

PL-2

Exploring Reduction in the 3Rs: Improving Resource Efficiency in Asia and the Pacific

Keynote

Presentation at the
ISAP 2013 Yokohama,
July 23, 2013

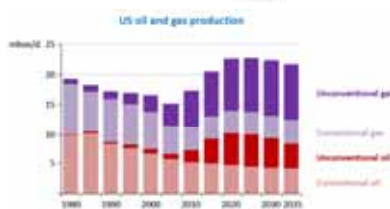
Prof. Dr. Raimund Bleischwitz

(incoming BHP Billiton Chair in Sustainable Global
Resources, UCL ISR, UK)

Recent Trends: Risks and Opportunities



South Chinese Seas, Asian Rivers:
Inter-state tensions may turn into wars



**New realities in the global energy
markets: US returns in oil and gas
production**

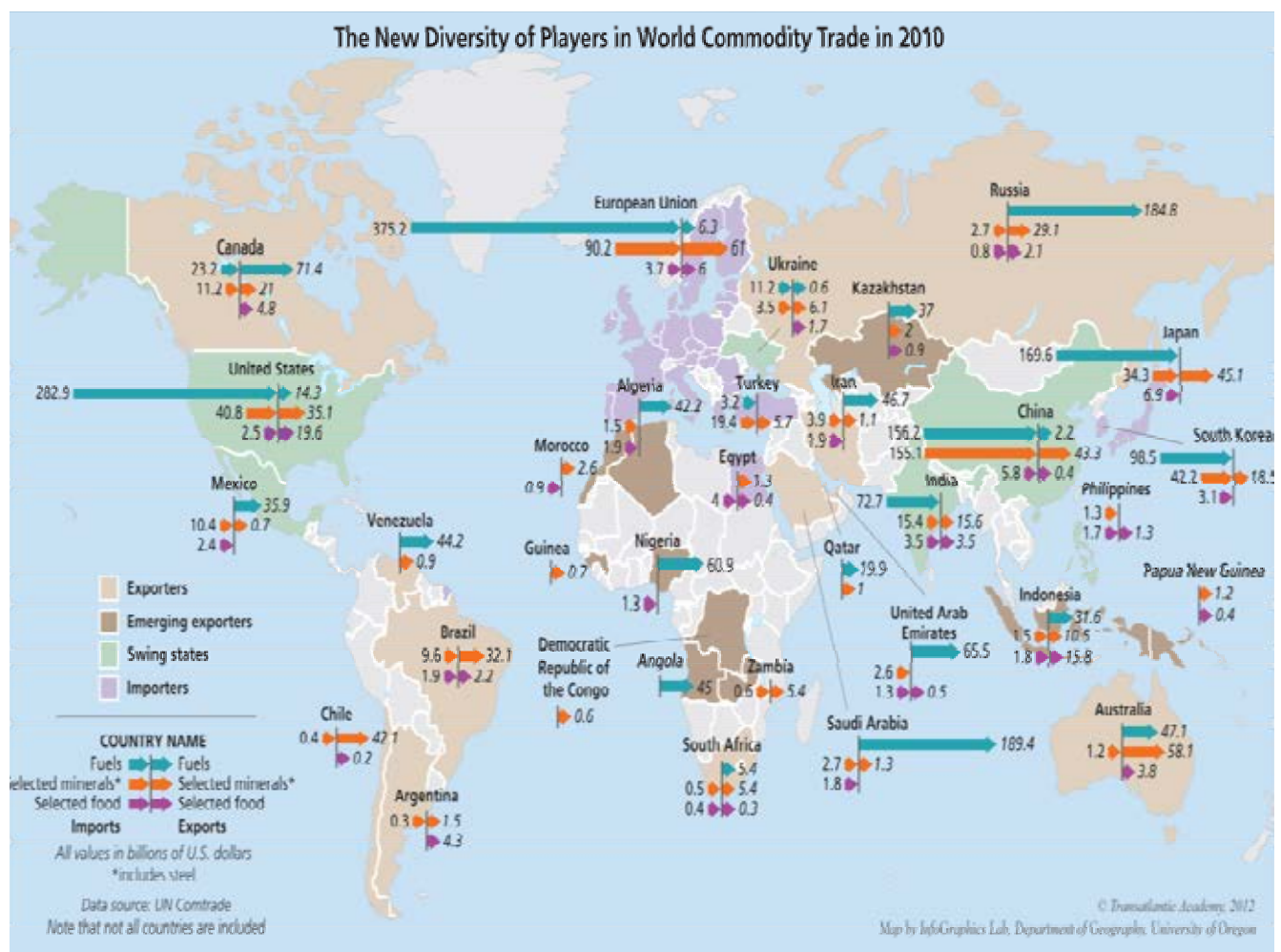
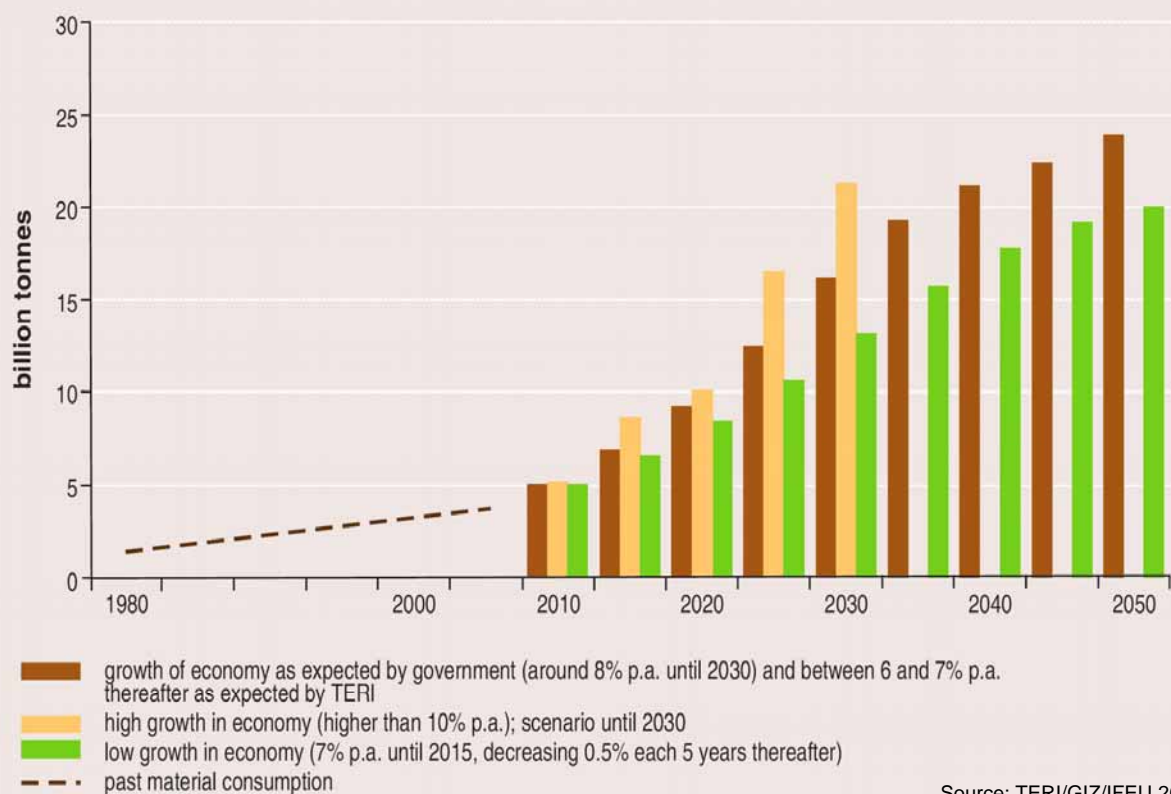


President Obama in Berlin:
“Complacency is not the attitude of
great nations” – new willingness to act

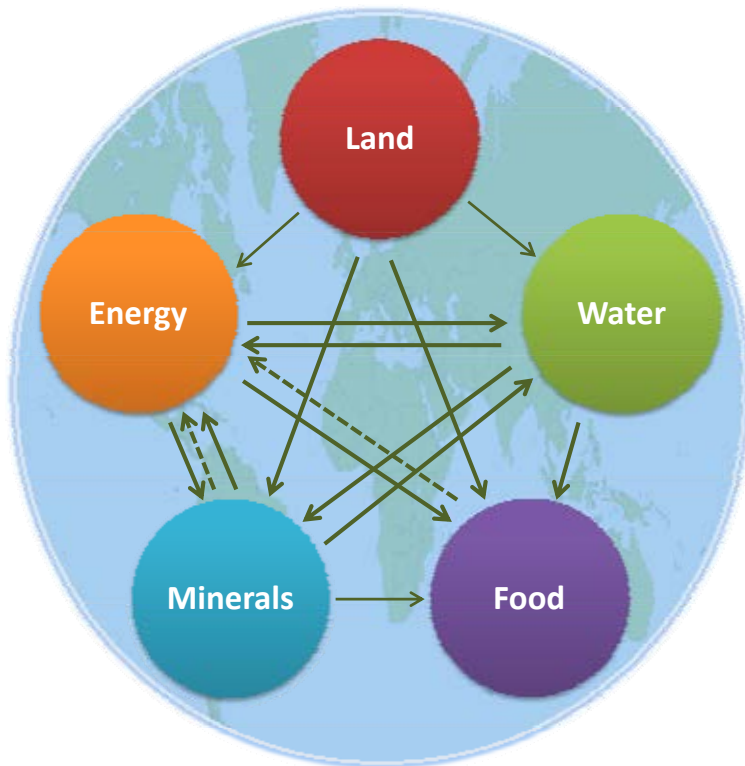


**G8, EU and the US push transparency
in raw material markets**

Asia's Growth need Resource Initiatives! The Case of India



The Global Resource Nexus



- Input (Major or Minor Provision of A needed to produce a service from B)
 --> Substitution (A may substitute B for a certain service)

CASE :

China, an export-oriented economy – needs energy – dam building – increases demand for materials – changes water management – worries downstream neighbors

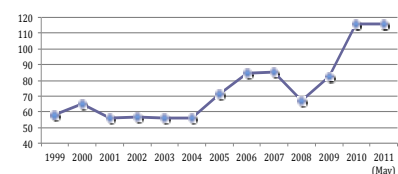
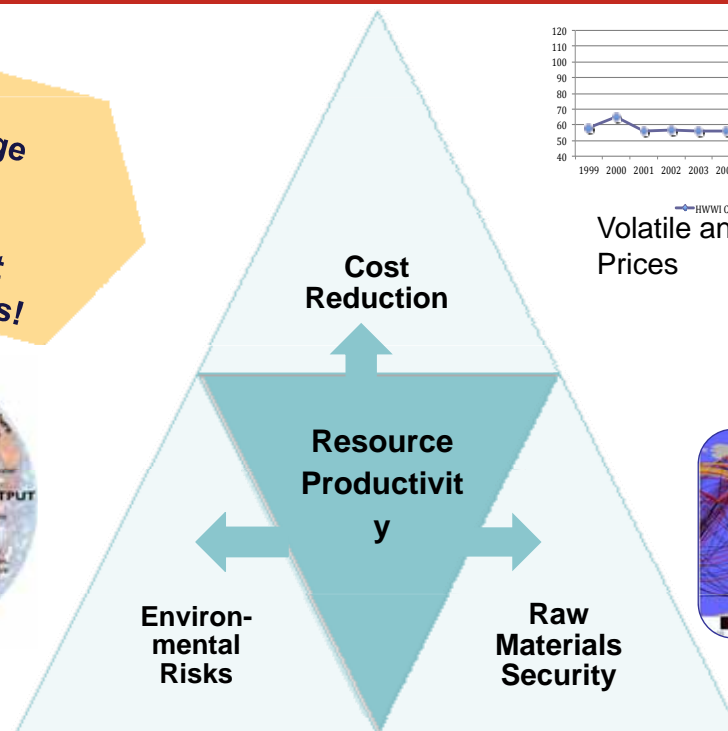


Reasons to do it: Orientation and Resilience in Times of Uncertainty

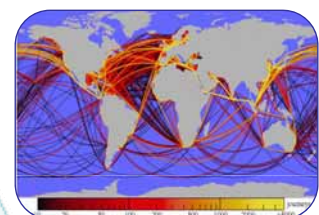
Climate change policy needs support from 3Rs!



Overuse of resources



Volatile and high Commodity Prices



Vulnerability of many Systems

Resource efficiency policy can deliver reductions !

(Modelling for Germany, Scenario 2030, Deviation from a Reference Path)

Increased and Sustainable Growth: 14,1 %

- Cost-saving, Innovations
- Improved Competitiveness

Rise in Employment: 684.000

- An Increase in Sales creates Jobs
- Focus on Material Costs instead of Staff Costs

Reduced National Debt: - 11,30%

- Lower Expenditures (Job Effect)
- Increasing Tax Revenue (due to Growth and employment)

Reductions of CO₂ and Resources

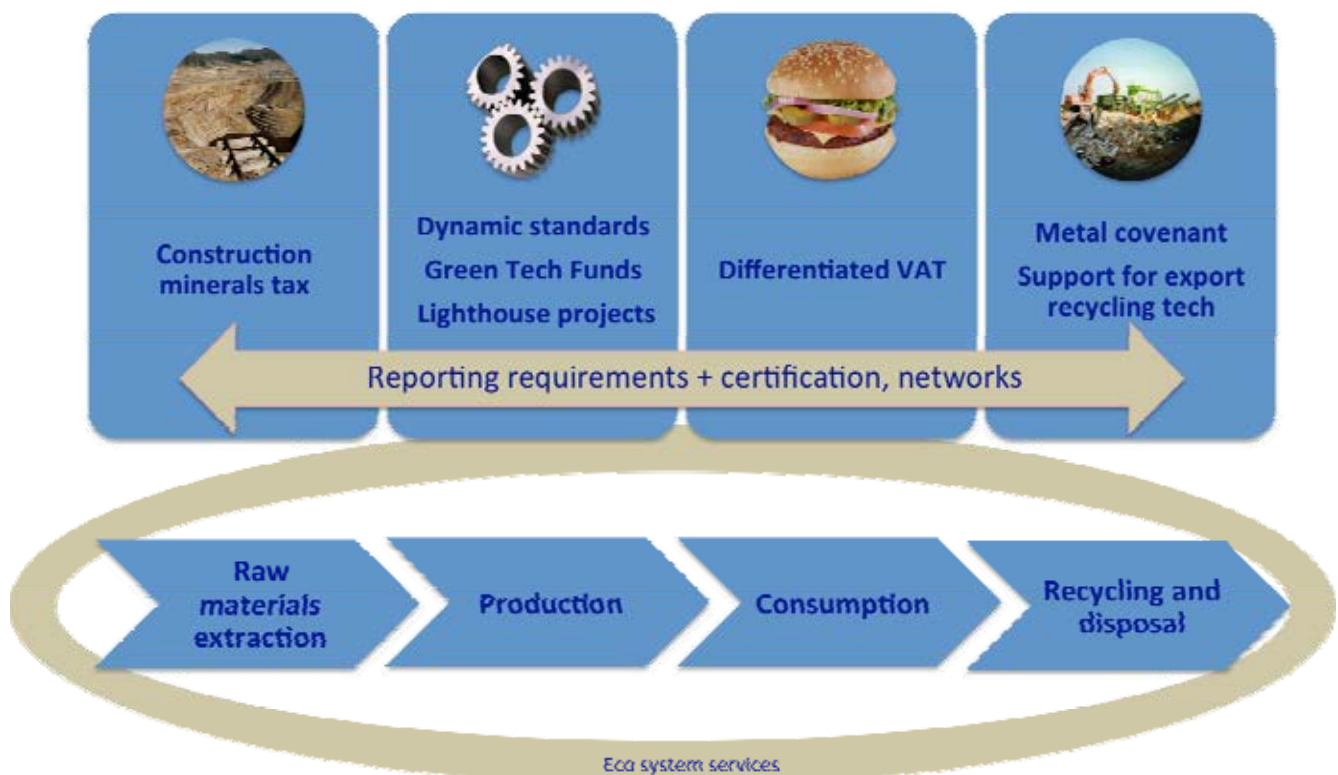
- CO₂: - 54% (Basis 1990)
- TMR: - 20-25 %

*

Source: Meyer et al. 2010, GWS

What policies? A suggested *policy mix* for Germany

(Modelling results on previous slide)



Towards a Resource Efficiency Policy in the EU



Target setting

- RE one (out of seven) flagship projects for Horizon 2020
- National targets, e.g. Germany,
- Aims of lowering use of primary resources and increasing RE



Communication & Awareness

- Roadmap for a resource-efficient Europe
- European Resource Efficiency Platform with key stakeholders



Other Activities

- Eco-Innovation Observatory
- „Beyond GDP“ Activities
- Raw Materials Initiative
- Support for the International Resource Panel

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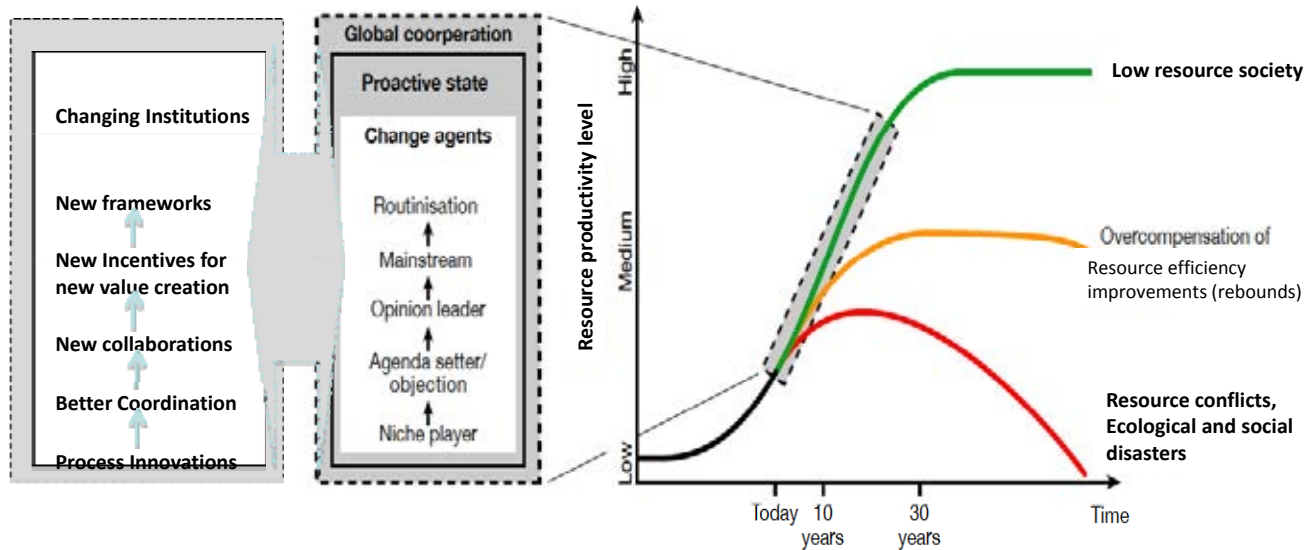
Metabolic rates – overview of scenarios

Table 2.1. Metabolic scales and rates, overview of scenario analysis

UNEP Panel

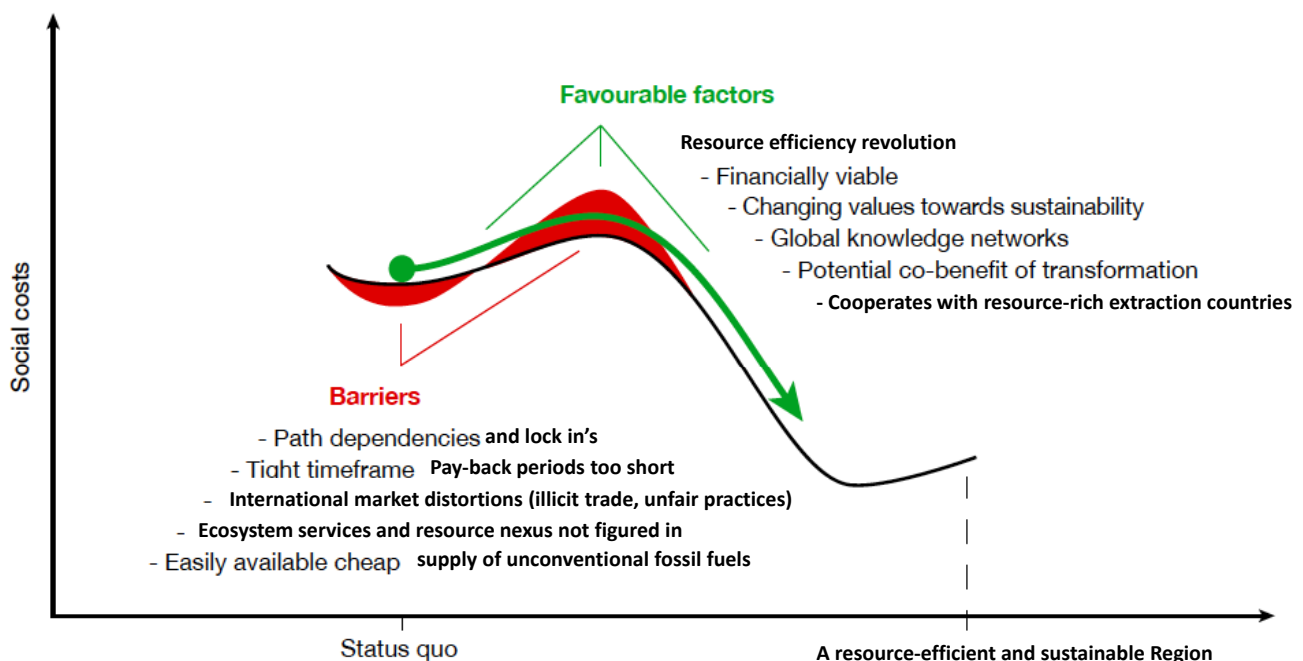
| | | Baseline | Scenario 1: Business as usual | Scenario 2: Moderate contraction and convergence | Scenario 3: Tough contraction and convergence |
|---|-----------------------------|----------|----------------------------------|---|--|
| Year | | 2000 | 2050 | 2050 | 2050 |
| World population (Billions) | | 6.0 | 8.9 | 8.9 | 8.9 |
| World Metabolic rate (Tons/capita/year) | | 8 | 16 | 8 | 5.5 |
| World Metabolic scale (Billion tons/year) | | 49 | 141 | 70 | 49 |
| Metabolic rate | Industrialized High density | 13 | 13 | 6.5 | 5 |
| | Industrialized Low density | 24 | 24 | 12 | 8 |
| | Developing High density | 5 | 13 | 6.5 | 5 |
| | Developing Low density | 9 | 24 | 12 | 8 |

Systemic Eco-Innovation for a Green Economy



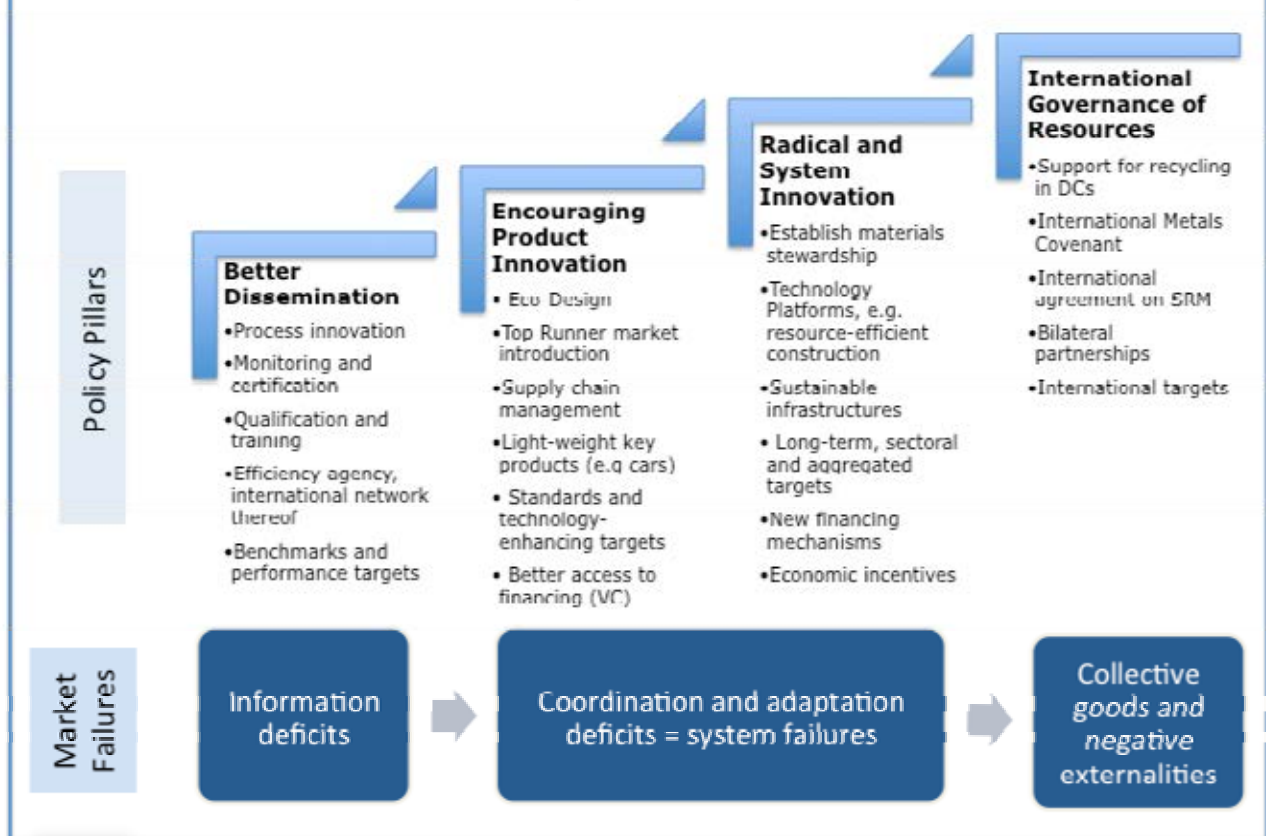
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Drivers and barriers to a great transformation



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Market Failures and Resource Policy Pillars



Conclusions: Why Policies, What Business can do, Why Indicators are Relevant

Policies

- To enable overcoming of market distortions towards system eco-innovations
- To counteract international imbalances

Business

- To grasp low hanging fruits of cost savings
- To realize a “resource revolution”

Indicators

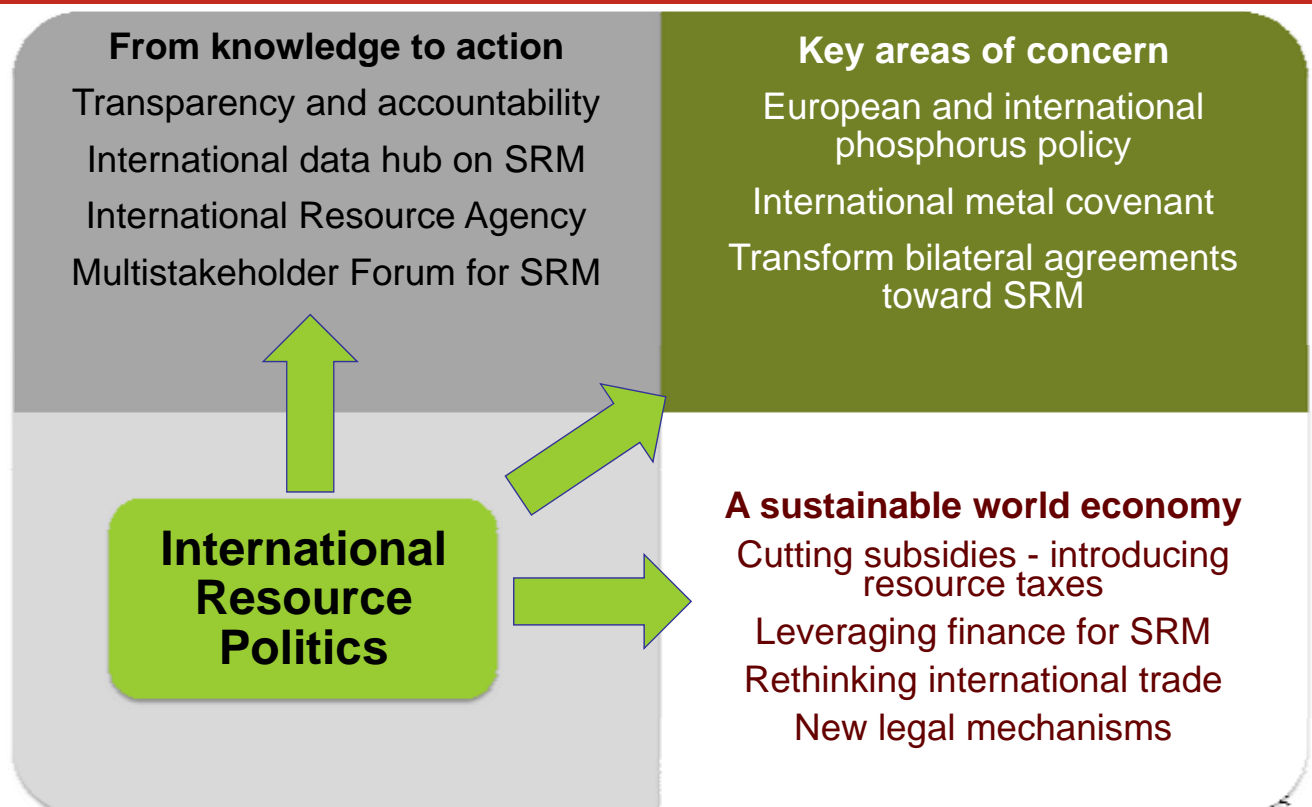
- To allow for a comprehensive monitoring of progress
- To signal risks of burden shifting to the poor

Lessons learned: ...good initiatives exist, but the broader frame is yet to come

- Existing initiatives are not legally binding (exception EITI in combination with US and EU acts).
- Former efforts, such as international commodity agreements, have largely failed.
- Domestic resource efficiency strategies face an uphill battle against international market distortions. Yet, there is no international strategy to deal with structural deficits such as negative externalities, abuse of human rights, huge volatilities, illicit trade.
- A clear orientation aligning human rights, freedom sustainable resource management, low carbon society, etc. is missing.

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Suggested ways forward



Proposal for An International Metal Covenant

- Rationale: material leakages internationally, low recycling standards in many countries.
- Covenant to include industry (recycling, automotive) and target countries.
 - To set long-term goals to increase the resource productivity by high quality recycling of old cars
 - To define the responsibilities of different actors in terms of operation, implementation, and evaluation.
 - Establishes material stewardship internationally.
 - States shall guarantee stable and supportive regulatory framework conditions
 - Going beyond compliance!



Source: Wilts / Bleischwitz 2010

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Cases: sustainable construction, sustainable cities



Zero-energy house
(Elumaja), Estonia



Construction products made
of recycled fly ashes, Spain



Ecological prefab houses,
Germany



TWEWATERS – sustainable and
smart city district, Belgium



Strawbale housing,
Belgium



and so on...

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Proposal: Engage Mining in Sustainable Resource Management

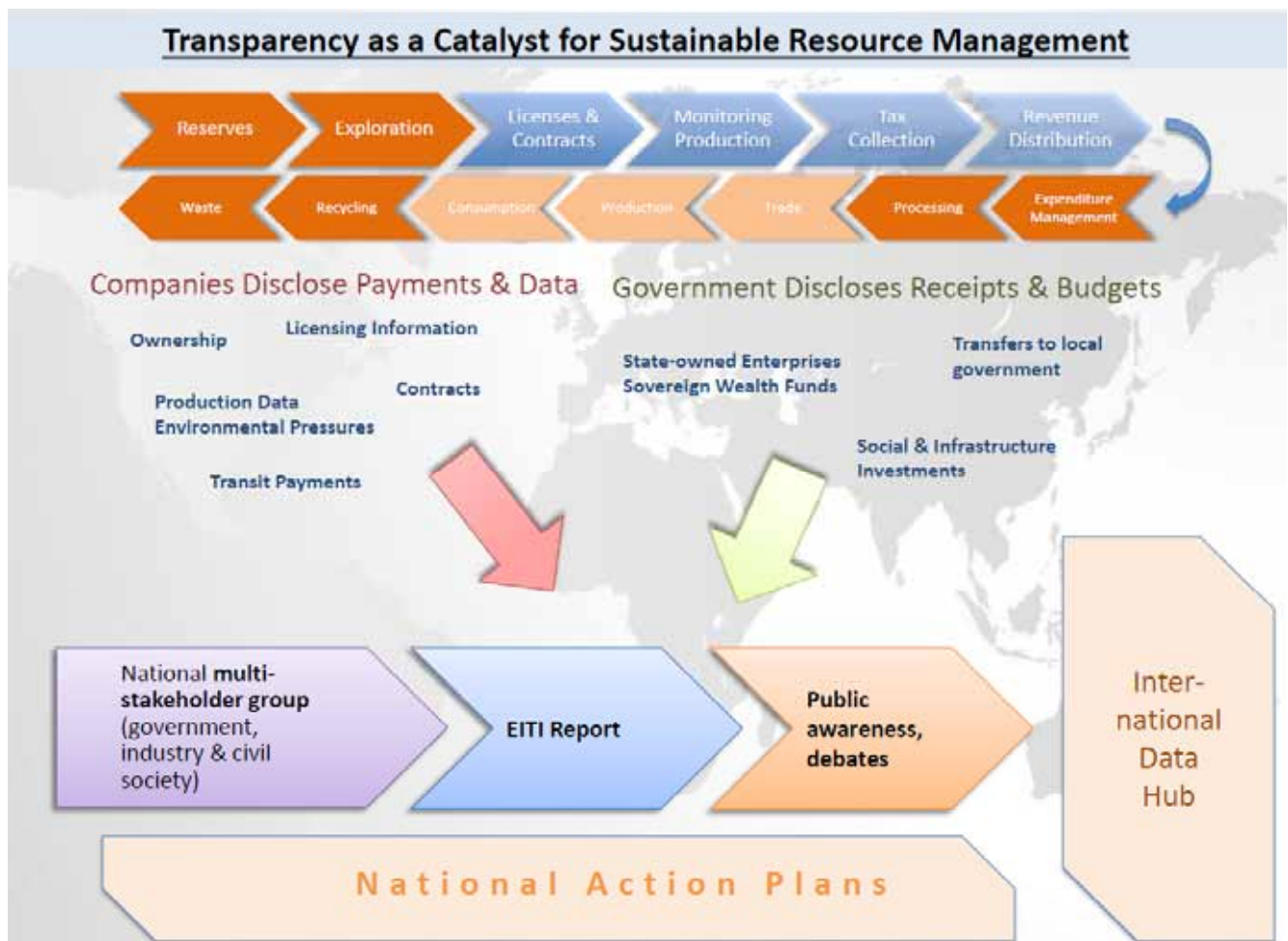
Resource efficiency in industry



Opportunities for resource-extracting countries

Source: Bleischwitz 2011

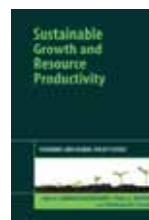
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Conclusions and Recommendations

- Resource efficiency can deliver decoupling in all markets in all countries
- Real reductions require additional efforts from business, policy and other actors
- A key is to kick-off early action along process innovations in business, especially SMEs, to allow for capacity building and savings
- Systemic eco-innovation requires active policies stimulating alliances
 - Within countries and
 - Internationally.

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Thanks for your attention!



For further information
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