Environmental Governance – Are Markets the Solution?

By Arild Vatn
1. Introduction

• PES is part of wider trend – increased interest in markets or ‘market-based’ solutions in environmental governance (EG)

• It is motivated by several arguments
  – Markets are more efficient that e.g., command-and-control
  – Expanded funding
  – Reduce the level of conflict

• The aim of this presentation is to characterize and analyze the wider picture of payments and markets in EG

• I will use PES, carbon markets and biodiversity offsets as core examples
2. Governance: Institutions

• Institutions are human constructs. They structure human interaction – the pervasiveness of human interdependencies
  – **Conventions** – practical solutions to coordination problems
  – **Norms** – support common values
  – **Legal/formal rules** – take side in conflicts

• Institutions influence
  – Who gets **access** to/can use what resources
  – People’s **perceptions and practices**
  – The **costs of interaction** (transaction costs)
  – The **rationality** or logic that motivate action

• My point of departure – in theoretical terms – is ‘classical institutional economics’
2. Governance (cont.)

Rationality and behavior

• Institutions operate as rationality contexts – they influence what kind of motivation that is expected. We may distinguish between three types:
  – ‘I’ (individual) rationality – what is best for me (maximizing individual utility))
  – ‘We’ (social) rationality – what is best for us
  – ‘They’ (social) rationality – what is best for the other(s)

  Note: The distinction between utility maximization and what is ‘right’

  Note: The process of defining what is right – e.g., best for the group

• Shift in institutional contexts – e.g., emphasizing individual vs. group rationality – results in shifting motivations. Often called ‘crowding in’ and ‘crowding out’

• Existence of environmentally friendly action, indicates presence of a ‘we’ or ‘they’ – i.e., moral motivation. Introducing payments in such situations, may result in a shift in motivation
2. Governance (cont.)

Governance structures

• Governance is collective action. It can be defined as the processes that **shape social priorities**, how **human coordination** is facilitated and how **conflicts** are **acknowledged** and possibly resolved

• Governance structures

  – **Actors**: economic and political; motivations and rights/responsibilities

  – **Institutions**:

  – **The resource regime**: The rules governing the economic process:

    – **access** to resources (e.g., property and use rights) and the **interaction** among economic actors (e.g., trade, command, reciprocity)

  – **The rules governing the political process** – i.e., the forming of the rules of the resource regime

    – Note the effect of institutions on **e.g., motivation and transaction costs**
I think the concept of market-based instruments is confusing. It is better to talk of markets as one among several economic instruments.
2. Governance (cont.)

Markets for ecosystem services (ES)

- Markets are characterized by the form of interaction being *trade*. Needs minimum one seller and one buyer – i.e., a market is a market even if it is not competitive

- Both *private and public actors* may operate in markets

- *States* play a crucial role in the creation of markets – e.g., rights; standards

- *ES* as a sub-category of the wider concept *nature values*
3. Markets for ecosystem services (ES)

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<td><strong>Complete</strong> (all transactions trade based)</td>
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Buyer ↔ Intermediary a) Intermediary ↔ Seller b)

Note that intermediaries may be private businesses, NGOs, but also public agents.
## Markets for ecosystem services (ES)

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<td>Certification schemes</td>
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<td>EU ETS – bilateral trades</td>
<td>EU ETS CDM (private buyers)</td>
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<td>Biodiversity offsets as banking</td>
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4. How big are these markets?

• PES: Is dominantly not characterized by trades/markets
  
  – Total volume in 2009: **23 bill. USD** – water, landscape, biodiversity and ‘voluntary’ land-based carbon projects. Of this about 90 % PES for public goods (Milder et al. 2010)
  
  – Regarding the resources for the public PES component about **99 % comes from the public purse** (based on ibid.)
  
  – Only a minor part of these resources are used to trade.
  
• Carbon markets (cap-and-trade): **176 bill. USD** in 2011 (World Bank 2012)
  
• Biodiversity offsets (not all is market/banking): **2-3 bill. USD** (Madsen et al. 2010)
4. How big are these markets? (cont.)

What explains this picture?

• Motivation: ES are dominantly common goods (public and/or common-pool)
  – Free rider problem
  – In cap-and-trade systems the cap ‘forces action’. Protection is in the cap. Trading is to reduce costs following the cap
  – Markets foster self-interest

• Transaction costs (TCs)
  – Markets for commodities → rather low TCs
  – Markets for common goods difficult to establish
  – Public solutions have typically lower TCs – can force payments; can in many instances utilize existing systems to raise funding (e.g., add a fee to the water bill)
5. Should we aim for more markets?

• In a discussion of this, I will emphasize three issues
  – Motivation
  – Financialization
  – Transaction costs
5. Should we aim for more markets? (cont.)

Motivational issues

• We need to distinguish between payments and markets

• Introducing payments for common ES may result in different types of responses

• Payment as compensation for lost income when e.g., establishing reserves is ‘easing’ the relationship between the land owner and the state. Often legally prescribed

• Payments as incentives to protect may have different effects
  – It may work ‘as expected’
  – It may result in shifts from e.g., social (‘We’) to individual (‘I’) rationality (‘crowding out’)
  – It may lead to strategic or opportunistic action – ‘hyper egoism’
    (The last two categories are not well distinguished in the literature)
5. Should we aim for more markets? (cont.)

Motivational issues (cont.)

• What markets add to payments as compensation/incentives, is that the level of protection is decided through the process of trade. (Not cap-and-trade markets, where the level/cap is politically defined)

• Demands the ES transformed into a commodity

• Allocation will be based on calculation of risk and profits and not on political judgment

• Due to the ‘free rider dynamics’ one may not expect markets to expand much. There are some opportunities, though like forest bonds

• Forest bonds may be issued by private actors or states.
  - Proposed to be used to invest in forest enhancements
  - Is a form of debt and demands interest + full value back upon maturity
  - To the extent that protection reduces profit opportunities, the public seems to have to guarantee the profits
5. Should we aim for more markets? (cont.)

Markets and financialization

• Financialization is turning tradable commodities or debt in these into financial objects that can themselves be traded – e.g., securitization (bundling and tranching) and derivatives. The gains from trade are linked to the development in the so-called ‘underlying’, which may be a forest bond.

• Market trades involve risk and actors want to protect them-selves as much as possible against these. Hence, financiali-zation is a ‘must’ in the case of ‘free markets’ – but also an opportunity for speculation.

• Financial operations like leveraging may increase the opportunities for making profits (through arbitrage) – but is in itself costly + increases risks further.

• Financialization creates a disconnect to the ‘underlying’. It offers gains mainly for the financial sector itself.
5. Should we aim for more markets? (cont.)

**ES and transaction costs (TCs)**

- TCs vary substantially with type of governance system and type of good

- A core challenge relates to most common ES being i) processes; ii) often highly **specific and complex**
  - The first point makes it **difficult to commoditize** the ES. Often one has to link the trade to a proxy – e.g., eco-tourism
  - The second implies that each trade is particular

- Public systems cannot circumvent these challenges, but they can reduce costs by using command and it is easier to handle specificity and complexity/handle ES integrity better
6. Conclusion

• The main message: **Public engagement is crucial** for governance of nature values/ES; even in the case of markets. The importance of protecting the integrity of public judgment

• **Markets** are often inefficient in ensuring ES protection and delivery
  – The free rider problem
  – Transaction costs
  – Financialization

• **Private resources** are very important for ES governance, but will only be engaged in rather small volumes if not directed by action of states and municipalities

• ES are typically ‘local resources’ that demands local adaptation. Therefore, markets – when being a reasonable solution – must be **locally delimited**