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How and why forest managers adapt to socio-economic changes:

A case study analysis in Swiss forest enterprises

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Content

- Background and central questions
- Theoretical approaches: learning concepts
- Method: Case studies in 6 forest enterprises
- Some results with respect to new ecosystem goods&services
- Analysis of explaining factors for learning in forestry
- Conclusion and outlook

Background

- Profound changes in Swiss forestry
 - New demands towards forestry
 - Internationalisation of the timber market
 - Increasing timber production costs
- Possible reactions of forest owners and enterprises?
 - Muddling through
 - Adaptation by innovation

Questions

- How do forest enterprises react to these changes?
 - Business as usual?
 - Innovations?
 - Production of new ecosystem g&s
 - Shift in ecosystem g&s categories?
- What are explanatory factors for learning processes and the production of new g&s?
- Did Swiss forest enterprises learn?

Interorganisational learning

Assumption: Innovations as outputs of learning processes

- Defines learning as the introduction of new outputs (here products)
- Focusing on collective actors and organisations without neglecting individual choices.
- Unit of analysis here: forest enterprises

Hypotheses

H1 Reaction to changes: expanded production towards cultural and regulating services

→ The degree of innovation and their quality

H2 Not only impulses induce learning processes:

→ a variety of internal and external factors.

H3 Learning forms and adaptation potentials depend directly on dominant policy instruments.

Empirical steps

1. Did learning happen? Innovation activity and production of new ecosystem g&s
2. What “quality” of new g&s? → shift in categories
 1. Provisioning
 2. Cultural
 3. Regulating
 4. Supporting
3. What factors induce learning activities?

Case study: 6 enterprises

Forest owner	Forest enterprise
Municipalities	Lausanne
	Neuenburg
Local citizens' associations (Bürgergemeinde)	St. Gallen
	Bern
Corporations	Schwyz
	Luzern

- Public ownership
- Located in agglomeration zones
- Managed by forest engineer
- +/- best practice

Hypothesis 1: New ecosystem g&s

Ecosystem categories	Goods & services	Number of innovation
Provisioning	Timber products (firewood, timber material for furniture and decoration etc.)	11
	Non-timber products (honey)	1
	Wood energy	5
Regulating	Security (erosion and land slide protection)	4
Cultural	Recreation (nature trails, sports, aesthetics) and education (school excursions)	35
Supporting	Biodiversity and biotopes	5

Hypotheses 2 + 3: Factors explaining learning processes

■ External factors:

- Forest ownership
- Decrease of returns in timber production
- Public contributions and subsidies
- Legal restrictions

■ Internal factors:

- Size
- Business strategy
- External contacts

Hypotheses 2+3: Results

- Main driving forces for learning are (H2):
 1. The decreasing (financial) importance of the key product (round wood) → impulse
 2. External contact with other stakeholders → learning from the model
 3. A strategic planning of the forest managers in cooperation with their employees and the forest owners → Trial and Error

- Learning depends on dominant policy instruments (H3)
 - Financial incentives and legal restrictions do not seem to be strong impeding factors for the production of new ecosystem g&s.

Main findings

- Identification of learning processes
 - Indicators: new ecosystem g&s
- Shift from provisioning to cultural and regulating services
 - No replacement of classical provisioning services, but complemented
- Driving forces for learning internal and external to enterprises; weak impact of regulations and public contributions

Conclusion

- Adequate combination: Interorganisational learning and ecosystem g&s approach
- Case studies: explorative study
 - Not representative, but open a new field
 - First insights in innovation activity and learning processes
- Analytical concept pertinent especially with respect to
 - Hypotheses testing
 - Ecosystem g&s approach

Outlook

- “Up to date” topic
- Research design can be enlarged
 - To a representative study → recommendations possible
 - To an international comparative study
 - To other context variables
 - “regular” forest enterprises
 - In rural areas
 - New conditions: increase in timber prices; international policy agreements etc.



Merci beaucoup de votre attention!