Developing Sustainable Value Chains

Sustainability assessment of entire forest value chains: Integrating stakeholder perspectives and indicators in decision support tools

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6-9 April 2008
Overview

Global Value Chains and Sustainability

Sustainability Indicator Set for the Forest-Timber-Building Chain

Integration into an Online-Tool

Conclusions
Overall Challenge Sustainable Development
Towards integrated product approaches to market change

- Quality of life
- Economic growth

- Use of nature
  - Efficient production
  - Satisfying consumption
  - Sustainable production and consumption
Global Value Chains
A concept of activities and flows

Value

Monetary flows

Consumption

Retailing

Production

Material flows

Material processing

Raw material extraction

End-of-Life

Information flows

Structural embeddedness


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Sustainable Global Value Chains
Requirements and Tools

Sustainability
Directional safeness

Supply chain management
Development of effective supplier networks

Tools for sustainability assessment

Tools for network management

Market development tools

Tools for customer and user integration

Demand side management
Customer orientation

Development of sustainable value chains

Source: adopted from Fichter et al. 2007
Sustainable Future Markets for Natural Resources
Research Project: Holzwende 2020plus - Building with Wood

Basic Survey
Holzwende 2020 plus

- Perspectives for sustainable future markets in forestry and timber industry: Trend analysis, scenario development (market, technology, forest use, institutions), road mapping
- Operationalisation of sustainable future markets: Addressing definition, criteria and instruments

Implementation projects in cooperation with the building sector
Cooperation and customer integration into the forest and timber value chain

- Regional future markets for wood-based construction
- Networks for wood-based refurbishment
- Material alliances for future markets
- Virtual SME sector
  - Innovative construction of industrial and private housing
  - Opportunities for resource efficiency and employment
  - Innovation through new technologies
  - Value creation through timber house construction

Transfer
- Internet platform
- Book as final report
- Multiplier network
- Implementation strategy
- Training materials
- Training for multipliers

Evaluation and Improvement of Methods

Federal Ministry of Education and Research
Wuppertal Institute for Climate, Environment and Energy
LAIS HOLZBAU
CEBra
TECNAR

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Developing a Sustainability Indicator Set for the Value Chain
Addressing the Entire Value Chain

Value creation

- Resource extraction (forestry)
- Wood and timber processing
- Construction of building with wood
- Use and maintenance
- Refurbishment
- Deconstruction/Recycling/Disposal

Prolongation of buildings’ life span through refurbishment

Trade and logistics
## Developing a Sustainability Indicator Set for the Value Chain
### Addressing the Entire Value Chain

<table>
<thead>
<tr>
<th>Value chain phase</th>
<th>Sustainability initiatives (examples)</th>
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</table>
| Resource extraction (forestry) | **UN Agenda 21, Chapter 11** provides guidance on how and why to combat deforestation.  
                              | **Ministerial Conference on the Protection of Forests in Europe (MCPFE)** addresses issues on forests and forestry and declares recommendations for the protection and sustainable management on forests in Europe. |
| Wood and timber processing | **Chain of custody certification** certifies wholesalers, manufacturers and distributors who handle wood coming from forests certified according to standards such as FSC or PEFC. |
| Building with timber       | **natureplus label** European seal of quality for building products, construction materials and home furnishings that are environmentally friendly, do not have negative health effects and properly perform their function. |
| Use and maintenance        | **Holzabsatzfonds (German Timber Promotion Fund)** central marketing institution of the German forestry and wood processing industries |
| Refurbishment              | **Action Program Environment and Health North Rhine Westphalia (APUG NRW)** aims to strengthen the links between environmental and health protection; promotes to take health-related aspects in refurbishments (incl. pollutant-free indoor air) into account. |
| Deconstruction/ Recycling/ Disposal | **Waste Wood Ordinance (AltholzV)** lays down requirements for the recycling and energy recovery as well as for the disposal of waste wood on the basis of the Closed Substance Cycle and Waste Management Act. |
| Value-chain-wide           | **Global Reporting Initiative (GRI)** creates guidelines and standards in corporate sustainability reporting. |
Aspects identified for the product chain:
1. Sustainable forestry
2. Efficient market exploitation
3. Processing of regional/certified wood
4. Benchmarking/product labelling
5. Use cascades
6. Sustainability in the phase of planning
7. Utilisation of sustainable wood products
8. Sustainability during the construction phase
9. Improvement of living quality and safety
10. Cost efficiency in the operating stage
11. Sustainable end-of-life management

Aspects identified for the company:
1. Sustainable business management
2. Sustainability management in the value-chain
3. Empowerment, cooperation and networking
4. Competitiveness and innovation ability
Developing a Sustainability Indicator Set for the Value Chain

Indicators for the Assessment

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<tr>
<th>Category</th>
<th>Aspects of category</th>
<th>Indicators for Assessment</th>
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<tbody>
<tr>
<td>Product chain</td>
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<tr>
<td></td>
<td>1) Sustainable forestry</td>
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<td>11) Sustainable end-of-life management</td>
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<tr>
<td>Company</td>
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Conclusions
Integration into an Internet-based „Sustainability Check“
Developing Questions for each Indicator
Integration into an Internet-based „Sustainability Check“
Aggregation of Results
Internet portal for training at www.holzwende2020.de
Tool box for sustainable future markets
Overview

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Sustainable Future Markets
Conclusions

- Conditions for the development of sustainable value chains are innovation alliances (actor cooperation) and the early integration of users and customers in the process of innovation (consumer integration).

- A number of management tools can support the development of sustainable value chains. Some tools have been specified for “building with wood”.

- A value chain wide indicator set / assessment tool may support the decision making in SMEs in favour of sustainable development.

- Consideration of key stakeholders and consumer needs can help to identify key issues in the chain and facilitates the promotion of sustainability in global value chains.
Thank you!

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