



Sustainable Approaches to Payment for
Ecosystem Services & Community-
Managed Watershed Health:
Participant Workbook

US Forest Service
International Programs
International Seminar on Watershed Management
Alumni Webinar

December 16, 2020



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Welcome to the second webinar for alumni of the USFS International Seminar on Watershed Management! USFS International Programs has brought international practitioners together in this program for over a decade to address the shared, global challenge of water conservation. We are excited to present *Sustainable Approaches to Payment for Ecosystem Services & Community-Managed Watershed Health*. Based on the interest in Payment for Ecosystem Services (PES) we heard in your responses to our alumni survey earlier this year, we will build on our discussions during the seminar about PES and expand our knowledge to think about how these ideas can encompass innovative approaches to community-based conservation.

You will have an opportunity to hear about work being done in this field around the world from experts in the U.S. Forest Service and fellow seminar alumni. We're grateful to Dr. Natasha James, Research Economist with the USFS Southern Research Station, for sharing her time and expertise with us on PES and how institutions can incentivize community-based conservation. We're also honored to highlight the great work being done by two Watershed Seminar alumni, Nilu Basnyat (2017 Seminar Participant) and Ganesh Bishwokarma (2018 Seminar Participant), representing the USAID's Program for Aquatic Natural Resource Improvement (Paani) Project in Nepal. Perhaps most importantly, this session will offer time for you to share your experiences and exchange lessons learned with practitioners like yourself around the world.

As you know, these are challenging and extraordinary days but no matter what lies ahead in the coming months and years, we want to stay connected with you. Please don't hesitate to let us know how you are doing and share any ideas you might have for how we can support you and your work remotely through this time.

Sincerely,

The Watershed Seminar Team



Agenda

Opening Remarks	Lee Blaser	8:00 to 8:05
Creating Sustainable Programs – Basics of Payment for Environmental Service (PES)	Dr. Natasha James	8:05 to 8:20
Example: USAID Nepal’s Program for Aquatic Natural Resource Improvement (Paani) Project	Nilu Basnyat Ganesh Bishwokarma	8:20 to 8:45
Breakout Group Discussions		8:45 to 9:15
Report Out		9:15 to 9:30




Creating Sustainable Programs

The Basics of Payment for Environmental Services (PES)

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Payment for Ecosystem Services Programs

- Often defined as:
 - Voluntary transactions
 - between service users and service providers
 - that are conditional on agreed rules of natural resource management
 - for generating off site services
- Encourage private provision of public goods such as carbon sequestration, watershed management, and wildlife habitat.



Wunder, Sven. (2015). Revisiting the concept of payments for environmental services. *Ecological Economics*. 117.10.1016/j.ecolecon.2014.08.016.

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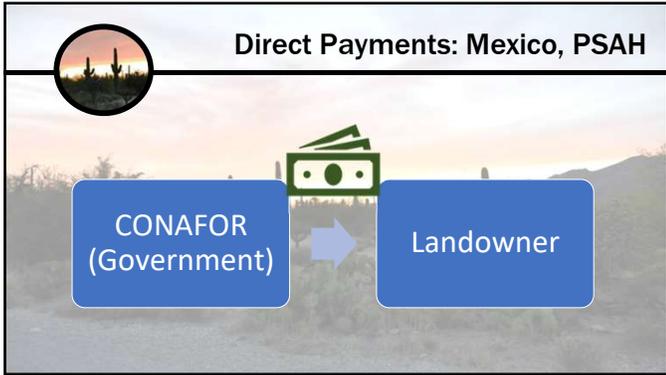


What are the Payments?

- **Direct Payments:** Cash payments directly from the service users to the service provider
- **Indirect Payments:** Cash payments from the service users to an intermediary on the behalf the service provider
- **In-Kind Payments:** use of a good or service as payment instead of cash



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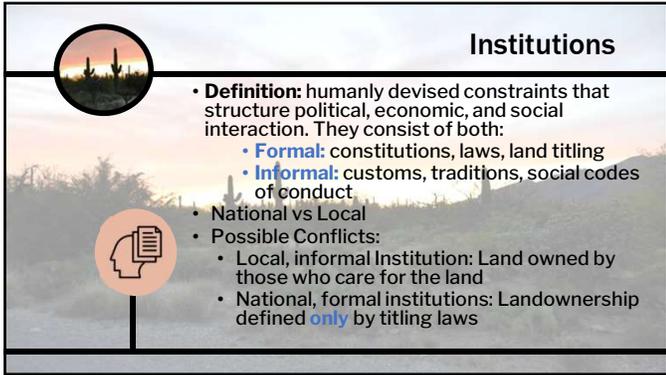
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Institutions

- **Definition:** humanly devised constraints that structure political, economic, and social interaction. They consist of both:
 - **Formal:** constitutions, laws, land titling
 - **Informal:** customs, traditions, social codes of conduct
- National vs Local
- Possible Conflicts:
 - Local, informal Institution: Land owned by those who care for the land
 - National, formal institutions: Landownership defined **only** by titling laws

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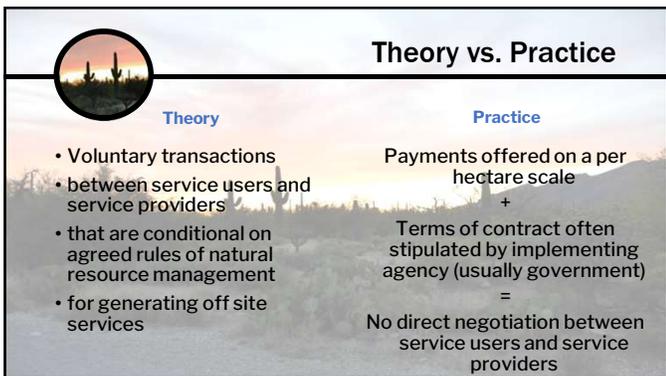
Bridging Institutions

- "it is increasingly accepted that integrating **social considerations** into environmental management planning **is instrumental to achieving more-robust ecological outcomes**".
- The U.S. Forest Service has also emphasized the importance of livelihoods in the creation and expansion of conservation projects.

When including stakeholders at all levels, institutions that bridge formal and informal rules can be built with all voices being considered.

Pascual, Unai; Phelps, Jacob; Garmenda, Enko; Brown, Katrina; and others. 2014. Social Equity Matters in Payments for Ecosystem Services. BioScience, 64(11): 1027-1036.

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Theory vs. Practice

Theory	Practice
<ul style="list-style-type: none"> • Voluntary transactions • between service users and service providers • that are conditional on agreed rules of natural resource management • for generating off site services 	Payments offered on a per hectare scale + Terms of contract often stipulated by implementing agency (usually government) = No direct negotiation between service users and service providers

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Mexico: PSAH



National Program for Hydrological Environmental Services:

- Reduce deforestation in areas critical for watershed related environmental services by paying landowners to preserve forest land.
- National government on behalf of water users, channels a share of the water use fees to the PES programs.




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USAID Paani Case Study: Questions to Consider



How does this impact the strength of the program?



What varying levels of institutions are there?




Is there a balance between conservation and social/equity goals?



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Stories from Alumni

USAID Nepal's Program for Aquatic Natural Resource Improvement (Paani) Project




Nilu Basnyat, Chief of Party
2017 Watershed Seminar Participant




Ganesh Bishwokarma, Field Manager
2018 Watershed Seminar Participant

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What does Paani do?

- fill knowledge gaps*
- support watershed management and conservation practices that benefit ecological and human communities*
- develop a roadmap through an integrated river basin management approach, for meeting the sustainable development goals of multiple users*

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Why does Paani work from watersheds?

The watershed is a basic unit of practical, hands-on learning and action:

- To develop relevant site-specific information and understanding
- For multiple leaders and stakeholders to work together to resolve issues, conserve river system functioning, and improve community well-being and resilience
- For inclusion in decision-making

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Paani's Approach to Sustainable Watershed Health and Local Livelihoods





Climate smart watershed management practices



Sustainably increase agricultural productivity, incomes, and livelihoods



Local institution development and support

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Sustainably increase agricultural productivity, incomes and livelihoods:

- Climate smart farming (tunnel farms), drip irrigation practices
- Efficient water management for domestic, irrigation and agricultural uses
- Riverbed farming by organizing poor and vulnerable groups
- Aquaculture fish farming for livelihoods

Local institutions:

- Resource leveraged from local government for Paani's initiation and efforts
- Providing enabling environment for registration and handing over of river stretch for management to Community Aquatic Animal Conservation Groups (CAACGs) and for their functioning

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Build on Nepal's rich legacy of local institutions

Two Successful model-

- Community based forest management
- Community-based irrigation users' associations,



**Paani Initiation-
Community Aquatic Animals
Conservation Groups**



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Developing Local Level Institutions – Community Aquatic Animal Conservation Groups (CAACGs)

Focus: collaborative aquatic resources management

- CAACGs are new institutions at watershed level formed through Paani's efforts
- The co-management of river stretches by local government and community groups by handing over these stretches to CAACGs




Local partnerships:

- Local government actively supported these groups, with the enactment of Aquatic Animal and Biodiversity Conservation Act (AABCA) duly from their Assembly meeting.
- Paani supported development and enactment of AABCA has helped establish CAACGs in a participatory manner and provides them legal personhood

A Chairperson of local government handing over a copy of Aquatic Animal Conservation Act to a member of Community Aquatic Animal Conservation Group

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Results

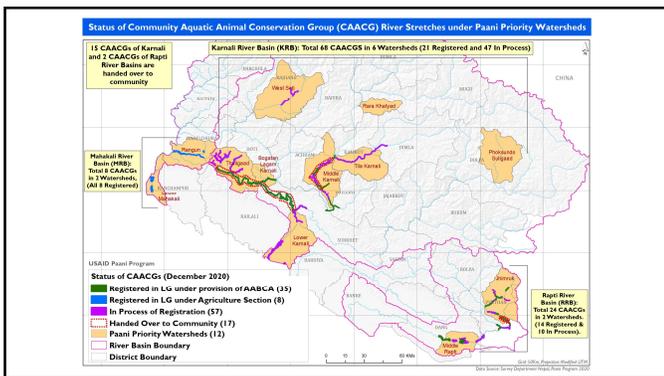
Status	CAACG Count	Area Coverage (Ha)	Stretch Length Tentative (KM)
In Process of Registration	57	8,232	371
Registered in Agriculture Section	8	2,135	17
Registered in LG under provision of AABCA	35	7,388	271
Grand Total	100	17,756	710

Paani initiated organizing the groups, legalizing them, building capacity on co governance and river stretch management activities, and they started to patrol river stretches to protect aquatic biodiversity, support livelihoods of river dependent groups by engaging on income generating activities



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Role of the CAACGs & Support from Local Government

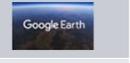
- ❑ CAACGs responsible for climate smart watershed management, freshwater biodiversity conservation and improving livelihoods through climate smart agricultural practices
- ❑ Each activity is conducted in close coordination with local government
- ❑ Local government enacted AABCA and allocated budget to scale up activities. About 3.2 million Nrs. (~USD 30,000) support to around 14 CAACGs, from 10 municipalities.
- ❑ Examples of Impact:
 - Controlled illegal fishing practices
 - Improved watershed health
 - Conserved biodiversity
 - Improved spring sheds
 - Increased water availability
 - Intervention in climate smart agriculture activities.



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Monitoring Improvement through impact monitoring tools

Data Collection Tool	Data Creation and Analysis (Area Demarcation)	Data verification	Data Storage and Supporting Documents
Activity Tracker Sheet 	Google Earth 	Geomeasure 	Paani MEL and GIS database 
Improvement Monitoring Tool (Improved Biophysical + Improved management) 	ESRI ArcGIS 	FGD and Field observation Survey Checklist 	realimprovement_Guidance Document 

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CAACGs – Selections of Members

AABC Act promotes proportional inclusion and equity by requiring:

- 
 A minimum of fifty-one percent of the members of the Group shall consist of women
- 
 At least 4 members of the Executive Committee are women or represent a *marginalized* community
- 
 At least 2 of the office-bearer positions (Chairperson, Secretary, and Treasurer, etc) are women

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CAACGs – Selections of Members



CAACG committee is selected by consensus, or by voting



Community Consultation for AABCA formulation process

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Paani Capacity Building Support to CAACGs

- Leadership and Advocacy Skills Development Trainings
 - o freshwater biodiversity conservation
 - o river resource management
- Institutional strengthening
 - o biodiversity registry
- Connecting with existing cooperatives at local level
 - o leverage resources
 - o financial sustainability
- Identifying conservation needs, priorities



Members of CAACG conducting assessment of local aquatic resources

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Paani Capacity Building Support to CAACGs



- Alternative livelihoods and off-farm income generating activities to reduce pressure of river resources
- Enabling environment for effective and evidence-advocacy
- River stretch patrolling
 - o controlling illegal activities and over exploitation of river resources, e.g., sand mining

A woman from the Majhi community living near the bank of the Karnali River in Rakam, Middle Karnali Watershed, weaves a fishing net. Photo credit: USAID Paani Program/Nabin Baral

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Lessons in Establishing and Supporting CAACGs

What can local communities do?

- Be effective custodians of aquatic animals and ecosystems if appropriate duties and rights are provided to them
- Make decisions related to conserving and using aquatic resources

Where do local communities still need support?

- Institutional strengthening for the first few years
- An umbrella organization (network or federation) of CAACGs in a river basin to strengthen CAACG effectiveness and implement AABC Act




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Impact Video
<https://bit.ly/3nht1IA>



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- One CAACG in Middle Rapti is a great example of how this model can and should work. Led by Pateshwori Chaudhary, a former poacher-turned-conservationist and now a Paani champion, the CAACG includes members from two neighboring fisher groups.

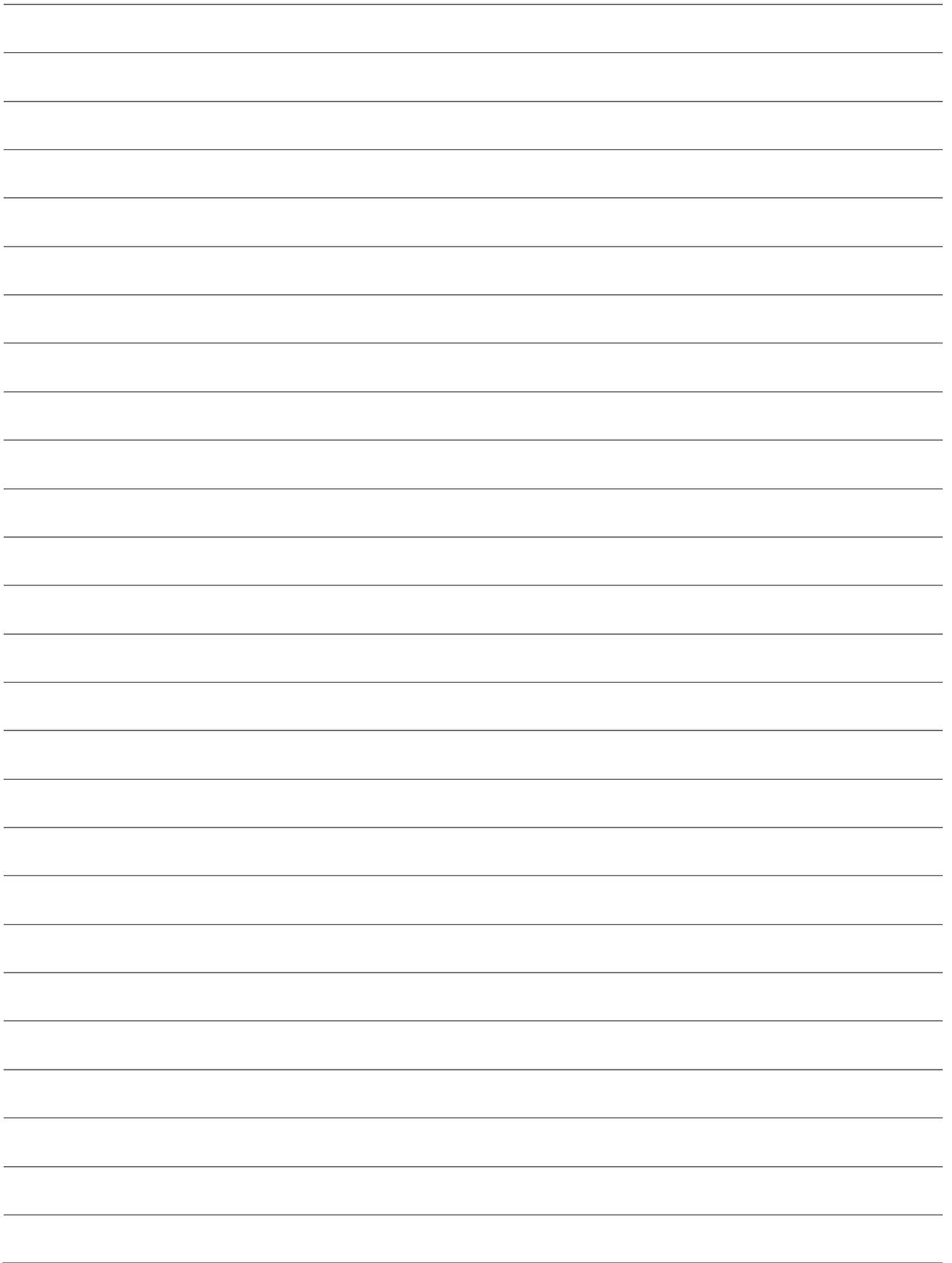


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Thank you!!!
 Clarification Questions



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Next Steps

Stay involved and keep the conversation going!

Join our Facebook group: <https://www.facebook.com/groups/usfswatershed2012>

Have ideas for a future webinar?

Contact the Watershed Team: SM.FS.IP_Watershed@usda.gov

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