



PBL Netherlands Environmental
Assessment Agency

Greening Growth decoupling growth & resource use

24-04-2013 | Sonja Kruitwagen



PBL Netherlands Environmental
Assessment Agency

Greening Growth:

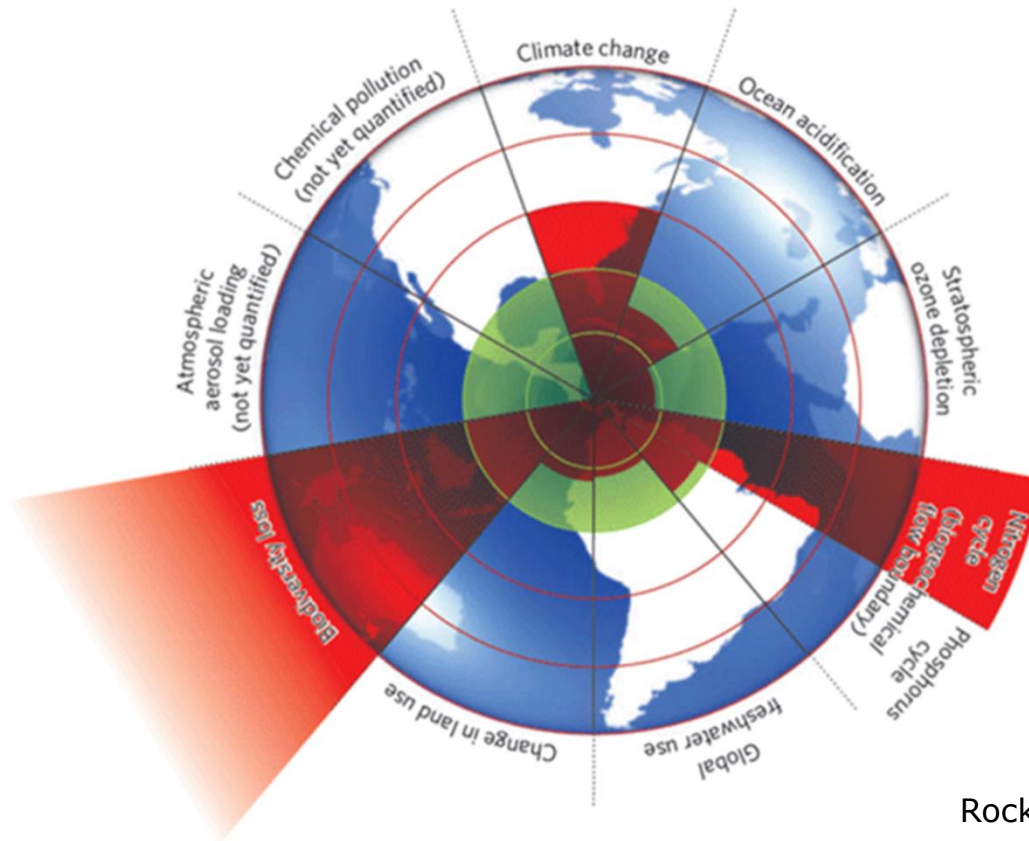
- Why do we need it?
- What is it?
- How can we realise it?

Different shades of green

- Broad approach in UNEP Green economy
*Improved human well-being and social equity,
while significantly reducing environmental risks
and ecological scarcities*
- Focus OECD GGS on mainstreaming
ecology in economy
*Fostering economic growth and development
while avoiding unsustainabel pressure on
the quality and quantity of natural assets*
- EC Resource Efficient Europe aims at
a low carbon, resource efficient and competitive economy in 2050



Global necessity to green the economy



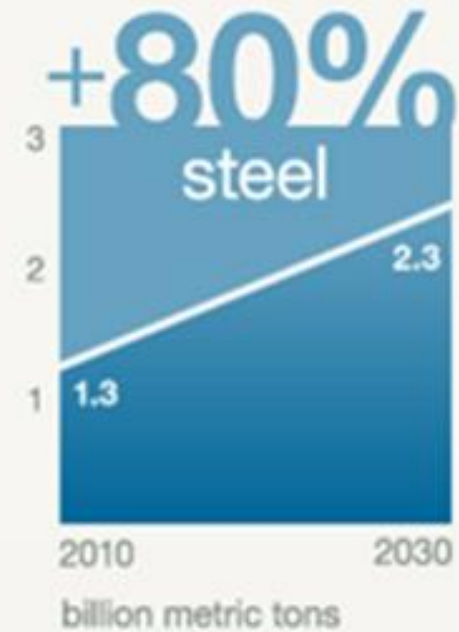
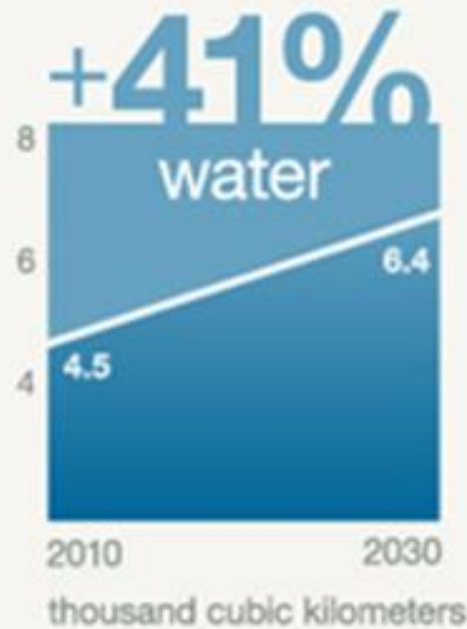
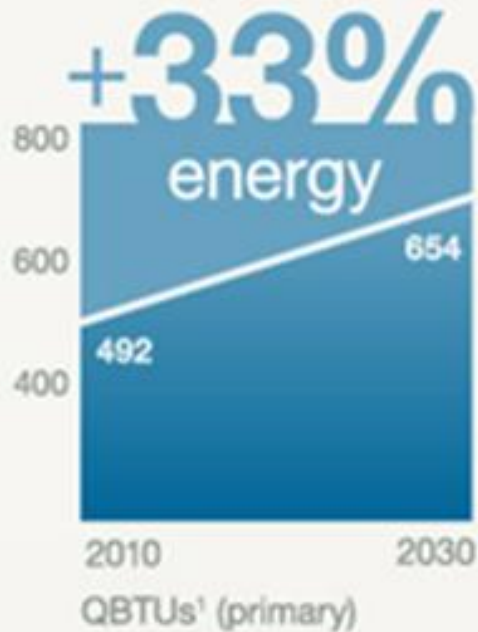
Ecological limits
impede long term
economic growth

Rockstrom et al.



Economic growth in emerging markets is fueling **dramatic increases in demand for resources...**

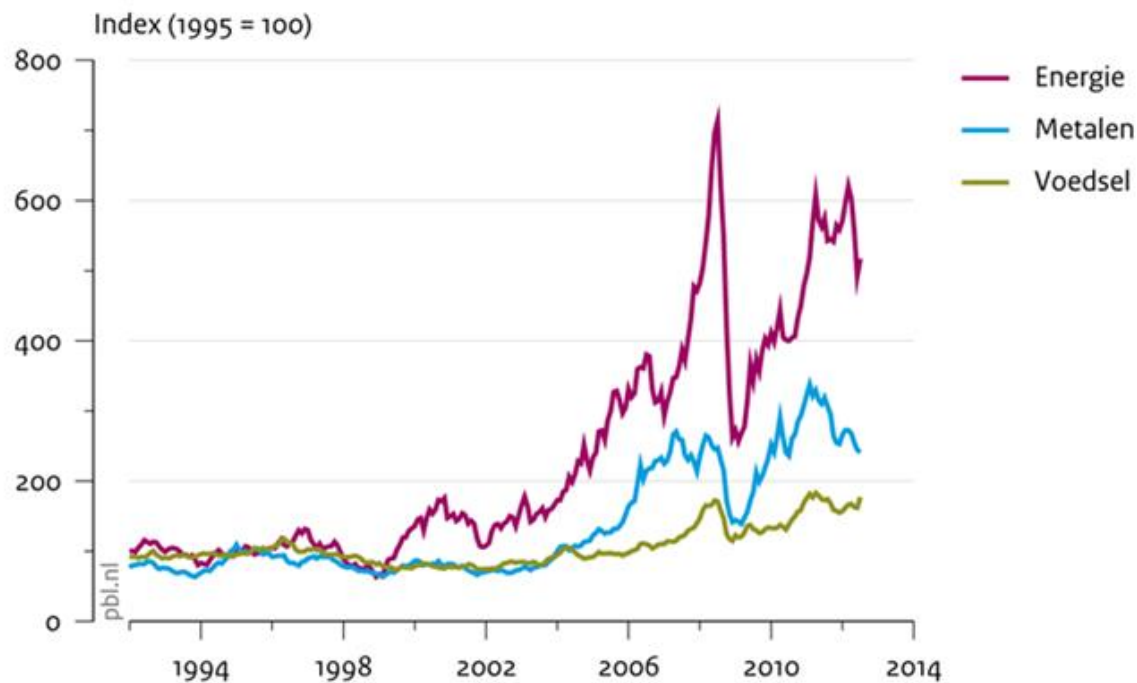
Projected growth, 2010–30¹



McKinsey

.. leading to high and volatile prices

Mondiale prijzen energie, voedsel en metalen

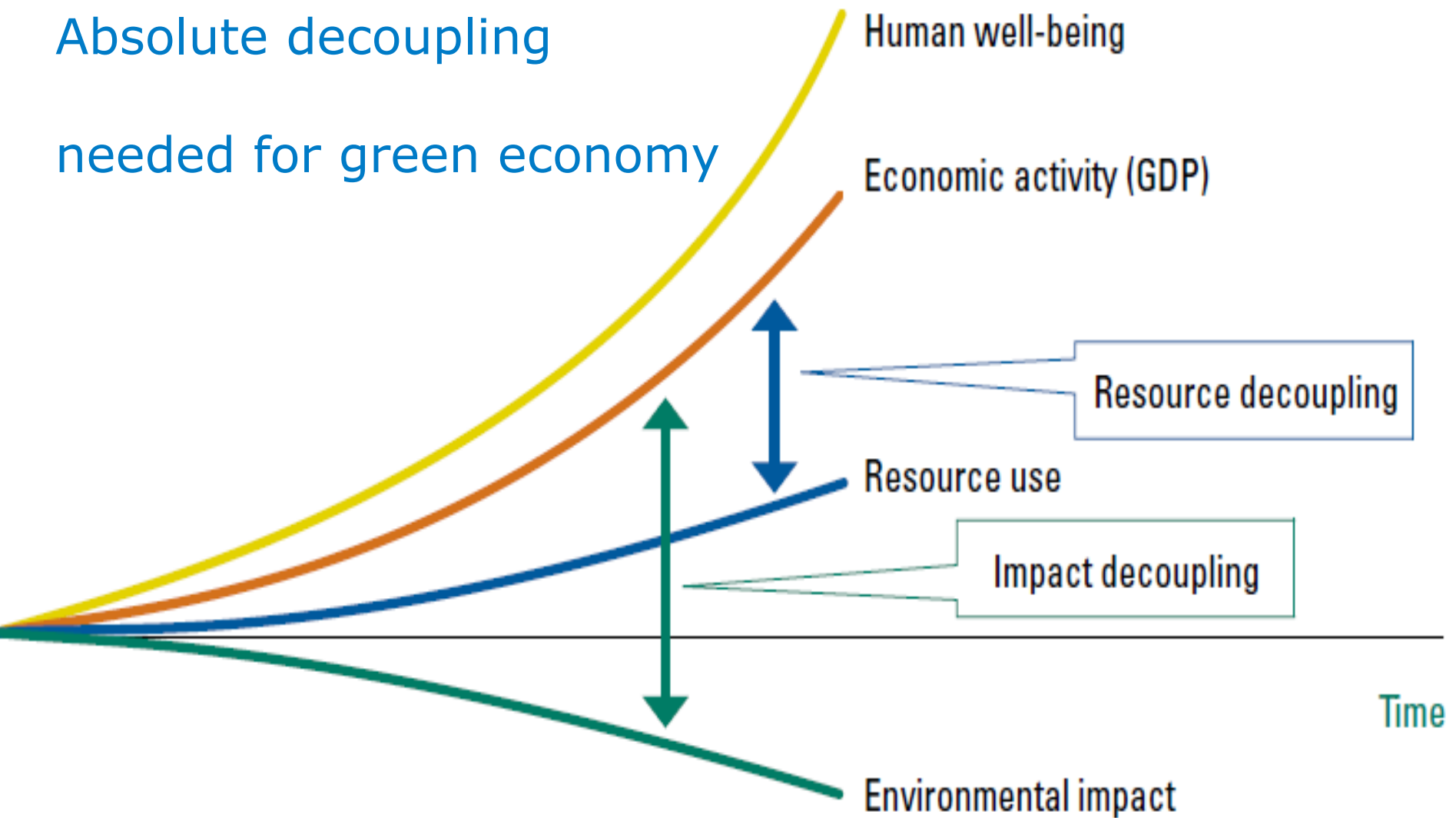




What is greening of the economy?

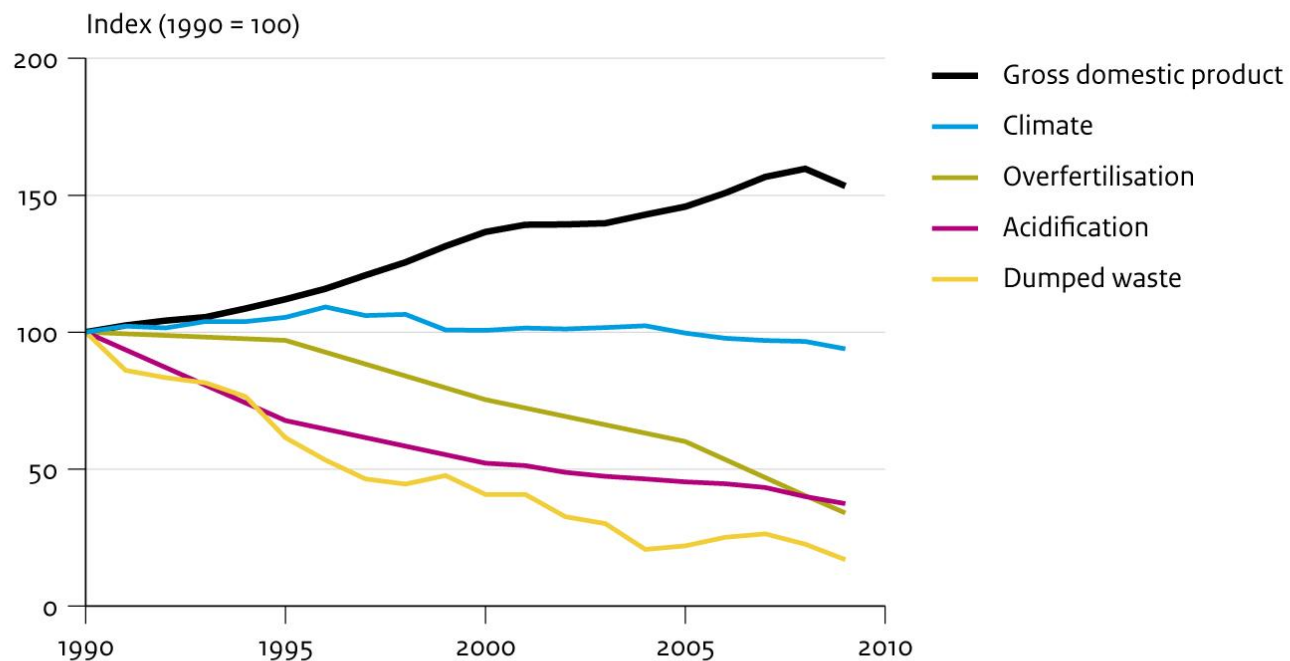
- Economic growth that recognises the preconditions set by nature and the environment
- Is aimed at decoupling of environment and economy, and redirects trends in climate, biodiversity, water and resources
- How to increase added value by using fewer inputs?
 - Increase efficiency in the application of energy and materials
 - Promote innovation and price natural resources
- Investment in more efficient handling of materials, energy, water and land is crucial to green and growth

Absolute decoupling
needed for green economy



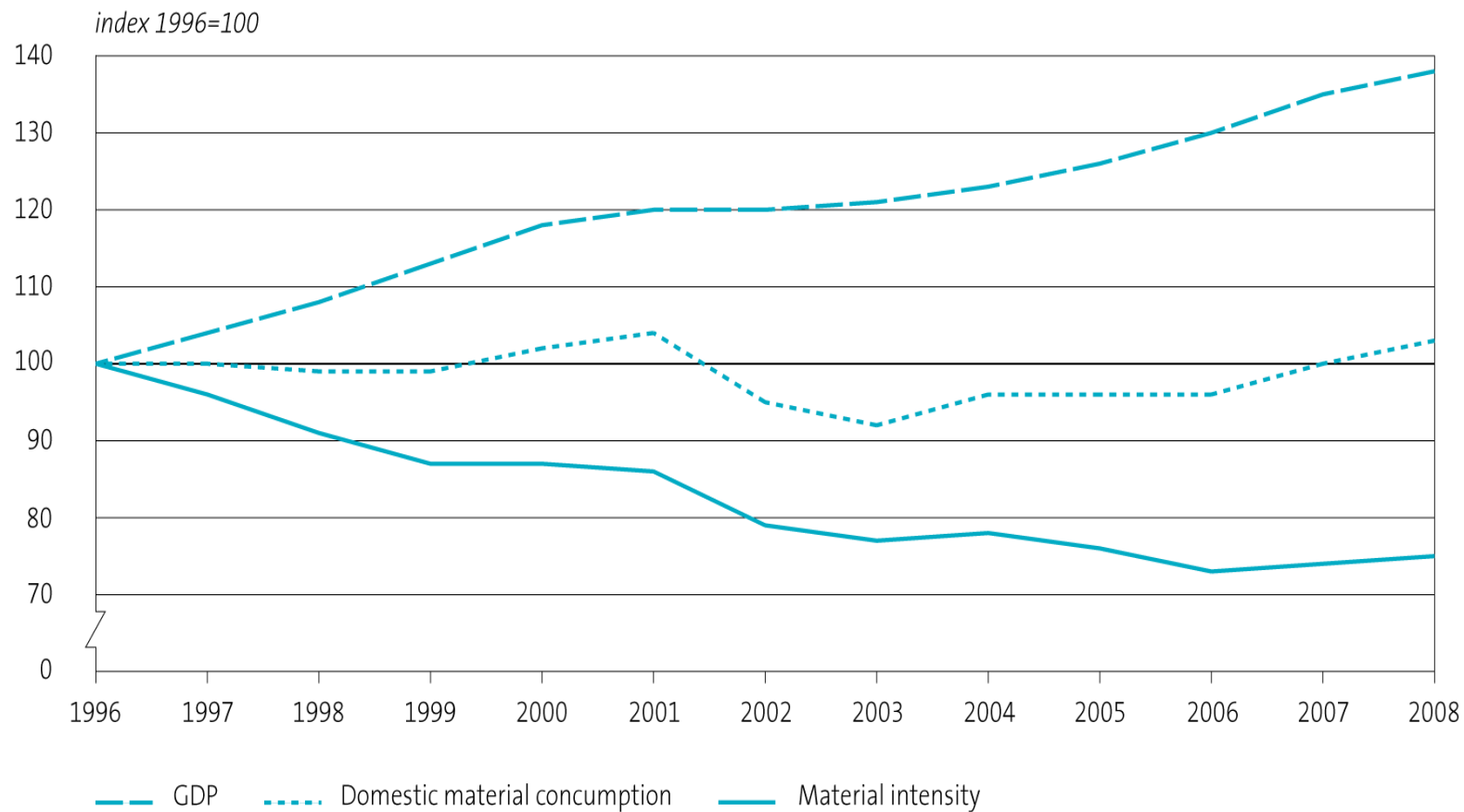
Decoupling in the Netherlands

Theme indicators





2.6.1 Material intensity, domestic material consumption and GDP



Source: Statistics Netherlands, Environmental accounts of the Netherlands 2009.

Improving efficiency is crucial for green and growth



- Using less energy, land, water and materials
- Requires innovation
- Less dependency
- Better for competitiveness?



Arguments for Green Growth

- Keynesian stimulus
- Correct market failures
- Stimulate innovation



Main questions for greening the economy

1. Why is greening the economy relevant for the Netherlands?
(vulnerability and opportunities)
2. To what extent are green growth and resource efficiency good voor growth en competitiveness? (benefits and losses)
3. To what extent will a green Dutch economy lead to negative impacts elsewhere?
4. How to instrument a transition towards a green and resource efficient economy? (conditions)
5. How to provide enough financing for clean tech?
6. How to measure progress?



Main preconditions to greening the economy

- Vision
- Getting the prices right
- Abolish perverse incentives
- Dynamic regulations
- Sustainable innovation

- Alternative ways of measuring progress



1. Vision

- Government provides direction
- Realise long-term commitment
- Implement stable policy
- Learn from experience
- Abolish restrictive regulations



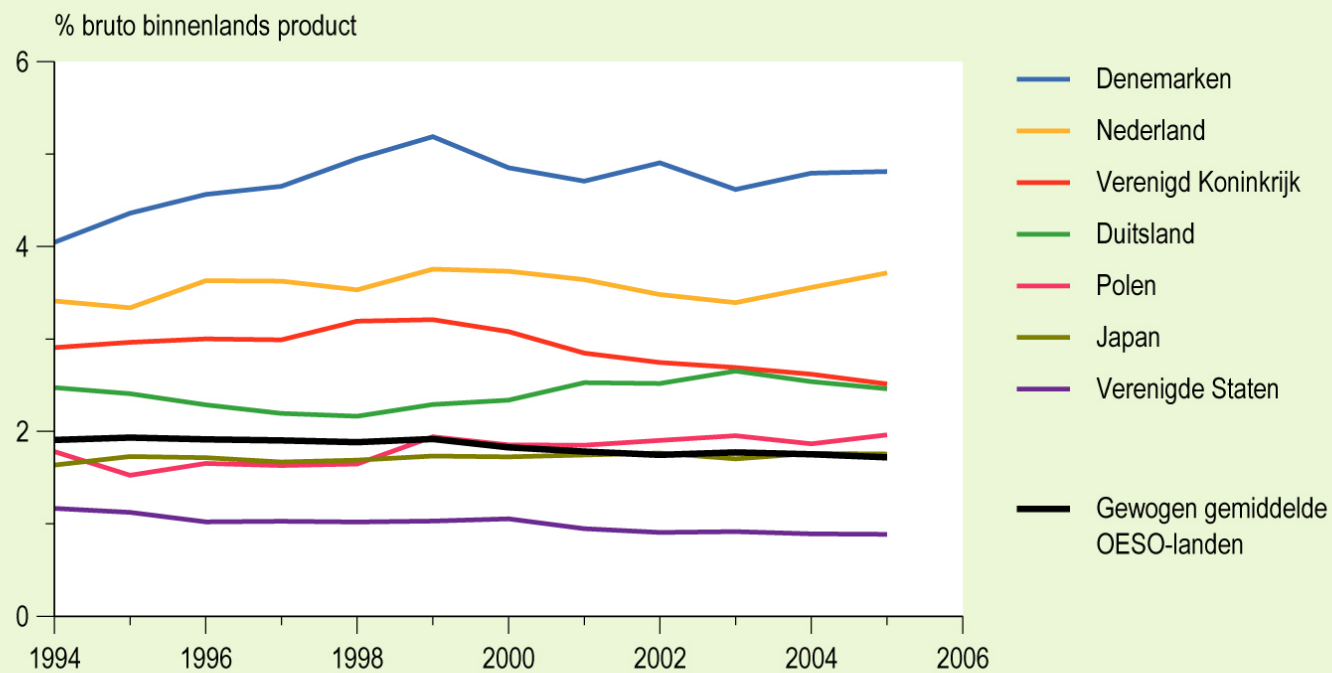
2. Getting the prices right

- Pricing external environmental effects
- Stimulate investment in clean and efficient technologies and discourage dissipation
- Getting prices right is necessary, but, in itself, not sufficient for realising a reduction of 80-95%
- Options
 - More stringent CO₂ ceiling ETS and European energy taxation
 - Further greening of Dutch tax system
 - Current yield of environmental taxes in the Netherlands is around 20 billion euros or 14% of total tax revenue

■

Green taxes relative to GDP

Groene belastingen als aandeel in bruto binnenlands product





3. Abolish environmentally harmful subsidies

- Here, price incentives have an adverse effect on the environment

- Could provide up to 10 billion euros for the National Treasury
 - Continue efforts to exempt shipping and aviation within the EU
 - Low tariffs for bulk users of energy in the Netherlands
 - Reducing tax exemptions for commercial and commuter traffic from 19 to 12 cents per kilometre would yield 1 billion

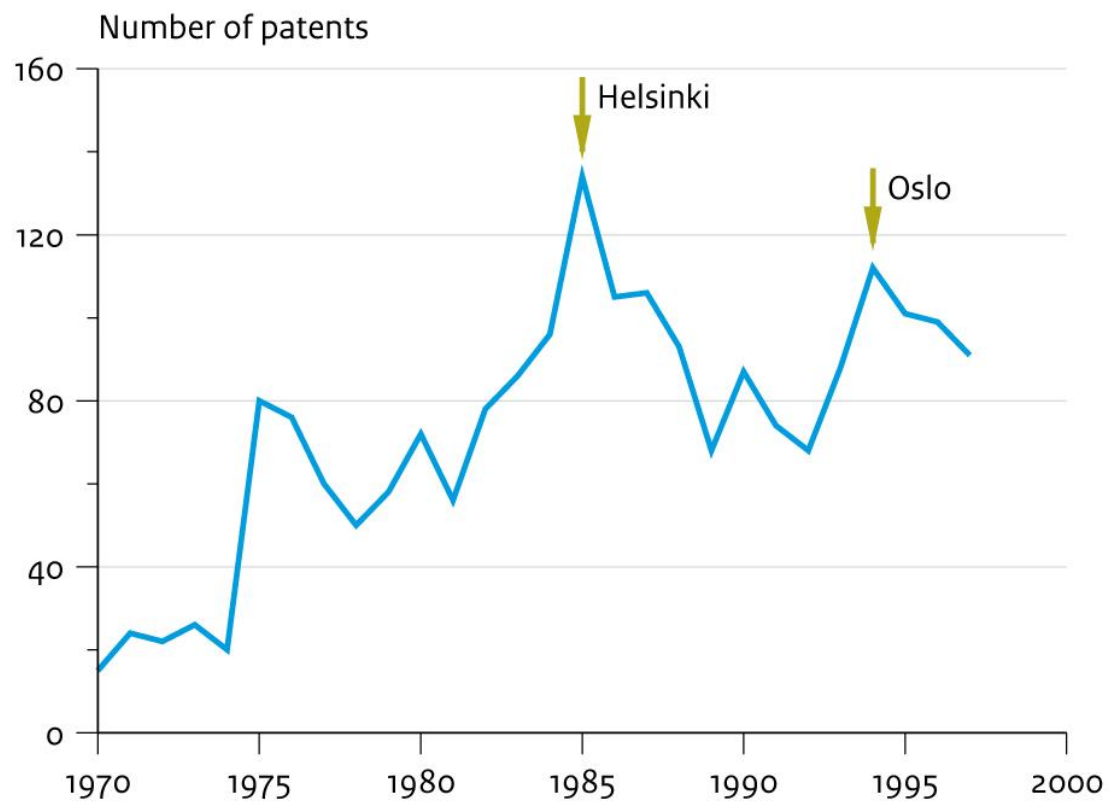
- The smallest savings are realised in sectors with the lowest energy taxation



4. Dynamic regulation

- Increase demands on the energy use of products, such as electric appliances and cars
- Dynamic standardisation: increase demands in time; reward innovative industry through financial benefits
 - Japanese 'top-runner programme', in which companies with the best results serve as the benchmark for the standard
- Clear agreements on emission standards contribute to innovations and their dissemination

Protocol for sulphur dioxide reductions





5. Green innovations

- Two types of innovation:
 - Improvements of existing clean technologies for a more efficient application of energy and materials
 - Radical innovations, new technologies
-
- Government stimulates green technology by:
 - Granting subsidies and tax benefits
 - 'launching customer'
- General policy of picking the winners?



How to measure progress for green growth?

- Balancing green and growth
- Efficiency and ecological risks
- Headlines needed