Thematic Strategy on the Sustainable Use of Natural Resources

SDMI
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European Commission
DG Environment – G4
Werner Bosmans
Natural resources

RAW MATERIALS
- Minerals
- Fuels
- Biomass

FLOWS
- Solar
- Wind
- Tidal

LAND (USE)

MEDIA
- Air
- Soil
- Water
What is the Issue?
The Life-cycle

Growing technosphere

Extraction: 16 tons
To physical stock: 10 tons
Disposal: 6 tons

Source
Sink

Threats to ecosystem services!
Objectives and Approach

1. **Decoupling** - reducing negative impacts of resource use in a growing economy
2. Improving resource efficiency
3. Focus on key economic sectors

- Long-term framework (25 years) – 5 year revision-cycle
- Knowledge base
- Co-ordinating function to ensure enhanced coherence and efficiency & building on existing policies
- Life cycle thinking
Life Cycle Thinking

Environmental and health impact modelling

Climate change, Acidification, Summer smog, Ecotoxicity, Eutrophication, Ozone layer depletion, Radioactive releases, ...

Life Cycle Phases
- Production phase
- Use phase
- End-of-Life phase

Life Cycle Inventory
- Extraction of raw material A
- Extraction of raw material B
- Extraction of raw material C
- Production of parts
- Production of intermediates
- Production of electricity
- Production of final product
- Utilisation

Emissions
- Energy carrier extraction
- Material recycling
- Incineration
- Land filling
- ...

Resources
- Material and energy resource consumption, land use

Environmental and health impact modelling
- Resource depletion

Environmental and health impact modelling
- Resource depletion

Life Cycle Phases
- Production phase
- Use phase
- End-of-Life phase

Resource depletion
Benefits of Life Cycle Thinking

- Include whole life cycle of product: avoid shifting-of-burdens among life cycle phases and countries
- Consider all impacts on the environment, human health, and resource availability: avoid shifting-of-burdens among impacts
- Quantify impacts on absolute basis: enable direct comparisons of options, also of very different systems that have same functional unit

✔ Identifies opportunities for improvement of goods and services
✔ Supports more coherent and science-based policy making
✔ Allows flexible implementation and measures by private sector
1. Global dimension: **International Panel**

2. MS involvement for national measures by establishing an **High Level Forum**

3. Voluntary participation of sectors in economic **sector initiatives**

4. Building the knowledge base: **Data Centre**
   ⇒ To inform policy-makers

5. Development of **indicators**
Actions

Building the knowledge base

• Data Centre:
  – To bring together available information
  – To monitor and analyse
  => To inform policy-makers

• Data Centres on natural resources + products + waste

• EUROSTAT with DG ENV, JRC, EEA

• State of play: Terms of Reference – setting up

• Link with European Platform on Life Cycle Assessment (LCA): Supporting business and policy making with reference data and recommended methods on LCA for better practice in LCA use and interpretation
**Actions:**

*Development of indicators*

- **Objectives:** To measure progress, identify priorities and set targets
- By Eurostat, together with JRC and EEA - available in 2008
- How to measure “Environmental impact”?

- Related with **TARGETS**
  - Example in Annex 1 of the Resource Strategy: **in EU 15:**
    “expect a rate of 3% resource productivity improvements per year for the period 2000-2030”
  - Council conclusions 23 Oct 06: “calls on the COM and MS to set **targets** for resource-specific impacts and eco-efficiency in order to complement the strategy by the year 2010”
Objective: Decoupling

Decoupling resource use from economic growth:
“more value per kilogram“

Better eco-efficiency: “more value per impact“

Decoupling environmental impact from resource use
“less impacts per kilogram“

Economic activity (GDP)

Resource use (kg, km², kW…)

Environmental impact (“indicators“)
Link impact – resource efficiency (1)

E. van der Voet et al. - Leiden Univ., Wuppertal Inst. & CE Solutions
Link impact – resource efficiency

E. van der Voet et al. - Leiden Univ., Wuppertal Inst. & CE Solutions
=> What is the correct aggregation level for indicators?

E. van der Voet et al. - Leiden Univ., Wuppertal Inst. & CE Solutions

- “At the most detailed level, the level of individual materials, there seems to be no relation whatsoever between the weight of a certain material and its impacts.”

- “there appears to be a correlation between the [EMC-DMC relation for countries], which is [...] significant. This probably implies that the composition of material consumption does not differ that much between countries which are to a certain extent comparable in terms of their market structure and have extensive trade flows with each other.”

- “DMC is not appropriate as there is no linkage between environmental impacts and the underlying consumption in terms of kilograms. Also if the natural resource strategy is to contain long-term goals […] one may question whether on such a long time-frame the changes in impacts will still correlate with the kilograms.”
Existing projects (1)

- Eipro – Environmental Impact/ of PROducts. 70-80 % of impacts from:
  - food & drink
  - housing (buildings & occupancy)
  - (private) transport
- Impro (in progress): environmental IMprovement of PROducts
  - passenger cars
  - meat products
  - housing
- European Platform on Life Cycle Assessment (LCA)
- Green paper on Market Based Instruments to be completed soon

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<thead>
<tr>
<th>Eurostat</th>
<th>JRC</th>
<th>EEA</th>
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<tbody>
<tr>
<td>indicators and data</td>
<td>life-cycle impacts of natural resources</td>
<td>indicators and data</td>
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Existing projects (2)

• Potential of the Ecological Footprint (EF) for monitoring environmental impact:
  – Analysis of the EF as an aggregated indicator
  – Analysis how other assessment tools complement EF
    - e.g. HANPP (Human Appropriated Net Primary Productivity) index, and
    - SEEA (System of Environmental and Economic Accounts)
  – Elements for improvements of the EF methodology

• Strengthening the Knowledge Base:
  – Overview of significant resource trade flows and their environmental impacts
  – Database for world-wide contacts and inventory on natural resource flows and impacts
  – An expert discussion with stakeholders through workshops
Actions

Sectoral Initiatives

• Voluntary participation of sectors in economic sector initiatives:
  ❑ EU Strategy for Growth and Jobs
  ❑ Implementing the Community Lisbon Programme:
    A policy framework to strengthen EU manufacturing – towards a more integrated approach for industrial policy

• Together with DG ENTR

• Environmental reporting, indicators, targets, measures …
Actions
Subsidiarity

- MS involvement:
  - National measures and programmes
  - National monitoring mechanisms
  - National targets where possible

- Facilitator: High Level Forum / Meeting
  - “waste prevention and resource efficiency in a life-cycle perspective”

- Set up in 2007
International Panel on the Sustainable use of Natural Resources

- **Objectives:**
  - To provide independent advice
  - To contribute to knowledge base
  - To provide capacity building in developing countries

- **Members** (15-20): Internationally recognised experts

- **With UNEP** – which will host the Secretariat in Paris

- **Trust Fund:** to enable governments to support the Panel

- **Board:** decides on work programme

✔ Inaugural Panel meeting foreseen for Autumn
Achievements in the EU

• Significant **degree of political buy-in** at various levels

• Commitment by Commission AND European Council in **renewed Sustainable Development Strategy:**
  
  “avoid overexploitation of renewable resources, apply the concept of life-cycle thinking, break the link between economic growth and environmental degradation”

  “build on the EU Strategy on the sustainable use of natural resources”

• Council, in its conclusions of 23 October 2006, "welcomes the Commission's communication"

• European Parliament voted on 23 April 2007 on a resolution supporting the objectives and asking for more actions and targets
One Step ahead: SCP

• Forthcoming EU Sustainable Consumption and Production (SCP) Action Plan:
  – the Resource Strategy serves as conceptual framework
  – the Action Plan focuses on specific, implementable measures.

• Preliminary ideas for the SCP Action Plan (including a better coherence of existing initiatives):
  – Extension of eco-design
  – Green private procurement
  – Market-based instruments
  – Environmental targets (ETAP)
  – Reinforce Eco-label scheme and Eco-Management and Audit Scheme (EMAS)
  – Promoting sustainable consumption
The way forward

- The Resource Strategy offers a conceptual framework and an overarching objective
- It offers tools and orientation for other policies – e.g. *Waste - SCP*
- Challenges:
  - ✓ To have full commitment to the decoupling goal and life-cycle thinking
  - ✓ To integrate this approach into all policies
  - ✓ To develop concrete measures

This is not the end of a process but just its beginning
We need your contribution to develop the right policy indicators
Thank you for your attention

DG ENV - G4

Werner.Bosmans@ec.europa.eu

http://europa.eu.int/comm/environment/natres/index.htm