Part B: SCORE!

Product-Services for Sustainable Consumption and Production

3rd SCP Workshop
21-22 October 2004, Tokyo

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Structure of the presentation

• Sustainable Consumption and Production: A Review
• Priority Areas of Concern: EIPRO
• Contribution of Product-Services: SusProNet
• Towards the Future: the SCORE! Project

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Sustainable Consumption and Production: A Review

• It is not about...
  • Designers developing sustainable solutions (and who then run away)
  • LCA specialists calculating hot spots (and think that they have then organised a move to sustainability)
• It is about ensuring that consumers have...
  • Needs/Attitude/Life style
  • Opportunities/Pressure/Life context
  • Abilities/Behavioural control/Influence on life
  ...that stimulate Sustainable Consumption
• And about...
  • Acknowledging that different levels of change need different approaches

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Levels of change

<table>
<thead>
<tr>
<th>What</th>
<th>Sustainability gains</th>
<th>Approaches</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Optimise systems</td>
<td>Marginal (&lt;50%)</td>
<td>Awareness raising</td>
</tr>
<tr>
<td>2. Redesign systems</td>
<td>Factor 2 (50%)</td>
<td>Awareness raising + offers of (most) sustainable solutions</td>
</tr>
<tr>
<td>3. Innovate systems</td>
<td>Substantial (&gt;50%)</td>
<td>Awareness raising + offers of (nearly) sustainable solutions + adapting context and framework conditions</td>
</tr>
</tbody>
</table>

A system is the the combination of:

- Production structure
- Interaction between demand and supply
- Consumption structure

1. Car energy label
2. Car sharing system
3. Low transport-need environment (Flandreundorf, Vienna)

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What are the main Hot Spots?

- Study: Environmental Impacts of Products
  - For EU's Integrated Product Policy
  - With Leiden University, Danish Technological University, and VITO (Belgium)
  - Must identify 'hot spot' products, given the total EU final consumption
- Some basic features:
  - January 2004-January 2005, 150,000 Euro
  - Track 1: Review existing (national studies)
  - Track 2: Use an existing Input-Output model and adapt that to the EU

Hot Spots in the EU: Track One

- Review a variety of national studies
  - RIVM, Dutch Namea
  - 2-0 LCA consultants: Danish Environmental IOA study
  - ETC/WMF: European resource analysis via IOA
  - Bio Intelligence/O2: Bottom-up extrapolation of LCAs, EU
  - VITO: Bottom-up extrapolation of LCAs, Belgium
  - Toolsust/University of Groningen: hybrid method for 4 cities in the EU, focused on Energy
- Results:
  - Consistent priority of Mobility, Housing/Energy, Food (70% of life cycle energy)
  - However, maximum breakdown into 50 final consumption categories
  - Not yet suitable to identify sectors for IPP

Hot Spots in Europe: Track 2

- Use and existing E-IOA from the US to 'model' Europe (CEDA 3.0 at CML)
  - Advantage: 500x500 matrix, high resolution
  - Only feasible approach to get an EU-like IOA with this resolution on short term
  - 'Forced' to emulate EU via
    - RAS method (adjusting to EU final consumption and known sector turnover data)
    - Total emission data
  - Results available end December but likely to confirm Track 1

Improvement options: Results from SusProNet

- SusProNet: Some basics
  - 2002-2004
  - 1.5 Million Euro
  - 6 Main institutes, 30 Industry members
- SusProNet is about Product-Services

Conclusion about Hot Spots

- The table shown last year is still valid

Product services: good for business, good for SCP?

- Good for business:
  - Business and consumers concentrate on 'core competences'; need more integrated solutions
  - Many products become commodities -> diversification is the only strategy to escape price competition
- Good for SCP?*
  - Smart: By starting with satisfaction, you have more degrees of freedom to design sustainable delivery systems
  - Stupid: 'Services are weightless' or 'If business focuses on PSS the sustainable paradise will follow'

References

<table>
<thead>
<tr>
<th>Final consumption domain</th>
<th>Approximate contribution to indirect and indirect energy use</th>
<th>References</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heating</td>
<td>25%</td>
<td>RIVM (2000)</td>
</tr>
<tr>
<td>Mobility (car use, transport for holidays, etc.)</td>
<td>25%</td>
<td>Nijdam and Wilting (2000), Hekk et al. (2004), Tukker et al. (2004)</td>
</tr>
<tr>
<td>House energy use (heating, lighting, personal care, clothes washing)</td>
<td>45%</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>25%</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>100%</td>
<td></td>
</tr>
</tbody>
</table>
Improvement options: Results from SusProNet
- SusProNet has almost completed a database with 200-250 PSS cases
- Attributes included:
  - PSS type (product, use, result oriented)
  - Environmental gains
  - Economic performance
  - Social performance
  - Drivers and barriers
  - Type of market: niche, main
  - How it started: product supplier, service supplier, new startup
- Large variety of cross-analyses possible but not yet ready

Improvement options: Results from SusProNet (2)
- However, initial results look like this:

<table>
<thead>
<tr>
<th>PSS type</th>
<th>Advantages</th>
<th>Disadvantages</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Product oriented services</td>
<td>Easy to implement Close to core business Incremental environmental benefits (50%)</td>
<td></td>
</tr>
<tr>
<td>2. Use oriented services</td>
<td>Medium (Factor 2) Changes consumer behaviour Very successful in B2B context</td>
<td>Low intangible added value = consumer acceptance difficult, because of ownership conflict etc.</td>
</tr>
<tr>
<td>3. Result oriented service</td>
<td>Radical (Factor x potential)</td>
<td>Risks: Liabilities How to measure result? Customer loses power over means</td>
</tr>
</tbody>
</table>

Other results
- SusProNet book: Greenleaf, Sept. 2005
- Edited Cluster Book
- Courses
- Spin off project on SCP: SCORE!

Sustainable Consumption Research Exchanges (SCORE !)
- Philosophy
  - For implementing SCP you need knowledge from
    - Business
    - Design
    - Consumer behaviour
    - Innovation at system level
  - You should focus at the 3 priorities mobility, food, housing
  - You should develop ideas and a testing/learning plan for them (SCORE cannot do research)
- Some basics
  - Co-ordination action
  - 8 core institutes, 20 members
  - 2005-2007
  - 1 Million Euro

Knowledge communities to be involved
- A system is the combination of:
  - Production structure
  - Interaction between demand and supply
  - Consumption structure
- Specialists:
  - Knowledge field:
    - KC1: Business developers
    - KC2: (Strategic) designers
    - KC3: Consumer scientists
    - KC4: Policy scientists
    - KC5: Mobility
    - KC6: Agriculture/Food
    - KC7: Energy/industry, e.g. consumer electronics
- Main object of analysis:
  - KC1: Business developers
  - KC2: (Strategic) designers
  - KC3: Consumer scientists
Note: co-operation sections shown on the basis of ETAP and the importance of the social scientific impact

Structure of Activities
- From end 2004: Exploring and exchanging concepts
- 2005-end 2006: "Empirical validation" of concepts with Best Practice in conversion to SCP chains
- Unit and end 2006: Conversion of concepts and communication

Milestones (Month)
- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.
- 8.
- 9.
- 10.
- 11.
- 12.
Focus per Event

<table>
<thead>
<tr>
<th>Workshop</th>
<th>Description</th>
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<tbody>
<tr>
<td>1</td>
<td>General platform for exchange of views how to realise sustainable consumption structures between the 33 Participants and Partners, from their own knowledge background.</td>
</tr>
<tr>
<td>2</td>
<td>Projects and knowledge centres</td>
</tr>
<tr>
<td>3</td>
<td>düzey per Event</td>
</tr>
<tr>
<td>4</td>
<td>The dissemination event is meant to disseminate the full lessons of the project to all relevant external parties.</td>
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Knowledge generation co-ordinated

<table>
<thead>
<tr>
<th>What</th>
<th>Projects and knowledge centres</th>
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<tbody>
<tr>
<td>1. Business development</td>
<td>- Sustainable consumption</td>
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<tr>
<td>2. Strategic design</td>
<td>- Sustainable consumption</td>
</tr>
<tr>
<td>3. Sustainable consumption</td>
<td>- Policy &amp; information instruments</td>
</tr>
<tr>
<td>4. Policy &amp; information instruments</td>
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Key results to be generated

<table>
<thead>
<tr>
<th>Main header</th>
<th>Result</th>
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<tbody>
<tr>
<td>1. Generating and disseminating best practice</td>
<td>- Describing best practice how to organise user awareness to reach sustainable consumption (3 sectors, 3 levels of change, interplay between 4 knowledge fields)*</td>
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Management structure

Advisory Board (proposed)

- Greening of Industry Network (GIN)
- Prepare
- O 2
- UNEP
- AIST

Support structure

- Sustainable business strategies
- Sustainable innovation strategies
- Sustainable consumption strategies
- Sustainable education strategies

<table>
<thead>
<tr>
<th>Coordinator team role</th>
<th>Advisory Board (proposed)</th>
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<tbody>
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<td>- GP</td>
<td>- Greening of Industry Network (GIN)</td>
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