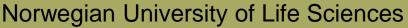# From theory to practice:
An institutional analysis of policymix for biodiversity and ecosystem governance

by

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Overview

- Institutions and governance
- Institutional analysis
- Categorizing policy instruments
- What do we observe?
  - Rights, obligations and interests
  - Motivations for action
  - Transaction costs
- Conclusion

1. Institutions and governance

- Governance can be defined as the processes that **shape social priorities**, how **human coordination** is facili-tated and how **conflicts** are **acknow-ledged** and possi-bly resolved.

- Hence there is one element related to **goal** formula-tion and one to **action** – including defining/chang-ing the institutional context/policy '**instruments**'

- Environmental gover-nance concerns then these issues as related to use and protec-tion of environ-mental resources

Governance structure

- **Actors**
  - **Economic actors**: Holding access rights to productive resources
  - **Political actors**: Being involved in defining the rules concerning (i) access to resources and (ii) interaction rules – i.e., rules for transfer of resources and products (goods/ser-vices and side-effects) between those having access to resources

- **Institutions**
  - **The resource regime**: The rules governing the economic process: (i) the access to resources and (ii) transfer of resources/products (i.e., goods/services and side-effects)
  - **The rules governing the political process** (typically constitutional rules and collective-choice rules) – i.e., the forming of the rules of the resource regime

Resource regimes

An institutional structure – 'ideal types' of **access rules/property rights** and **interaction rules** – comparative analysis (markets are not **the** reference system). Each cell is specific regarding rights, motivations and transaction costs

Access rules: Property rights / Type of interaction rules	Private property	Public property	Common property	Open access
Exchange: Market type interaction rules				
Command: Public/state interaction rules				
Cooperation: Community based interaction rules				
No rules defined				

2. Institutional analysis

- Three core dimensions:
  - What **rights and responsibilities** are defined – what interests and values are protected?
  - How does the institutional structure influence **motivation**?
  - How does the institutional structure influence the costs of interaction – **transaction costs** (TCs)?
- There is no institution free environment. Hence, one needs always to observe 'what is' when proposing 'what could be'.

3. Categorizing policy instruments

- Standard categorization
  - **Economic** ('market based')
  - **Legal** (command-and-control (C&C)) **rules**
  - **Informational/educational**

- Economic instrument typically demand a legal basis – e.g., rights. Other rules may be needed defining the good/service to be traded, eligibility, information etc.

- At the same time there may be reasons to combine instruments beyond this – i.e., policymix:
  - Rights – e.g., compromises between C&C ('no right') and payments ('right to compensation') to increase legitimacy
  - Motivation – e.g., targeting different types of communities and/or rationalities
  - Complexity. A TCs element in this – e.g., combine very specific and more coarse systems; uncertainty and safe minimum standards

The main types

Legal rules ('command and control')		Information	Economic instruments (public or private control)	
Public provision-ing	Legal protection - Standards - Prohibitions - Prescriptions	Information - Technical - Normative Education/develop-ment of skills	Public measures - Taxes and fees - Subsidies - Fiscal transfers	Markets - Non-liability based (voluntary) - Liability based

Government/public action:

Defining rights (the resource regime) and interaction rules. Maybe also defining the service.

Types of markets

	Direct market	Market with intermediaries	
		Complete (all transactions trade based)	**Incomplete** (combination of trade-based and non-trade based transactions)
Non-liability based (voluntary)	Vitel case	Some PES systems Certification schemes	Most PES systems
Liability based	EU ETS – bilateral trades	Biodiversity offsets EU ETS – OTC CDM – OTC	Some CDM projects

Note that the state/government or other public agents may be intermediaries.

4. What do we observe?

- Turning to experience. I will focus at the three aspects previously emphasized:
  - Rights and responsibilities
  - Motivation for action
  - Transaction costs

4. What do we observe?
Rights and responsibilities

- Protection by command: Land owners have 'no right'

- PES: Voluntary → rights (implicitly) with land owners. If states are buyers (intermediaries), takes typically the form of subsidies.

- PES as compensation for commanded protection – mixed set of rights. Different systems
  - Compensation always offered - e.g., Nordic countries (Bergseng and Vatn 2009)
  - PES as a voluntary 'add on' to commanded area protection – e.g., Costa Rica (Barton et al. 2014)

- Biodiversity offsets → rights for development are being offered against a 'no net loss' rule – mixed set of rights

4. What do we observe?
Rights and responsibilities (cont.)

- Protection by command has created substantial levels of conflict
  - With *de facto* no or low compensation – e.g., Tanzania (Kajembe et al. forthcoming)
  - With compensation – e.g., Scandinavian experience (Hiedanpää 2002; Bergseng and Vatn 2009; Skjeggedal et al. 2010)

- A shift to voluntary protection has reduced conflict levels substantially. Norwegian experience is that compensations, how-ever, have increased somewhat (Skjeggedal et al. 2010).

- Competing rules regarding fairness and legitimacy

Photo: Anne Sverdrup-Thygeson

4. What do we observe?
Motivation

- Three main issues:
  - Institutions influence what **rationality or logic** is expected/ fostered – e.g., individual vs. social rationality; free rider problems; 'crowding out'
  - The specific **cultural context** into which a policy is introduced influence responses to a policy/policy instrument
  - **Payments** are not necessarily transformed into changed **actions**.

- Payments may work as expected. Nevertheless, a lot of care needs to be involved when forming policies not least because we here enter an area where normative/ moral issues are so central

Rationality

- Common goods and the **free rider problem** → public action dominates where action is voluntary. 99 % of resources for PES for common goods/services are raised by public bodies using command power (Milder et al. 2010) (TCs play a role also – see later)

- Possible shifts to **opportunistic behavior** →compliance issues; intermediaries and **information asymmetries**. Experiences from CDM (Ostrom 2009) and biodiversity offsets (Gibbons and Lindenmayer 2007; Spash 2009)

- Indications that people finding protection to be **morally right** do not enter PES programs – e.g., Primmer et al. (in review).

- 'Crowding out'?

- The need for 'targeting' different groups in different ways

Cultural context

- The effect of policies – whether legal, informational or economic – depends on **the existing cultural/ institutional context**

- Example: REDD+ payments in Kilosa (Tanzania).
    - **Could not pay** individuals **according to opportunity costs** (OCs) as those having high OCs – especially charcoal makers – were considered 'bad people'.
    - The higher level of **internal trust**, the more villagers want payments to go to the community (Vatn et al. 2013)

POLICY MIX

Payments and action

- Action following payments means changes in **meaning and habits** → an 'inducing transaction' (Hiedanpää and Bromley forth-coming). Hence, not a simple exchange

- PES/REDD+ etc. may demand profound cultural changes – e.g., abandoning slash and burn; new energy sources.

- Demands strong focus also on education. Must be understood as meaningful from inside, though

Transaction costs – general vs. specified policies

- One reason for policy mixes are transaction costs (TCs). The Tinbergen 'rule' does not hold in 'real life situa-tions' → trade-off between TCs and precision (Vatn 1998)

- Still, a need for policy mixes – e.g., general (fairly imprecise policy measures) forming the basis. Added to that a set of specified policy measures/actions.

- Example: Landscape amenities: Coarse acreage payments combined with legal regulations and/or payments for certain landscape elements

Transaction costs – typical levels

- Levels of TCs found for PES projects vary. Examples:
  - Wunder et al. (2008) document TCs for a set of PES projects. Document very high start-up costs. Sometimes at the level of 10 years of payments. Running costs much lower.
  - Barton et al. (2014) document TCs (running costs) in the order of 20 % or less of the contract amount in both Costa Rica and Norway and 25 % or less in Finland

4. What do we observe?
Transaction costs – explaining the variation

- Governance structure – command vs. trade
  - Command systems may reduce TCs substantially compared to trades – e.g., PES for water management
  - The situation may be different for biodiversity offsets

- The characteristics of the service/transaction (Rørstad et al. 2007). Illustration (only running costs):
  - TCs for a fertilizer tax was 0.1 % compared to the tax volume
  - TCs for a payment for specific landscape elements were 46 % compared to the payment

- Number of actors – e.g., costs may be lower if communities as opposed to individual are involved (Corbera et al. 2007)

- Conflict level
  - The shift from prescribed to voluntary forest protection in Norway reduced TCs for the administrative body from 35 till 20 % of total costs (Skjeggedal 2010)

POLICY

5. Conclusion

- When analyzing policies – mixes or not – do not start off from 'nirvanas'. Analyses must be **comparative**. (We should ban concepts like 'market failure')

- The concept of **governance structures** is one way of basing such comparative analyses. It emphasizes the interaction between actors and institutions – rights; motivations and TCs

- **Policymix** is a rational **response to complexities** – environmental, motivational, TCs and legitimacy

- It is also a response to **conflicts in policy making**, and changes in 'policy fashions'.