

Markets and payments for environmental services

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TYPES OF ECOSYSTEM SERVICES

Carbon

Water

Biodiversity

Forest carbon

- **Ethiopia**
 - Natural regeneration project
- **Malawi**
 - Tree planting – 20,000 ha
 - Plan Vivo
- **Madagascar**
 - REDD in Makira forest – WCS
- **Mozambique**
 - Carbon trust – Envirotrade
 - Zambezi Delta
 - Sofala community carbon project CCB
 - Green Resources afforestation – 126,000 ha
- **Kenya**
 - REDD Kasigau corridor, 8000 ha, CCB
 - Afforestation in Karura forest UNEP
- **Tanzania**
 - REDD by TFCG, WWF and JGI
 - TIST
- **Uganda**
 - FACE Foundation;
 - Nile Basin afforestation – World Bank
 - REDD by JGI and WCS
 - Ecotrust afforestation
 - Global Woods – Kikonda
 - TIST
- **Rwanda**
 - Afforestation
- **Zambia**
 - REDD

Water

- **Kenya**
 - Lake Naivasha, WWF-CARE program
- **Tanzania**
 - Uluguru Mountains EPWS – WWF-CARE-IIED project
- **South Africa**
 - Working for water through removal of invasive species
 - Drakenberg mountain

Biodiversity

- **Uganda:** Bwindi Impenetrable trust fund
- **Kenya:**
 - Kitengela Maasai land lease
 - Shompole community trust – 62000 ha

Other

Uganda

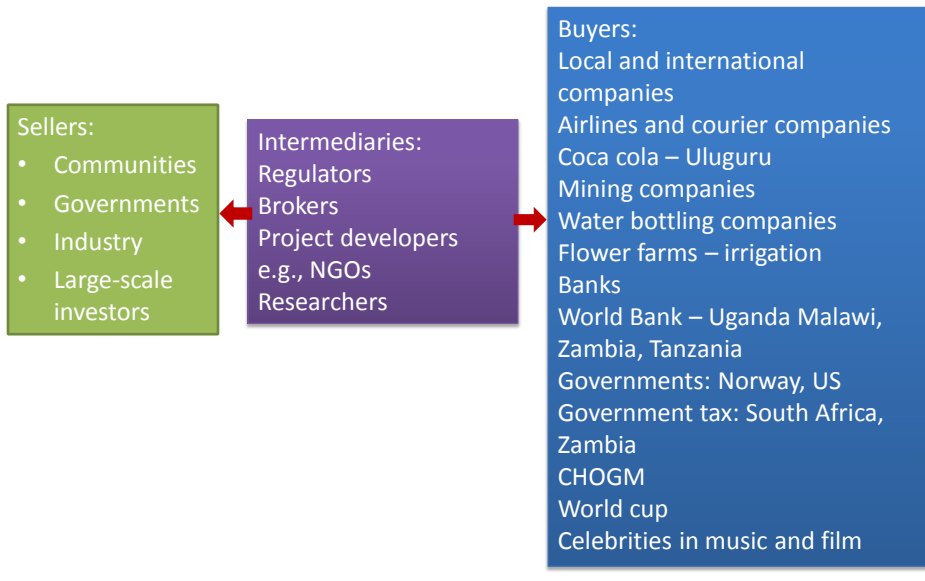
Landfill project – World Bank \$3000
 Urban stove improvement
 Hydro-dams

Kenya

Ken Gen 9 CDM projects
 Efficient cookstoves – cell phone-based micro-credit

South Africa: Landfill project

Actors



Roles and responsibilities

Sellers:

- Develop projects
- Monitor
- Ensure quality and quantity: verification and certification
- Ensure permanence
- Account for leakage

Intermediaries:

Setting standards
Regulatory frameworks for PES
Project development
Fund channeling
Research
Brokering
Negotiation
Communication among all actors
Market and legal information exchange
Stocking and peddling

TYPES OF MARKETS

Voluntary
Regulatory

Markets and price trends

- Carbon 2009: 8.7 billion tCO₂e; \$144 billion
- CDM: 211 Mt; \$ 2.1 Billion
- EU ETS: 6.3 billion tCO₂e; Value: \$118 Billion
- JI: 26 Mt; \$354 MM
- Voluntary: 46 Mt; \$338 MM
- One large electric utility's emissions:100MT

Forest carbon price trends

| Standard | Instrument | Mar 09 | June 09 | Sept 09 | Dec 09 | Mar 10 |
|----------|------------------------|--------|---------|---------|--------|--------|
| CCX | CFI v09 | \$2.00 | \$0.95 | \$0.10 | \$0.10 | \$0.10 |
| VCS | VCSUs | \$3-4 | \$4-5 | \$4-6 | \$4-7 | \$3-5 |
| CAR | CRT v09 Futs, Dec 2013 | n/a | n/a | \$7.24 | \$8.36 | \$4.70 |



Payment schemes

Commoditised payments – risk mainly on seller

- Payment in form of cash AFTER proving that a certain amount of service has been delivered
- Standards for proving: CDM, VCS, CCB
- Who proves: certified agencies
- Developed for carbon

Payment schemes

Co-investment - risk sharing

- Payment mostly in kind
- Community receive support based on agreement that they will change their landuse
- Community is paid based on evidence that sustainable landuse practices are adopted and maintained
- Payment not based on proof of ES delivery
- Common for water and biodiversity
- Ecotourism
- Benefit sharing
- Trusts
- Land lease
- Community based natural resource management

Payment schemes

Compensation for opportunities skipped

- Communities paid after quantifying the trade-off incurred by taking on sustainable landuse practices
- Requires quantification of the opportunities skipped
- Uses models
- Has been tried in Asia
- Buyers may not be willing to pay the actual value of opportunities skipped

Costs

- PDD development - once
- Monitoring - periodic
- Verification - periodic
- Validation – once
- Social impact monitoring – periodic
- Environmental impact monitoring
- Verification trigger
- Registration fees
- Certification fee
- Brokerage fee
- Sales tax
- Project implementation
- Legal advice
- Marketing

Likely PES pitfalls

- Perverse incentives
- Costs
- Relabeling of tired approaches
- Getting blown out of context – PES is additional to other approaches
- Not delivering – ES or livelihoods
- Creating expectations

Challenges and risks

- | | |
|---|---|
| ● Information – generation, access | ● Contracts tht cater for interests of key stakeholders |
| ● Complex | ● Co-benefits |
| ● Scale – aggregation | ● Safeguards |
| ● Brokering gap | ● Leakage |
| ● Financing the initial investment in PES structuring | ● Non-permanence |
| ● Elite capture | ● Loss of interest in case of long-term maturation period |
| ● New laws and institutions –MRV, enforcement | ● Opportunity cost of not expanding agriculture or not drilling oil |
| ● Fears of loss of sovereignty | ● Land ownership status of land stewards |
| ● Determining boundaries | ● Technical capacity of project implementer |
| ● Governance; funds and contract management | |
| ● Willingness to pay | |
| ● Willingness to accept | |

Potential for PES

- Geography: curricula and policies
- Diversity of services
- Diversity of schemes
- Diversity of beneficiaries
- Potential impact on environment
- Potential money saved by public and private sector
- Potential livelihood support
- Potential reduction in conflict

Thank you

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