Can Markets Protect Biodiversity?
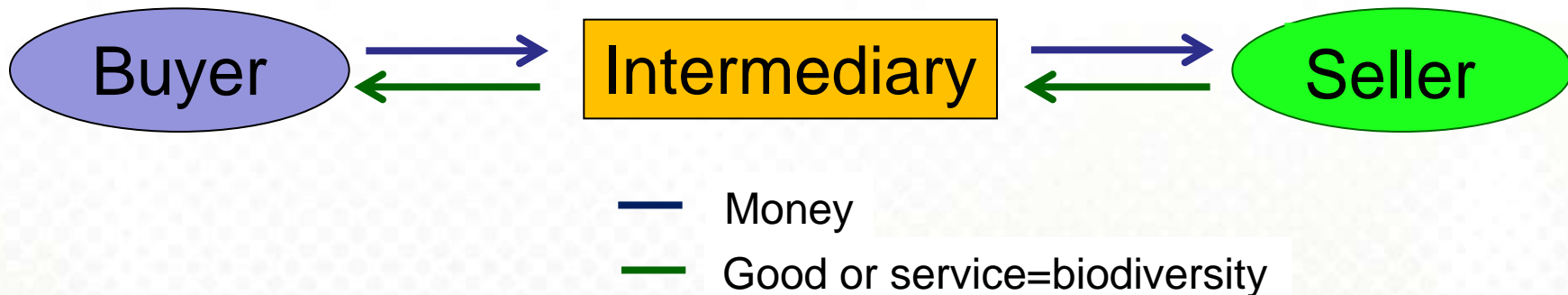# – An evaluation of different financial mechanisms

by

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What is a market in biodiversity?

Buyer → Intermediary → Seller

— Money
— Good or service=biodiversity

- It is, however, quite some distance from selling shoes to selling biodiversity

How to create a market in biodiversity?

- Challenge 1: Public good → all can act as free-riders. **Create rights and responsibilities**

- Challenge 2: Biodiversity as hard to define as a tradable commodity. Maybe **pay for proxies like land**

- Challenge 3: Different values involved (services, ethical issues etc.) → payments may not capture all values concerned (may even be offensive). **Be careful**

- Challenge 4: The number of actors is large → high costs of transacting. **Intermediaries will be core**. Much **power** will be placed here

- Challenge 5: Perverse incentives → people may destroy biodiversity to become potential sellers of their reproduc-tion. **Careful definition of rights and responsibilities?**

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Markets and governance

- Governance structure:
  - **Actors**: Firms, NGOs, state/public bodies etc.
  - **Institutions for interaction**: Markets, legal regulations/command, reciprocity etc.

- It is not market vs. state
  - **Private** and/or **public** actors etc.
  - Interaction via **market** and/or **legal regulations**/command etc.

Creating rights and responsibilities

- Rights and responsibilities (R&R) are core in environ-mental conflicts. Whose **interests** should be **protected**; e.g., the polluter pays principle; the provider gets principle

- Moreover, without R&R, no market

- The state has the power to define R&R

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- **Payments for environmental services (PES)** ('voluntary')

- **Procurement auctions**: The state defines a set of environ-mental goods which are next auctioned

- **Tradable development rights (TDR)**: The state/city/muni-cipality sets a **cap** on land for development. A developer can expand beyond his cap by paying others to develop less.

- **Biodiversity offsets/habitat banking (BO)**: The state defines goals for biodiversity → a **cap**. Liable actors may trade the ensuing responsibility

- Trade is thought to ensure that the goal/cap defined by a public authority is reached at **lowest possible cost**

- So, in the case of TDR and BO, it is the publicly defined **cap that protects the environment**. The money does not protect the environment. They are payments to compensate others to do the legally defined protection. The 'cap creates the money'.

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- Buyers and **sellers** need often to **be created** (organized)

- Rights are (implicitly) with **landowners** (provider gets)

- Size of the 'market': In 2009 about **1.470 mill USD** (1/10 of the similar market for water services) (Milder et al. 2010)

- Who are buyers: **99 % are public/state money** (97 % in developing countries). So PES is state subsidies. Reason: Most probably the free-rider problem and transaction costs

- Motivation: Given rights, there is a danger that landowners start e.g., to cut forests to become eligible for payments (cf. REDD experience).

EX 2: Biodiversity offsets

- A liability for habitat protection is defined – a type of cap

- Developers can next trade this liability to reduce costs. Together with the cap, this creates buyers. Assumptions:
  - **Opportunity costs** are lower in some areas. Development at site A is compensated by e.g., constructing a similar habitat at lower costs at site B
  - **Moving the habitat in space (and time** (banking)) is possible without important loss of value

- The problem of assuring equal quality in space and time – the issue of 'trading down'. High rates of non-compliance observed (e.g., Gibbons and Lindenmayer 2007). **Lower costs through lowered values...**

- Strong push from **financial actors**. The interest is very much in the trading (intermediaries)

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- Protection of biodiversity happens through establishing **rights and responsibilities**. This is state action

- Biodiversity is **difficult to define** as a tradable good/ service. Moreover, multiple values → limitations on markets

- **Transaction costs** are very high → limitations on markets

- The above also creates ample opportunities for intermediaries to capitalize on **information asymmetries** and '**trading down**' – delivering less protection than defined

Thank you!