

Innovation systems and processes in the field of bioenergy

A cross-national analysis of differences and commonalities in DE, CH, IT, LV, F and FIN

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Key questions addressed

- What is specific about innovation processes in the bioenergy sector and how does this alter our understanding of rural innovation processes and systems?
- What kind of policies are needed to support innovations in the bioenergy sector?



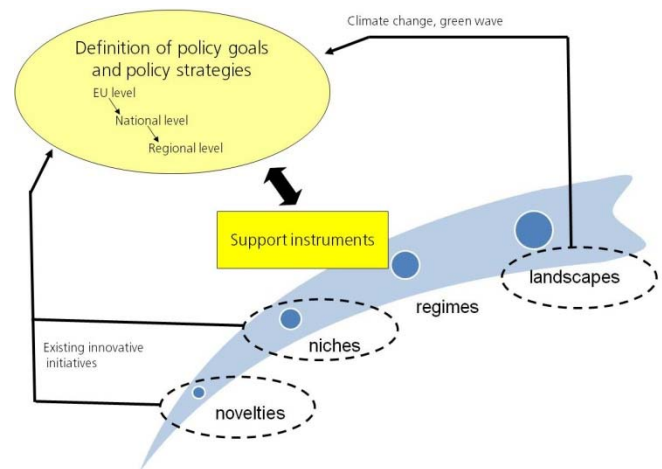
Biomass as a renewable energy source

All in-depth reviews and case studies are concerned with the use of biomass as a renewable energy source. Biomass is a very diverse energy source. It includes residues (primary, secondary and tertiary residues with highly variable physical and chemical characteristics) as well as energy crop production (rapeseed, cereals and perennial crops like willow or Miscanthus).

Variation in utilisation paths, actors and drivers

- Scale: large, industrial vs. small, artisanal, decentralized; international vs. communal/local
- Actors: private vs. public; private-public partnerships
- Drivers: industry-driven; regional-/communal-level government driven; local actor network driven

The wider context



Factors that affect the related innovation processes

Limiting	Enabling	Supportive framework conditions
<p>limited predictability of bioenergy markets and technological developments creating uncertainty</p>	<p>clear political agenda and commitment to the know ledge based bio-economy at EU and national level</p>	
<p>predominance of industry-driven developments and industrial-scale technologies</p>	<p>active role of local actors and SMEs; renewable energies considered as opportunity for agriculture and rural areas</p>	
<p>missing communal/local infrastructure hindering effective links between production, distribution and use of bioenergy</p>	<p>establishment of efficient supply chains; consumer awareness; new forms of collective action and communal-level partnerships</p>	
<p>focus on technological side of innovations and material investments</p>	<p>attention paid to organizational and social changes; more decentralised solutions appropriate to the needs of the local socio-economic context</p>	

