
Conditions for institutional durability of Payment for Watershed Ecosystem Services

Case study analysis from Colombia and Germany

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Marcela Muñoz, Camilo Pineda and Robert Holländer

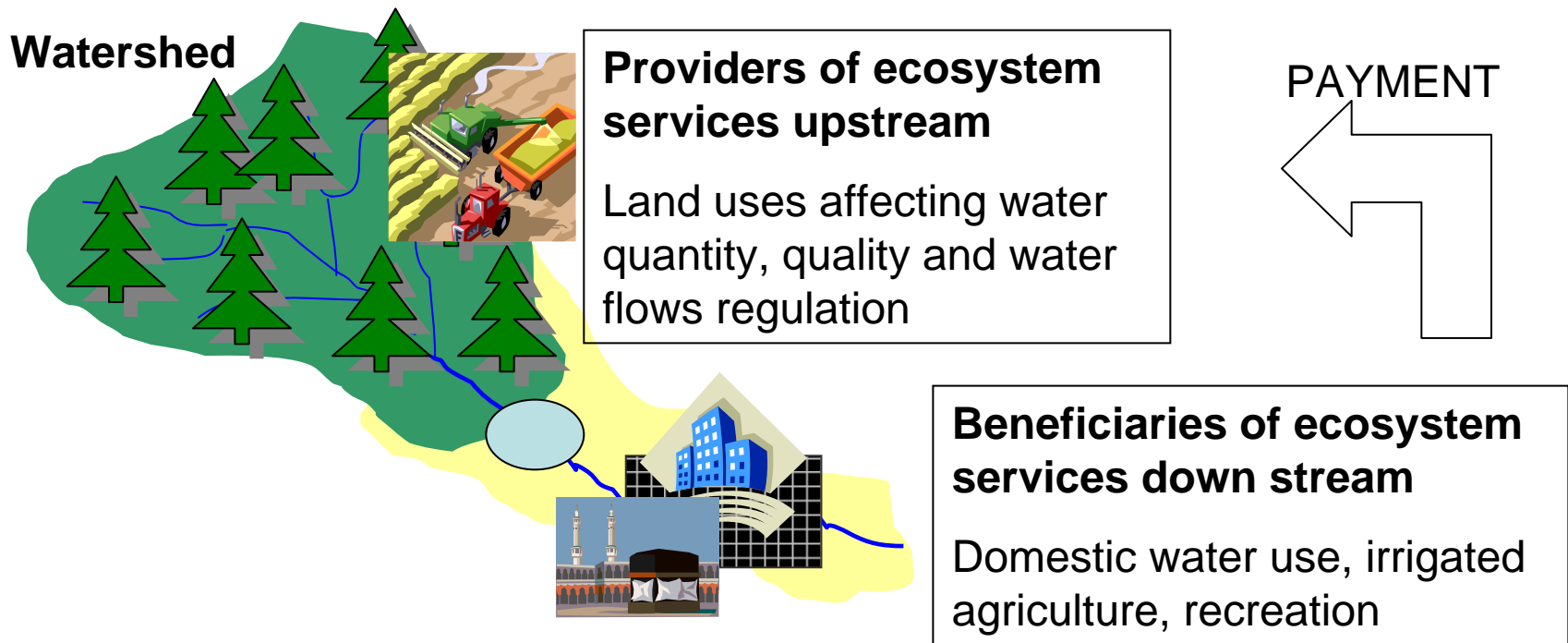
Institute for Infrastructure and Resources Management
Environmental Technologies and Environmental Management

OUTLINE

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 - PWES as institution
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- METHOD
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- CONCLUSION

INTRODUCTION

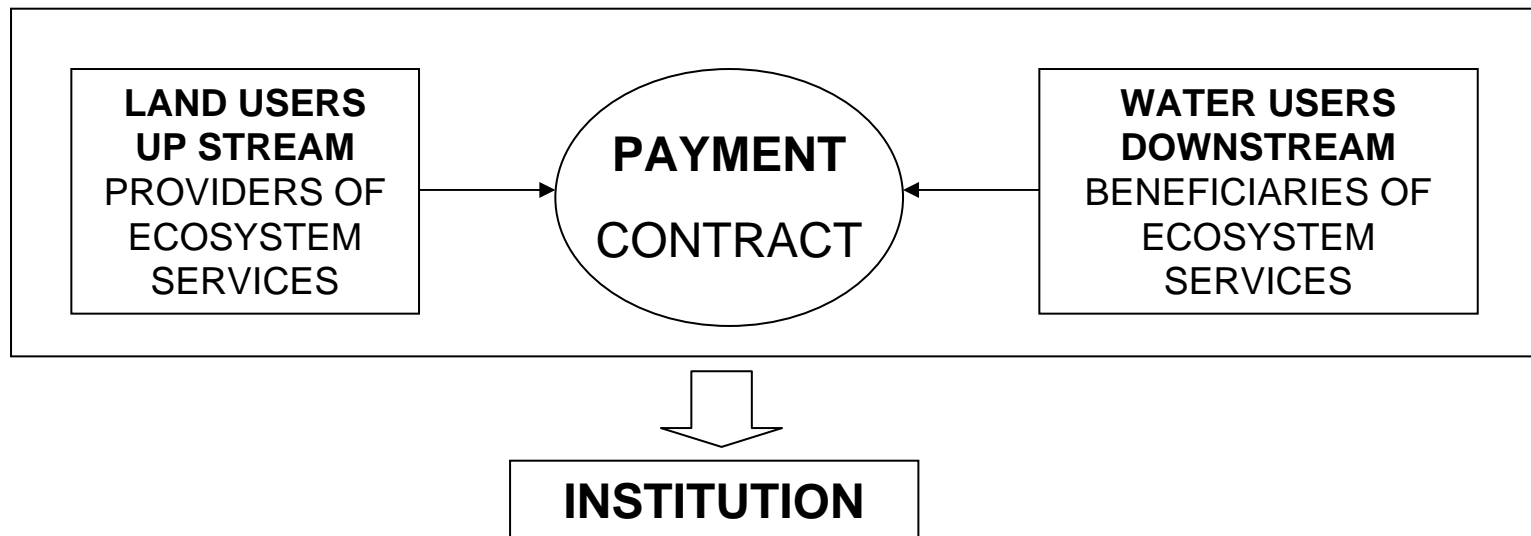
Payment for Watershed Ecosystem Services (PWES)



“...mechanisms addressed to maintain or modify land uses that affect water quality and quantity down streams”. (UNDESA, 2003)

INTRODUCTION

PWES = INSTITUTION



PWES: Institution established to resolve the environmental conflict upstream – downstream

(Paavola, 2007)

INTRODUCTION

Objective: identification of conditions under which PWES are enduring institutions

Framework of analysis: Institutional sustainability of Common Pool Resources (CPR).

Wade (1987), Ostrom (1990), Baland and Plateau (1996), Agrawal 2001.

Applicability to PWES analysis:

- Characteristics of CPR and watershed ecosystem services:
 - Difficulty of exclusion: of use – farmers
 - rivalness: on resource use water – land

CRITICAL ENABLING CONDITIONS FOR INSTITUTIONAL SUSTAINABILITY OF CPR

1. RESOURCE SYSTEM
 - Feasibility of improving the resource
 - Indicators of resource conditions
 - Traceability of resource improvement
2. GROUP CHARACTERISTICS
 - Small size
 - Past successful/organizational experiences
 - Appropriate leadership
 - Trust
 - Low poverty
3. RELATION RESOURCE AND GROUP
 - Overlap between residential and resource location
 - High levels of dependence on resource system
 - Fairness in allocation of benefits from resource
4. INSTITUTIONAL ARRANGEMENTS
 - Rules are easy and simple to understand
 - Ease in enforcement of rules
 - Graduated sanctions
5. EXTERNAL ENVIRONMENT
 - Supportive external sanctioning institutions
 - Low levels of articulation with external markets

METHOD

	GERMANY	COLOMBIA
CASE STUDIES	Organic farming in the catchment area of Mangfalltal . Munich	Water users Association. Pradera. Asobolo
Initiated	1992	1993
Ecosystem services	Water quality	Water quantity Flow regulation
Land uses / practices paid for	Organic farming	Reforestation activities Protection of water sources organic farming
Type of payment	In cash: USD 399 ha/year - 6 years USD 396 ha/year -12 years	In kind: social and agri-environmental programs
Financial resources	Water tariff: USD 0.007/m ³ water consumed	Fee paid by water users downstream: USD 2.73L/s

RESULTS AND DISCUSSION

SIMILARITIES

- **Emerging process:**
 - Feasibility of improvement the resource
 - Indicators of resource available
 - High dependence of the resource (water users)
- **Group characteristics**
 - Small group in the design
 - **Previous organizational experiences**
 - **Appropriate leadership**

RESULTS AND DISCUSSION

- **Institutional arrangement**
 - Rules simple and easy to understand
 - Ease of enforcement of the rules
 - Monitoring
 - Graduated sanctioning mechanism

DIFFERENCES

- Traceability
- **Trust**
- **Levels Poverty**

CONCLUSION

- The differences from developing and developed countries are evident, however, several similarities regarding the conditions contributing to the durability of PWES were found
- If similarities of conditions for the durability of PWES can be found in such different contexts, they might be relevant for other PWES schemes and for future implementation.

Thank you for your attention!

Marcela Muñoz

munoz@wifa.uni-leipzig.de

