

# China's 12<sup>th</sup> Five Year Plan

## Challenges for a greener future

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**MISTRA** 

# Phase I

- First step; the great clean-up
  - Emission reductions from point sources – pollution load to air, water and soil
- Second step; from problem “islands” to “continents”
  - Diffuse pollutant sources
  - Products
  - Integrated approach

# How?

- Regulations; license, supervision, control
- Introduce economic instruments (PPP principle)
- Close down counter productive subsidies
- Structural changes (old factories, power plants etc.)
- Regional cooperation
- Monitoring

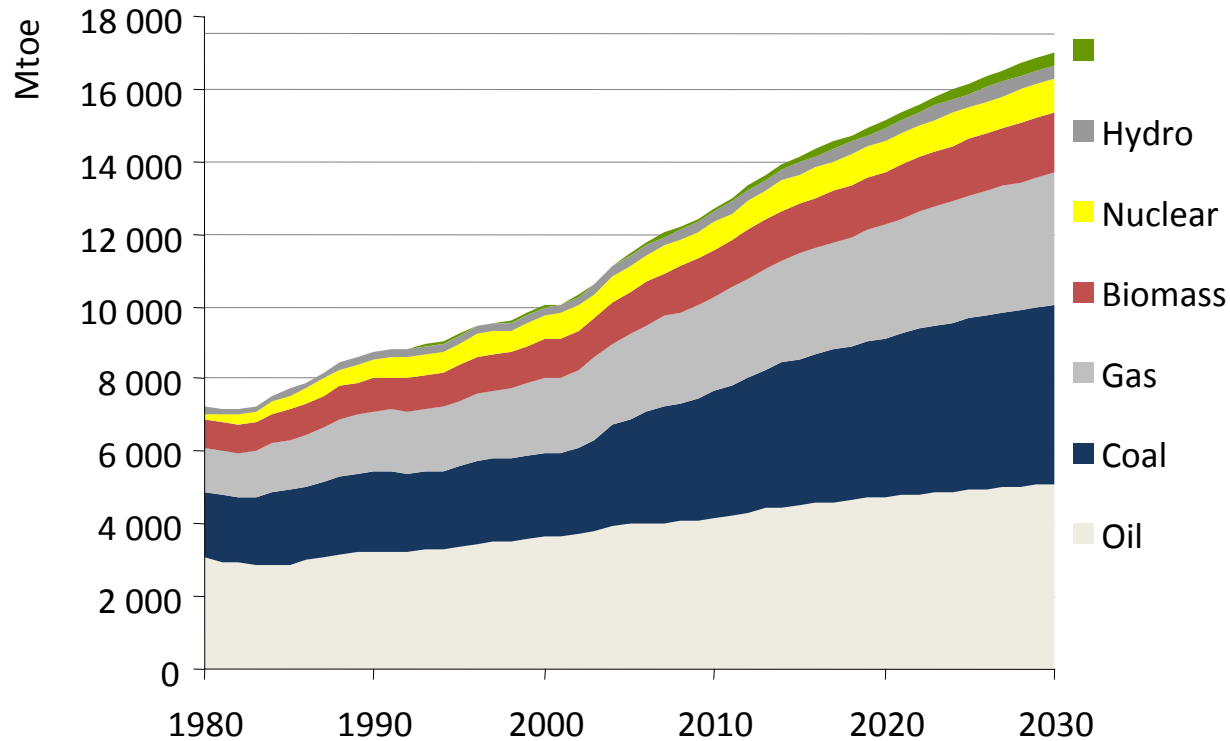
# Phase II

- Holistic/system approach → “environmental problems are problems generated by the society” → benefits, synergies and barriers in connection to other policy areas
- Production – consumption patterns
- Human behaviour
- Identify the real driving forces behind environmental degradation
- Sustainability in a global context
- Policy objectives and targets
- From regulations towards more market based mechanisms

# Energy

- Energy intensity, efficiency, saving and renewables
  - Regulations; legislation, standards
  - Efficient economic instruments → price mechanisms
  - “Good and bad” subsidies
- Lot of experiences from other countries and CCICED task forces over the last decade

# World primary energy demand in the Reference Scenario: this is unsustainable!

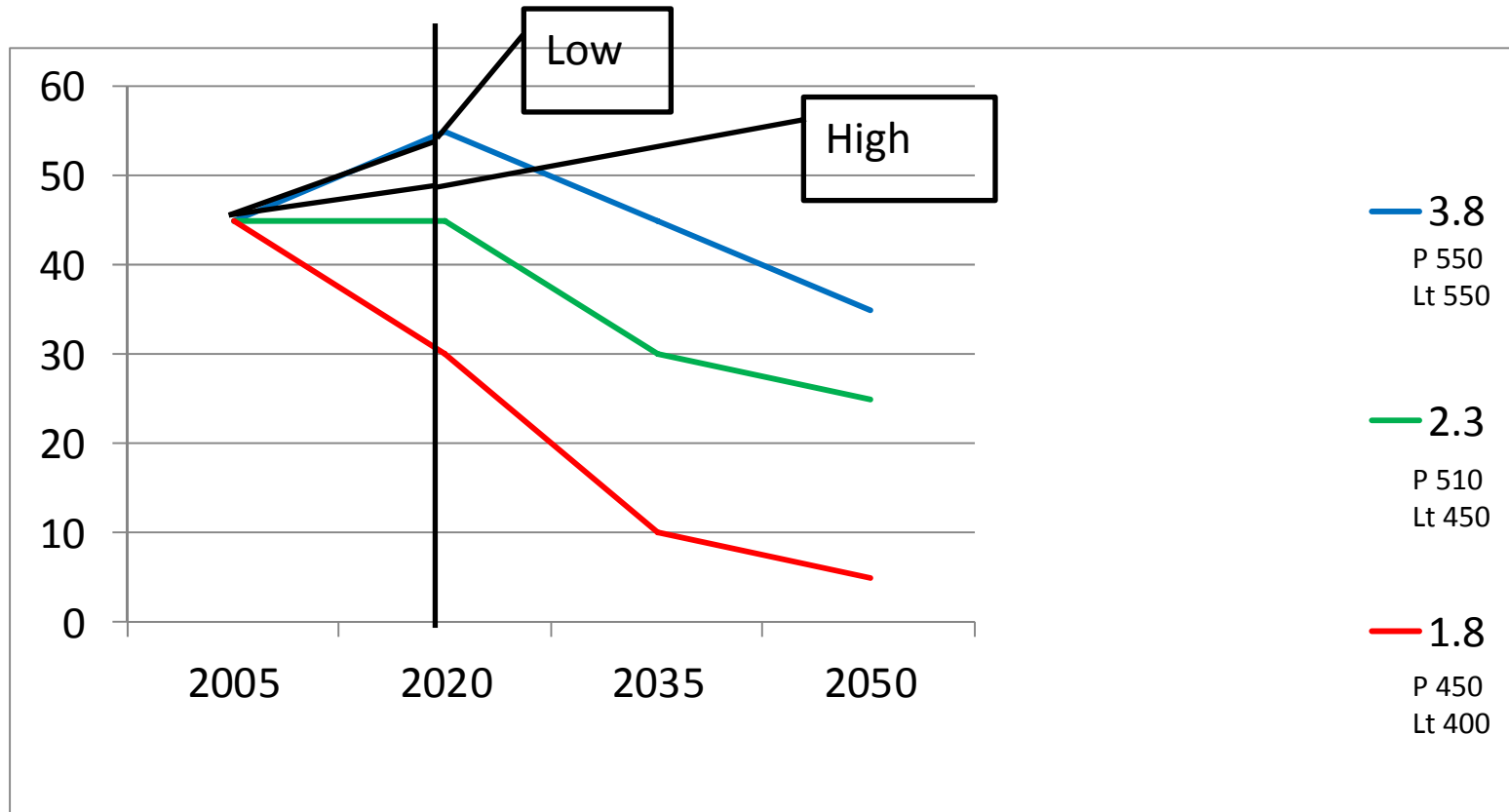


World energy demand expands by 45% between now and 2030 – an average rate of increase of 1.6% per year – with coal accounting for more than a third of the overall rise

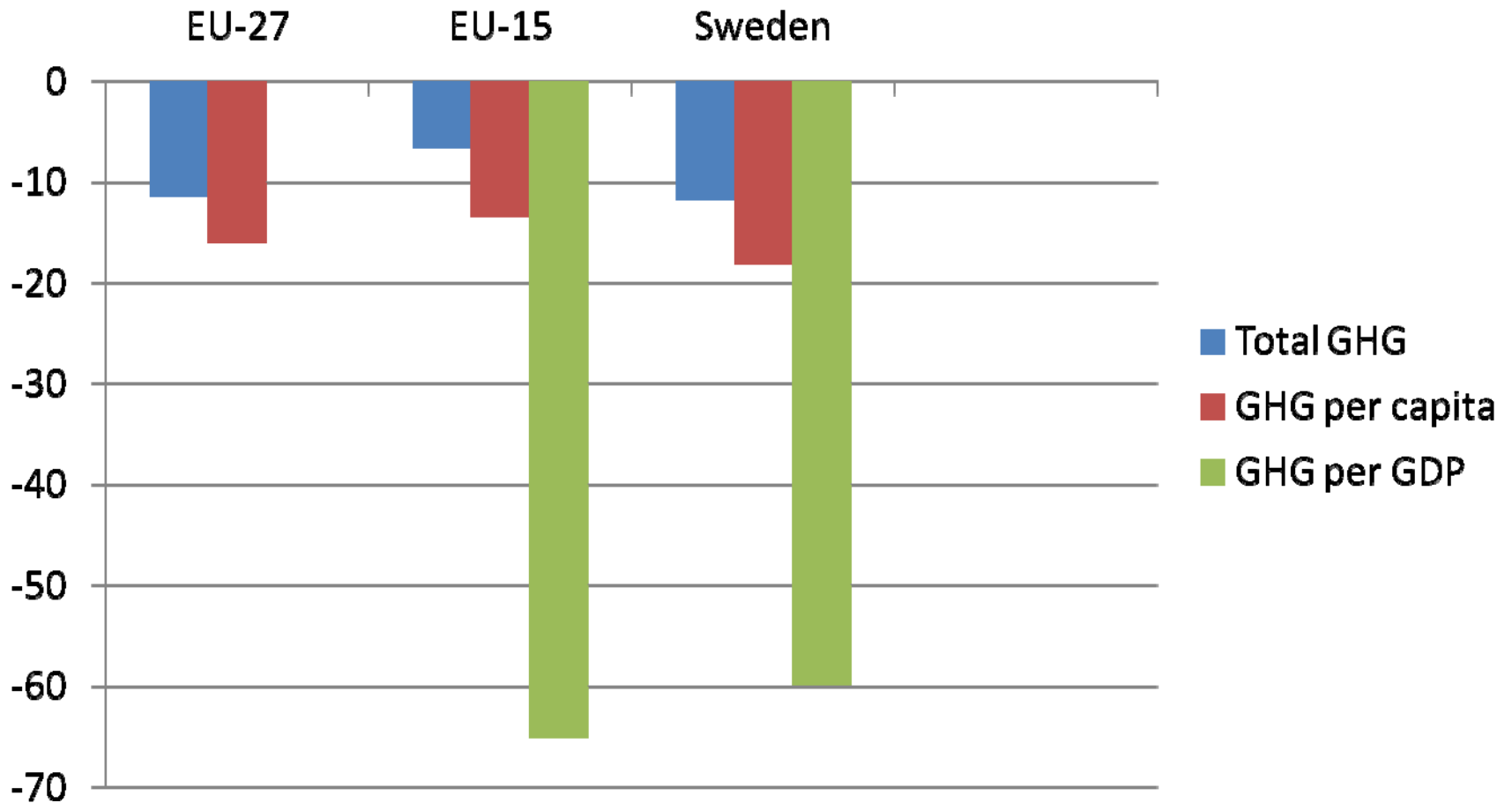
**World Energy outlook 2008**

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# Pledges in Copenhagen Accord

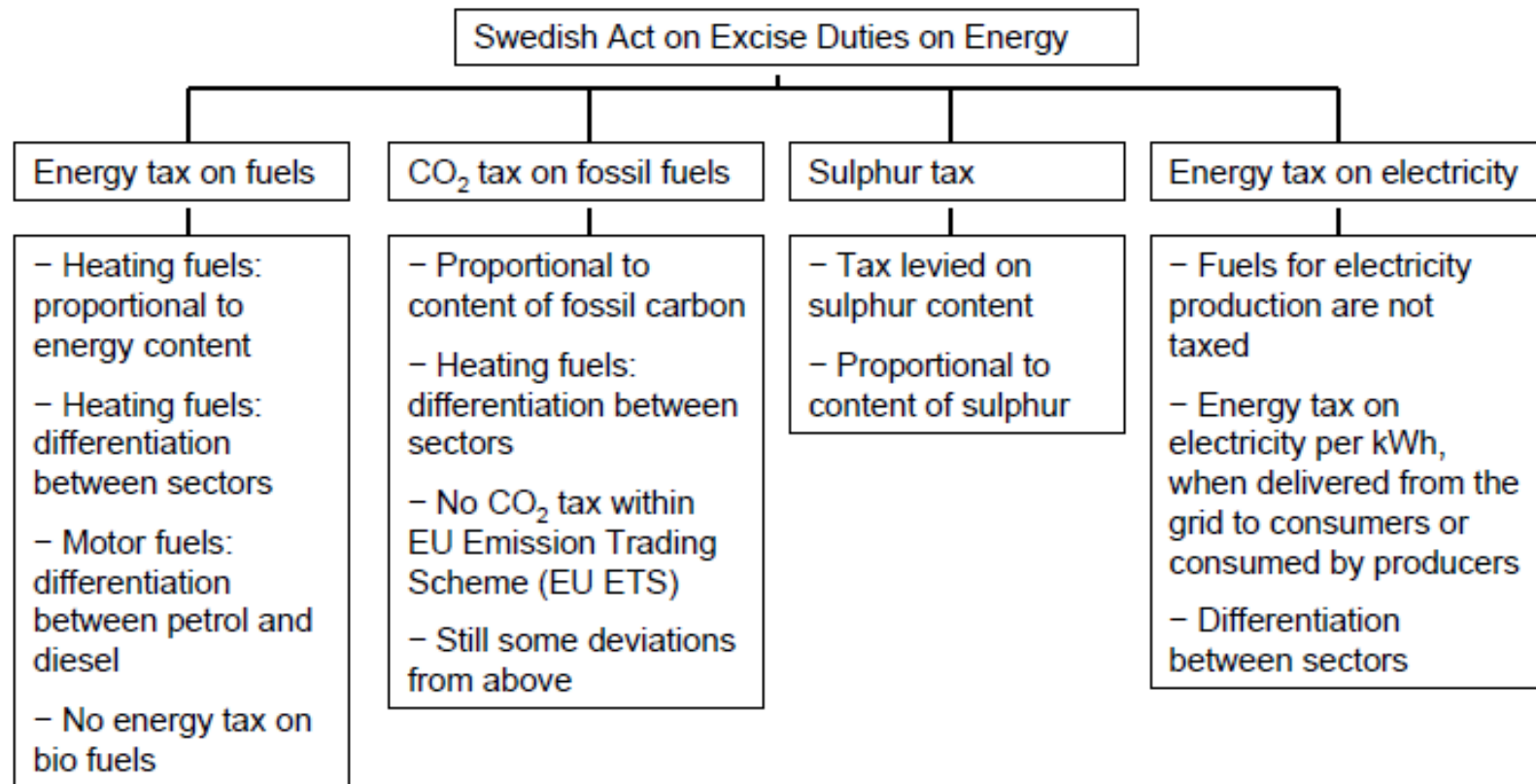


# 1990 – 2008 percent decrease

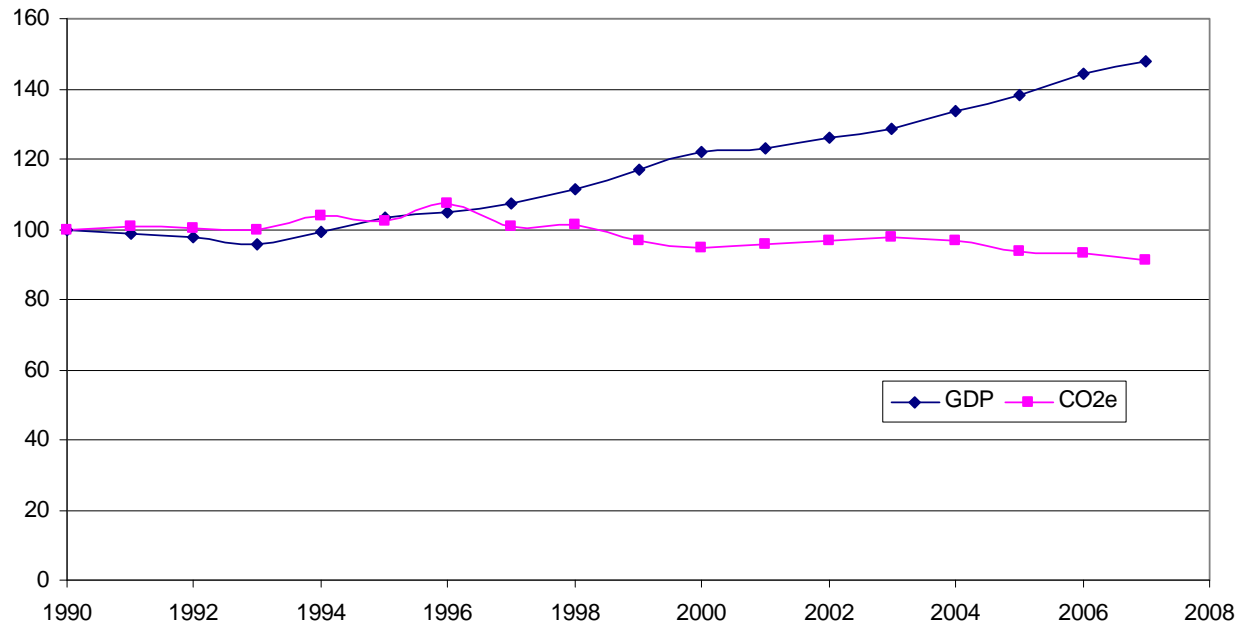




# Description of current energy related taxation in Sweden



# Real GDP and CO<sub>2</sub>e emissions in Sweden, 1990 - 2007

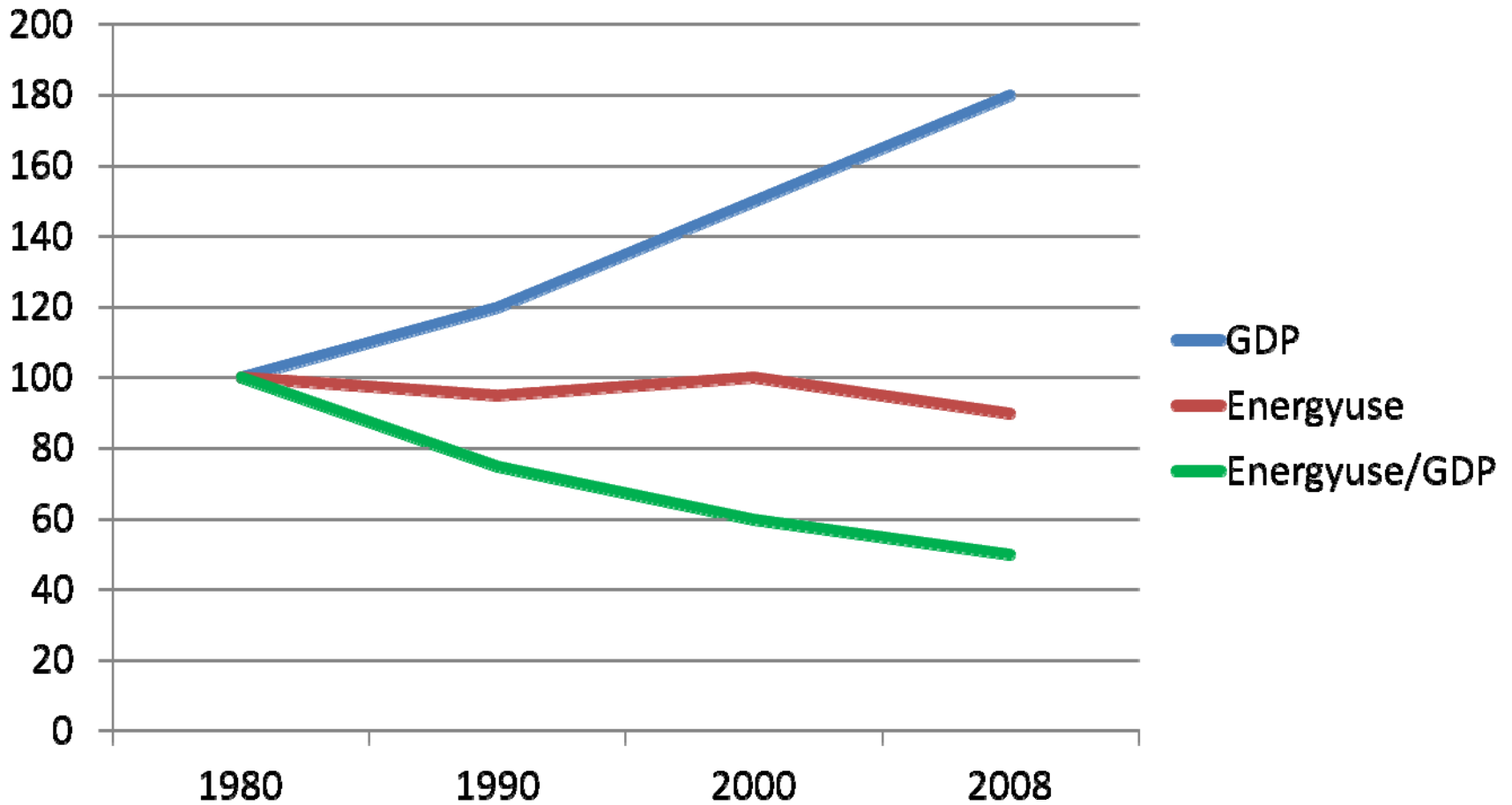


**1990 – 2007:**  
9 % reduction of CO<sub>2</sub>e  
emissions  
+ 48 % economic growth

**Emission reductions  
can be combined with  
economic growth!**

Sources: For CO<sub>2</sub>e: Sweden's National Inventory Report 2010, submitted under the United Nations Framework Convention on Climate Change. For real GDP: Statistics Sweden

# Energyintensity - Sweden



# Ecosystem and biodiversity

- Ecosystem services
  - Climate change (carbon storage, emissions of GHG etc.) and climate regulation
  - Water management, flooding, erosion control
  - Fibre, renewables
  - Biochemicals, pharmaceuticals
  - Genetical storage
  - Ecotourism
  - Non-monetary values

# Pressure on ecosystems

- Global meat, fish, and dairy consumption is now causing around 30% of biodiversity loss
- 80% of agricultural area is currently devoted to meat and dairy production
- 10% of the world's population consumes 25% of animal protein (fish, meat, and dairy) and world consumption has doubled since 1970
- Renewable resources for energy use

# How?

- Integrated approach → terrestrial, limnic, marine environment
- Price on ecosystem services and biodiversity
- Cost of action  cost of inaction
- Conservation → area protection
- Long term approach
- Define the framework for sustainable use
- Monitoring on different scales

# Conceptual development

Circular economy



Low Carbon economy



Green economy – Green growth

# China

- Has a strong economy but is still a developing country
- Trying to find pathways towards sustainability, e.g. an improved quality of life
- Is aware that that the environmental situation of today needs corrections and new approaches
- Understand that there is a need of more of smart work than hard work



# Overarching challenge

**How to decouple growth from  
pressure on environment?**

谢谢！

**Thanks for your  
attention!**

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