IMEA workshop 20 March 2009

Establishing a "basket of indicators" to monitor the use of natural resources

From an EEA perspective

Gorm Dige
(gorm.dige@eea.europa.eu)

ONLY ONE EARTH

EU =

2.5

Earths

US =

5

Earths

"The Resource Strategy"

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"

Objectives in "Resource Strategy"

- Decoupling - reducing negative impacts of resource use in a growing economy
- Improving resource efficiency
- Indicators needed

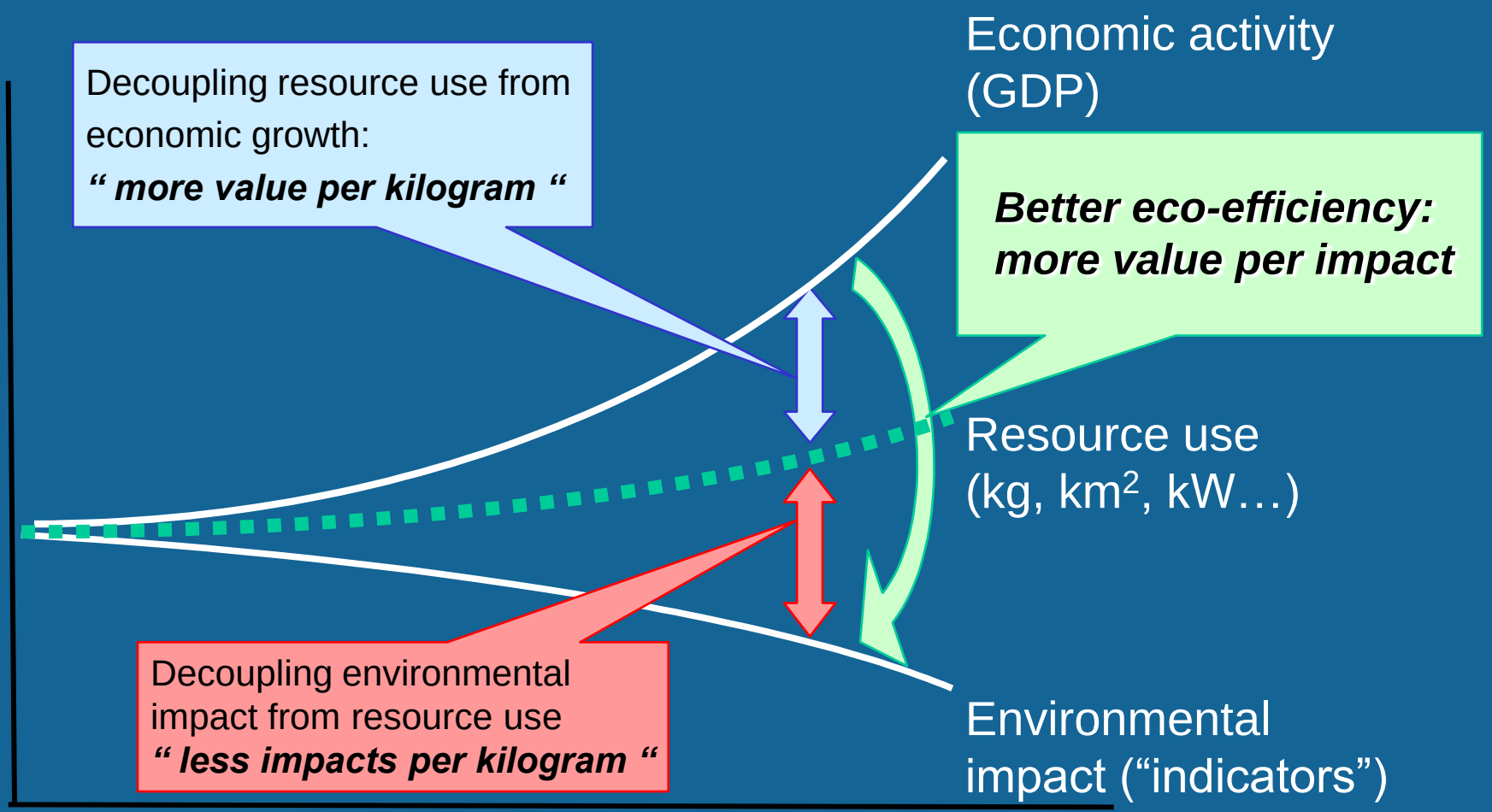
RAW MATERIALS
Minerals-fuels-biomass

MEDIA
Air
Soil
Water

LAND

FLOWS
Solar
Wind
Tidal

Measuring progress



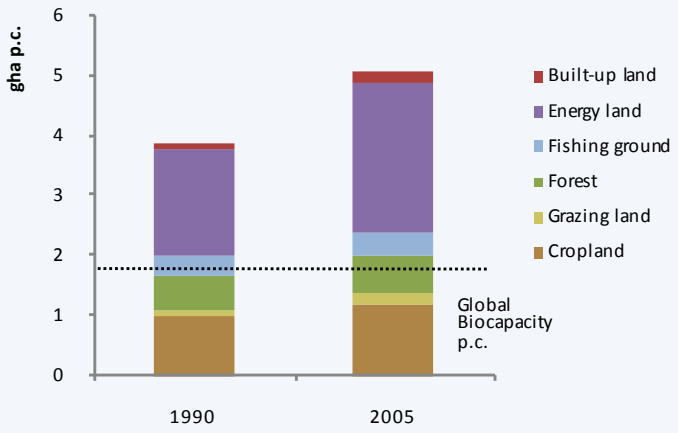
Actions - indicator development

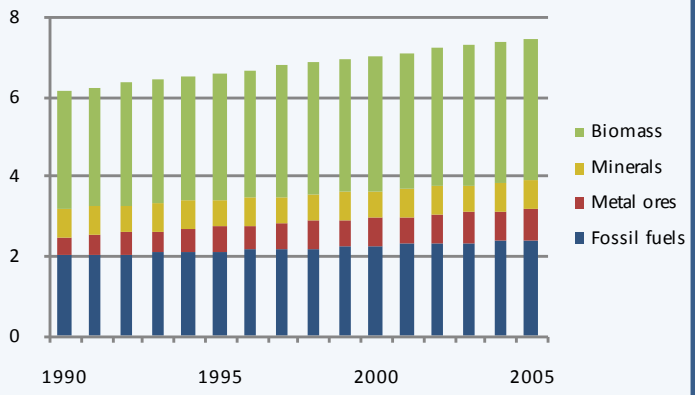
- Commission study on progress indicators http://ec.europa.eu/environment/natres/studies.htm
- EEA organised workshop 3 June 2008 in DG Env.
- Roadmap – "basket of impact indicators"

Which indicators to use?

- **How to measure "Environmental impact"?**
  - In study evaluated 25 tools / indicators
  - Main criteria: policy relevance, high scoring in evaluation and complementarity
  - An "indicator basket" with four complementary tools: EF, EMC, LEAC and HANPP

A basket of indicators on impact of resource use





EF

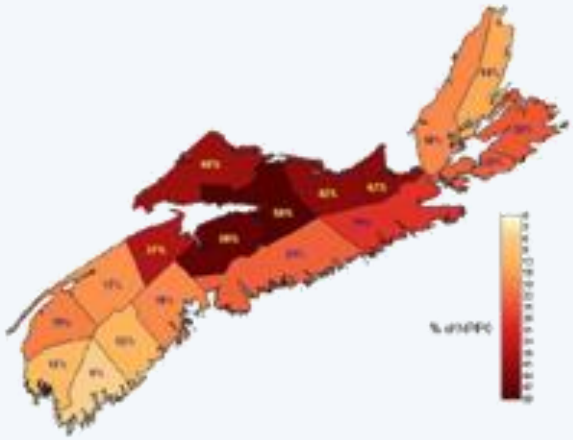
The per capita Ecological Footprint has increased 34% above 1990 levels, driven primarily by an increase in the use of fossil fuels. Resource use remains well above the Earth's available per capita biocapacity.

EMC

Data on Environmentally weighted Material Consumption reveal a steady increase in overall environmental impacts (particularly greenhouse gas emissions and eco-toxicity). Biomass and fossils are the largest contributors.

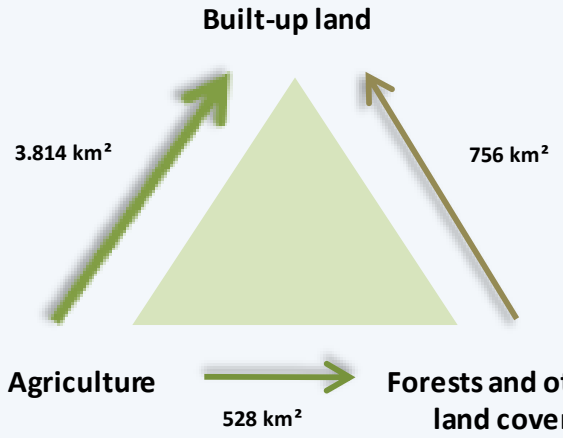
The intensity of human appropriation of biomass is low compared to other industrialised countries. Overall, pressure on biodiversity is low with few "hot spots" of intense human impact.

HANPP



The Land and Ecosystem Accounts show that land-use conversion is driven primarily by sealing of formerly agricultural surfaces. Forest and other natural lands have remained steady in recent years.

LEAC



Key findings in study

Tool	Impact categories	Complementary property in basket
EF	Resource consumption	Impacts of natural resource use on the regenerative capacity of ecosystems; assessments of carrying capacity and overshoot
EMC	Climate change Health and toxicity impacts	Climate change and impacts independent from absorption capacities
HANPP	Land use (Ecosystems and biodiversity)	Intensity of ecosystem and land use (Indirect: pressures on biodiversity)
LEAC	Land use (Ecosystems and biodiversity)	Socio-economic (sectoral) pressures on land cover and land use changes (Indirect: pressures on biodiversity)

Key recommendations in study

- Apply basket instead of single indicators
- Link with Eurostat & JRC / LCA initiatives
- Create joint data infrastructure
- Future integration of indicators

Next steps: Roadmap

Communication:

- What specific questions can each of the indicators / tools in the basket answer?
- What purpose does the basket of indicators fulfil in the policy process?

Production:

- How does the basket comply with int. standards?
- How achieve complementarities and make practical for policy makers?
- What would be top 3 “basket” improvements out of research agenda?

Research agenda: EF & EMC

Tool	Task	Time frame
EF	Reviewing current carbon accounting	short to medium term
	Reviewing method of capturing embodied energy and resources in traded goods and services	short term
EMC	Improvement of material consumption data	short term
	Validating EMC results against national statistical data	short term
	Increasing transparency and robustness of LCI data	short to medium term

Research agenda: LEAC & HANPP

Tool	Task	Time frame
HANPP	Improving data base for HANPP calculations	short to medium term
	Calculation of HANPP embodied in traded products	short term
LEAC	Development of aggregated LEAC-based indicators	short to medium term
	Specify relations between land cover and land use	medium term
	Further development of integrated LEAC system	medium term

First outputs from roadmap

- Indicator based assessment by end 2009 to support simultaneously the following four processes:
  - The resource strategy and its review,
  - Beyond GDP
  - JRC / Estat indicator work
  - The EEA Environment state and outlook report (SOER) 2010.

Thank you!