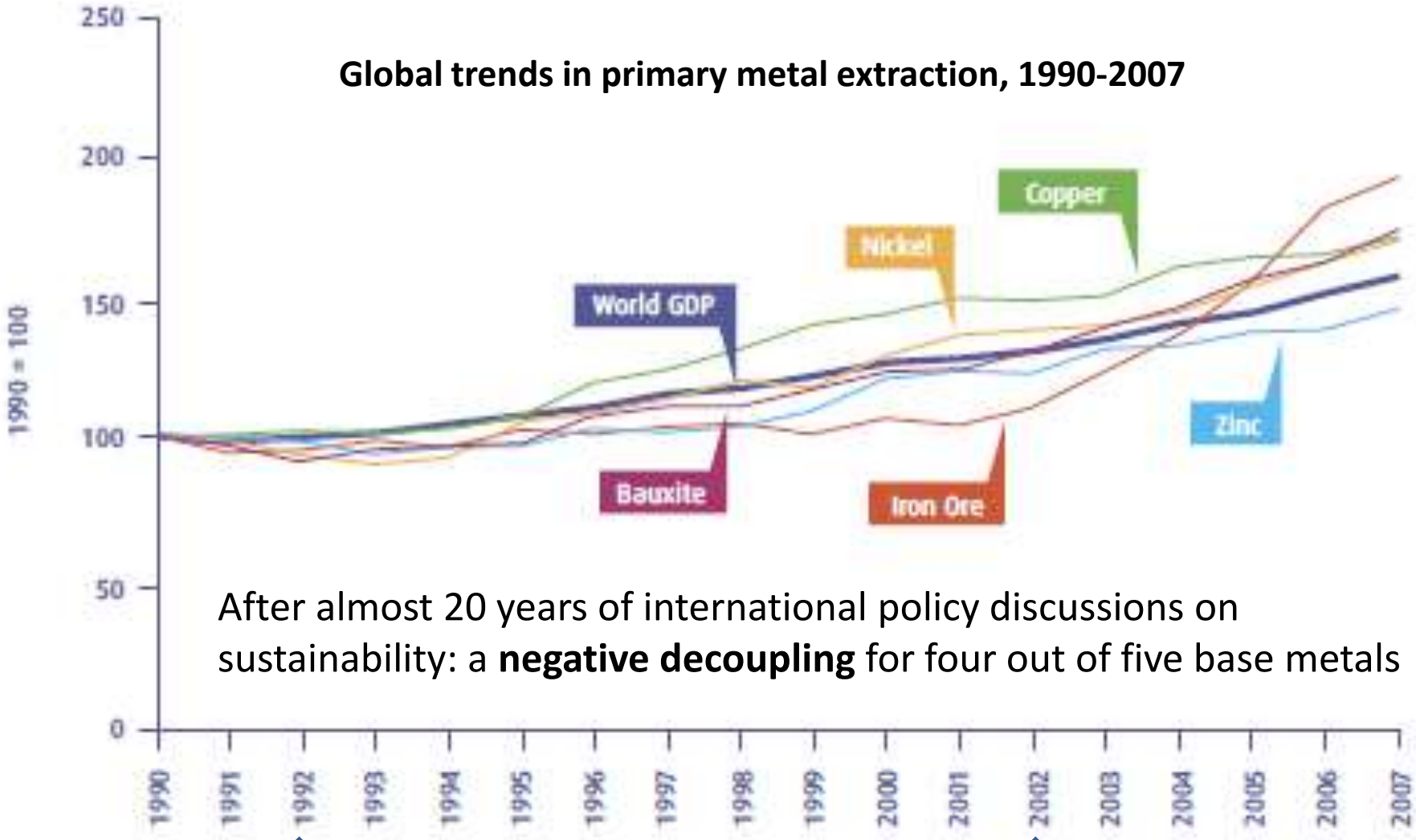
Decoupling and Sustainability Transitions – Approaches to Sustainable Resource Use

Magnus Bengtsson
Director SCP
Institute for Global Environmental Strategies (IGES)

UNEP IRP and SWITCH Asia *Seminar on Resource Efficiency and Decoupling Approach*
Bangkok, April 2012

No Sign of Decoupling – The Example of Metals



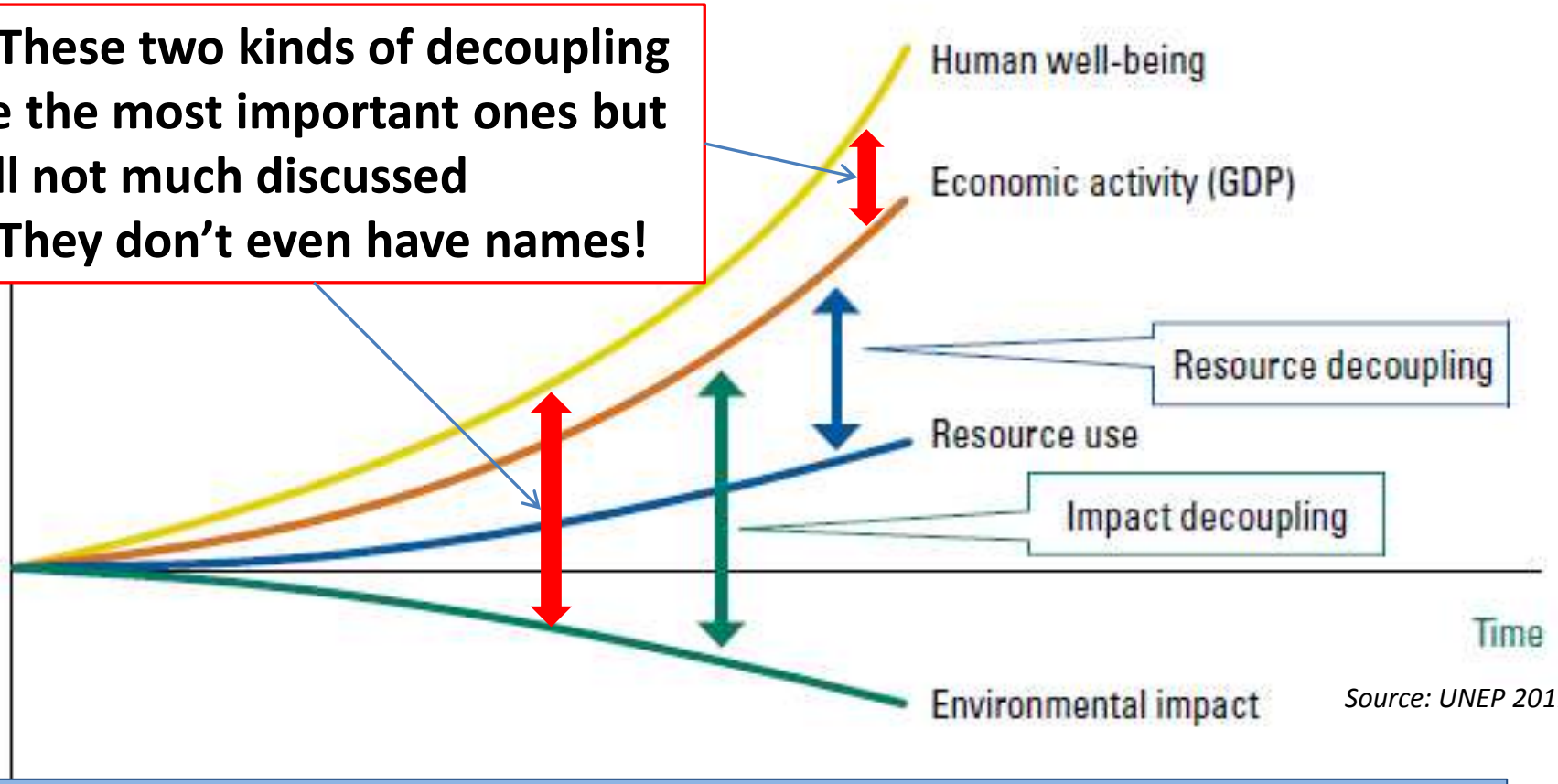
After almost 20 years of international policy discussions on sustainability: a **negative decoupling** for four out of five base metals

Rio Conference
Agenda 21

Johannesburg
Plan of Implementation

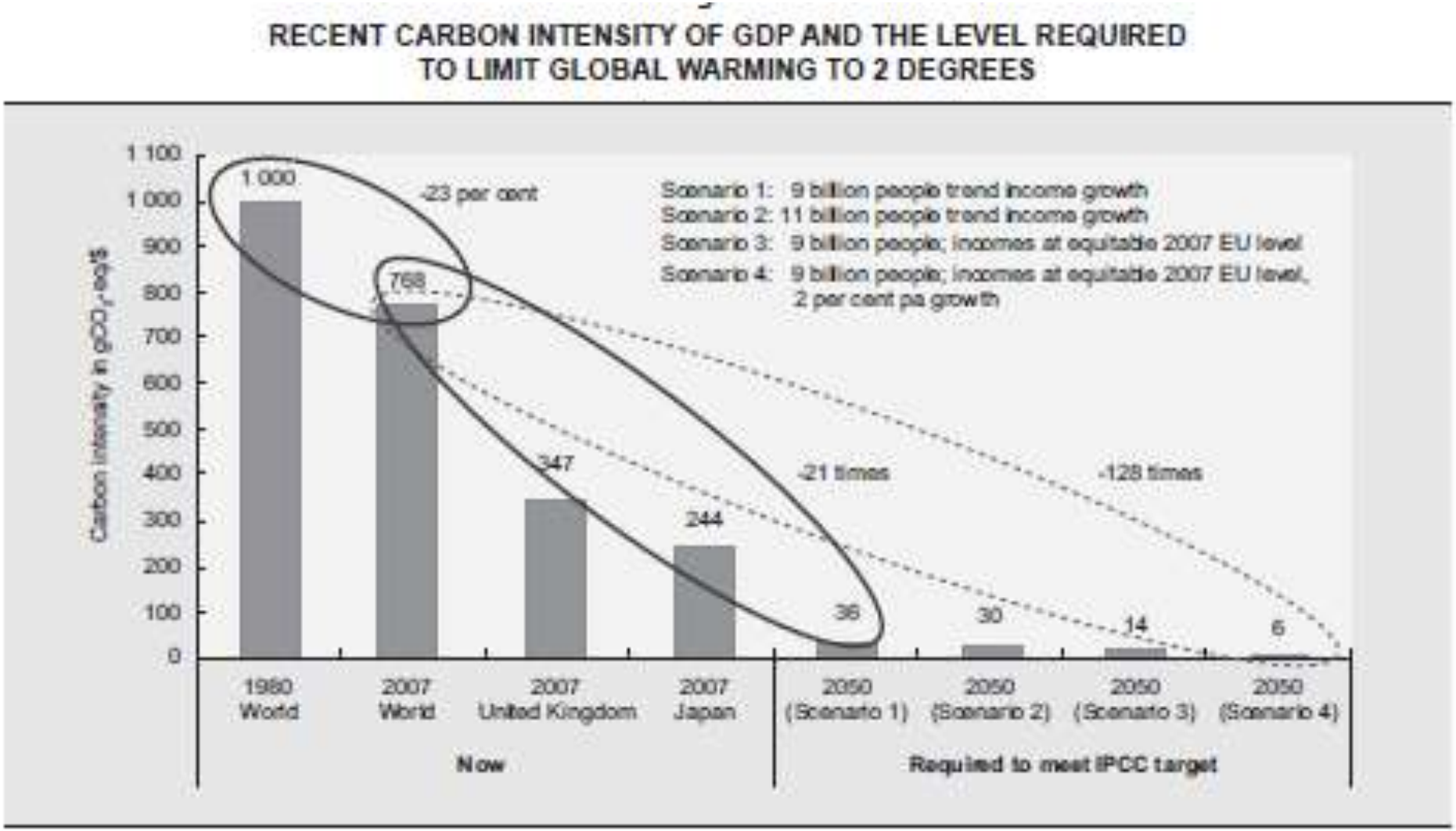
Source: Jackson 2009

- **These two kinds of decoupling are the most important ones but still not much discussed**
- **They don't even have names!**



Source: UNEP 2011b

- **Decoupling is an ambition but still only a theoretical concept**
- **No one knows whether sufficient decoupling can actually be achieved within the required time-frame**
  - The lock-ins of the existing socio-technical systems
  - The drastic reductions needed (e.g. GHG at least -80%)
  - The urgency (a few decades)



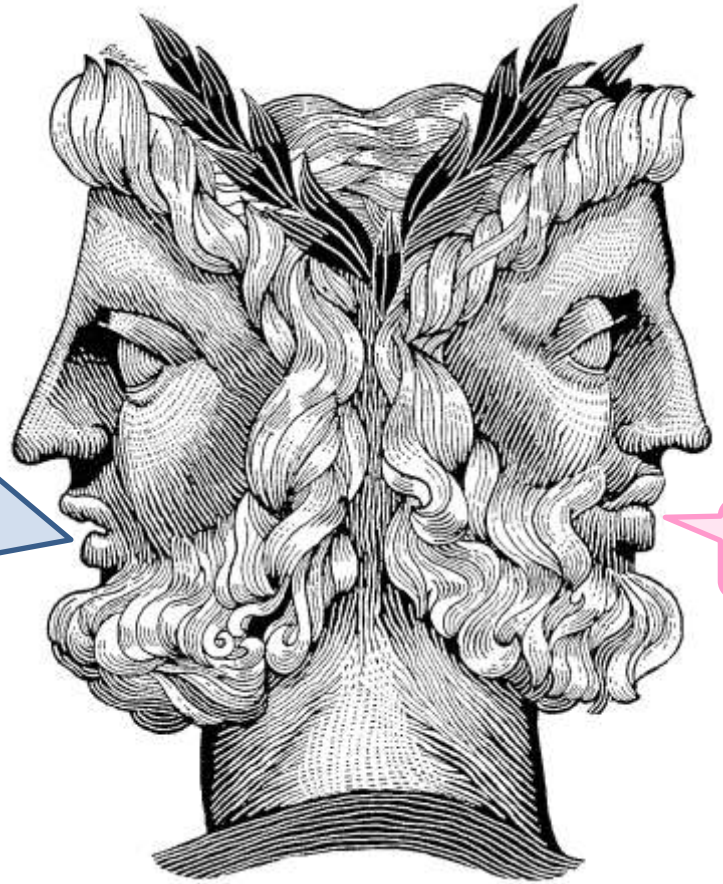
Source: Hoffman 2011, based on Jackson 2009

Improvements in Carbon Intensity

Actual, 1980-2007	0.7% per year
Needed, 2007-2050	11% per year (Scenario 4)
	6.8% per year (Scenario 1)

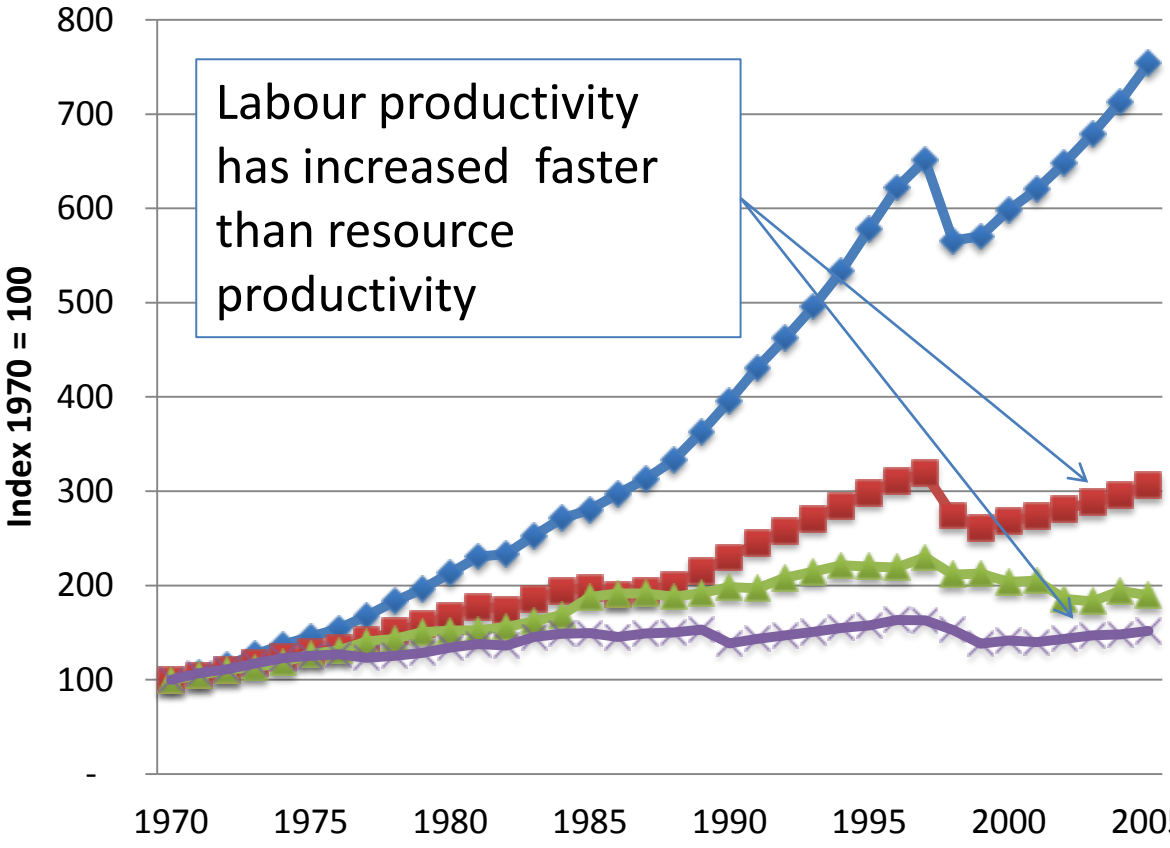
What Governments and Other Powerful Actors Are Saying

Grow the Economy



Consume Sustainably

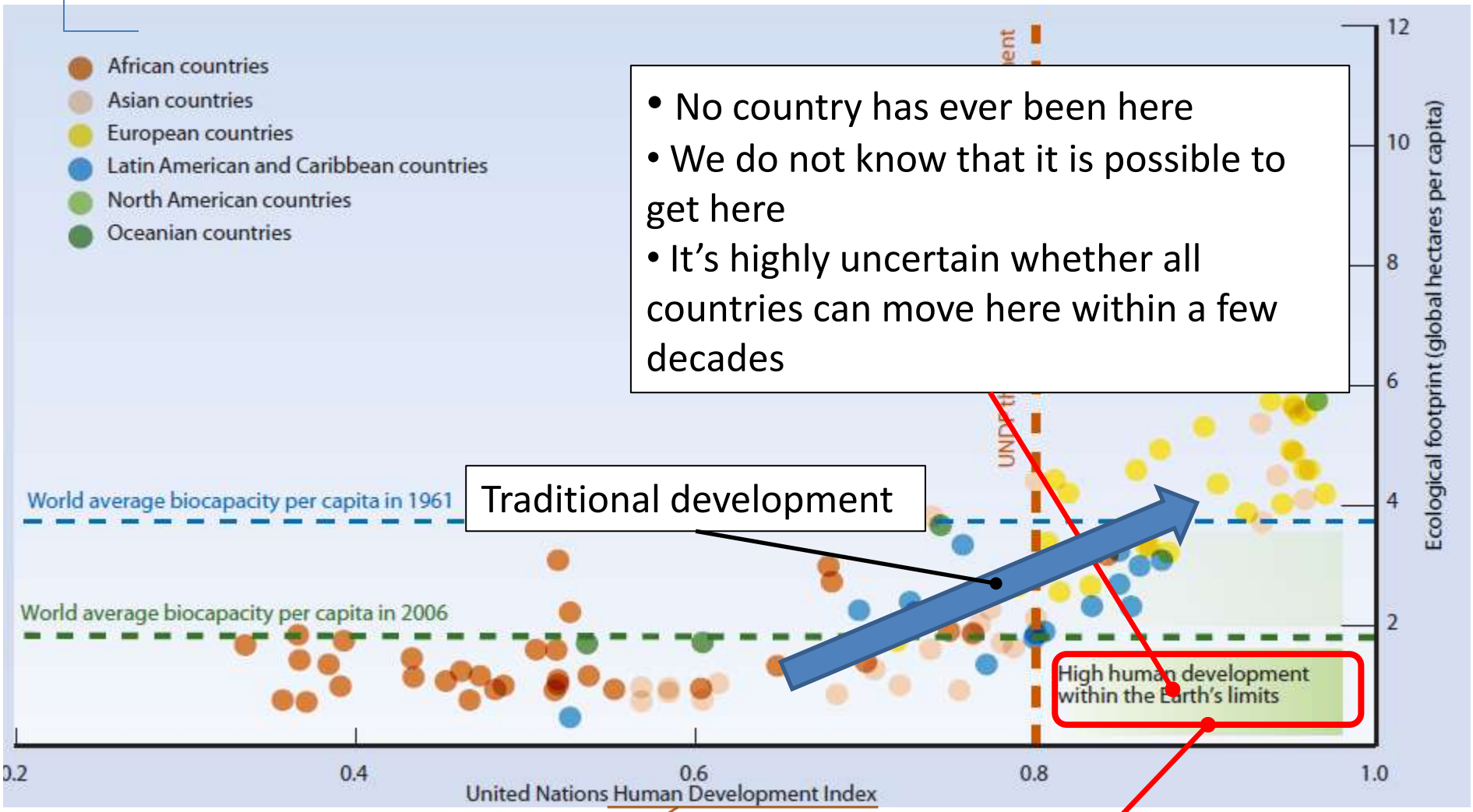
Evolution of GDP and factor productivities for Indonesia, 1970 – 2005, indexed



- **Decoupling requires this logic to be reversed**
- **New economic model driven by resource constraints**

Source: CSIRO 2011

- We are getting better at producing more stuff with fewer employees -> risk of unemployment, pressure for econ. growth
- We are less successful in producing stuff using fewer resources and less energy -> increasing environmental impact



Source: UNEP 2011a

GDP
Education
Life expectancy

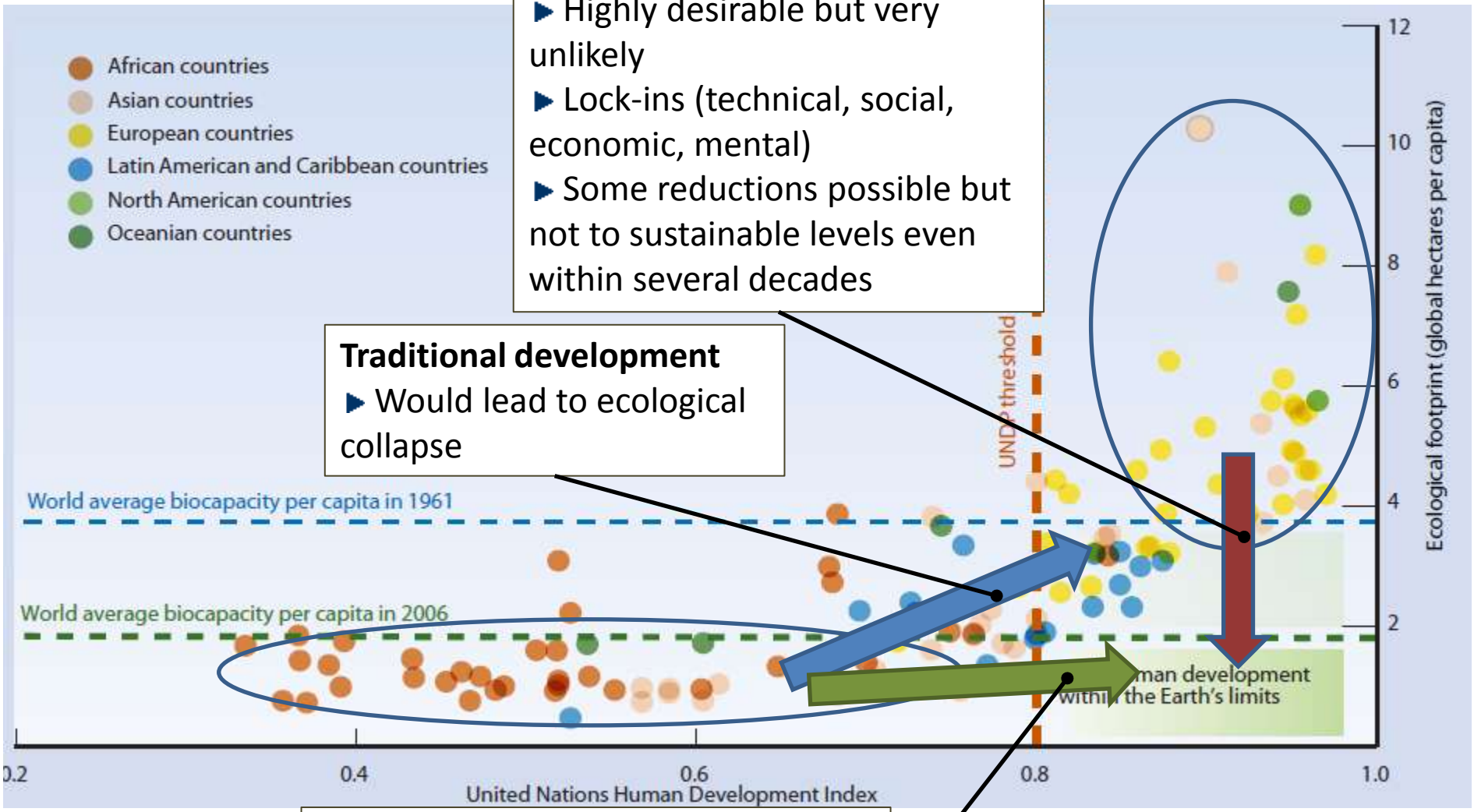
The Sustainability Corner

Drastic reduction of rich countries' footprints

- Highly desirable but very unlikely
- Lock-ins (technical, social, economic, mental)
- Some reductions possible but not to sustainable levels even within several decades

Traditional development

- Would lead to ecological collapse



Sustainability Transition: Radically different development pathway

- Very challenging but potentially achievable

Source: UNEP 2011a

Sustainability Transitions in Practice: A Few Basic Leads

- Need to address whole product life-cycles and whole service provision systems, such as mobility and housing
- Encouragement of systems innovation: experiments, pilot projects, broad-based evaluations, public and private investments, replication&upscaling
- Involvement of a wide range of stakeholders
- Coordination and collaboration among all related government ministries
- Combination of policy tools: regulations; economic incentives; R&D, education, and training; voluntary agreements
- Selective adoption of modern/"western" solutions – inspiration from progressive countries/cities. Where will they go in the next 20 years?
- Strengthening of remaining traditional sustainable practices

Sustainable Consumption and Production – The 3 Key Tasks in Developing Asia

- Enabling the poor to access the resources needed for decent, safe and healthy lives
  - Progress by many countries, MD
    remaining challenges
- Mitigating the environmental i
  consumption in all social group
  emphasis on the middle-class and the rich
  - Limited policy attention. Generally weak and uncoordinated response
- Safeguarding the sustainable and culturally valued aspects of traditional Asian lifestyles
  - Little attention so far

Linkages between poverty and sustainable resource use are still poorly understood and not well reflected in policies

Main focus of SCP research and policy in developed countries

A Transition Happening Right Now

- Increasing long-distance transportation, deep-freezing, cold-keeping, packaging, air-conditioning, lighting, etc. => Increasing energy consumption and waste generation
- Is this unavoidable? Do the benefits outweigh the negative consequences? How are benefits and costs (in a broad sense) shared? Are there alternative ways to modernize?

Key Messages - 1

- Relying on decoupling (with continued global growth) as our main strategy towards sustainability is a gamble with very high stakes - it may turn out to be unfeasible

- Ideally, rich countries should cut down their material consumption to provide development space for developing countries
  - This may require rich countries to stabilize or reduce their economic activity (zero growth; de-growth)
  - Politically very challenging

- Developing countries must avoid mimicking the resource-hungry patterns of consumption and production in rich countries

Key Messages - 2

- Developing countries need to find their own development pathways, which can bring prosperity and quality of life to all their citizens while keeping within the ecological boundaries of the Earth
- Urgent need for radical systems innovation (both technical and social innovation) – in developing countries combining elements of traditional and modern practices
- Resource productivity must improve faster than labour productivity – requires a change of the current economic model
- Governments' planning and policy evaluation needs to place more emphasis on well-being – and less on GDP
  - Improved data and indicator systems are likely to be useful for guiding policy development and monitoring

Thank You for Your Kind Attention