



PBL Netherlands Environmental  
Assessment Agency

# Role of the EU in the exploitation of global natural resources

- Scarcity in a sea of plenty
- EU Resource-efficiency perspectives in a Global Context

8 November 2011, Ton Manders



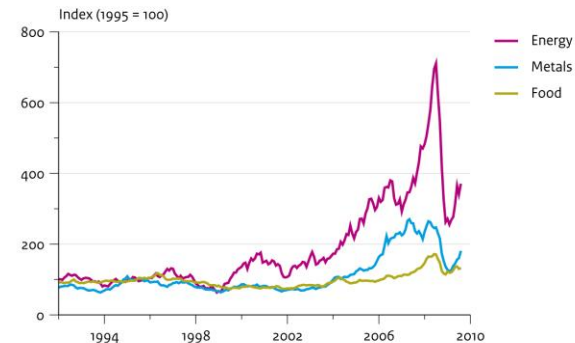
## Messages

- A complex issue, no simple solutions
- Resource efficiency is only part of the solution
- EU policy could be improved

# A complex issue, no simple solutions

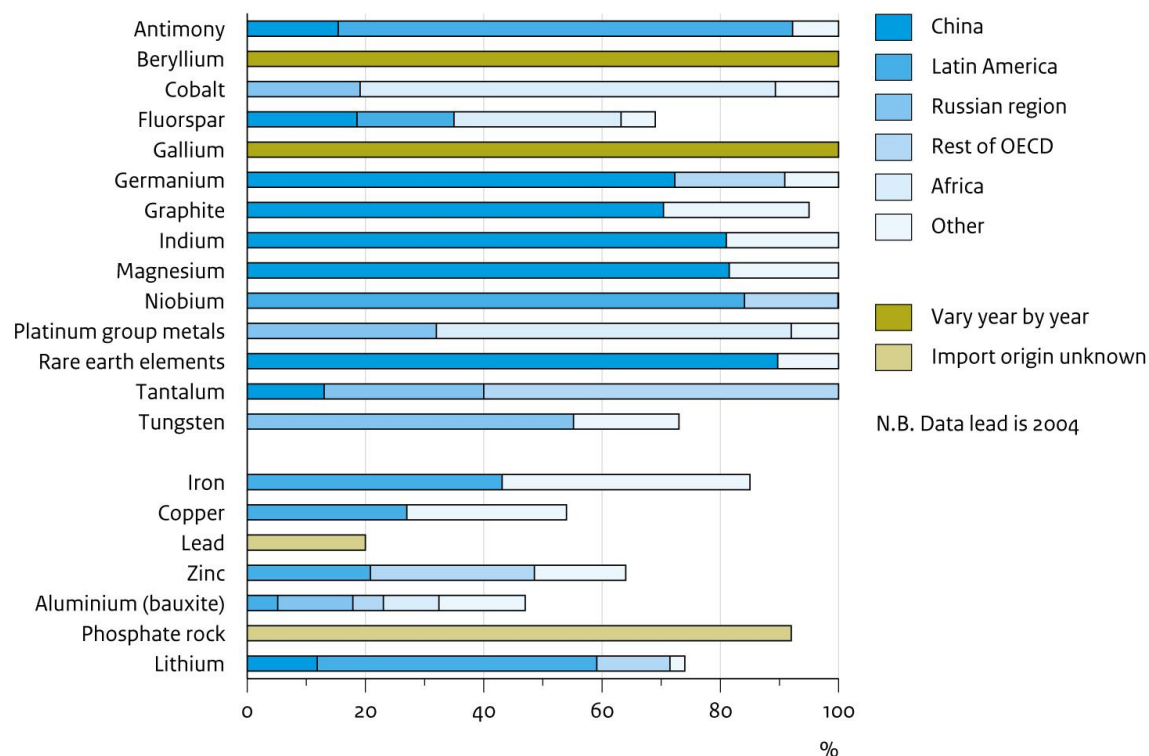
- Scarcity of resources
  - resources are too expensive
- Abundance of resources (environmental degradation)
  - Resources are too cheap
- Security of supply
- Social dimension
- Many resources, strong interlinkages

Global prices energy, food and metals



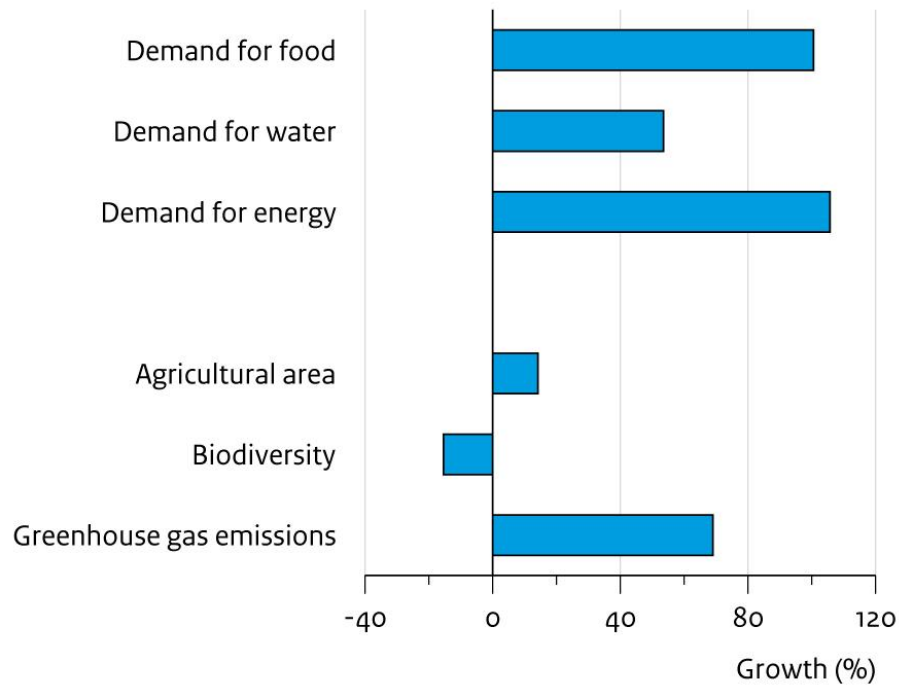
# Resources are unevenly spread across the globe

## Import dependency and import origins of minerals EU-27, 2006



# Problems are bound to increase

## Global shift demand for food, water and energy, 2000 – 2050



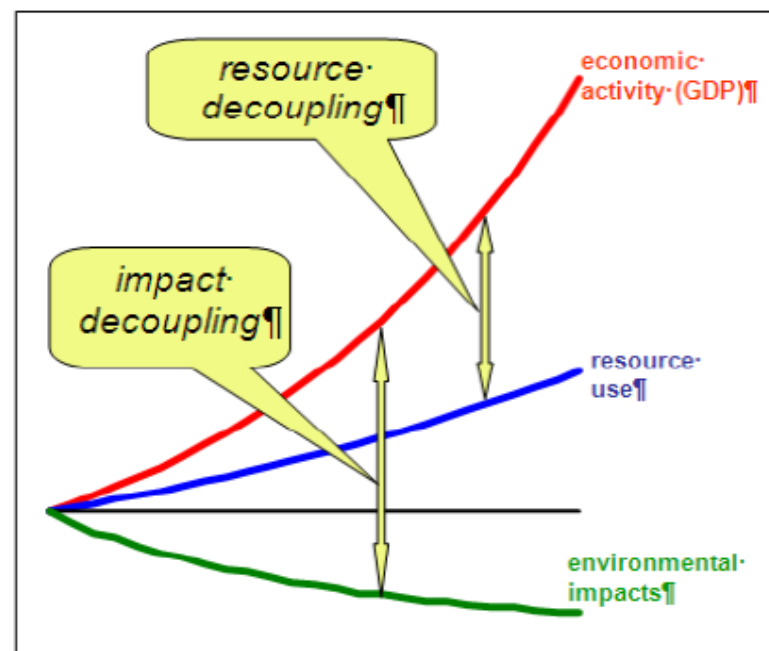
# A complex issue, no simple solutions

Different goals, different policies, trade-offs/synergy

	Security of supply	Affordability	Environment	Development
Security of supply		-	+ / -	+ / -
Affordability	-		-	-
Environment	+ / -	-		+ / -
Development	+ / -	-	+ / -	

# Resource efficiency is not the silver bullet

- Relative decoupling is not absolute decoupling
  - increased labour productivity was never meant to create unemployment
- Europe's role is limited
- Other promising tracks
  - Substitutes
  - Changing behaviour



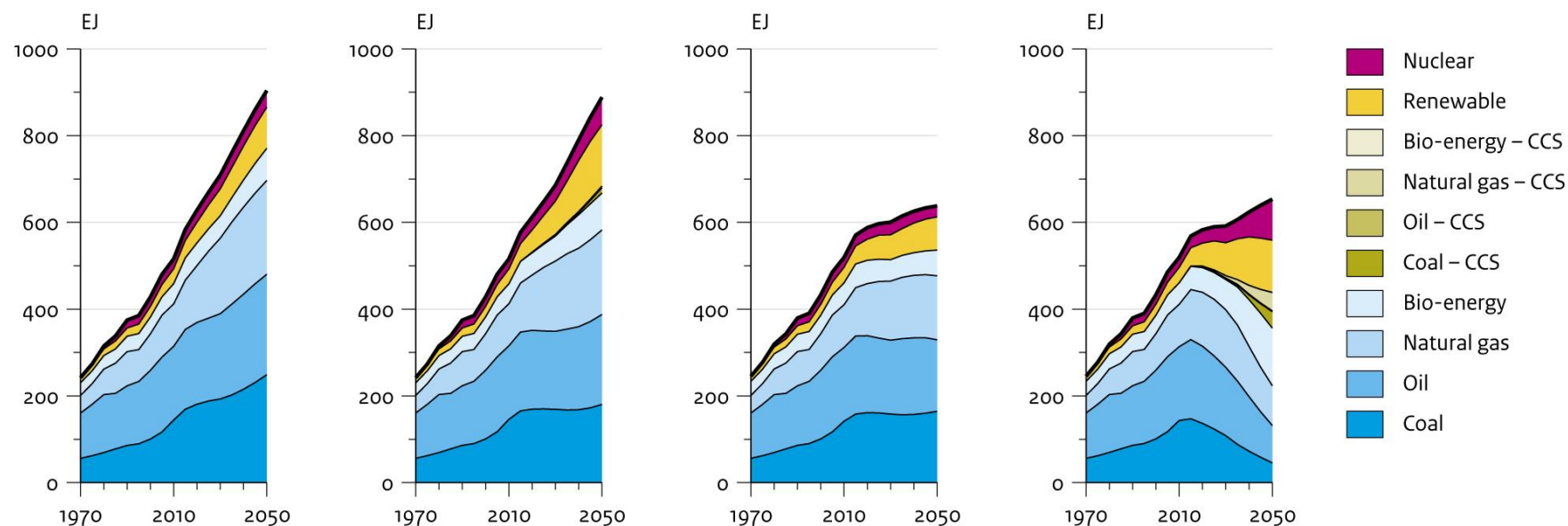
## Primary energy use per energy carrier

Baseline

Envisaged Policies

Global Resource Efficiency

Global Resource Efficiency  
and Climate Policy

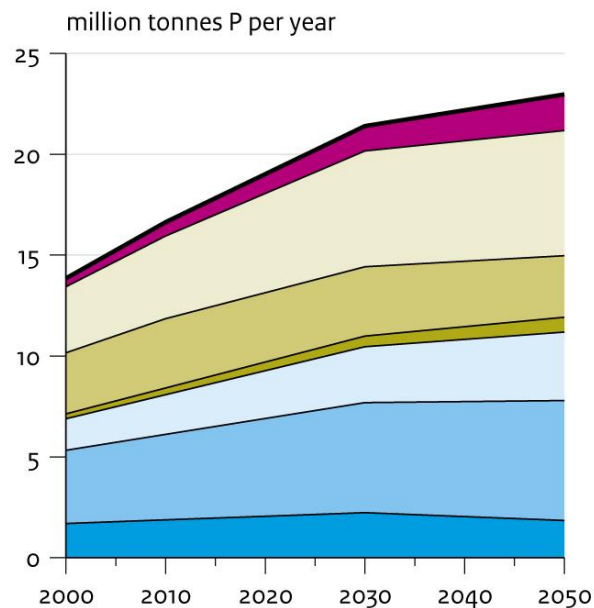


- Enhanced RE breaks energy consumption trend; from 2025 decarbonization of energy supply indispensable to reach 2 degree climate target

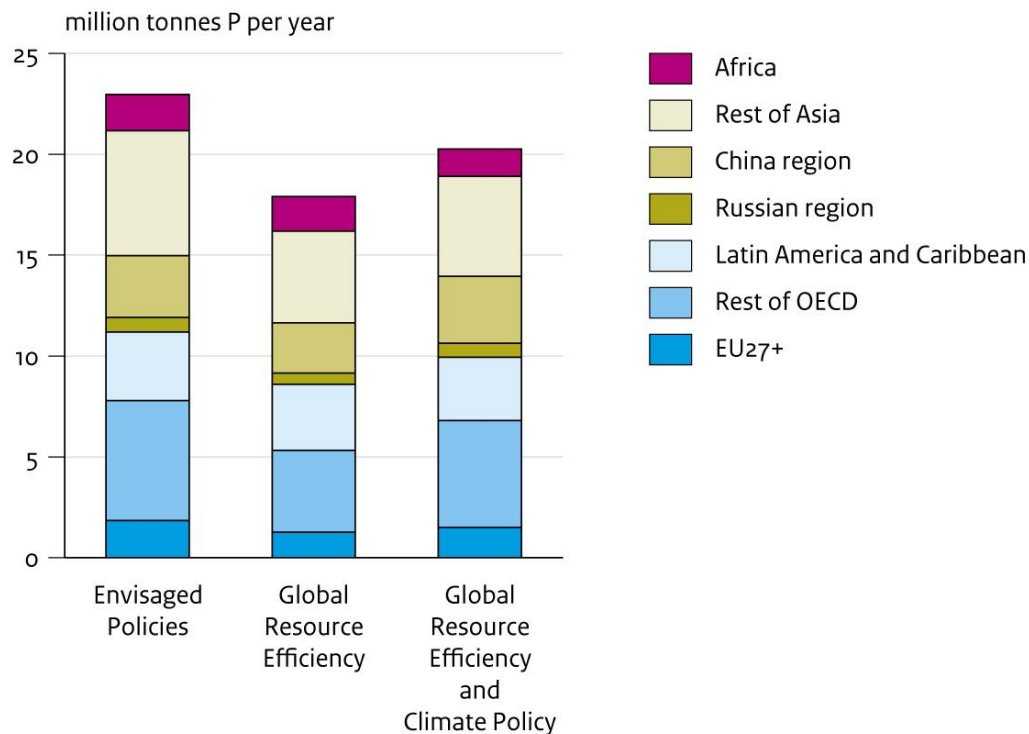


## Phosphorus fertilizer use

Envisaged Policies

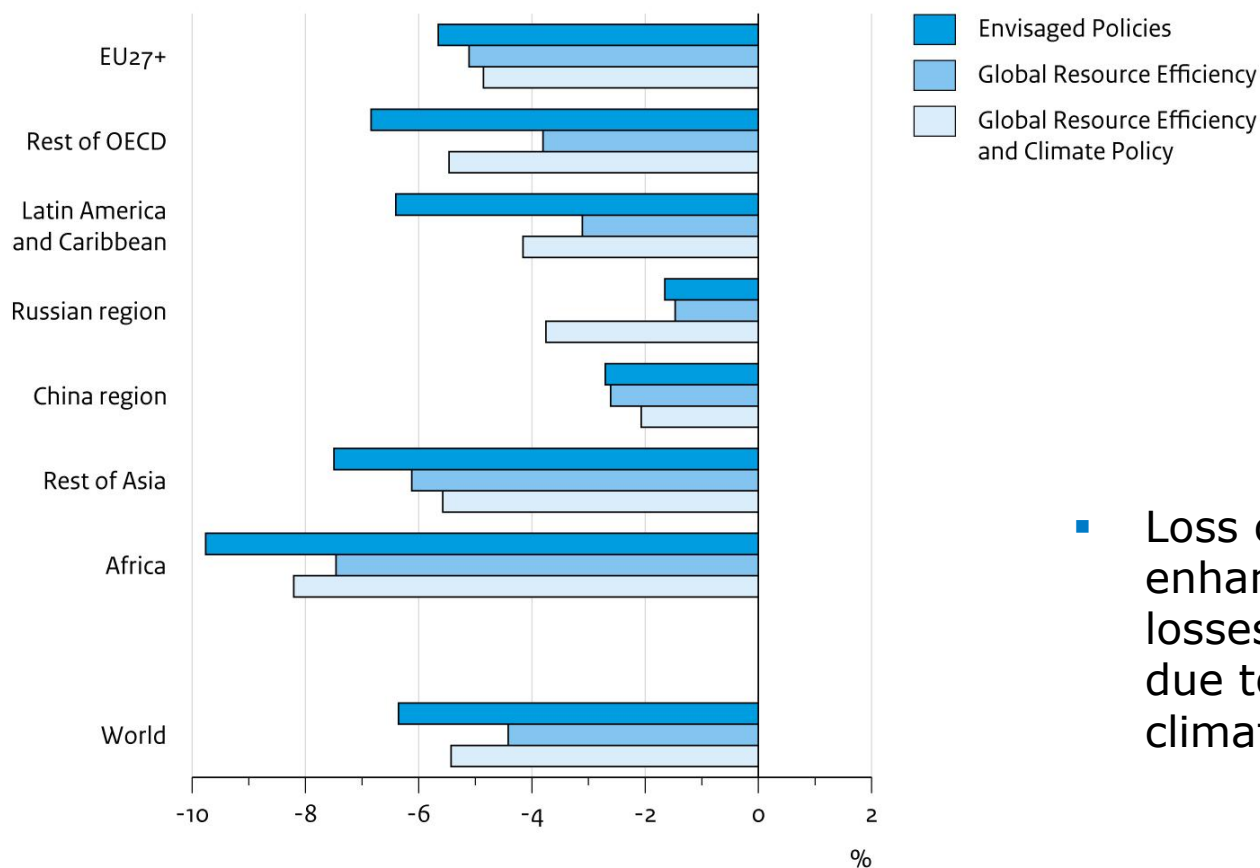


Per scenario, 2050



- Phosphorus use, indispensable as fertilizer, is bound to increase further. Enhanced RE reduces the growth with some positive effect on resource depletion.

## Net change in Mean Species Abundance, 2010 – 2050



- Loss of MSA reduced by enhanced RE; additional losses in some regions due to bio-energy for climate mitigation

## Europe's resource policy

- Fragmented – more integrated approach needed
- Limited attention for development perspective
- External policy unclear
  - coordination versus competition

## Europe's resource policy – to do list

- Explicit, concrete goals, prioritize.
  - RE is not enough, additional measures needed
    - more focus on substitutes
    - more focus on changing behavior
  - More data needed (material flow analysis, MFA),
  - More focus on policy instruments.
- How to bring about resource efficiency?