

# EMBEDDING ECOSYSTEM SERVICES INTO POLICY (EESP)

## LEARNING SERIES

### Session 2: Introduction to Payments for Ecosystem Services

Day 1

## about this session

This session will provide an overview of Payments for Ecosystem Services (PES) including traded services, stakeholders involved, payment mechanisms, significance of design and the difference between input and output-based PES. This will be supplemented with examples of the types of activities that landowners can be engaged to do under PES. The session will further discuss success factors based on African PES project experiences are highlighted. Finally, there will be a game where participants simulate rural households in Malawi, engaging in farming and fuelwood use. Through gameplay, participants explore decision-making, community dynamics, and design considerations in PES implementation.

**Keywords:** Payments for Ecosystem Services, landowner benefits



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Jane is an environmental economist with 36 years of experience in conservation and development. She specializes in assessing ecosystem health, valuing ecosystem services, and integrating biodiversity into economic planning. She contributed to the development of the Millennium Ecosystem Assessment framework and the UN's Ecosystem Accounting methods. Her expertise includes water security, ecosystem rehabilitation, land degradation, and green economy development. Jane is the director of Anchor Environmental Consultants and holds a part-time position at the University of Cape Town.

## learning objectives

- Understand the rationale for Payment for Ecosystem Services (PES) and how benefits to ecosystem service beneficiaries can offset landowners' opportunity costs.
- Gain a comprehensive overview of PES, including the traded services, stakeholders involved (ES providers and buyers), payment mechanisms, and the significance of effective design.
- Identify various examples of activities that landowners and communities can be engaged in under a PES, while also distinguishing between input-based and output-based PES approaches.
- Recognize the key factors that contribute to the success of PES projects, drawing on lessons learned from PES initiatives in Africa.



# Embedding Ecosystem Services into Policy (EESP) Learning Series

Jane Turpie

# Payments for Ecosystem Services: An introduction

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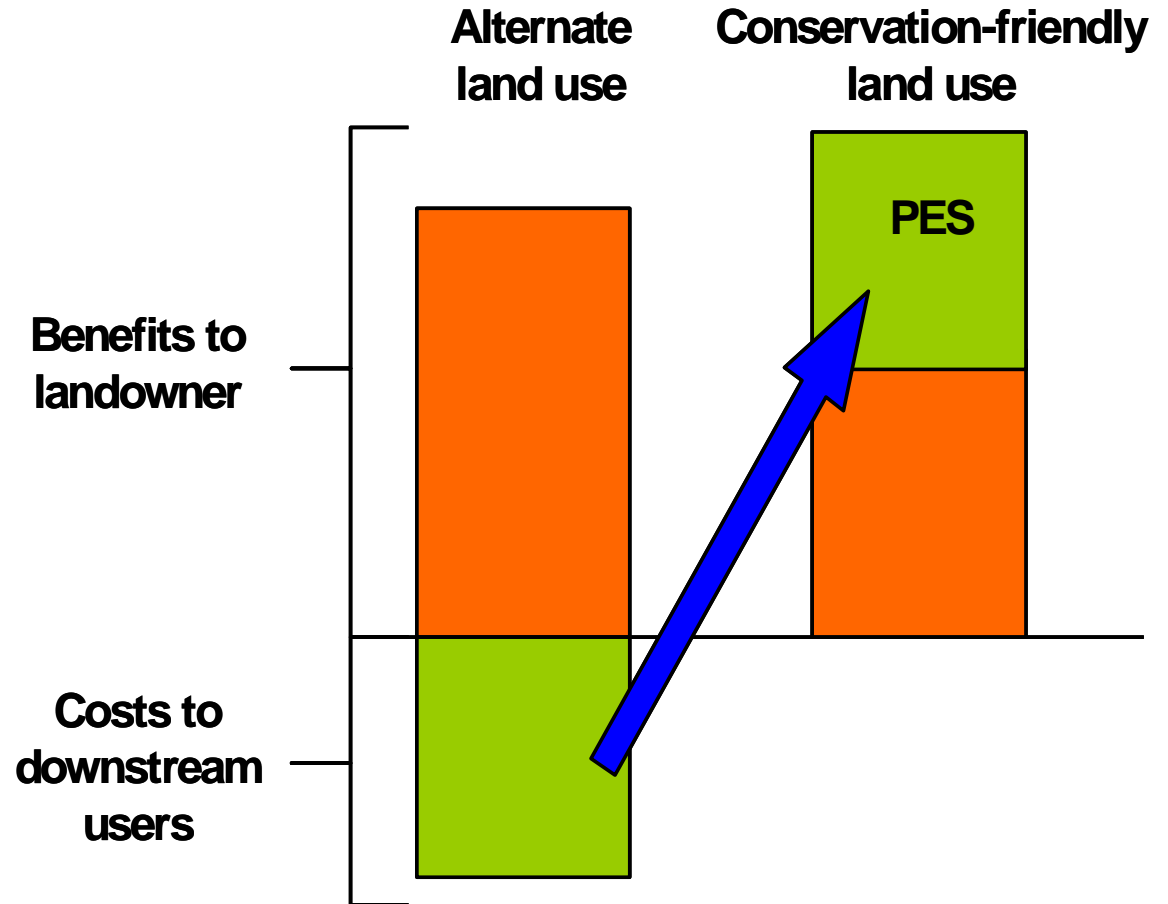


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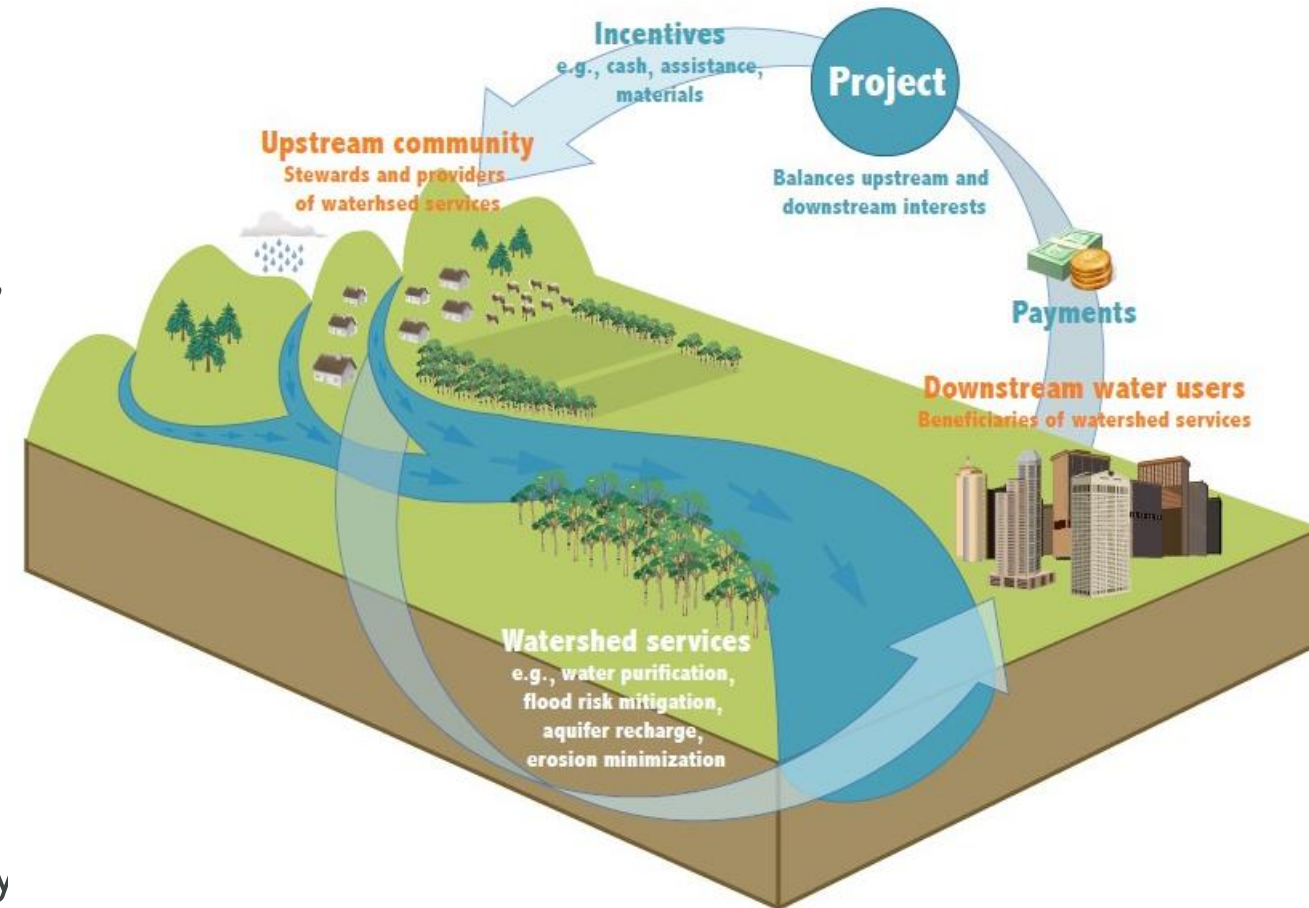
# Rationale

- Landowner activities are reducing ES benefits to others
- If WTP high enough\*, they can pay landowner(s) to undertake conservation management to restore/secure the ES
- \*Payment must be enough to compensate the landowner(s) for the costs of the required action
- Serves as both an incentive and a financing mechanism



# PES in a nutshell

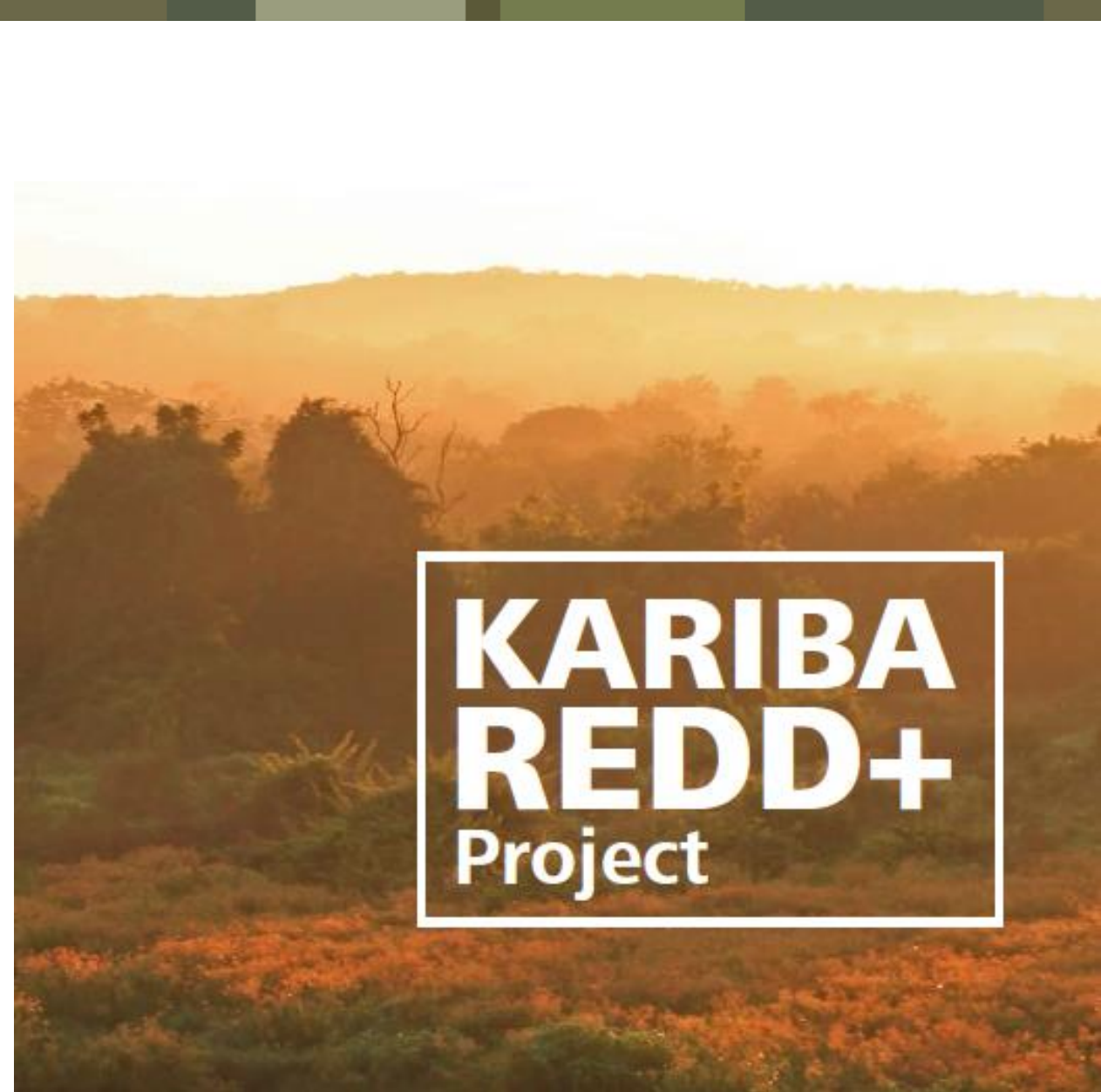
- Ecosystem services secured by paying ecosystem managers to adopt more conservation-friendly practices
  - **Ecosystem services** - carbon, biodiversity, hydrological functions, natural landscapes, or a bundle
  - **Ecosystem managers** - people, communities, firms or governments
  - **Payments** - monetary or non-monetary, from private sector, government and/or international donors.
    - Usually brokered by **intermediary**
    - **Conditionality** of payment is key
- **Design** is key to ensure efficiency, additionality and avoid rent-seeking



# Activities might include:

- Maintaining better vegetation cover
  - Reduced rate of wood harvesting
  - Reduced livestock stocking rates
- Setting aside areas for complete protection
  - e.g. riparian areas, wildlife areas, wetlands
- Active restoration, e.g. tree planting in deforested areas

Payments may be based on ES outputs (ideal) or input-based (e.g. change in management practices)



# Success depends on

- **Well-respected institutions, and clear property rights**
- **Conditional payments**, not just *ad hoc* in-kind rewards
- **A long-term contract**, proper monitoring system, defined targets, rewards and sanctions.
- A competent, independent **intermediary**
- Supportive public institutions, policies and laws
- A strong **business case** showing that benefits exceed costs
- Evidence of results from initial phase



# Enough theory lets game



# PES Game

- You are a household in rural Malawi.
- You generate a farming income of \$70
- You also harvest wood for fuel or charcoal to the value of your Playing Card x \$10.
- **You will have to decide**
  - Continue using wood from forest **OR**
  - Accept a payment and promise not to use this wood
- We will explore this under different contexts
- **To start:** Report your Player Number and your Playing Card #.
- **All decisions to be recorded on your sheet**



# Round 0: Baseline

- No PES payment
- Harvest wood? YES or NO?



# Round 1: PES

- PES payment = \$50
- Harvest wood? YES or NO?
  
- How did you decide?
  
- Key concept: Opportunity cost



# Round 2: PES + Illegal harvest is possible

- PES payment = \$50
- 25% chance of audit
- If found to be harvesting illegally, lose PES payment and harvest value, and pay \$70 fine
- Q1. Accept PES?
- Q2: Did you harvest?
- Key concept: Rational theory of crime



## Round 3: Harvest uncertainty

- PES payment = \$50
  - 50% chance that you don't get the wood benefit
  - You have to commit first
  - **Q1. Accept PES?**
- 
- Key concept: Choice under risk



# Round 4: Auction

- PES payment = ? Depends on bids!
- Write down a bid to be in the programme
- The lowest 50% of bids will be accepted.
- PES payment is the lowest bid that is not accepted
  
- Key concepts:
- Incentive compatibility
- PES auctions ensure cost effectiveness, get ES at lowest social cost



# Round 5: Community Contract

- Grouped into communities, Within a community you are ALL or NONE in PES.
- PES payment = \$50 x no. of households (you can allocate how you wish)
- 5 minutes to decide PES or not?
  
- Key concepts:
- Community governance
- Division of gains / power in the community



# Round 6: Community Contract, with possibility of illegal harvest

- PES payment = \$50 x no. of households
- Choose whether to police \$5/hh - makes cheating impossible
- Unpoliced contracts have 25% chance of audit
  - If ANY illegal harvesting, ALL lose PES payment & harvest value, and pay \$70 fine
- 5 minutes to decide PES or not
- Group and individual decisions
- Trust and co-operation
- Self-governance





# Thank you!



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