

“What European strategy to promote dematerialization?”

15.3.2010, Brussels

European resource consumption and resource efficiency in a global context

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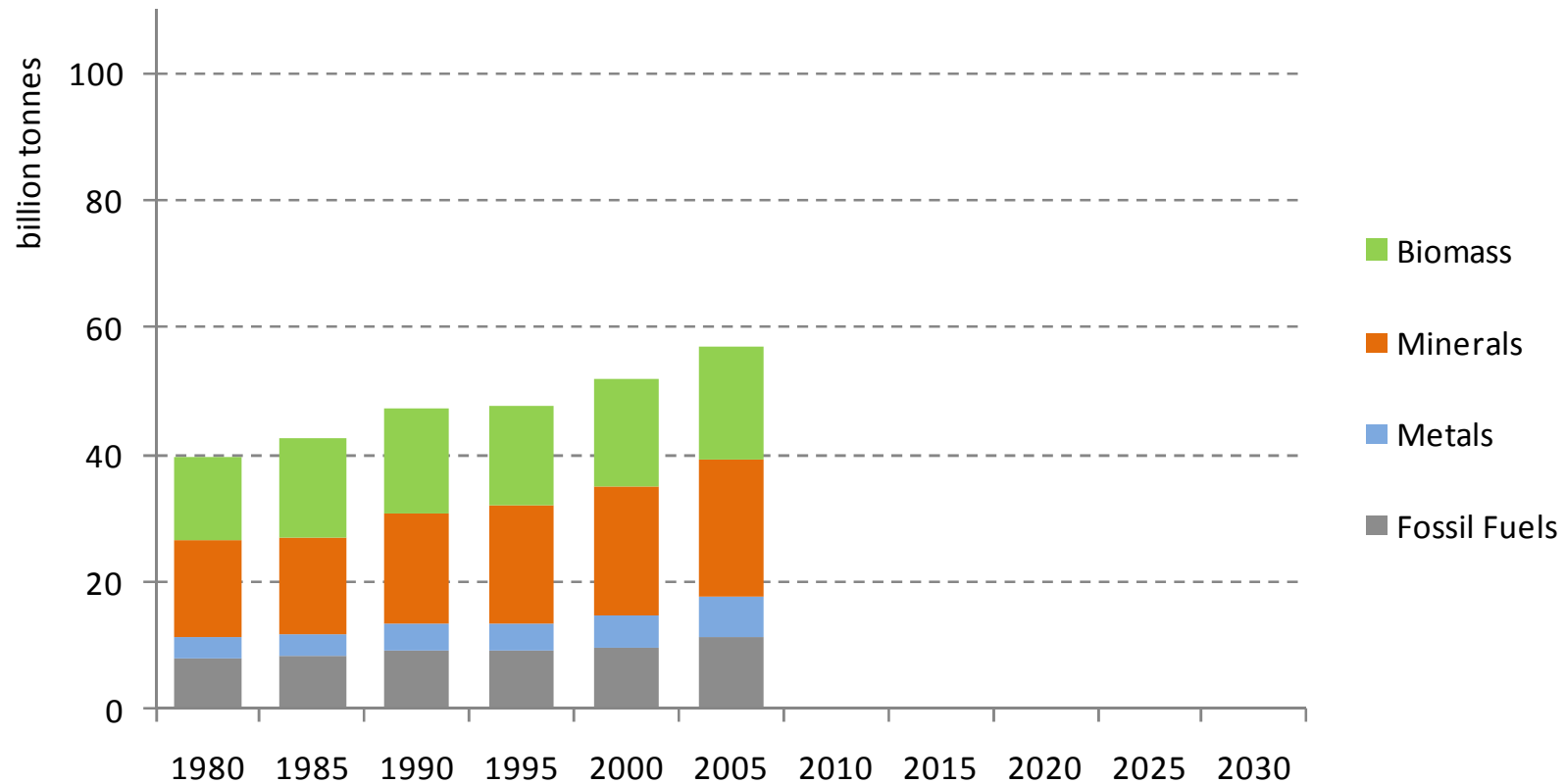
Content



1. Global trends of resource use
2. Resource efficiency and resource consumption
3. The “double-decoupling” strategy of the EU
4. Conclusions for the revision of the “Resource Strategy”

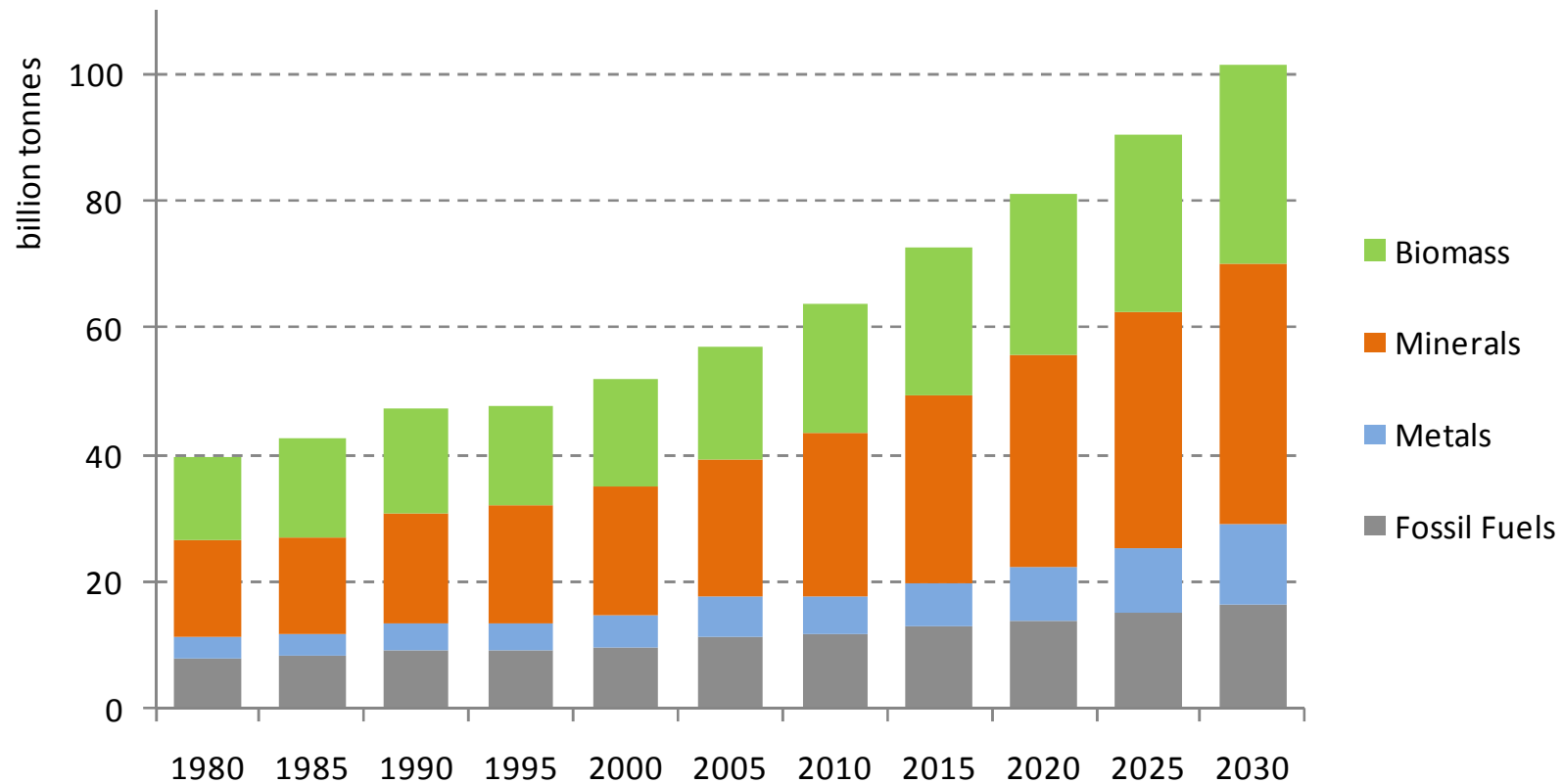
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Global resource extraction, 1980-2005



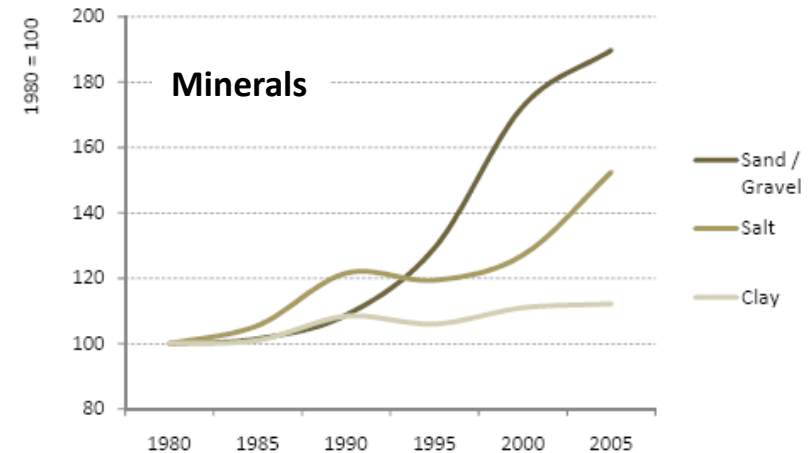
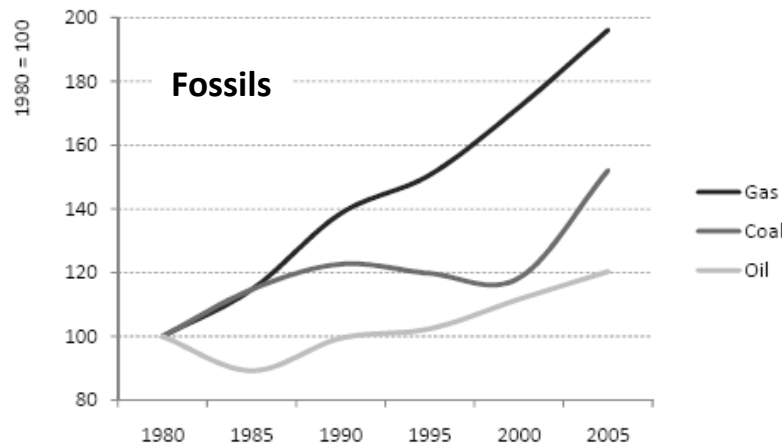
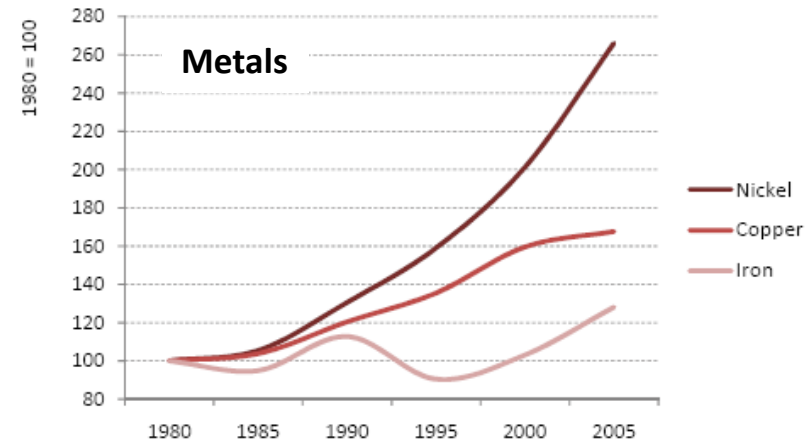
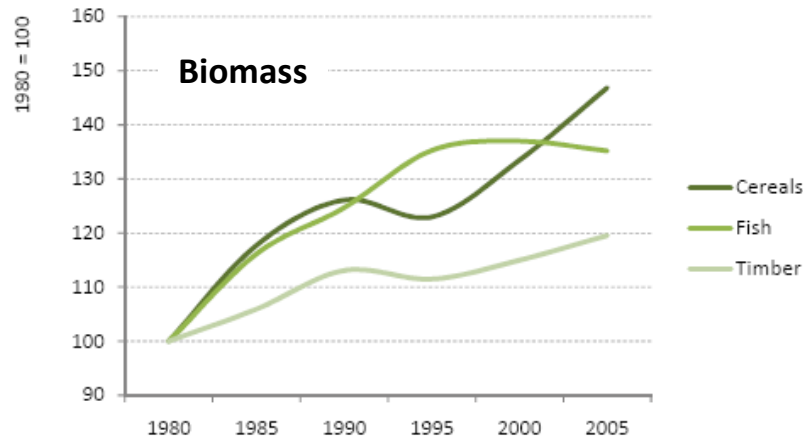
Source: www.materialflows.net

Shares in global extraction, 1980-2030



Source: www.materialflows.net and Lutz/Giljum, 2009

Global resource extraction, 1980-2005



Source: www.materialflows.net

Environmental problems of resource use



Global resource use

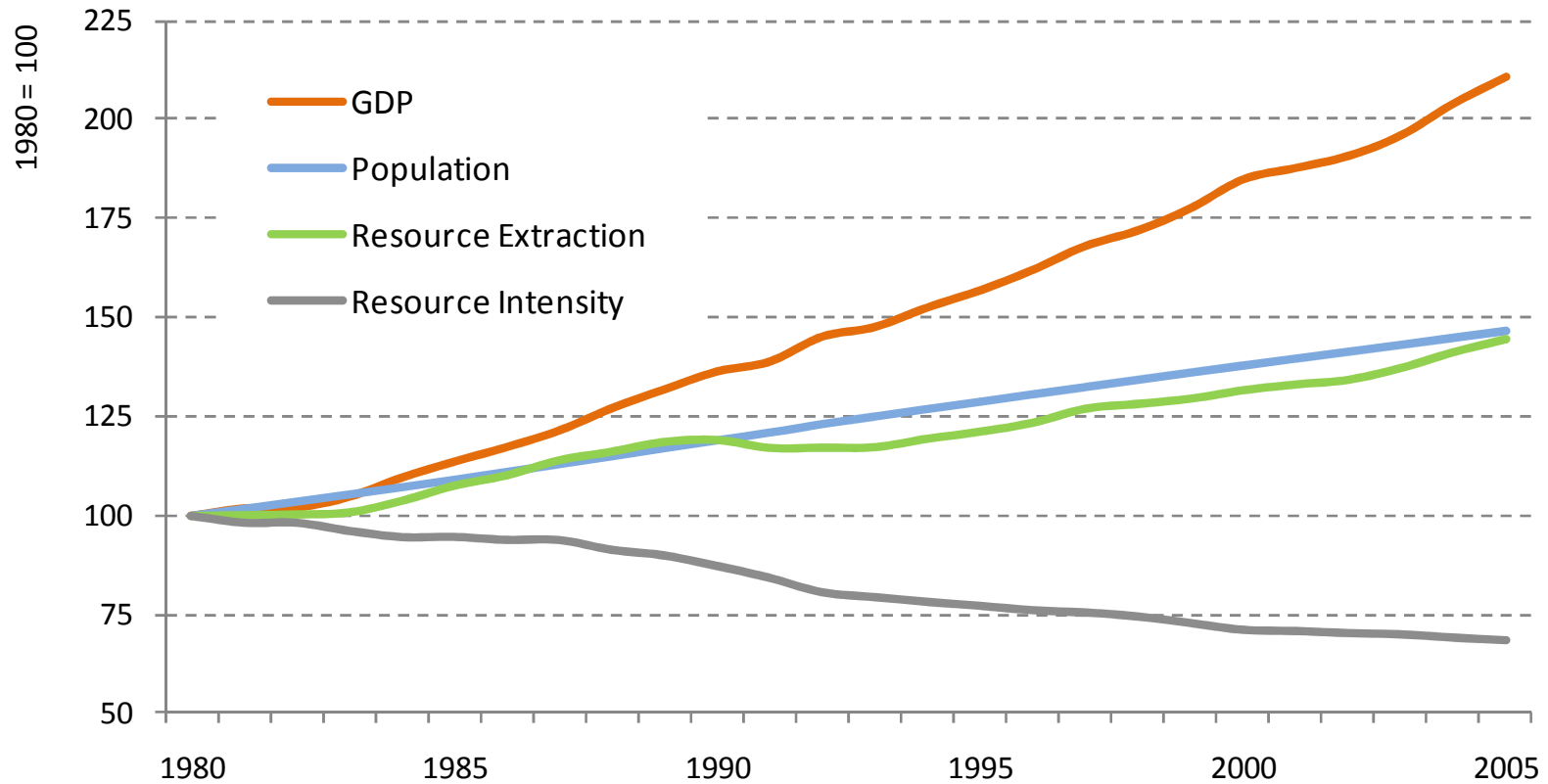
- **Unsustainable trends** of global resource extraction and use
- 80% of world population still live in **poverty** (< 10 US\$ per day) → need to increase consumption
- How to achieve high quality of life for 9-10 billion without **overusing** ecosystem capacities & **conflicts** over scarce non-renewable resources?
- High-consuming countries (incl. Europe) need to **reduce their resource use** in absolute terms

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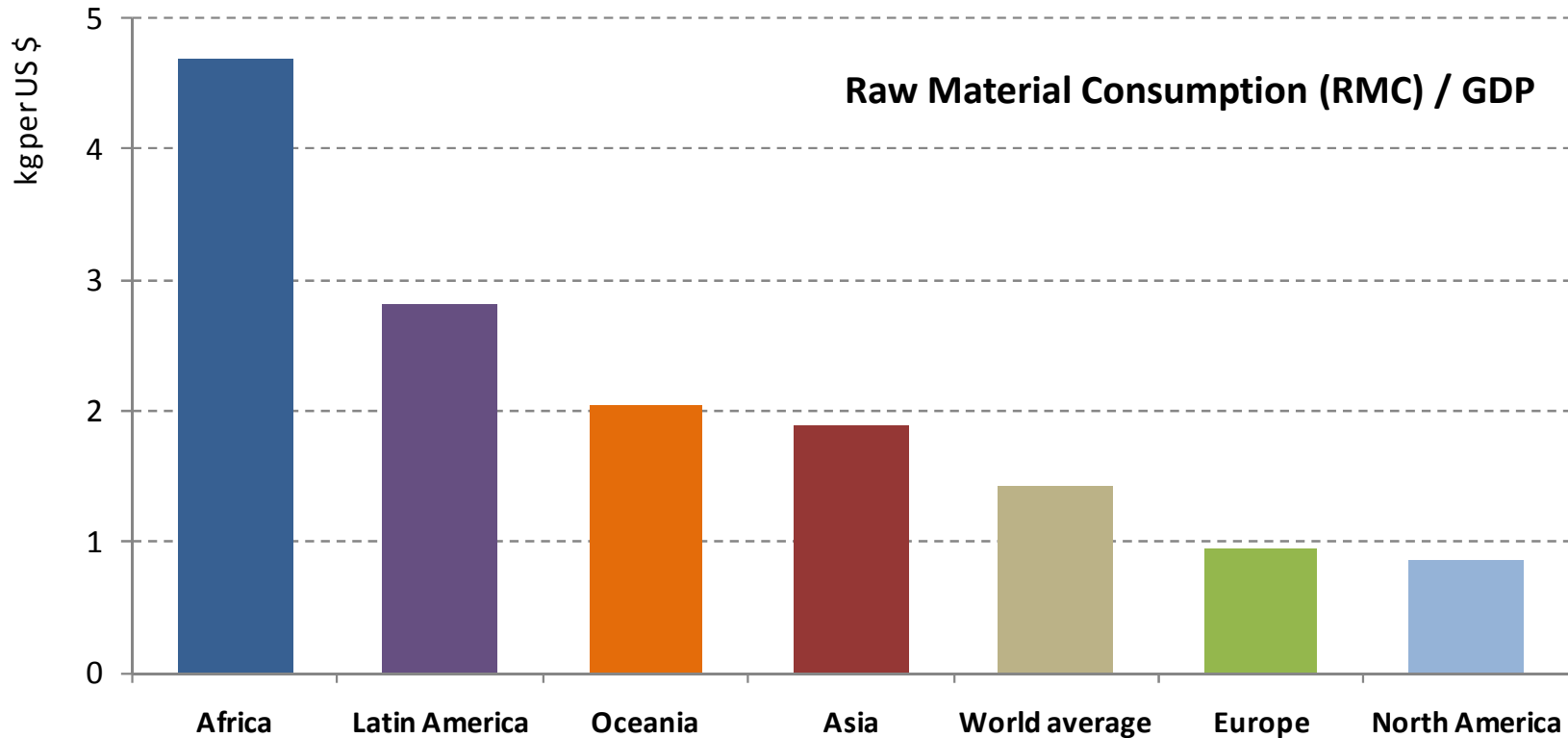
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Global relative de-coupling, 1980-2005



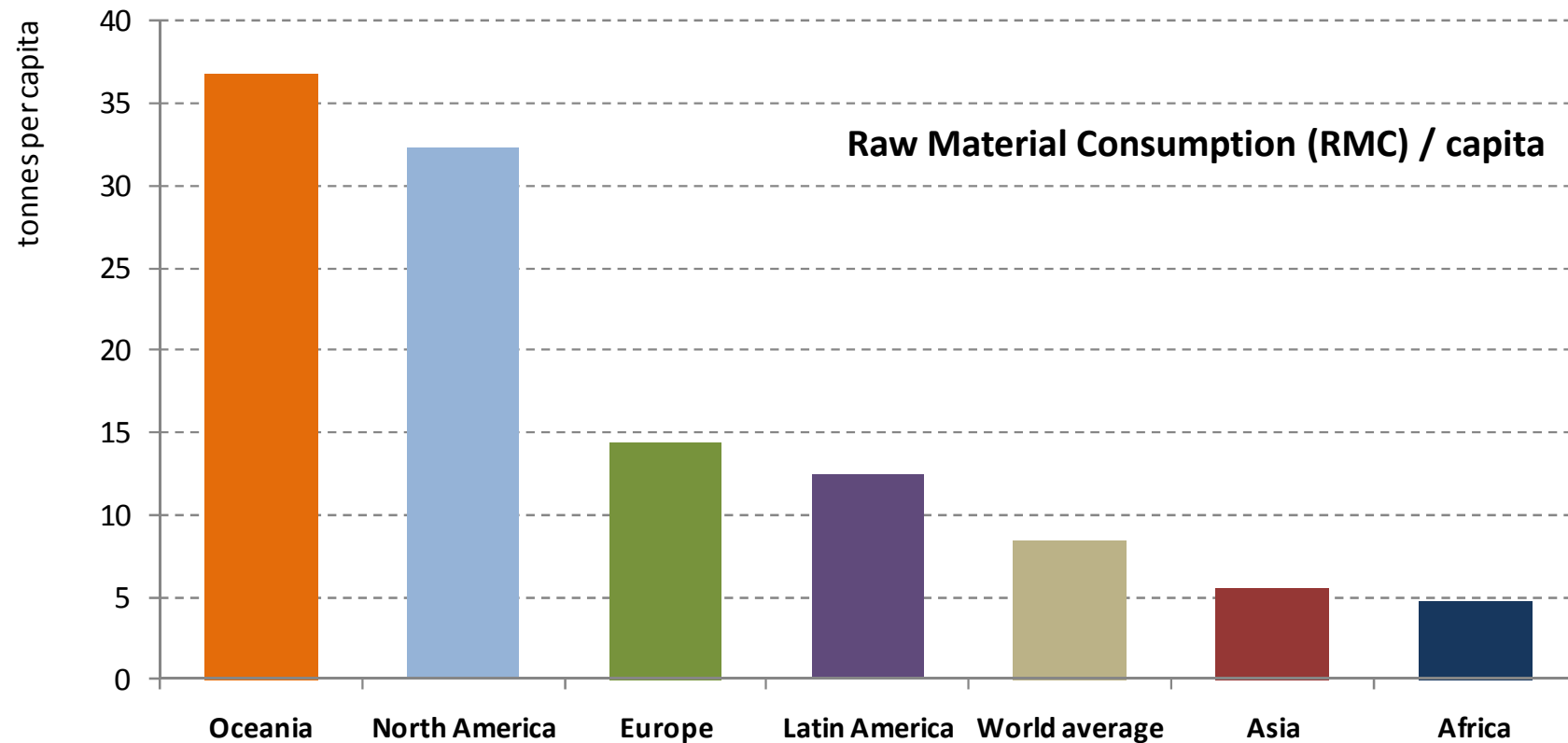
Source: www.materialflows.net

Resource intensity of consumption, 2000



Source: SERI and Friends of the Earth, 2009

Resource consumption per capita, 2000



Source: SERI and Friends of the Earth, 2009

Efficiency and consumption

- Relative de-coupling (Europe & global)
- High efficiency \leftrightarrow high consumption
- “Resource Strategy” needs to address rebound effects
- Concrete policy instruments
 - Increasing efficiency of companies & products (“eco-innovation”)
 - Limit / reduce resource use on macro level (e.g. resource taxes, resource trading schemes, etc.)
 - Increase information for companies and consumers

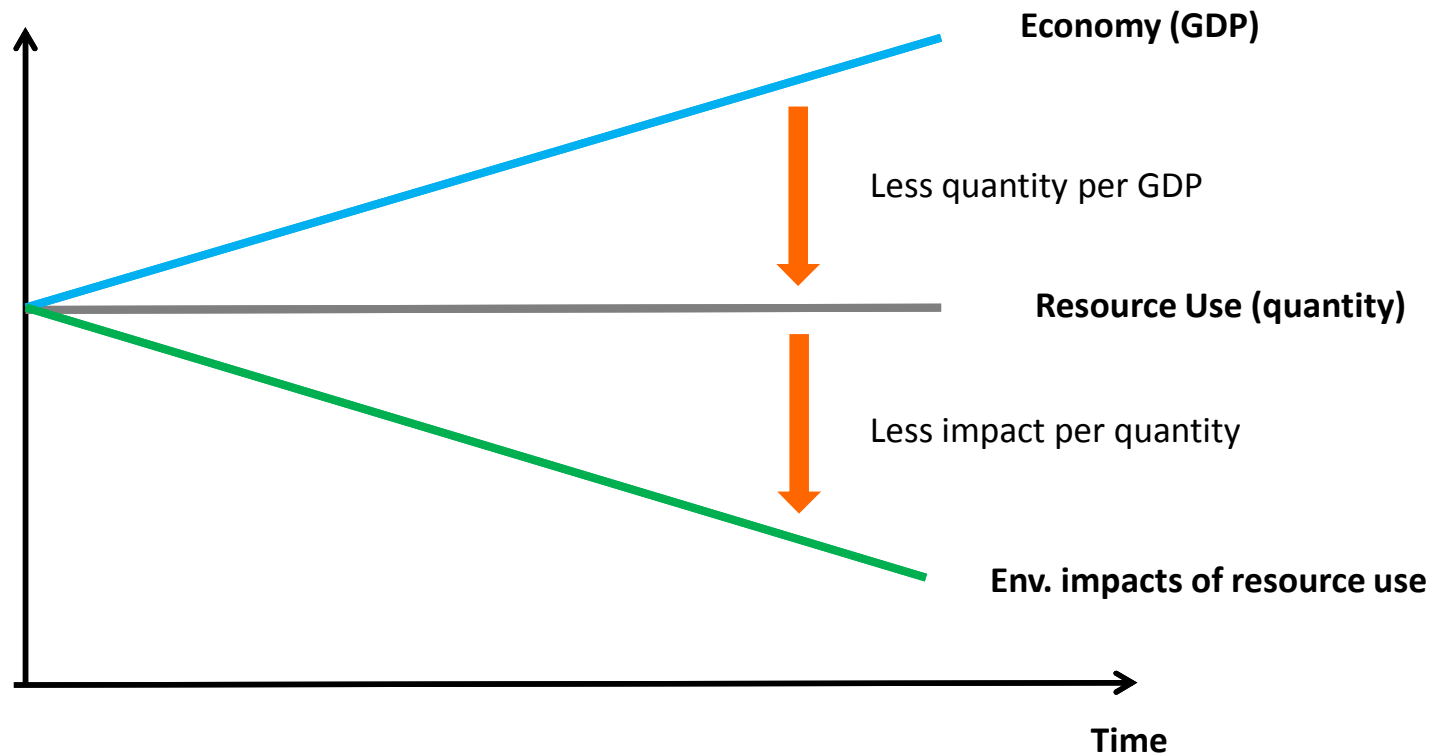
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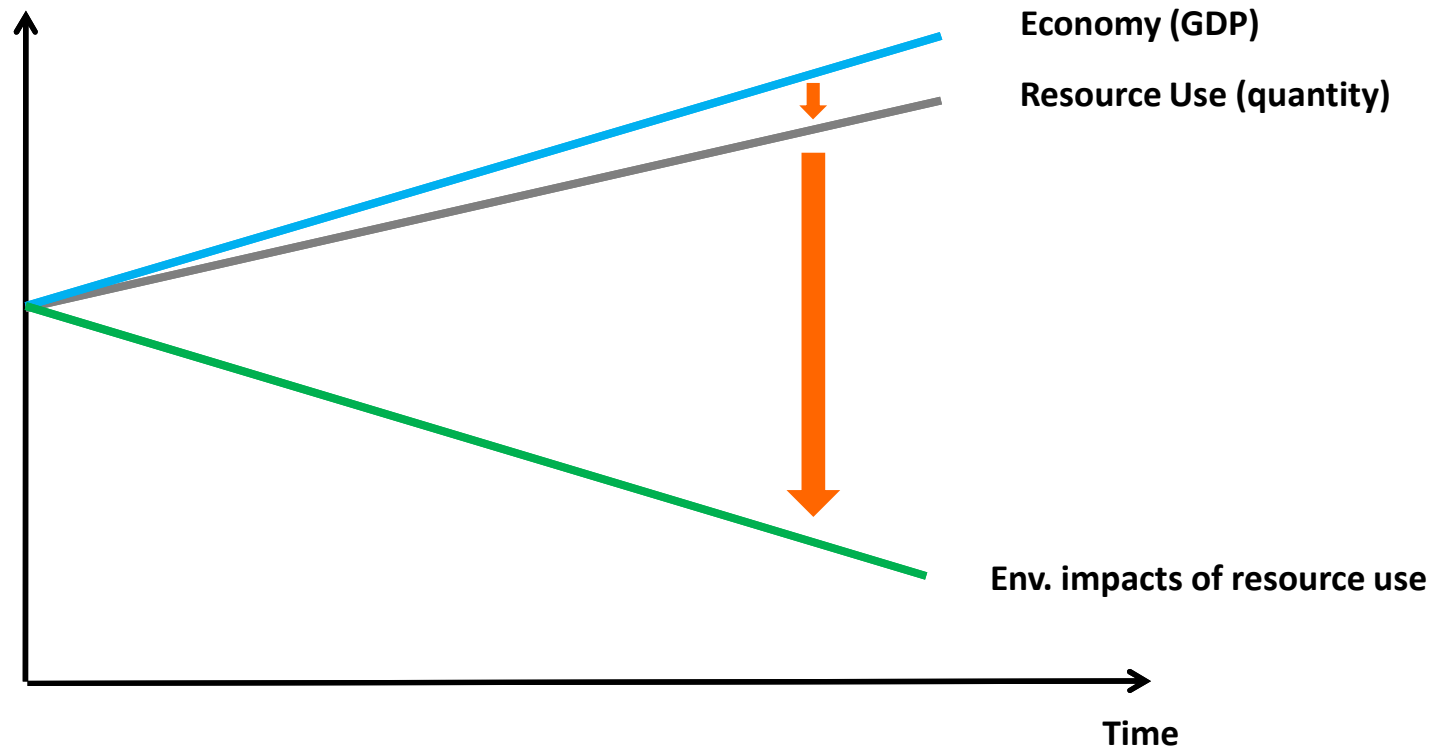
Strategy of Double De-coupling

Resource Strategy: “double de-coupling” GDP from negative environmental impacts related to resource use



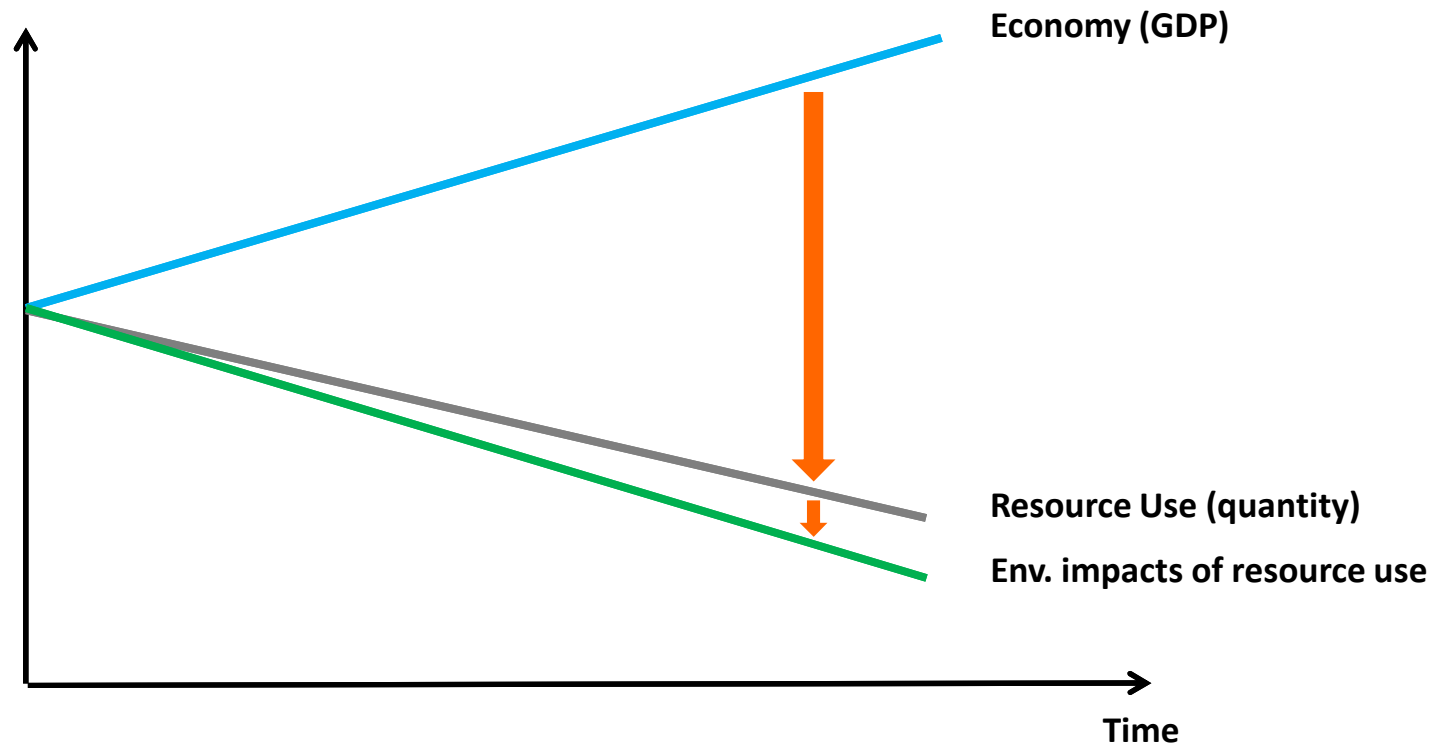
Strategy of Double De-coupling

Basic assumption: **quantities are no problem**, as impacts per quantity can be drastically reduced (e.g. by material substitution, closing circles, ..)



Strategy of Double De-coupling

Others (including SERI): **quantities are a problem**: difficult to de-couple quantities from impacts at current levels of resource use



Strategy of Double De-coupling

- Many technologies exist; but is it possible to apply them on a **large scale** in a sustainable way?
- **Biofuels**: reduce GHG emissions per ton of fuel; huge negative consequences (land cover change, water demand, etc.) when upscaled
- **CCS**: coal power plant: + 100% steel / MW
gas power plant: + 140% steel / MW (CML Leiden, 2009)
- **Wind** energy: even higher material requirements
- **Competition** over resources (metals!)
- Current / future energy demand vs. limited resources

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4. **Conclusions for the revision of the “Resource Strategy”**

Revision of “Resource Strategy”

- Main objective: **reduce Europe’s resource consumption** in absolute terms
 - Clear targets
 - Concrete policy instruments
- Apply a consistent **set of indicators** to monitor progress
 - Past years: environmental impact indicators
 - Required: indicators to illustrate quantities

SERI / FoE indicator set

Resource use category		Product level		National level	
Materials	biotic	Material Rucksack of products	biotic	Material flow-based indicators of countries <small>(including materials embodied in imports and exports)</small>	biotic
	abiotic		abiotic		abiotic
Water		Water Rucksack / Water Footprint of products		Water Rucksack / Water Footprint of countries <small>(including water embodied in imports and exports)</small>	
Land area		Actual land use of products		Actual land use of countries <small>(including land embodied in imports and exports)</small>	
GHG emissions		Carbon Footprint of products		National GHG emissions <small>(including GHG emissions embodied in imports and exports)</small>	

Download full study “How to measure Europe’s resource use?”:

www.foeeurope.org/publications/2009/seri_foe_measuring_eu_resource_use_final.pdf



Thank you for your attention!

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