

Workshop Report

ICIMOD



FOR MOUNTAINS AND PEOPLE

Research Policy Interface: Incentivizing Communities for Ecosystem Services in Nepal



SANDIE

ECONOMICS & THE ENVIRONMENT



About ICIMOD

The International Centre for Integrated Mountain Development (ICIMOD) is a regional knowledge development and learning centre serving the eight regional member countries of the Hindu Kush Himalayas (HKH) – Afghanistan, Bangladesh, Bhutan, China, India, Myanmar, Nepal, and Pakistan – based in Kathmandu, Nepal. Globalization and climate change have an increasing influence on the stability of fragile mountain ecosystems and the livelihoods of mountain people. ICIMOD aims to assist mountain people to understand these changes, adapt to them, and make the most of new opportunities, while addressing upstream and downstream issues. ICIMOD supports regional transboundary programmes through partnerships with regional partner institutions, facilitates the exchange of experiences, and serves as a regional knowledge hub. We strengthen networking among regional and global centres of excellence. Overall, we are working to develop economically and environmentally-sound mountain ecosystems to improve the living standards of mountain populations and to sustain vital ecosystem services for the billions of people living downstream – now and in the future.



About Koshi Basin Programme

With support from the Department of Foreign Affairs and Trade (DFAT), Government of Australia, International Centre for Integrated Mountain Development (ICIMOD) initiated the Koshi Basin Programme (KBP) in 2013 to enhance the regionally coordinated management of the Koshi basin for the improved wellbeing of local communities and sustainable use of ecosystem goods and services. Since its inception in 2013, KBP has been working to develop knowledge and tools to better address the water issues in the basin. It aims to contribute to inclusive poverty reduction in the Koshi basin by evaluating the range of possible water-related development pathways through evidence-based decision-making and basin-wide cooperation. These pathways take into account climate change, hazards, and the provision of sustainable freshwater ecosystem services. The KBP uses the river basin management approach to promote sustainable use of transboundary water resources and develop 'win-win' solutions that can be supported by all countries. Particular focus is given to issues of gender and inequality and their linkages to drivers of change and river basin management, as well as to the potential of employing incentive-based mechanisms to improve water use efficiency and productivity.

ICIMOD gratefully acknowledges the support of its core donors:

The governments of Afghanistan, Australia, Austria, Bangladesh, Bhutan, China, India, Myanmar, Nepal, Norway, Pakistan, Switzerland, and the United Kingdom.

Workshop Report

Research Policy Interface: Incentivizing Communities for Ecosystem Services in Nepal

9 November 2016

Kathmandu Nepal

International Centre for Integrated Mountain Development, Kathmandu

January 2017

Published by

International Centre for Integrated Mountain Development
GPO Box 3226, Kathmandu, Nepal

Copyright © 2017

International Centre for Integrated Mountain Development
All rights reserved. Published 2017

Prepared by

Kanchan Shrestha, Naresh Newar, Sunita Ranabhat, Kiran Timalisina

Editorial team

Laxmi Dutt Bhatta, Shahriar M. Wahid, Sunita Ranabhat, Kanchan Shrestha and Naresh Newar

Production team

Naresh Newar (Editor)
Punam Pradhan (Graphic designer)
Asha Kaji Thaku (Editorial assistant)

Photos: – Cover – Karen Konniff; All others photos - Naresh Newar

This publication was produced under the Koshi Basin Programme (KBP) of ICIMOD. The KBP is supported by the Australian Government through the Sustainable Development Investment Portfolio for South Asia, as well as by ICIMOD's core funds contributed by the governments of Afghanistan, Australia, Austria, Bangladesh, Bhutan, China, India, Myanmar, Nepal, Norway, Pakistan, Switzerland, and the United Kingdom.

Note

This publication may be reproduced in whole or in part and in any form for educational or nonprofit purposes without special permission from the copyright holder, provided acknowledgement of the source is made. ICIMOD would appreciate receiving a copy of any publication that uses this publication as a source. No use of this publication may be made for resale or for any other commercial purpose whatsoever without prior permission in writing from ICIMOD.

The views and interpretations in this publication are those of the author(s). They are not attributable to ICIMOD and do not imply the expression of any opinion concerning the legal status of any country, territory, city or area of its authorities, or concerning the delimitation of its frontiers or boundaries, or the endorsement of any product.

This publication is available in electronic form at www.icimod.org/himaldoc

Citation: ICIMOD (2016) *Research Policy Interface: Incentivising Communities for Ecosystem Services in Nepal*. Workshop. Kathmandu: ICIMOD

Contents

Acronyms and abbreviations	iv
Acknowledgements	v
Executive summary	vi
Inauguration and key speeches	1
Presentations	5
Scope and Constraints in PES: Linking Research Policy in Nepal Mr Resham Bahadur Dangi	5
Floor Discussions	7
Technical Session – I	8
Designing Payment for Ecosystem Services: Lesson Learned Dr Rajesh K Rai	8
Technical Session – II	9
Incentive for Ecosystem Services: Integrating research in policy learning from Koshi Basin Mr Laxmi Dutt Bhatta, ICIMOD	9
Way forward and conclusion	11
Annexes	12
Workshop Agenda	12
List of participants	13

Acronyms and Abbreviations

CBD	Convention on Biological Diversity
DFAT	Department of Foreign Affairs and Trade, Government of Australia
EIA	Environmental Impact Assessment
GGN	Green Governance Nepal
GON	Government of Nepal
HICAP	Himalayan Climate Change Adaptation Programme
HKH	Hindu Kush Himalayas
ICIMOD	International Centre for Integrated Mountain Development
IEE	Initial Environmental Examination
KBP	Koshi Basin Programme
MEA	Millennium Ecosystem Assessment
MFSC	Ministry of Forests and Soil Conservation, Government of Nepal
NBSAP	National Biodiversity Strategy and Action Plan
NPC	National Planning Commission, Government of Nepal
PBES	Platform on Biodiversity and Ecosystem Services
PES	Payment for Ecosystem Services
REDD	Reducing emissions from deforestation and forest degradation
WTP	Willingness to Pay
SANDEE	South Asia Network for Development and Environmental Economics
SDIP	Sustainable Development Investment Portfolio
TEEB	The Economics of Ecosystems and Biodiversity

Acknowledgements

The workshop organizers Ministry of Forest and Soil Conservation (MFSC), International Centre for Integrated Mountain Development (ICIMOD), South Asia Network for Development and Environmental Economics (SANDEE) and Green Governance of Nepal (GGN) would like to offer their gratitude to officials from the Government of Nepal, key note speakers, session hosts and stakeholders and all participants for their contributions to the workshop. We would like to acknowledge the support of the Government of Australia's Department of Foreign Affairs and Trade (DFAT) provided through Sustainable Development Investment Portfolio (SDIP) in South Asia and Government of Norway and Sweden.

Executive Summary

In 2005, Millennium Ecosystem Assessment (MEA) emphasized the importance of the link between the ecosystem, ecosystem services and human wellbeing to policy makers. The concept of ecosystem services is widely discussed in scientific and policy discourse. The decline of ecosystems and services provided by these ecosystems is notably linked to population growth, anthropogenic activities, climate change, and inadequate policies addressing them. A number of studies show that the continuous decline on ecosystem services is due to a collective failure of science-policy process, or a divide between science and policy. To address these gaps and to strengthen research policy interface, many United Nations (UN) Member countries supported to establish The Intergovernmental science-policy 'Platform on Biodiversity and Ecosystem Services (PBES)' under the umbrella of 'Convention on Biological Diversity (CBD).' In recent years, payment for ecosystem services (PES) is widely discussed and piloted as a financial instrument to support financing for the sustainable supply of ecosystem services.

“The decline of ecosystems and services provided by these ecosystems is notably linked to population growth, anthropogenic activities, climate change, and inadequate policies addressing them.”

Nepal, as a conference of parties to the CBD, has committed to conserve its unique ecosystems and biodiversity, with possible reform on policies and institutional arrangements. Nepal's National Biodiversity Strategy and Action Plan (NBSAP, 2014-2020), highlights policy and institutions as key to the success of managing its ecosystems. However, NBSAP also identified research-policy inter-linkage as one of the gaps in formulating policies and institutional arrangement. Science-policy discourse is urgently needed to support policy formulation process. This comes at a time when Nepal has already agreed to reform its federal structure.

PES is a financial and market based instrument to support sustainability and ecosystem financing. A number of small scale pilots have been practiced in Nepal, through various institutions. As result, a wide range of knowledge has been generated which could help the Government of Nepal in the decision making process. Ministry of Forests and Soil Conservation (MFSC), in collaboration with various conservation partners has recently drafted a national policy on PES which is under review and consideration for final approval at the ministry itself. The science available through small scale action research and pilots on PES could be instrumental to support drafting PES policy in Nepal.

In this context, a one-day consultative workshop was held in Kathmandu on 10 November 2016 to inform and discuss with policy makers on the findings of the recent research in Sunsari, Dhankuta and Baitadi districts conducted by ICIMOD, SANDEE and GGN. These findings were presented by Dr Rajesh Rai from SANDEE and Mr. Laxmi Dutt Bhatta from ICIMOD.

The MoFSC was the lead organiser of workshop. The co-organisers were ICIMOD' Koshi Basin Programme (KBP) and Himalayan Climate Change Adaptation Programme (HICAP), South Asia Network for Development and Environmental Economics (SANDEE) and Green Governance of Nepal (GGN).

The workshop was inaugurated by the Hon'ble Minister Shankar Bhandari for MFSC. He said that although Nepal's conservation efforts were globally acknowledged the country was yet to take full advantage of the ecosystem services. The inaugural session was chaired by the Secretary of the MFSC Dr. Krishna Chandra Paudel. Hon'ble Raja Ram Syangtan, Member of Parliament, Dr. Prabhu Budhathoki, Hon'ble Member of National Planning Commission (NPC), and Dr. David Molden, Director General of the ICIMOD addressed the inaugurated session. Dr. Akhileshwar Lal Karna, Joint Secretary of the MoFSC gave a welcome address to the participants. Mr. Resham Bahadur Dangi, Joint Secretary of MoFSC was the key note speaker of the inauguration session.

ICIMOD Director General David Molden said that this forum was a good opportunity to enter into discussions with policy makers who were present during the meeting. He added that ICIMOD will be happy to provide support in policy formulation related to PES.

Government officials said that the timing of the consultation was highly relevant, given that Nepal is in the process of developing its three-year 14th Development Plan in which PES is proposed to be included in the micro planning process. Until now, PES had not been incorporated into micro planning process of the government. There are many challenges towards making this happen and this is where the science-policy interface is so crucial, said NPC Member Prabhu Budhathoki.

“We have to go one step forward to integrate and internalize the PES into our planning process and ICIMOD can make extra effort to not only share knowledge but influence and encourage government to internalize this process for a real impact of science-policy interface,” said Dr Budhathoki.

Policy makers should be guided with clear guidelines based on research to develop relevant policies, laws and mechanisms. “Let’s hope that the forum will be able to produce knowledge to guide policy makers to translate into policy action that can help implement PES at the local level,” said MFSC Secretary Krishna Chandra Paudel.

The workshop had three key presentations including two technical sessions:

- i. Scope and constraints in PES: Linking research to policy in Nepal by Mr. Resham Bahadur Dangji, MFSC
- ii. Technical presentation 1: Designing Payment for Ecosystem Services: Lesson Learned by Dr Rajesh K Rai, SANDEE
- iii. Technical presentation 2: Incentive measures for Ecosystem services: Integrating research learning from Koshi Basin by Mr. Laxmi Dutt Bhatta, ICIMOD

The presentations were followed by question and answer sessions, and interactions with participants, who included high-ranking government officials, development practitioners and journalists.

Mr. Dangji described how critical services received from the forest ecosystem are often considered free of cost such are oxygen, hydrological services and temperature regulation, which has led to the degradation of these forest ecosystem. The payment for ecosystem services approach has evolved as market based instrument where beneficiaries provide incentives to sustain and potentially increase these services. The MOFSC has recognized the importance of integrating PES mechanism into its policies.

However, Mr. Dangji shared that, several challenges such as: methodological issues to determine value of forest based ecosystem service, lack of clear guidelines for monitoring and regulating services at local and sub-national level, low capacity to negotiate between service provider and seller, role of private sector as intermediary agents yet to be recognized, risk of under investment to maintain sustained flow of ES and risk of natural disaster on flow of ecosystem services, need to be addressed. He suggested the next steps for policy implementation were to prepare technical guidelines to determine values of services, directives for negotiation and transaction, standard operating procedure for intermediary agents and guidelines for monitoring and evaluation of the services.

Dr Rai shared research findings of three PES studies on drinking water projects in Dharan, Dhankuta and Baitadi. The studies demonstrated that the PES schemes implementation can require substantial funding but the costs can be reduced when it is integrated into the project design phase, particularly with EIA and IEE process. Payment based on output of the services may be risky for service providers as the relationship between sustainable management of natural resources and ecosystem services may not be clear. Thus, it is recommended for payment to be based on the activities/practices that could enhance the services identified by multiple stakeholders. Another recommendation was to establish tri-partite institutional structure involving existing local institutional.

Mr. Bhatt shared research findings of PES pilot studies in two watersheds in Dharan and Dhankuta Municipality. The studies indicated PES should be a supplementary scheme to existing resource management approaches. For example, a comprehensive forest management plan that takes into account multiple benefits from the ecosystem is important. The studies show that downstream communities are willing to provide incentives to upstream communities for conservation. However, rather than cash payment, incentives in form of development activities are preferred. PES schemes should have a locally-driven approach to make the PES mechanism sustainable. Incentives to upstream communities should be done through institutional arrangements with help of local institutions like the local government body. For instance, Dhankuta Municipality is playing such an institutional role in facilitating PES mechanism to provide incentives for the services providers of the upstream catchment areas.

The presenters also drew the attention of the participants about making PES schemes socially and gender inclusive. Social issues should be addressed by local institutions involved in PES services on behalf of the disadvantaged groups to make the PES mechanism sustainable by equal participation of all communities. PES is for conservation and protection of natural resources and should be implemented soon, remarked Hon'ble Member of Parliament, Raja Ram Syangtan during his concluding remarks.

Inauguration and key note speeches

Chair

Dr Krishna Chandra Paudel, Secretary, MFSC, Government of Nepal (GON)

Welcome address:

Dr Akhileshwar Lal Karn, Chief of the Environment Division/Joint Secretary, MFSC, GON

Speakers:

Hon'ble Shankar Bhandari, Minister for MFSC, Government of Nepal (GON)

Hon'ble Raja Ram Syangtan, Member of Parliament, GON

Dr Prabhu Budhathoki, Hon'ble Member of National Planning Commission (NPC), GON

Dr David Molden, Director General, ICIMOD

Mr. Resham Bahadur Dangji, Chief of Foreign Aid Division/Joint Secretary, MFSC, GON

Key messages

- PES is a sustainable financial instrument
- Importance of PES to be incorporated in the national and local development planning. Until now micro planning does not integrate PES and should be started with the new 14th development planning.
- Challenges to institutionalizing PES need to be addressed and various approaches should be considered while designing PES scheme
- Dialogue between researchers and policy makers are essential for knowledge sharing
- Integration and internalization of science-policy process key for translating research into action for impact
- Government of Nepal committed to implement PES mechanism
- To sustain PES mechanism, a drive for local ownership of PES schemes is more effective than project-based approach
- Social issues needed to be addressed to represent the marginalized and disadvantaged groups by agencies to sustain the PES mechanism
- Incentives for development activities and not cash should be the essence of PES scheme sustainability.

Welcoming the participants, Dr. Akhileshwar Lal Karna highlighted on the importance of PES and its need for implementation. PES has been accepted in Nepal's policy level. The Forestry Act has acknowledged the role of PES in forest improvement. The amended Forest Act has recognized PES. He illustrated examples of PES work done by ICIMOD and Hariyo Ban Program.

But he said there were quite little research on PES. The workshop was timely given that the MFSC is going to revise forest regulation. The lessons learnt from the research shared during the workshop and follow up discussions among participants would provide inputs for the policy makers.



The event's chief guest Hon'ble Shankar Bhandari, Minister for Forest and Soil Conservation emphasized on the implementation of conclusions drawn by workshop and meetings. "Let's come out with conclusion on what need to be done by different related stakeholders during this workshop and discussion why it could or could not happen in the next workshop," he said while addressing the participants. He added that climate change and human intervention are impacting environment and ecosystem services. He explained that many people in Nepal depend on forest resources for their livelihood, which is most affected by change in climate.

Nepal has been implementing community based forest management for ecosystem services. This conservation effort has been acknowledged worldwide. But also we are not able to take full advantage of ES. That is why PES has been acknowledged in policy of Nepal and in Forest Act. Research and study on PES has been given priority in the policy but findings from relevant research could not be incorporated well. GoN is committed to implement PES mechanism with the involvement of local communities.

ICIMOD Director General David Molden said that the dialogue between researchers and policy makers is essential for sharing the knowledge of science. ICIMOD is a knowledge sharing institution that works across the HKH countries.



"PES mechanism is not about providing cash compensation but incentives for development initiatives"

– Dr David Molden

communities, the out-migration of male increases the burden on females. So, a strong gender perspective is needed," he explained. PES should be incorporated in EIA and IEE right from the beginning. PES schemes are supplementary and complementary to existing mechanisms like REDD plus. He shared that ICIMOD will provide necessary support to the policy makers for the ongoing draft of policy formulation related to PES.



"We are committed to institutionalizing PES mechanism"

– Hon'ble Minister Shankar Bhandari

Additional incentives have to be provided for sustainable practices through the PES mechanism, said Dr Molden. He gave an example of Pakistan, where sheep hunters were given incentive by the government to conserve sheep for tourists. He also gave an example of incentives through PES in China where the government pays for converting farmlands into wetlands. Similarly in Bangladesh, local communities pay for conservation for fish species.

Dr Molden highlighted on how PES mechanism should not be treated as providing cash compensation but supporting the communities through incentives for development initiatives. An example of research already being conducted in Sindhupalchowk, Dharan, Shivapuri, Dhankuta and Kulekhani of Nepal was given reinforcing the idea that rather than payments, PES should be a process for providing incentives for actions/activities that may provide/increase services. In PES designing process, the key issue is setting up institutional mechanism for PES.

"We need to remember that in the mountain communities, the out-migration of male increases the burden on females. So, a strong gender perspective is needed," he explained. PES should be incorporated in EIA and IEE right from the beginning. PES schemes are supplementary and complementary to existing mechanisms like REDD plus. He shared that ICIMOD will provide necessary support to the policy makers for the ongoing draft of policy formulation related to PES.

Dr Prabhu Budathoki, Hon'ble Member, NPC, said that PES is critically important for Nepal not only from economic prospective but also from the geopolitical aspect. He said that ecosystems are the foundation of our survival and human beings cannot create it. The principle of PES includes how to maintain, manage and distribute the ecosystem services. NPC is in the process of developing 14th development plan, so the PES could be included in the micro planning process. Till now in the micro planning, the PES issue has not be considered yet. Even in the forestry sector, PES mechanism has not gained importance, and is included only in objectives. Nothing is clearly mentioned in development programmes and working plans, said Dr Budathoki. "So this is the right time to bring this issue and incorporate in micro planning." Even sectoral policies (tourism, energy, water) have hardly recognized PES in their sectoral plans. Concrete research findings and recommendations should be made to be able to incorporate in micro plans.

PES mechanism is fundamental to implement Nepal's constitution properly due to the federal restructuring of the nation. PES mechanism may inform how ecosystem services can be shared between federal states. Integration and internalization of science policy process are important to implement research finding and make real impact at local level. Institutions like ICIMOD should try to make extra effort to include government organization to internalize this PES mechanism for implementation besides providing knowledge and raising awareness of research findings, said Dr Budathoki, adding that NPC is supportive to include PES in the planning process. He requested MFSC to share all the PES-relevant issues with NPC.





Hon'ble Raja Ram Syangtan, Member of Parliament shared that the Paris Agreement on climate change has been approved by parliament in Nepal and that PES mechanism can be used as one of the approach for climate change adaptation as well. There is need to recognize the most vulnerable people due to climate change, and the global climate fund should be mobilized for their welfare, said Hon'ble Syangtan. He also stressed the need to vegetate barren land for climate change mitigation and adaptation, which will reduce the worldwide impact of climate change.

“There is need to find the alternative ways to reduce fossil fuel use”
 – Hon'ble Member of Parliament, Raja Ram Syangtan

Different policies have been formulated but could not be implemented due to lack of regular monitoring by GoN. Multiple use forest need to be promoted and the focus should not only be on timber production. He suggested that there is need to find the alternative

ways to reduce fossil fuel use. Sustainable forests management can help alleviate poverty, thus incentives for forest protection should go to poor people who depend on the forest for livelihoods.

Chairing the session, Dr Krishna Chandra Paudel hoped that there would be a concrete outcome from the workshop's interaction to guide MFSC to develop necessary policy, institutions mechanisms, and legal instruments, develop programs and projects where they are applicable and to bring change at local level. He stated that PES is not only about money but also to maintain and regulate the services provided by ecosystem. He urged the researchers to come up with intermediary plans that are practical and agreeable to all stakeholders. He suggested two immediate activities to be carried out. First, documentation of success stories, on how it has been implemented by local communities. Second, timely sharing of draft of policy should be facilitated to receive recommendation on time. “We need to learn from GEF and TEEB on economic valuation of ES, and need to develop local level mechanism for PES and implement them,” remarked Dr Paudel.



“The researchers need to come up with intermediary plans that are practical and agreeable to all stakeholders”
 – Dr Krishna Chandra Paudel

Presentations

Scope and constraints in PES: Linking research to policy in Nepal by Mr. Resham Bahadur Dangi, MFSC

Technical presentation 1: Designing Payment for Ecosystem Services: Lesson Learned by Dr Rajesh K Rai, SANDEE

Technical presentation 2: Incentive measures for Ecosystem services: Integrating research learning from Koshi Basin by Mr. Laxmi Dutt Bhatta, ICIMOD

Key messages

- Manage ecosystems to maximize benefits
- PES can contribute to SDGs, NAPA, LAPA
- Prepare SoP for intermediary agents to facilitate PES negotiation and transaction;
- Prepare guidelines to prepare purchase document for PES transaction; Clear guidelines needed to monitor, regulate activities and support in negotiation skills of the service sellers
- Policy actions needed to make PES implementable
- PES scheme is a rigorous process and needs substantial funding
- PES should be considered as a supplementary scheme of the existing resources management approaches.
- Prepare user friendly directive to follow procedural steps for PES negotiation and transaction;
- Provide support to service providers in-kind may enhance the efficacy of the PES scheme

Scope and Constraints in PES: Linking Research Policy in Nepal

Mr Resham Bahadur Dangi

PES is one of the tools for sustainable financing, particularly in the discussions on climate change adaptation. PES has been implemented in Nepal but could not scaled up as per expectations. PES is sustainable financing instrument. Among three ecosystems— land, forestry and water—which are critical for economic development, forest is one of the safety nets for food security but forest degradation has threatened the flow of ecosystem services to sustain living.

Forest contributes five percent while water contributes two percent to Nepal's GDP. Therefore, there is a need to manage these ecosystems to maximize benefits. Forest can include both land and water but it has been used only in the market as providing timber. On the contrary, the forests have so much potential. For instance, forests provide valuable resources and services. The medicinal herbs, hydrological services, and temperature regulation are yet to be accounted and valued in the market system.

Unfortunately, all these are used as 'free commodities.' In general, any service that is free are consumed more and likely to degrade faster than others. Users' pay principle may contribute to maintain these freely available services. But is the policy responsive for this? Can policies account for these services? However, policies have internalized some of the services at least acknowledging and describing that these services exists. For instance, Vietnam has already brought ecosystem services in the market system and is being implemented.

Forest provides different gifted services like oxygen, hydrological services, temperature regulation, siltation control, habitat, cross pollination; carbon store. The recent amendment of the Forest Act has acknowledged all these forest services and provision of ecosystem services



PES is not a new practice, as it has been taking place at local level but needs to be included in the government policy. PES can contribute to Sustainable Development Goals (SDG), National Adaptation Plan of Action and Local Adaptation Plan of Action (LAPA).

We need to remember that forest is local, national and global goods. Take the case of Kulekhani project. Tree logging benefits the logger but creates negative impact on the reservoir and may increase impacts of floods. Incentives should be drivers for behavioral change. 'Business as usual' cannot contribute towards the sustainable development. Benefits can be increased by sustainable practices like REDD+. Therefore, service providers and service buyers should be identified and both should be aware that these services can be enhanced with incentives. For example, service buyers can be hydropower companies, tourism industry, water sports industry and resort owners.

There are several challenges and issues to implement PES in Nepal. First is the methodological issue while valuing the services. There is a need to develop standard method between buyer and seller. In addition, lack of clear guidelines to monitor and regulate the activities and weak capacity to negotiate with potential buyers are also challenges. The role of private sector as intermediary agent should be recognized and encouraged. The risk of under investment due to uncertainty of continuous flow ecosystem services, double counting of ecosystem services and risk of natural disaster should be taken into account.

He suggested following actions to make PES implementable in Nepal

- Prepare user friendly technical guidelines to value the services and determine its tariff for purchase agreement.
- Create user friendly directives to follow procedural steps of PES.
- Prepare SoP for intermediate agents to facilitate PES negotiation and transactions.
- Make guideline to prepare purchase agreement for PES transactions.

Floor Discussions

Participants raised several clarifications and queries regarding the presentation. A question was raised whether a separate fund is needed for PES implementation. Some participant also suggested that local level funds can be generated for the implementation for PES. For instance, Kathmandu municipality residents can pay for the water quality services provided by Shivapuri National Park.

There was also broader suggestion regarding PES' implementation if REDD Implementation Center could be changed to Ecosystem Service Cell. Similarly, participants suggested that academic institutions can play an important part in negotiation of incentives. There were also queries about the measures to overcome PES constraints. Are there any measures, which are implemented? If not then, what should we do to implement?

Participants also showed importance to explore existing traditional practices that trades ecosystem services, therefore, PES can be institutionalized effectively. In addition, there was a suggestion on ensuring clear roles and responsibility of local communities in the PES process.

In response to these queries, Mr. Dangji emphasized on both traditional, horizontal and vertical approach to design PES scheme. He added that some of the services can be bundled, which can enhance the efficacy of the scheme. For global services, government should be more active to regulate private institutions but there is the issue about the quantification of payment. For example, in Sanima Hydropower Project, both buyers and sellers are ready but sellers are asking how should they value the services?

The Economics of Ecosystems and Biodiversity (TEEB) has provided some answers but it cannot be applicable to all. It has to be contextualized. For example, in Nepal bees would have high value but Willingness to Pay (WTP) for conservation of leopard may be much lower.

Organizations are evolutionary and the REDD implementation Center can also change in the future as the need arises. We need to move away from Environment Impact Assessment (EIA), Initial Environmental Examination (IEE) cut paste syndrome. Values need to be created. Services at the local level are good but national accounts must be maintained and consistency and implementation also needs to be maintained. Legitimacy to the agreement has to be created by the government and the legal process. Kulekhani is payment transfer process and not PES. The money has been transferred to the DDC.



TECHNICAL SESSION – I

Designing Payment for Ecosystem Services: Lesson Learned

Dr Rajesh K Rai

The presentation was focused on learning from three case studies of Dharan, Baitadi and Dhankuta to answer following questions:

- Can we generate financial resources locally?
- Are resources managers getting appropriate pay? – Value of ecosystem services
- Are resources managers investing on activities that contribute to maintain the supply of ecosystem services
- Why monitor the activities?
- Does PES follow any specific procedure during the design phase?



All these cases are from drinking Water and Sanitation Projects of Dharan Municipality, and Dhankuta and Baitadi districts, supported by the Asian Development Bank (ADB). In these projects, water sources and water resources are not in the same watershed. Like Nepal Water Supply Corporation, these projects are also solely focused on water supply. The main goal of the PES in these cases is to maintain the quality and quantity of drinking water as per the design.

Key messages

- Designing PES scheme is a rigorous process, which demands substantial fund. Therefore, PES designing process should be integrated into project design phase, particularly with IEE/EIA would reduce cost and ensure participation of resource managers in the entire process
- Output based payment may put service providers at risk because the relationship between land-use practices and production of ecosystem services is not clear. Payment based on the demand activities identified by multi-stakeholder forum may enhance the efficacy of PES schemes.
- Implementation of PES requires to establish a tri-partite institutional structure involving existing local institutions.
- PES should be considered as a supplementary scheme of the existing resources management approaches. Therefore, designing PES scheme under the multi-sectoral approach would increase the welfare of both service providers and water users.
- Number of beneficiaries determines whether PES is financially feasible or not. Therefore, projects having small number of beneficiaries may require external support to implement PES
- Providing support to service providers in-kind may enhance the efficacy of the PES scheme

TECHNICAL SESSION –II

Incentive for Ecosystem Services: Integrating research in policy learning from Koshi Basin

Mr Laxmi Dutt Bhatta

Human demand for ecosystem services is quickly growing around the world. Food production must increase to meet the needs of an additional 3 billion people over the next 30 years. One-third of the world's population is now subject to water scarcity. Population facing water scarcity will double over the next 30 years. Firewood is the only source of fuel for one third of the world's population. Wood demand will double in next 50 years.

Forests are considered (both at upstream, and downstream) key for sustaining water supply. Forest ecosystem is changing, both in species pattern, and cover. Downstream community agrees to pay for conserving upstream forest ecosystem. Grazing (uncontrolled) is considered dominant drivers impacting forest ecosystem and water quality. Financial instrument with institutional arrangement is required for incentivizing upstream communities. He suggested to establish a tripartite institution involving existing local institutions to implement PES. In addition, cash payment may not always be feasible. Incentives in form of development projects may enhance the sustainability of PES scheme, in which local ownership is key.

Floor discussions

The participants provided feedback with queries and recommendations to the presenters as follows:

- Is payment by downstream to upstream community enough? If not, what are the other options? Any advice given by local communities for possibility of increment in water availability?
- As the integrated watershed management incorporates the PES mechanism, local context need to be considered for institutional mechanism and approach.
- Is watershed conservation related to water quality and quantity? There is need to do a study of water resources and forest link in water supply/storage.
- Need to better understand springshed management and potential for PES implementation





- Need to categorize ecosystem services, and identify the research gap.
- Are hydropower projects done following suggestions from IEE/EIA?
- Need to have participatory monitoring by upstream and downstream communities for local level PES mechanism. Different development activities and disaster affects the natural resources so it would be appropriate if those risks are considered in PES.
- Risk management should be introduced

Response by presenters:

- If number of users is less, the monetary tariff will be less so need to be supported by other sectors (multi stakeholder approach)
- For water availability increments, the activities were included that has been mentioned in the watershed management plan. Being market based approach, no blue print method could be advised.
- For the sustainability of the PES mechanism, it should be locally driven approach rather than project based approach. So the users also consider other services
- IWRM is good for only one watershed. It is not appropriate for other users in next watershed.
- Buyer can select the service they want to buy, so buyer will categorized the services accordingly
- Local conflict management system is found in the working area.
- IEE and EIA is project based approach; it does not have long term vision.
- Participatory monitoring and auditing is important and need to include during agreement procedure.
- Social issues need to be addressed on behalf of communities that may not have such capacity by subsidiary agencies for the sustainability of the PES mechanism.
- Due to lack of trust, third party monitoring should be included for verification.

Way Forward and Conclusion

- The recently amended Forest Act (1993) discusses the importance of ecosystem services for local livelihoods. Based on revised forest Act, existing forest regulation revision process is already under discussion where PES could be further elaborated.
- There is a need for standard methodology, tools and guidelines to assess value of ecosystem services, and implementation guidelines for PES schemes.
- Nepal is presently under preparation for its next development plan, where opportunities are there to discuss PES provisions in development planning
- Institutions like ICIMOD can provide support and encourage the Government of Nepal to integrate and internalize the planning process of PES into the country's development planning process for a real impact of science-policy interface
- The role of the private sector as intermediary agents between buyers and sellers should be recognised
- Clear guidelines needed to monitor and regulate activities to maintain service at sub national and project level
- User-friendly technical guidelines are needed to follow procedural steps for PES negotiation and transaction
- Sufficient financial investment needed to maintain sustained flow of ecosystem services



Annexes

Annex 1: Workshop Agenda

“Research-Policy Interface: Incentivising communities for Ecosystem services in Nepal”

Organised by Ministry of Forest and Soil Conservation (MoFSC), International Centre for Integrated Mountain Development (ICIMOD), South Asia Network for Development and Environmental Economics (SANDEE) and Green Governance of Nepal (GGN) with the support of Australian Government’s Department of Foreign Affairs and Trade (DFAT) provided through Sustainable Development Investment Portfolio (SDIP) South Asia, and Government of Norway and Sweden.

Venue: Hotel Yellow Pagoda, Kantipath, Kathmandu

AGENDA

08:30-09:00	Registration	Bikal Dahal, Green Governance Nepal Subhash Sharma, Ministry of Forests and Soil Conservation
09:00-11:00	Inaugural Session	
	Chair	Dr Krishna Chandra Paudel, Secretary, Ministry of Forests and Soil Conservation
	Chief Guest	Hon’ble Shankar Bhandari, Minister for Ministry of Forests and Soil Conservation
	Guests	Hon’ble Raja Ram Syangtan, Member of Parliament Hon’ble Chham Bahadur Gurung, Member of Parliament Hon’ble Prabhu Budathoki, Member, National Planning Commission Dr David Molden, Director General, ICIMOD
	Welcome Address	Dr Akhileswar Lal Karna, Joint Secretary, Ministry of Forests and Soil Conservation
	Presentation: Payment for Ecosystem Services in Nepal: Existing policies and possibilities in Nepal	Mr. Resham B. Dangi, Joint Secretary, Ministry of Forests and Soil Conservation Hon’ble Chham Bahadur Gurung, Member of Parliament Hon’ble Raja Ram Syangtan, Member of Parliament Hon’ble Shankar Bhandari, Minister for Ministry of Forests and Soil Conservation
	Closing Remarks	Dr Krishna Chandra Paudel, Secretary, Ministry of Forests and Soil Conservation
11:00-11:15	Tea Break	
11:15-13:00	Technical Presentations and interaction session	
	Chair	Hon’ble Janak Chaudhary, Chairperson, Parliamentary Committee on Environment
	Technical Presentation 1: Designing Payment for Ecosystem Services: key findings from the ICIMOD-SANDEE collaborative research	Dr Rajesh Kumar Rai, SANDEE
	Technical Presentation 2: Incentive for Ecosystem Services: Integrating research in policy- Learning from Koshi Basin	Mr. Laxmi Dutt Bhatta, ICIMOD
	Plenary and discussion	
	Wrap up and concluding remarks by Chair	
	End of Workshop	

Annex 2: List of Participants

1. Anupama N Das, President Chure-Tarai Madhesh Conservation Development Board. (PCTMCDB)
2. Arun S Poudyal, Kathmandu Forestry College (KAFCOL)
3. Ashmita Bhusal, Guthi
4. Bandana Rai, Green Governance Nepal (GGN)
5. Bhim Prakash Khadka, Federation of Community Forestry Users Nepal (FECOFUN)
6. Bhisma Raj Ojha, Rastriya Samachar Samiti (RSS)
7. Bholu Bhattarai, National Forum for Advocacy Nepal (NAFAN)
8. Bijaya K Singh, Consultant
9. Bijaya Raj Paudyal
10. Bikal Dahal, People Help Group (PHG)
11. Bimal K Acharya, Ministry of Forests and Soil Conservation (MoFSC)
12. Dhananjaya Lamichhane, MoFSC
13. Dr Akhileshwor L Karna, MoFSC
14. Dr Indra Prasad Sapkota, District Forest Office (DFO), Kathmandu
15. Gehendra K Upadhyaya, MoFSC
16. Gopi Lal Nepal, MoFSC
17. Hem Lal Aryal, Department of Forests (DoF)
18. Hon'ble Chham Bahadur Gurung, Member of Parliament, Government of Nepal
19. Hon'ble Minister Shankar Bhandari, MoFSC
20. Hon'ble Prabhu Budhathoki, National Planning Commission (NPC)
21. Hon'ble Rajaram Syangtan, Member of Parliament
22. Jagannath Joshi, Hariyo Ban/Care Nepal
23. Kalu Bhai Khadka, Nepal Environment and Forest Users Group (NEFUGF)
24. Kanchan Shrestha, ICIMOD
25. Khem Raj Sharma, Nepal Engineering College
26. Kiran Tilmalsina, GGN
27. Krishna Adhikari, RSS
28. Dr Krishna Chandra Paudel, Secretary, MoFSC
29. Laxman Gautam, DoF
30. Laxmi Bhatta, ICIMOD
31. Maheswar P Niraula, MoFSC
32. Man K Dhamala, Central Department of Environmental Science (CDES), Tribhuvan University
33. Manish Maharjan, Ministry of Irrigation
34. Nand Kishor Agrawal, ICIMOD
35. Naresh Newar, ICIMOD
36. Niraj B Bhatta, GGN
37. Prahlad Thapa, IUCN
38. Pranav Acharya, Hydro Consult Engineer
39. Puroshottam Acharya, Department of Electricity Department (DOED)

40. Rajendra Kafle, Joint Secretary, MoFSC
41. Rajesh Rai SANDEE
42. Raju Laudhari, MoFSC
43. Resham Dangi, MoFSC
44. Sagar Dhakal
45. Sambhu Dangal
46. Shankar Poudel, Rupantaran
47. Shahriar M. Wahid, ICIMOD
48. Shekhar Kr Yadav, Nepal Foresters' Associations (NFA)
49. Sher Bd Thaguna, Department of National Parks and Wildlife Conservation (DNPWC)
50. Subhas K Sharma, MoFSC
51. Sudhita Basukala, Under Secretary, Department of Plant Resources (DPR)
52. Sujeet Shrestha, Program Manager, Kangchenjunga Conservation Area Project (KCAP)
53. Sunita Ranabhat, ICIMOD
54. Surendra Adhikari, MoFSC



© ICIMOD 2016

International Centre for Integrated Mountain Development

GPO Box 3226, Kathmandu, Nepal

Tel +977-1-5003222 **Fax** +977-1-5003299

Email info@icimod.org **Web** www.icimod.org