indonesia	van Noordwijk M, Hoang MH, Neufeldt H, Oborn I, Yatich T. 2011. *How trees and people can co-adapt to climate change: reducing vulnerability through multifunctional agroforestry landscapes*. Nairobi, Kenya: World Agroforestry Centre (ICRAF).
56	2011	1.1.1	Policy briefs and other relevant policy publications	Indonesia	Leimona B. 2011. *From local initiatives to global winners: involving the community in provisioning environmental services*. (Presented at The 10th Asia Pacific Roundtable for Sustainable Consumption and Production (APRSCP) 9-11 November 2011 Jogjakarta, Indonesia)
57	2011	1.1.1	Policy briefs and other relevant policy publications	Indonesia	Pasha R, Asmawan T, Leimona B, Setiawan E, Wijaya C. 2011. *Komoditas atau koinvestasi jasa lingkungan? pembelajaran dari implementasi skema jasa lingkungan sebagai alternatif pengelolaan daerah hulu berbasis partisipasi masyarakat*. (Presented at Kongres Ilmu Pengetahuan Nasional (KIPNAS) X - LIPI Bidakara, 10 November 2011).

No.	Period	RUPES Outputs	Category	Country Network	Publication
58	2011	1.1.1	Policy briefs and other relevant policy publications	Indonesia	Villamor G, Leimona B. 2011. *Rewards for Environmental Services (RES) in the Highlands: the RUPES Programme.* Rome - Italy. Food and Agriculture Organization. 116p (Proceeding on Scientific Workshop on Mountain Mobility and Transport)
59	2011	1.1.1	Policy briefs and other relevant policy publications	Indonesia	RUPES Philippines Team. 2011. *Participatory biodiversity conservation and agroforestry development in MT.Apo and MT. Kitanglad National Parks and ridge to reef in MT. Malindang through rewards for environmental services.* Philippines: World Agroforestry Centre. 41p (Proceeding on a Training Workshop)
60	2011	1.1.1	Policy briefs and other relevant policy publications	Nepal	Joshi L. 2011. A community-based PES scheme for forest preservation and sediment control in Kulekhani, Nepal. Ottaviani D and Scialabba NE,eds. *Payments for ecosystem services and food security*. In: Rome, Italy: FAO. p 199-203.
61	2012	1.1.1	Policy briefs and other relevant policy publications	Viet Nam	Catacutan D,Thuy PT,Bac DV,Simelton E,Huong TT,Enright A,Egashira E,Nga DT,Thang LM,Hung PT,Dung LN,Ebert E.2012.Major challengers and lessons learnt from payments for forest environmental services (PES) in Viet Nam. Policy brief.Viet Nam. (English)
62	2012	1.1.1	Policy briefs and other relevant policy publications	Viet Nam	Catacutan D,Thuy PT,Bac DV,Simelton E,Huong TT,Enright A,Egashira E,Nga DT,Thang LM,Hung PT,Dung LN,Ebert E.2012.Major challengers and lessons learnt from payments for forest environmental services (PES) in Viet Nam. Policy brief.Viet Nam. (Vietnamese)
Synthesis report on RES Policy and institutional aspects: 6 publications					
63	2011	1.1.2	Synthesis report on RES Policy and institutional aspects	Indonesia	Leimona B, van Noordwijk M, Joshi L, Catacutan D, Yatich T, Dietz J, Mwangi H, Gathenya JM, Muthuri C, Sinclair F, Bhattarai S, Onyango L, Suyanto, Kalinganire A, Noordin Q, Bayala J, Gebrekirstos A, Tscherning K, Piñon CD. 2011. *Supporting multifunctionality through realistic, conditional and voluntary actions to enhance trees as source of environmental services*. In: van Noordwijk M, Hoang MH, Neufeldt H, Oborn I, Yatich T. 2011. *How trees and people can co-adapt to climate change: reducing vulnerability through multifunctional agroforestry landscapes*. Nairobi, Kenya: World Agroforestry Centre (ICRAF). 133 p.

No.	Period	RUPES Outputs	Category	Country Network	Publication
64	2012	1.1.2	Synthesis report on RES Policy and institutional aspects	Philippines	Pinon CD, Catacutan D. 2012. *Bridging the Gap between Central and Locally-Formulated Policies to Promote Smallholder Investments in Vegetable Agroforestry: the case of Lantapan Municipality in southern Philippines.* In: Catacutan, DC, Mercado, Jr., AR, Chiong-Javier, ME, Ella, VB, Espaldon, MVO, Rola, AC, Palada, MC, Duque-Piñon, C, Saludadez, JA., Penaso, AM, Nguyen, MR., Pailagao, CT, Bagares, IB, Alibuyog, NR, Midmore, D, Reyes, MR, Cajilig, R, Suthumchai, W, Kunta, K and Sombatpanit, S. (eds.) 2012. *Vegetable-Agroforestry Systems in the Philippines*. Special Publication No. 6b. World Association of Soil and Water Conservation (WASWAC), Beijing, China and the World Agroforestry Center (ICRAF), Nairobi, Kenya. pp 367-384.
65	2012	1.1.2	Synthesis report on RES Policy and institutional aspects	Philippines	Palada, MC, DL Wu, GC Luther, EC Javier, S Ramasamy, M Bhattarai, AR Mercado, Jr, MR Reyes and C Duque. *Selection of Vegetable Crops under Vegetable Agroforestry System.* In: Catacutan, DC, Mercado, Jr., AR, Chiong-Javier, ME, Ella, VB, Espaldon, MVO, Rola, AC, Palada, MC, Duque-Piñon, C, Saludadez, JA., Penaso, AM, Nguyen, MR., Pailagao, CT, Bagares, IB, Alibuyog, NR, Midmore, D, Reyes, MR, Cajilig, R, Suthumchai, W, Kunta, K and Sombatpanit, S. (eds.) 2012. *Vegetable-Agroforestry Systems in the Philippines*. Special Publication No. 6b. World Association of Soil and Water Conservation (WASWAC), Beijing, China and the World Agroforestry Center (ICRAF), Nairobi, Kenya. pp 113-130.
66	2012	1.1.2	Synthesis report on RES Policy and institutional aspects	Philippines	Mercado AR, Jr., Piñon CD , Reyes MR, Palada M, 2012. *Tree and Vegetable Management under Vegetable-Agroforestry System.* In: Catacutan, DC, Mercado, Jr., AR, Chiong-Javier, ME, Ella, VB, Espaldon, MVO, Rola, AC, Palada, MC, Duque-Piñon, C, Saludadez, JA., Penaso, AM, Nguyen, MR., Pailagao, CT, Bagares, IB, Alibuyog, NR, Midmore, D, Reyes, MR, Cajilig, R, Suthumchai, W, Kunta, K and Sombatpanit, S. (eds.) 2012. Vegetable-Agroforestry Systems in the Philippines. Special Publication No. 6b. World Association of Soil and Water Conservation (WASWAC), Beijing, China and the World Agroforestry Center (ICRAF), Nairobi, Kenya. pp 131-145.
67	2012	1.1.2	Synthesis report on RES Policy and institutional aspects	Philippines	Mercado AR, Jr., Piñon CD , Palada M, Reyes MR. 2012. *Vegetable-Agroforestry (VAF) System: Understanding Vegetable-Tree Interaction as a Key to Successful Vegetable Farming in the Uplands of Southeast Asia.* In: Catacutan, DC, Mercado, Jr., AR, Chiong-Javier, ME, Ella, VB, Espaldon, MVO, Rola, AC, Palada, MC, Duque-Piñon, C, Saludadez, JA., Penaso, AM, Nguyen, MR., Pailagao, CT, Bagares, IB, Alibuyog, NR, Midmore, D, Reyes, MR, Cajilig, R, Suthumchai, W, Kunta, K and Sombatpanit, S. (eds.) 2012. *Vegetable-Agroforestry Systems in the Philippines.* Special Publication No. 6b. World Association of Soil and Water Conservation (WASWAC), Beijing, China and the World Agroforestry Center (ICRAF), Nairobi, Kenya. pp 79-112.

No.	Period	RUPES Outputs	Category	Country Network	Publication
68	2012	1.1.2	Synthesis report on RES Policy and institutional aspects	Philippines	MEC Javier, CD Piñon, AR Mercado, Jr, MR Reyes. 2012. *Women Farmers and "Angels of the Earth": Piloting Vermicomposting in a VAF system*. In: Catacutan, DC, Mercado, Jr., AR, Chiong-Javier, ME, Ella, VB, Espaldon, MVO, Rola, AC, Palada, MC, Duque-Piñon, C, Saludadez, JA., Penaso, AM, Nguyen, MR., Pailagao, CT, Bagares, IB, Alibuyog, NR, Midmore, D, Reyes, MR, Cajilig, R, Suthumchai, W, Kunta, K and Sombatpanit, S. (eds.) 2012. *Vegetable-Agroforestry Systems in the Philippines*. Special Publication No. 6b. World Association of Soil and Water Conservation (WASWAC), Beijing, China and the World Agroforestry Center (ICRAF), Nairobi, Kenya. pp 261-277.
Policy working paper: 9 publications					
69	2008 - 2009	1.1.2	Policy working paper	Viet Nam	H N Nguyen. 2009. Analysis of Decision No. 380/QD-TTG - the Pilot Policy on Payment for Forest Environmental Services: Content and implementation. A case study in Son La province. Working Paper. World Agroforestry Centre (ICRAF SEA). (AR p.10)
70	2010	1.1.2	Policy working paper	Philippines	Ma. Elena Chiong-Javier, Graeme Ferdinand, D. Armecin, Diana Jean S. Martinez, Emma P. Abasolo, Caroline Duque-Piñon. 2010. Gender and Natural Resource Management: Implications for Rewarding Environmental Services in the Philippines. Report. Philippines: ICRAF
71	2011	1.1.2	Policy working paper	Philippines	Lopez RC, Abasolo EP, Lasco RD. 2011. *Carbon-forestry projects in the Philippines: potential and challenges: the Ikalahan Ancestral Domain forest-carbon development*. Working Paper no. 133. Bogor, Indonesia : World Agroforestry Centre (ICRAF).
72	2011	1.1.2	Policy working paper	Viet Nam	Catacutan D, Hoang MH, Sen H, Luan TD, van Noordwijk M. 2011. *Moving beyond pilots: A review of lessons learnt in payments for forest ecosystem services (PFES) in Viet Nam.* Viet Nam: World Agroforestry Centre (ICRAF).
73	2011	1.1.2	Policy working paper	Viet Nam	Simelton E, Hoang MH. 2011. *Climate change resilient agroforestry systems for livelihood improvement of smallholders in Viet Nam.* (Prensented in the International Workshop on Sustainable Strategies for Increased Resiliency of Sloping Land Agroecosystems Amid Climate Change, October 4-8, 2011, Traders Hotel, Roxas Boulevard, Pasay City, Metro Manila, Philippines).
74	2011	1.1.2	Policy working paper	Indonesia	Lasco RD, Pulhin F, Bugayong L, Mendoza M. 2011. An Assessment of Potential Benefits to Smallholders of REDD+ Components in the Philippines. Annals of Tropical Research, 33(1): 31–48 (2011)

No.	Period	RUPES Outputs	Category	Country Network	Publication
75	2011	1.1.2	Policy working paper	Viet Nam	Hoang MH, Trong Hoan D, Minh Thoa P, van Noordwijk M, Minang P. 2011. Benefit distribution across scales to reduce emissions from deforestation and forest degradation (REDD+) in Viet Nam. Journal of Land Use Policy (LUPD). No. 1089 1-13.
76	2012	1.1.2	Policy working paper	Philippines	Lasco, R., RK Veridiano, MC Habito and FB Pulhin. 2012. Reducing emissions from deforestation and forest degradation plus (REDD+) in the Philippines: will it make a difference in financing forest development? Mitigation and Adaptation Strategies for Global Change (in press).
77	2012	1.1.2	Policy working paper	Philippines	Piñon C, Catacutan D, Leimona B, Abasolo E, van Noordwijk M, Tiongco L. 2012. Conflict, Cooperation and Collective Action: Land Use, Water Rights, and Water Scarcity in Manupali Watershed, Southern Philippines.
Report on policy impact for RUPES: 1 publication					
78	2012	1.3.1	Report on policy impact for RUPES	Indonesia	Cattleya. 2012. *A Rapid Gender Assessment of Rewards for, Use of and Shared Investment in Pro-poor Environmental Services, RUPES II*. Report. World Agroforestry Centre (ICRAF) and Asian Institute of Technology (AIT).
Site working papers: 14 publications					
79	2008 - 2009	2.1.1	Site working papers	Indonesia	Bontoux N. 2009. Landscape beauty in Minangkabau homeland: study of agro-ecotourism opportunities around Lake Singkarak. Bogor, Indonesia: World Agroforestry Centre (ICRAF).
80	2008 - 2009	2.1.1	Site working papers	Viet Nam	Watershed function of the Leng river basin in Ba Be district, Bac Kan province (AR p.13): the working paper is the output from H N Nguyen. 2009. Analysis of Decision No. 380/QD-TTG - the Pilot Policy on Payment for Forest Environmental Services: Content and implementation. A case study in Son La province. Working Paper. World Agroforestry Centre (ICRAF SEA).
81	2008 - 2009	2.1.1	Site working papers	Indonesia	Beria Leimona ,Brooke Kelsey Jack, Betha Lusiana and Rachman Pasha. 2009. Designing a procurement auction for reducing sedimentation: a field experiment in Indonesia. EEPSEA. Research Report
82	2010	2.1.1	Site working papers	Indonesia	Leimona B, Joshi L. 2010. *Eco-certified Natural Rubber from Sustainable Rubber Agroforestry in Sumatra, Indonesia*. Bogor, Indonesia: World Agroforestry Centre (ICRAF).
83	2010	2.1.1	Site working papers	Indonesia	Lucy Finchett-Maddock. 2010. Observing the impact of RUPES in Lake Singkarak: a legal pluralist perspective on the implementation, integration, and reactions of normative frameworks affected and effected by RUPES' schemes and an assessment for the future. PhD thesis.

No.	Period	RUPES Outputs	Category	Country Network	Publication
84	2011	2.1.1	Site working papers	Indonesia	Leimona B, Akiefnawati R, Pasha R, Suyanto. 2011. *Improving rubber quality in Lubuk Beringin, Bungo District, Jambi: an initial analysis of its financial and social benefits*. Bogor, Indonesia: World Agroforestry Centre (ICRAF).
85	2011	2.1.1	Site working papers	Philippines	Chiong-Javier ME, Abasolo EP, Balinhawang S, Rice D, The Kalahan Educational Foundation. 2011. *Setting Up a RES Mechanism on the Ground: The Kalahan Experience in Nueva Vizcaya*. Philippines: World Agroforestry Centre (ICRAF).
86	2011	2.1.1	Site working papers	Thailand	Thomas D, Prabudhanitisam S, Chairat N, Ratnamhim A, Thanompun K. 2011. *Rewarding Community Participation in Managing Environmental Services Provided by a National Park; A case study of Doi Inthanon National Park, Chiang Mai, Thailand.* Thailand
87	2011	2.1.1	Site working papers	Viet Nam	de Groot, K. 2011. *Payments for environmental services (PES) from tourism; A realistic incentive to improve local livelihoods and sustain forest landscapes in Viet Nam's northern highlands*. MSc Thesis.
88	2011	2.1.1	Site working papers	Viet Nam	Chung DH, Lam K, Nguyen T. 2011. *Carbon stock evaluation in some types of land use in Bac Kan province, Viet Nam*. Viet Nam: World Agroforestry Centre (ICRAF). (English and Vietnamese)
89	2011	2.1.1	Site working papers	Indonesia	Leimona B. 2011. *Maintaining agrobiodiversity and improving local livelihood of small holder rubber farmers in Bungo District, Jambi*. Bogor, Indonesia: World Agroforestry Centre (ICRAF).
90	2011	2.1.1	Site working papers	Viet Nam	Hoang MH, Hoan DT. 2011. Assessing the potential for, and designing, a 'Payment for Environmental Services' scheme in Bac Kan province, Viet Nam. Viet Nam, World Agroforestry Centre (ICRAF). (English and Vietnamese)
91	2011	2.1.1	Site working papers	Nepal	Joshi L. 2011. Protected Areas and Payment for Ecosystem Services: A feasibility study in Shivapuri-Nagarjun National Park, Nepal. Nepal: International Centre for Integrated Mountain Development (ICIMOD). (English and Nepalis version)
92	2011	2.1.1	Site working papers	Viet Nam	Viet B D, Do Trong H, Perez-Teran AS. 2011. *Carbon rich land use models in Bac Kan province*. Hanoi, Viet Nam: World Agroforestry Centre (ICRAF).
Lecture Notes: 3 publications					
93	2011	3.1.1	Lecture Notes	Viet Nam	Hoang MH, Quan NH. 2011. *Tools for use in Integrated Natural Resources Management (INRM) and Payment for Environmental Services in Viet Nam (TULViet).* Lecture Notes Volume 1. Viet Nam: World Agroforestry Centre (ICRAF). 89 p.

No.	Period	RUPES Outputs	Category	Country Network	Publication
94	2011	3.1.1	Lecture Notes	Viet Nam	Simelton E, Nguyen T, Nguyen Q, Johansen MD. 2011. *Training of Trainers (ToT) on the Toolbox in natural resources management and in Payment for Environmental Services in Viet Nam - TUL-VIET NAM*. Viet Nam: World Agroforestry Centre (ICRAF).
95	2011	3.1.1	Lecture Notes	Viet Nam	Peres-Teran AS, Dumas-Johansen MK, Viet Bac D, Simelton E, Hoang MH.2011. *Participatory Landscape and Livelihoods Analysis in Bac Kan province for PES proposal.* Viet Nam: World Agroforestry Centre (ICRAF).
Manuals for identifying ES: 4 publications					
96	2008 - 2009	3.1.2	Manuals for identifying ES	Indonesia	Rahayu S, Widodo RH, van Noordwijk M, Suryadi I and Verbist B. 2009. Monitoring air di daerah aliran sungai (Water monitoring in watershed). Bogor, Indonesia. World Agroforestry Centre - ICRAF, SEA Regional Office. 104 pp.
97	2008 - 2009	3.1.2	Manuals for identifying ES	Indonesia	Hairiah K and Rahayu S. 2007. Pengukuran karbon tersimpan di berbagai macam penggunaan lahan (Carbon measurement of different land uses). Bogor, Indonesia. World Agroforestry Centre - ICRAF, SEA Regional Office. 77 pp.
98	2008 - 2009	3.1.2	Manuals for identifying ES	Indonesia	Beria Leimona ,Brooke Kelsey Jack, Betha Lusiana and Rachman Pasha. 2009. Designing a procurement auction for reducing sedimentation: a field experiment in Indonesia. EEPSEA. Research Report
99	2012	3.1.2	Manuals for identifying ES	Viet Nam	Bac DV, Do TH, Lan DN, Catacutan C 2012. Manual on Payments for Forest Environmental Services Policies in Viet Nam.
Site Profile: 8 publications					
100	2010	4.1.1	Site Profile (paper work)	Indonesia	RUPES.2010.Where we work: brief explanation of RUPES action research sites.World Agroforestry Centre.Bogor
101	2010	4.1.1	Site Profile (paper work)	Indonesia	ICRAF. 2010. Lubuk Beringin Village Forest: The First in Indonesia. Poster. Bogor: ICRAF
102	2012	4.1.1	Site Profile (paper work)	Regional	RUPES.2012.RUPES action research sites.Bogor: World Agroforestry Centre.
103	2010	4.1.1	Site Profile (video)	Viet Nam	Video: RUPES:Viet Nam Story
104	2010	4.1.1	Site Profile (video)	Indonesia	Video: Mud to Power (English and Indonesian)

No.	Period	RUPES Outputs	Category	Country Network	Publication
105	2011	4.1.1	Site Profile (video)	Indonesia	RUPES Team. 2011. *Voluntary Carbon Market in Singkarak (in Bahasa)*. Bogor, Indonesia: World Agroforestry Centre (ICRAF).
106	2012	4.1.1	Site Profile (video)	Indonesia	Padang TV. 2012. *RUPES West Sumatera Workshop on Padang TV.* Padang, Indonesia: Padang TV.
107	2012	4.1.1	Site Profile (video)	Nepal	A 13-minutes video on PES in protected areas in Nepal and broadcasted through local TV stations in Nepal.
Manuals for monitoring ES: 2 publications					
108	2008 - 2009	4.2.1	Manuals for monitoring ES	Indonesia	Rahayu S, Widodo RH, van Noordwijk M, Suryadi I and Verbist B. 2009. Monitoring air di daerah aliran sungai (Water monitoring in watershed). Bogor, Indonesia. World Agroforestry Centre - ICRAF, SEA Regional Office. 104 pp. (AR p.23)
109	2008 - 2009	4.2.1	Manuals for monitoring ES	Indonesia	Hairiah K and Rahayu S. 2007. Pengukuran karbon tersimpan di berbagai macam penggunaan lahan (Carbon measurement of different land uses). Bogor, Indonesia. World Agroforestry Centre - ICRAF, SEA Regional Office. 77 pp. (AR p.23)
Translations of manuals: 3 publications					
110	2008 - 2009	4.2.1	Translations of manuals	Indonesia	Beria Leimona ,Brooke Kelsey Jack, Betha Lusiana and Rachman Pasha. 2009. Designing a procurement auction for reducing sedimentation: a field experiment in Indonesia. EEPSEA. Research Report
111	2011	4.2.1	Translations of manuals	Indonesia	Hairiah K, Dewi S, Agus F, Velarde SJ, Ekadinata A, Rahayu S, van Noordwijk M. 2011. *Measuring Carbon Stocks Across Land Use Systems: A Manual.* Bogor, Indonesia: World Agroforestry Centre (ICRAF). 154 p.
112	2012	4.2.1	Translations of manuals	Indonesia	Rahayu S, Widodo RH, Van Noordwijk M, Suryadi I, Verbist B. 2012. Water Monitoring in Watersheds. World Agroforestry Centre.

Annex 3: Outputs versus targets

Objectives/Expected Results	Indicators	Implementation Targets			
		Appraisal (Total)		Cumulative (Oct 2008-Dec 2012)	%
Component 1 National Policy Framework Purpose: National policies are increasingly conducive to voluntary, realistic, conditional and pro-poor RES	*At least 4 Asian countries have developed national policies that are increasingly realistic, conditional, voluntary and pro-poor*		16 Policy Briefs and other publications accessible to RUPES stakeholders A synthesis report on RES policy and institutional aspects at 3 countries with 3 policy working papers 10 National workshops and quarterly meetings of national networks in 3 countries		
Sub-Component 1.1: To support active participation by national policy makers in international fora					
Output 1.1.1: Policy briefs and recommendation available for decision makers for advocating local and national importance at international fora		16	Policy briefs and other relevant policy publications	67	419
Output 1.1.2. Regional studies on RES issues and policies in Asian countries are available for conceptualizing local and national intervention		1	Synthesis report on RES Policy and institutional aspects	6	600
		3	Policy working paper	9	300
Sub-Component 1.2: To contribute to development and improvement of policy frameworks for RES at local and national level					
Output 1.2.1. Reports and synthesis of lessons learned about policy and institutional options at local and national level		10	National workshops	16	160
		36	Meetings of national network	126	350
Other achievements. Any achievement that support the component objectives. Not included in the calculation of			*1.2.1 Supporting activities*	27	

Objectives/Expected Results	Indicators	Implementation Targets			
		Appraisal (Total)		Cumulative (Oct 2008-Dec 2012)	%
achievement percentage.					
Sub-Component 1.3: To evaluate RUPES-II policy impact					
Output 1.3.1: Report on policy impact of the RUPES-II by applying the Research and Policy in Development (RAPID) tool (Start and Hovland 2004)		1	A report on policy impact for RUPES	1	100
Component 2 International and National Buyer and Investor Engagement Purpose: International, national, local ES beneficiaries engage as buyers in RES schemes that address rural poverty as well as secured ES	*At least 10 potential buyers of ES receive information on opportunities for purchasing ES from rural communities promoted by RUPES II*		6 Site working papers 10 informed ES buyers 12 Provincial/District workshops 6 Community contracts 4 Site Briefs at each annual report		193
Sub-Component 2.1: To support engagement of ES buyers and investors at all levels					
Output 2.1.1. Analysis of relevant industries at international, national and local scales as appropriate		6	Site working papers	14	233
		10	Informed ES buyers	23	230
Other achievements. Any achievement that support the component objectives. Not included in the calculation of achievement percentage.			*Update activities on informed ES buyers*	0	
			2.1.1 Supporting activities	6	
Sub-Component 2.2: To collaborate with organizations with an interest in promoting and supporting special marketing for environmental friendly products, including carbon					
Output 2.2.1. Strategic marketing plans for each relevant site/project		12	Provincial/District workshops	25	208

Objectives/Expected Results	Indicators	Implementation Targets			
		Appraisal (Total)		Cumulative (Oct 2008-Dec 2012)	%
Other achievements. Any achievement that support the component objectives. Not included in the calculation of achievement percentage.			*Provincial/District meetings*	18	
			2.2.1 Supporting activities	7	
Sub-Component 2.3: To execute marketing plan with lessons learned recorded and suggestions for needed modifications					
Output 2.3.1. Business case and environmental conservation contracts developed		6	Community contracts	6	100
Other achievements. Any achievement that support the component objectives. Not included in the calculation of achievement percentage.			*2.3.1 Supporting activities*	8	
Output 2.3.2. Lessons learned and recommedations compiled and documented		4	Site Briefs at each annual report	see output 1.1.1	
Other achievements. Any achievement that support the component objectives. Not included in the calculation of achievement percentage.			*2.3.2 Supporting activities*	2	
Component 3 Environmental Services Intermediaries Enabled Purpose: Brokers, certifiers, and other implemented agencies enabled to effectively facilitate ES reward scheme without excessive transaction costs	*Transaction costs reduced for at least 4 intermediaries identified and supported by RUPES-II*		3 Lecture Notes 6 Application of TULSEA tools 2 Manuals for monitoring ES 6 National trainings in collaboration with TULSEA GTZ 1 Regional training An evaluation of capacity building at each annual report		200
Sub-Component 3.1: To develop lecture notes/training materials explaining concepts of RES schemes and technical manual for field workers					
Output 3.1.1. Lecture notes on RES concepts		3	Lecture Notes	3	100

Objectives/Expected Results	Indicators	Implementation Targets			
		Appraisal (Total)		Cumulative (Oct 2008-Dec 2012)	%
Other achievements. Any achievement that support the component objectives. Not included in the calculation of achievement percentage.			*3.1.1 Supporting activities*	2	
Output 3.1.2. Application of the TUL SEA tools to identify ES		6	Application of TULSEA tools	21	350
		2	Manuals for identifying ES	4	200
Sub-Component 3.2: Capacity building for different partners					
Output 3.2.1. Trainings to aid in using RUPES assessment and negotiation tools		6	National trainings	15	250
		1	Regional trainings	1	100
Other achievements. Any achievement that support the component objectives. Not included in the calculation of achievement percentage.			*International trainings*	6	
			Provincial / District trainings	11	
			3.2.1 Supporting activities	0	
Component 4 Innovations in effective, efficient and pro-poor RES mechanisms Purpose: Rural poor and associated project implementers enabled to select from and engaged in a wide array of established and contextualized RES mechanisms	*At least five new approaches to RES developed and tested with partner organizations*		12 Sites joining the RUPES network 12 Site Profiles 2 Manuals for identifying ES 2 Translations of manuals 10 Community trainings An evaluation of capacity building at each annual report		151
Sub-Component 4.1: To participate in and support demonstration sites on new approaches to RES, including on REDD, voluntary CDM, microhydropower projects, eco-labelled products, and micro credits					
Output 4.1.1: Reports on success and constraints from demonstration sites on new RES approaches		12	Sites joining the RUPES network and their profiles	16	133

Objectives/Expected Results	Indicators	Implementation Targets			
		Appraisal (Total)		Cumulative (Oct 2008-Dec 2012)	%
Other achievements. Any achievement that support the component objectives. Not included in the calculation of achievement percentage.			*Action Research*	29	
			Research Report	3	
			Site Profile (paper work)	2	
			Site Profile (video)	5	
Sub-Component 4.2: To ensure ES providers have the capacity and sustainable insitutional arragement					
Output 4.2.1. Guildelines and simple tools for site monitoring and evaluation		2	Manuals for monitoring ES	2	100
		2	Translations of manuals	3	150
Output 4.2.2. A series of community trainings in managing all aspects of reward schemes		10	Community trainings	22	220
Other achievements. Any achievement that support the component objectives. Not included in the calculation of achievement percentage.			*Community meetings*	129	
			Community workshops	11	
Component 5 Mainstream RES into IFAD rural development activities Purpose: IFAD and other agencies increasingly incorporate RES into rural poverty alleviation strategies and programs	*At least 20% of new IFAD projects in Asia consider including RES in their strategies. Other donor projects also incorporate RES.*		4 Communication strategies and implementations 1 Database 6 International workshop and 20 national workshop attended 5 IFAD Investment Projects supported		222
Sub-Component 5.1: To actively communicate project progress and sharing lessons					
Output 5.1.1: Documents for informing project progress and sharing lessons, including policy briefs, E-News		4	Annual workplan, communication strategies, database, and reports	4	100

Objectives/Expected Results	Indicators	Implementation Targets			
		Appraisal (Total)		Cumulative (Oct 2008-Dec 2012)	%
Other achievements. Any achievement that support the component objectives. Not included in the calculation of achievement percentage.			*Update on Communication strategies*	10	
			Update on Newsletter	16	
		6	International workshop attended (+conducted)	32	533
		20	National workshop attended	55	275
		5	IFAD Investment Project supported	6	120
			Other international partners supported	26	
			International meetings	14	
			Regional workshops	9	
			Regional meetings	5	
Output 5.1.2. A series of Technical Advisory Notes available		5	Technical Advisory Notes	4	80
Governance and Technical Input for 5 components					100
		2	Cross-country meetings (RUPES Team coordination meetings)	2	100
Project Coordination					
		4	Resource Mobilization	4	

Annex 4: Stakeholders' workshop findings

Country	Component 1: *National policy framework*		Component 2: *International and national buyer and investor engagement*		Component 3: *ES intermediaries enabled*		Component 4: *Innovations in effective, efficient, and pro-poor RES mechanisms*		Component 5: *Mainstream RES into IFAD rural development initiatives*	
	Evaluation	*What next?*	*Evaluation*	*What next?*	*Evaluation*	*What next?*	*Evaluation*	*What next?*	*Evaluation*	*What next?*
Indonesia	10 National regulations: -No. 32/2009, article 41-43 as ES -No. 37/2012, government regulation on IWM Indonesia ES Protocol	1- Strengthen the current national network to enhance the government commitment to implement the regulation 2-Improve government on PES (e.g. mission, vision)	8 Buyers: 1- GoI 2- KS (Kraktau Steel) 3- PLN 4- CO^2 Operate the Netherland 5- Water company	1- Expanding current initiatives to get more buyers/ investors 2-Raise awareness to target companies 3-Field education	8 Preparing the local organization as intermediary and an independent body; functions as centre of PES initiatives in the area	1-Develop PES organization/ trust fund with legal support from government 2-Improve capacity of local organization to become professional organization (e.g. Training, campaign, dissemination, education legal from government	9 Initiated community contracts on water and carbon services; supported community to renegotiate current contract	1-Bundle ES (ex watershed with eco-certification) 2-Link stakeholders with communities to provide alternative livelihood source 3-Integrate gender on PES initiatives	2 -Requested to support READ program on NRM component -Integrated project with READ program in NRM, sloping areas, watershed, land cultivation	1-Conduct workshop 2-Establish demonstration plot 3-Provide NRM facilitator

Country	Component 1: *National policy framework*		Component 2: *International and national buyer and investor engagement*		Component 3: *ES intermediaries enabled*		Component 4: *Innovations in effective, efficient, and pro-poor RES mechanisms*		Component 5: *Mainstream RES into IFAD rural development initiatives*	
	Evaluation	*What next?*	*Evaluation*	*What next?*	*Evaluation*	*What next?*	*Evaluation*	*What next?*	*Evaluation*	*What next?*
Viet Nam	8 National workshops (3); policy briefs, CB and policy formulation	Continue provide TA to VNFOREST on policy formulation	8 International buyers: Granted fund by Australian Ambassador (20 USD), support soil conservation strengthen the capacity for local people on environmental protection National buyers: 2 ES users for water services	Buyer's study and dialogue, RES business case for negotiation	10 6 intermediari-es enabled (VNForest-Viet Nam Forest Protection and Development Fund), Bac Kan DARD, Bac Kan DoNRE, IFAD/3PAD project, 2 natural reserves areas/nation-al parks	Provide TA in design of multi-functional landscapes (e.g. agroforestry)	9 RES innovation mechanism: Proposed 3 PES mechanism s in 3 districts of Bac Kan Poor targeted: About 650 rural poor as the participants. Of which, about 200 rural poor as the non-participants direct and indirectly benefit from the schemes (30-40% women).	1 Continue provide advice to Bac Kan DARD and 3PAD project in implementin g the pilot PES models (carbon, water) and provide tools for monitoring ES performance 2 Link to potential carbon buyers for Bac Kan	8 Support 3PAD project in Bac Kan for developing the FLA and LUP for RES	Continue dialogue/consul tations with IFAD country office

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	Evaluation	*What next?*	*Evaluation*	*What next?*	*Evaluation*	*What next?*	*Evaluation*	*What next?*	*Evaluation*	*What next?*
China	8 Developed RES for grassland to the China's State Bring up the companies' interests on PES (green certificate credits)	Willingness to accept need to be analyzed (have done survey in Xishuangbanna) Workshops for higher level governance officials, provincial/ national need to be hold to rise the awareness of PES and communities needs cost effectively	8 3 Sites have defined the buyer and provider	More interaction between the buyer and provider need to be done Policy for market-based PES need to be awared by workshop between these decision-makers Bring up the interest about market-based PES and encourage them to bridge the buyer and provider	6 Related CB on PES had done	More NGO can get involved Learning the successes study from Dianchua Pilot sites for 3 projects to strengthen the capacity of the stakeholders	8 3 sites PES mechanism have been composed and also have been tested the validation	1 More specific details of regional PES schemes need to be discussed wider national PES scheme 2 More stakeholder need to be involved in the PES mechanism discussion (local government and companies) 3 More reliable documents can be published by local languages	6 Awareness raising for regional, provincial and national government agencies increased agenda	

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	Evaluation	*What next?*	*Evaluation*	*What next?*	*Evaluation*	*What next?*	*Evaluation*	*What next?*	*Evaluation*	*What next?*
India	8 Contributing to national and regional policy framework by providing 3 scenarios (National water policy) – business as usual, core-environmental, sustainable Support national forest policy						8 New mechanism was developed for PES Prioritization of ES in consultation with community CB of authorities Efforts to monetize regulating services and non-use value	Efforts for livelihood transformation for sustainable wetland management Culture fishery – culture fishing Shifting cultivation – sustainable agriulture		

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	Evaluation	*What next?*	*Evaluation*	*What next?*	*Evaluation*	*What next?*	*Evaluation*	*What next?*	*Evaluation*	*What next?*
Philippines	6-Presence of national TWG but no national RES policy/ framework yet	1- Develop DAO (DENR) and other policy mechanisms 2- Converge all national / local initiatives related to PES/RES 3- More /continuous RES/PES advocacy	7-Discrepancy in results of RUPES sites	1- Develop/ implement exit strategy in RUPES sites 2- Link/ endorse RUPES initiatives to national efforts on RES/PES (DENR, buyers, CCC, NAFC)	7-Implemented CB for intermediaryes; Engaged intermediaries in key RES activities	1- Continue CB for local champions 2- Focus sites to centralize R&D activities 3- Ensure presence of facilitator	5-Incentive-based policy (on trial stage); implemented TULSEA tools	1- Document best PES/RES practices 2- Replicate good practices 3- Promote appropriate and easy to implement tools	7- Good communication with IFAD-Philippines	1- Collaborate with INREMP in site selection
AVE	8.20		7.75		7.75		8.00		5.75	
GEN AVE	7.49									

World Agroforestry Centre
TRANSFORMING LIVES AND LANDSCAPES

RUPES
REWARDS FOR USE OF AND SHARED INVESTMENT IN PRO-POOR ENVIRONMENTAL SERVICES

IFAD
Enabling poor rural people to overcome poverty

The Rewards for, Use of, and Shared Investment in, Pro-poor Environmental Services (RUPES) project, phase 2 (2008–12), coordinated by the World Agroforestry Centre, was the second stage of the introduction of the concept of rewarding people to protect or enhance environmental services that benefit businesses or the wider population in Indonesia, the Philippines, Viet Nam, Nepal, India and China. The ultimate target group for RUPES 2 was indigenous forest dwellers and smallholding farmers in less productive environments that were vulnerable to environmental degradation and climate change. RUPES 2 gave ample consideration to innovative approaches that targeted fair and efficient schemes for rewards for environmental services (RES). Countries in which RUPES worked have integrated environmental serviced and rewards into their legal policy frameworks. Moreover, RUPES case studies provided lessons to rationalize conflicting policies on access and use of natural resources in rural areas.