

# Growth and the environment in a global perspective

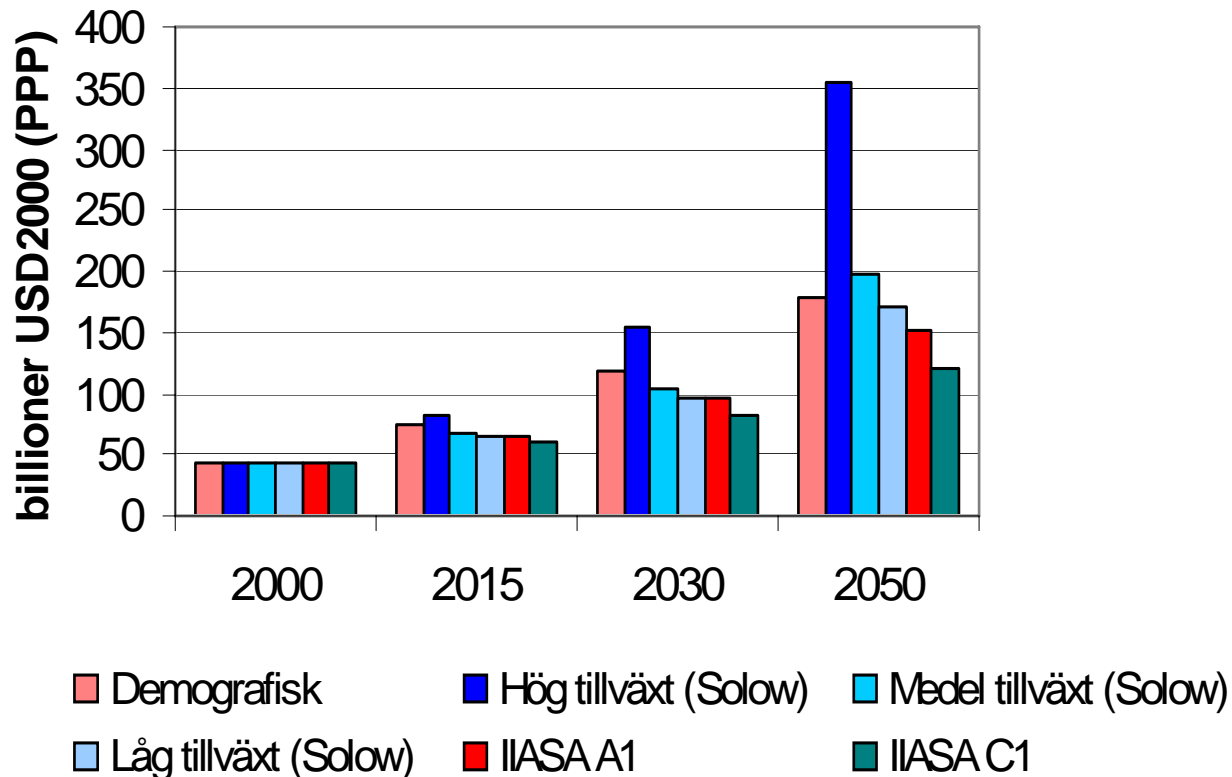
Miljövårdsberedningens  
promemoria 2007:1

# Three challenges studied

- Demand for biological resources
- Climate change with a focus on energy efficiency
- Long global product chains with little transparency on environmental consequences

# Economic growth prognosis until 2050

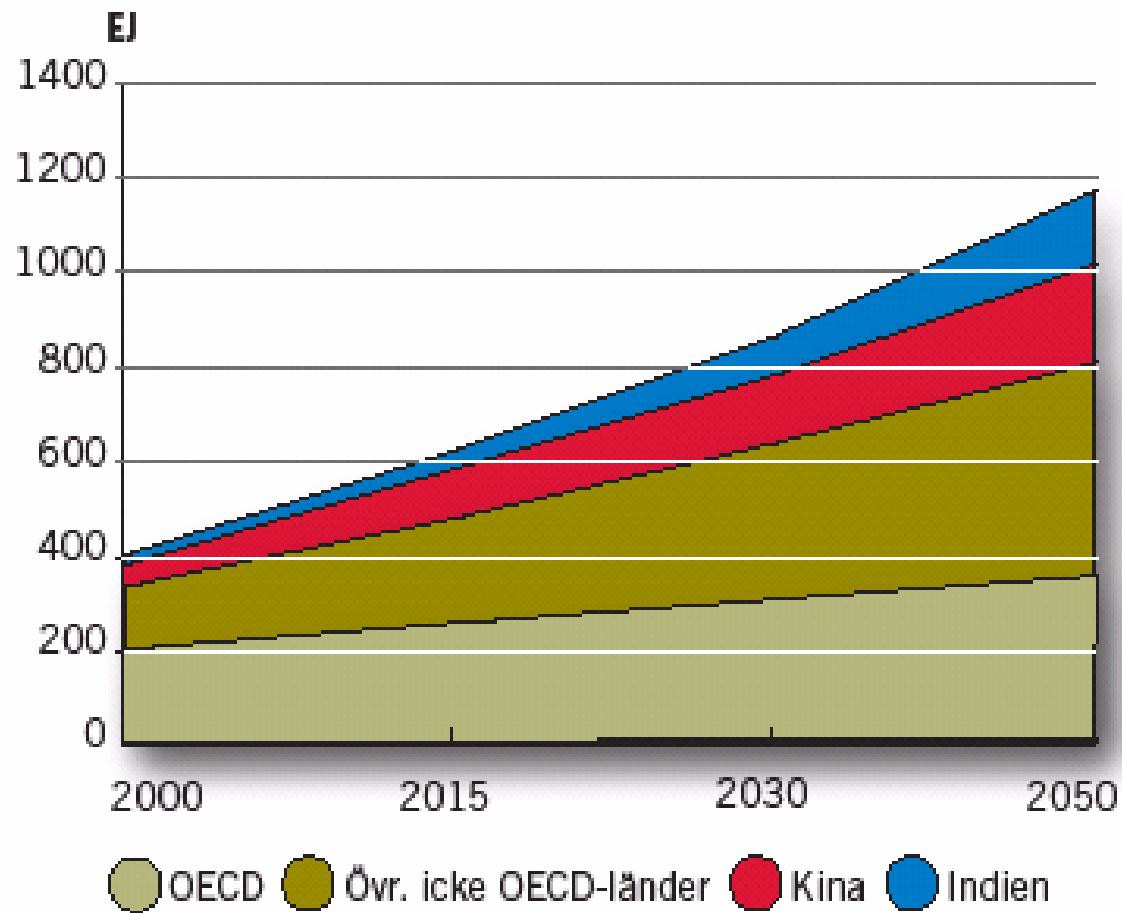
## BNP scenarier

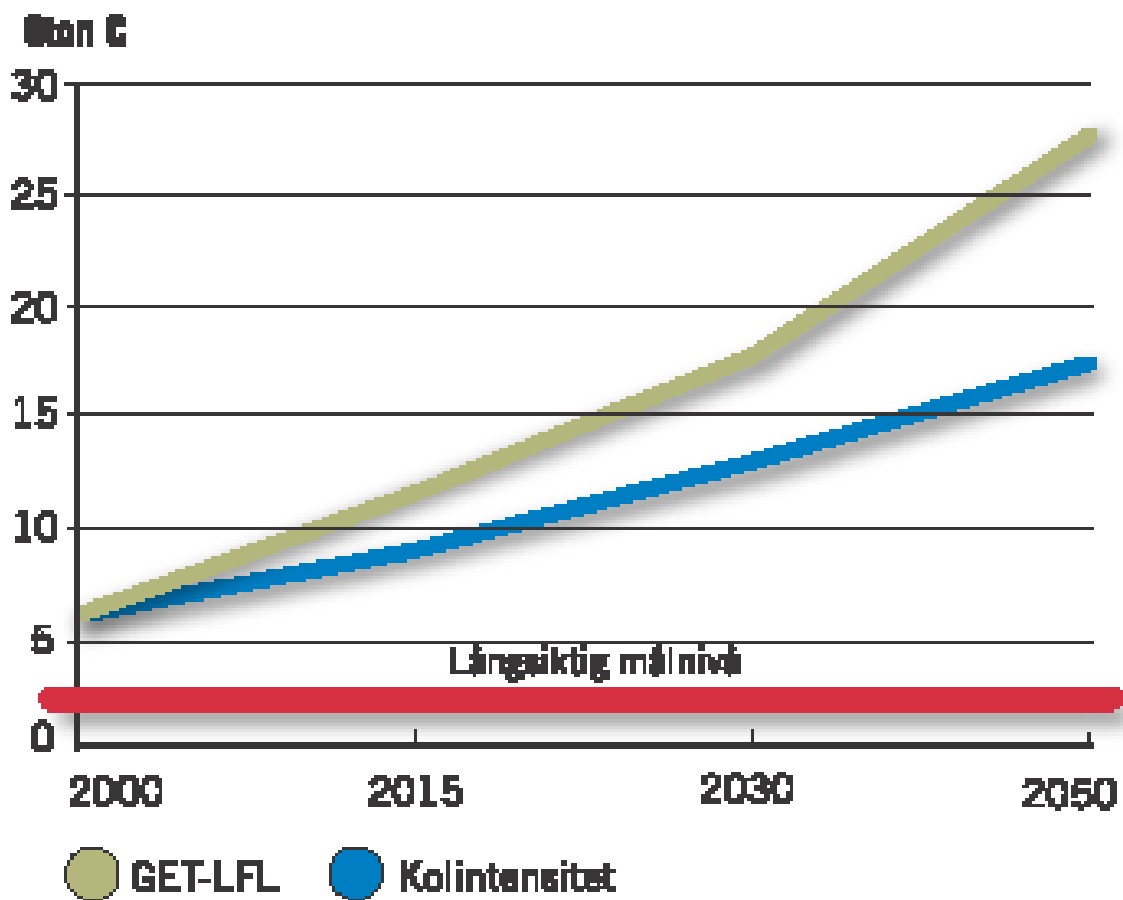


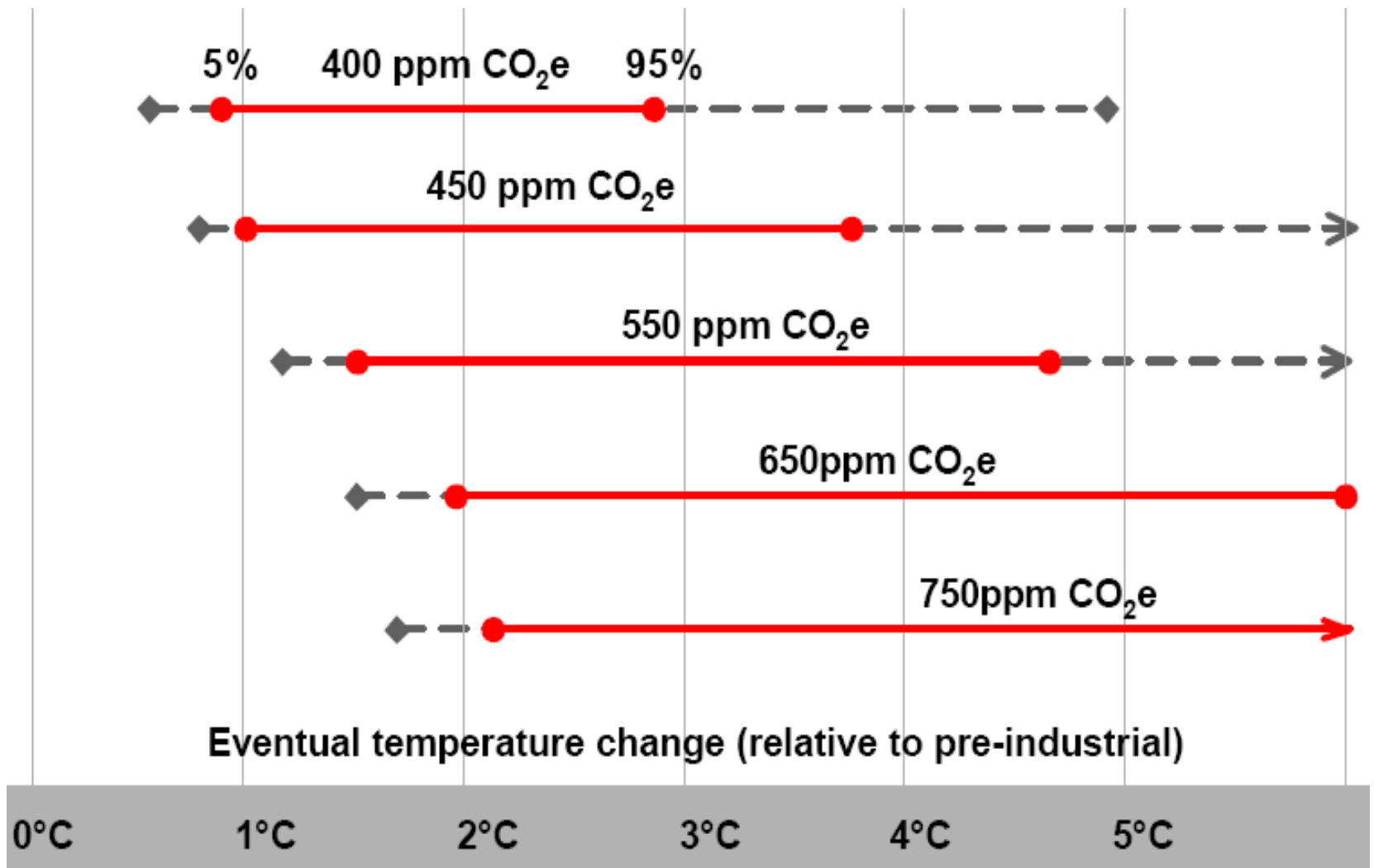
# Scenarios

Scenarios for demand on

- energy
- timber
- food and freshwater
- bio energy
- fish

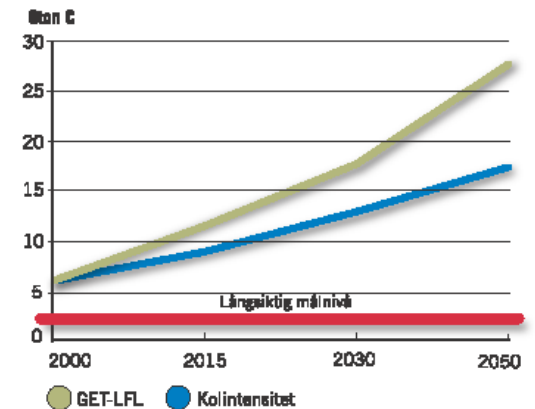
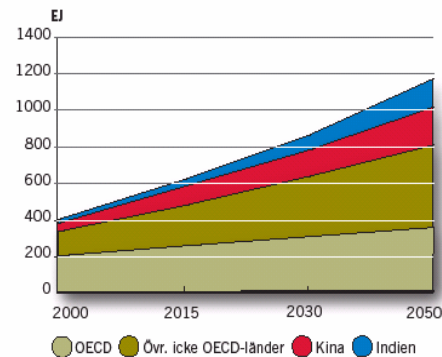
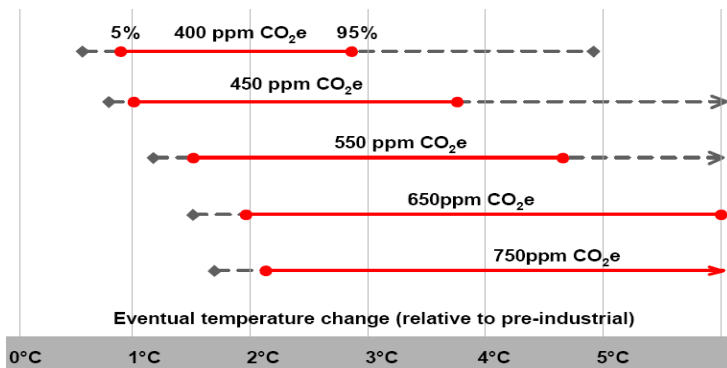




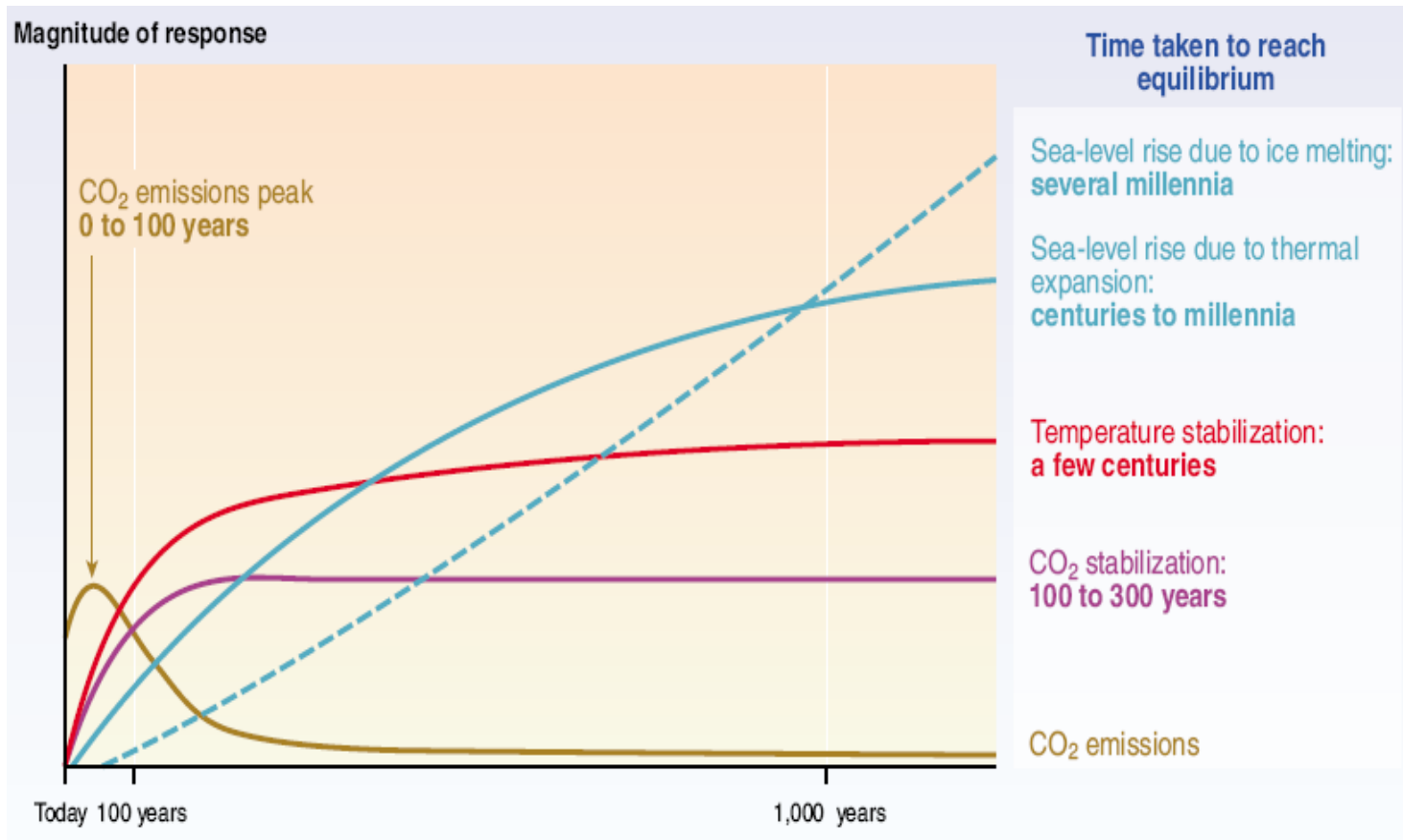


# Energy and climate

- CO<sub>2</sub>e should be stabilized at 400 ppmv
- Emissions globally should be at least halved until 2050
- Global demand on energy may triple until 2050

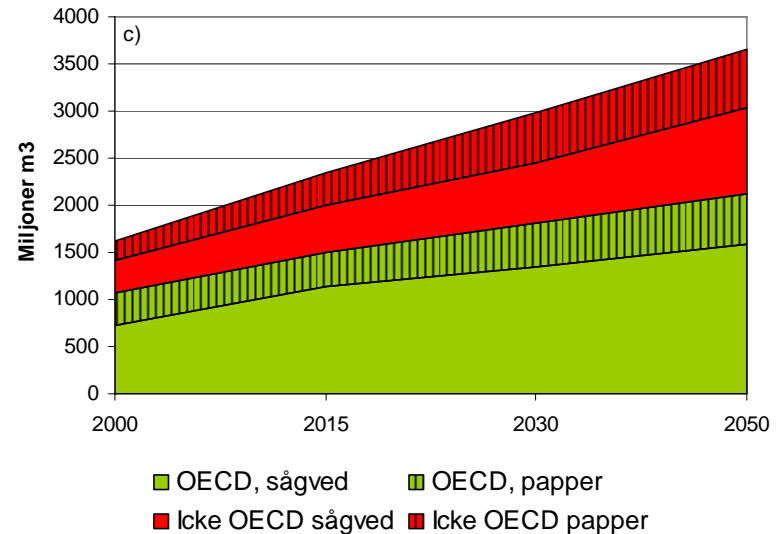


# A safeguard strategy for climate change



# Forest products

- Demand on forest products for industrial use (paper, sawn products and panels) may more than double
- Deforestation alarmingly high and responsible for 20 % of CO<sub>2</sub> releases

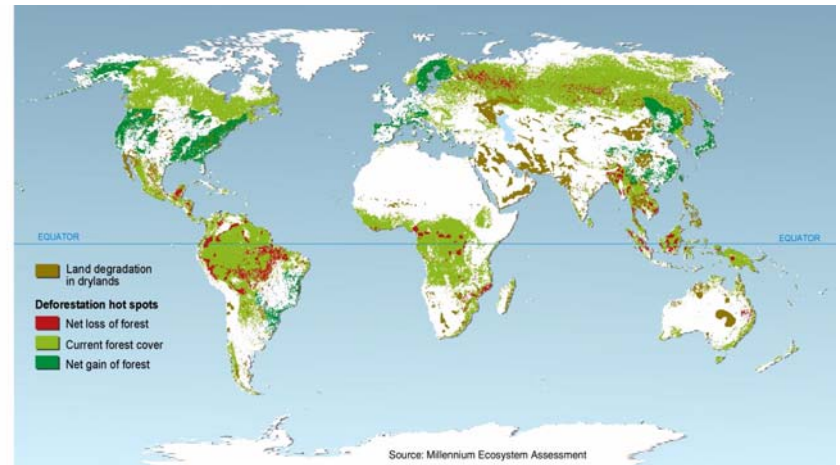


# Freshwater

- Demand on freshwater for food production 50 % higher
- Water for bio energy, cotton, flowers.....?
- Irrigation agriculture at a dead end ?

# Bio energy

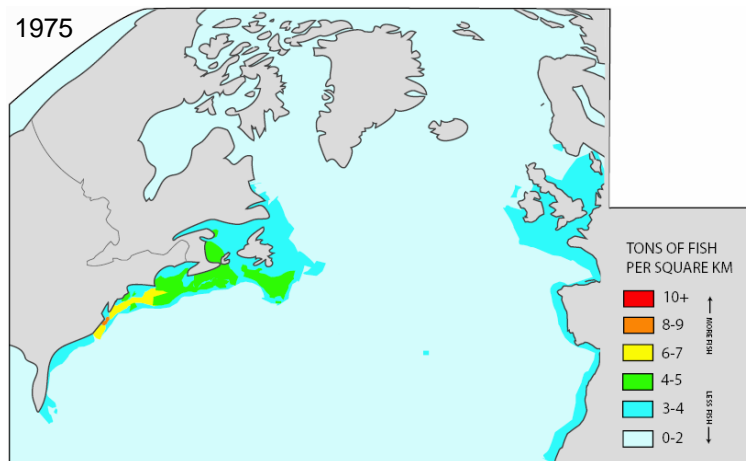
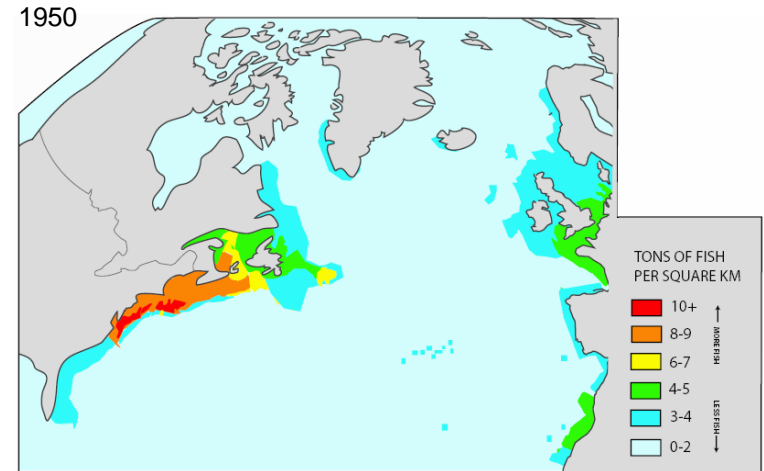
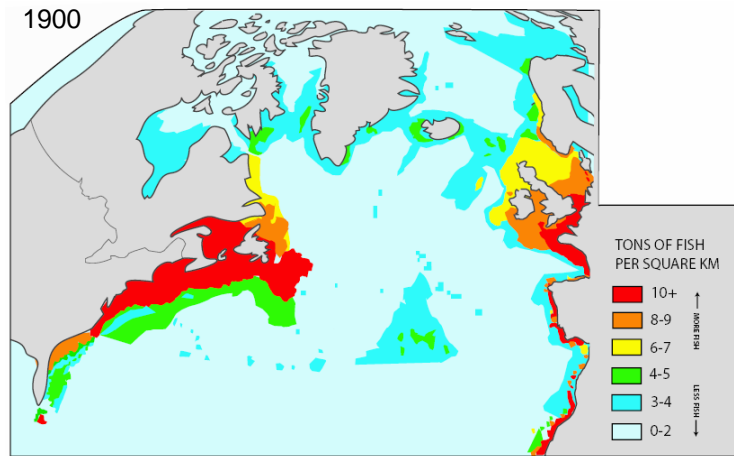
- Even if areas 4-7 times larger than present EU cultivated land was used it could not deliver more than about 15-20 % of energy demand 2050
- Would need as much water as total food production
- What land?



# Fish

- Demand may increase by 30 % until 2030 according to FAO
- 25 % of fish stocks already outside safe biological limits and another 50 % in acute need of more sustainable management
- Total catching of wild fish has stagnated/decreases
- Risk for further decreases until 2050
- Fish farming the solution?

# North Sea – 90 % reduction since 1900



# Combined effects -risk for regime shifts

- Climate change
- Increasing demand for food, forest products, fresh water and land
- Decreased resilience in many ecosystems
- Risk for mutually reinforcing processes

# Sunny side

Potential for more efficient use

- 4 600 kcal produced – 2 000 kcal consumed
- Energy efficiency yearly by 1,5- 2 %

# Governance

- Rapid markets – growing economies
- Sluggish societal institutions

# Double strategy

both

- Decoupling

and

- New methods for sustainable use and management of ecosystems

# What can a small country like Sweden do – what could EU do?

- Good example
- Bilateral environment cooperation
- International initiatives

# International initiatives

- create International panel for ecosystem resilience
- review all conventions for an ice free Arctic
- stop illegal logging and fishery
- moratorium on bottom trawling
- shared water facility
- standards for sustainable production bio energy
- SCR in the global product chains
- potential international economic instruments

# Three platforms

- Include ecological footprint in Swedish environmental quality objectives
- Make global environmental challenges a profile issue in the Swedish EU presidency 2009
- Take initiatives for a new Summit on Sustainable development in 2012 – a Rio + 20

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