

Water and resource efficiency in Europe

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The green economy

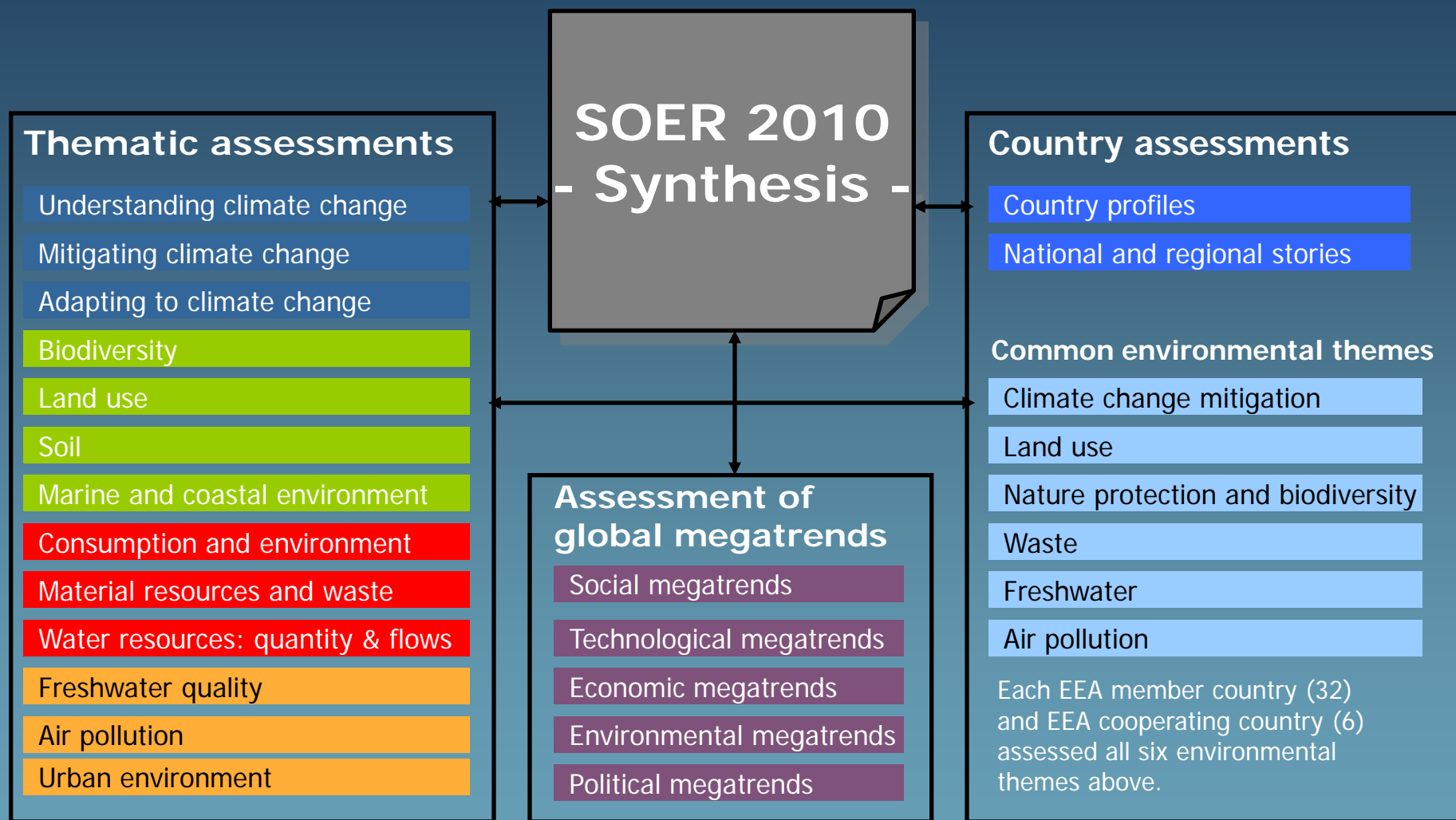
An economy in which policies and innovations enable society to generate more of value each year while preserving the natural systems that sustain us



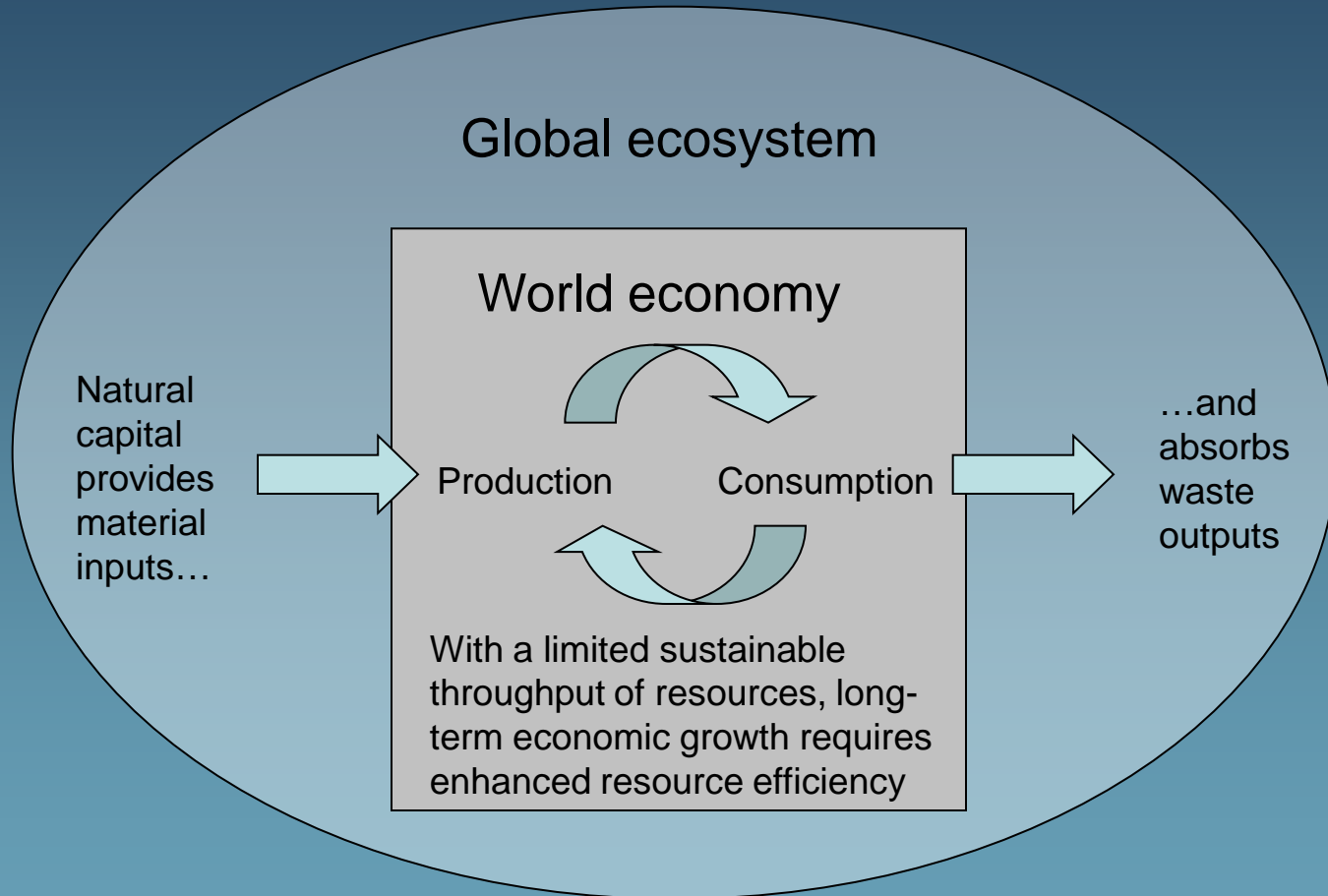
A comprehensive body of assessments of the European environment, offering coherence across themes and across scales, illustrating the complex systemic links between issues, including the impacts of global megatrends.



What is SOER 2010?



SOER 2010 Synthesis: the basis for a coherent narrative to guide responses across sectors



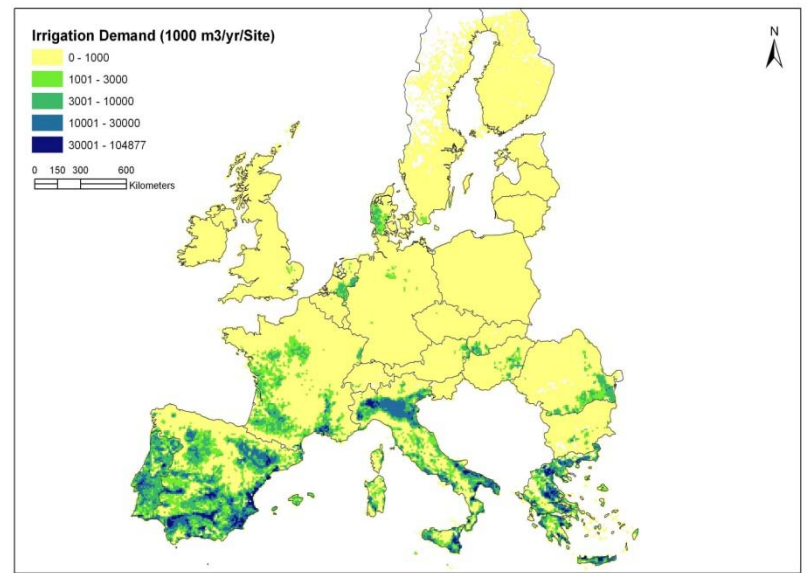
Blueprint for the future of European waters



Water quality and quantity

Agricultural eutrophication and water use are still responsible for the biggest impacts for inland water and coastal water bodies

Reduction at source both in agricultural and urban water management need to be part of the solution in a water scarce future



Water quality and quantity

Water Scarcity and Drought are key issues in southern Europe

Climate change impacts are likely to worsen the picture both regarding WS&D and Floods

Supply side measures are part of hydromorphological pressures affecting EU-water bodies

Water-energy linkages are vital to further developments in resource efficiency



1. Implementation of existing water management legislation and conventions: positive impacts

- Increased stakeholder involvement and public participation – for example in elaborating water management plans
- Implementation of new monitoring and assessment needs
- Restructuring of water policy and administration of water agencies
- Enhanced coherence among policy fields and cooperation between local and national authorities
- More cohesion in European water policy goals and increased international cooperation

Implementation of existing water management legislation and conventions: negative impacts & difficulties

- EU-wide water legislation is sometimes ill-adapted to national specifications and needs
- Difficulties for both protection agencies and other stakeholders in understanding and interpreting the WFD
- Challenging levels of ambition and tight timeframes
- Problems grasping and implementing economic concepts and physical accounting methodologies
- High costs of implementation – diminishing returns on technological investments underline the need to manage demand and address pollution at source



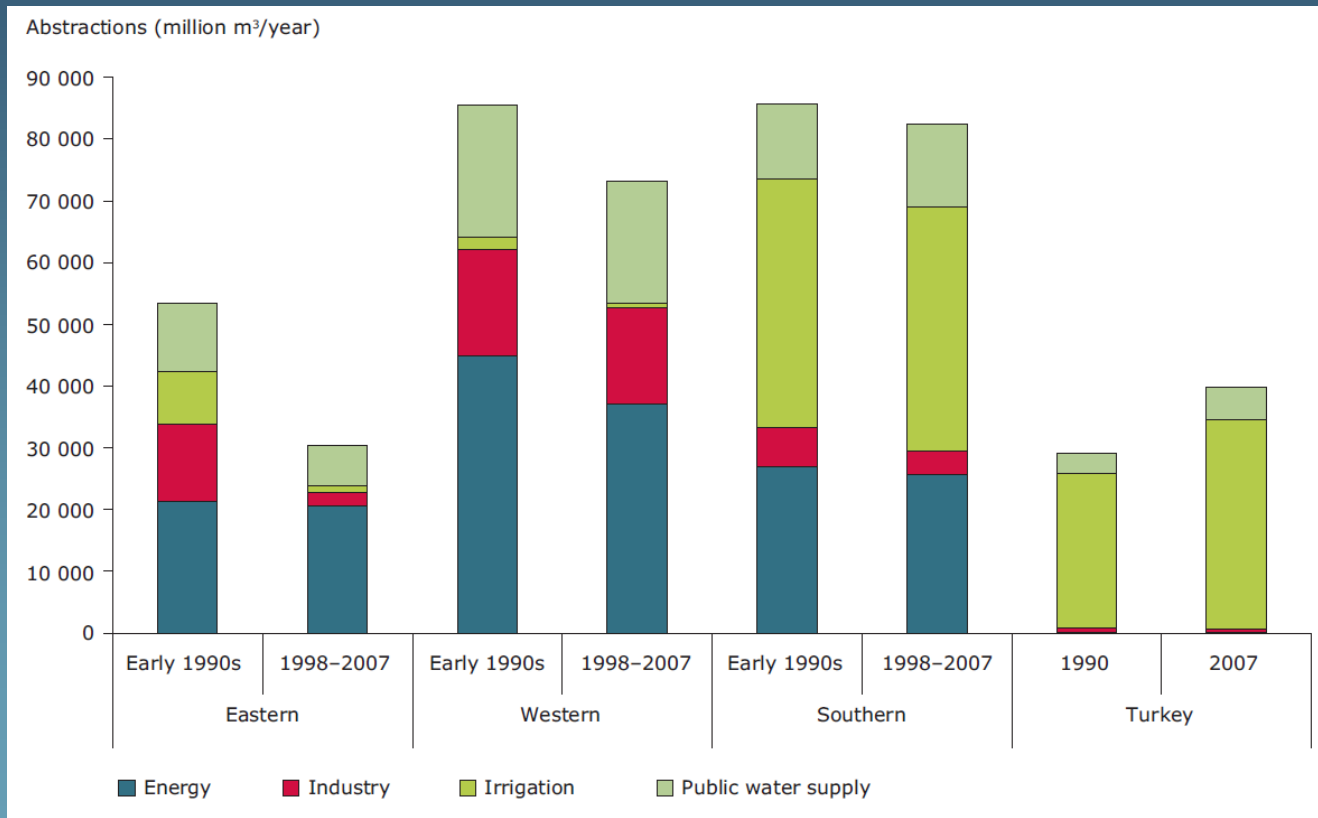
2. Innovation that increases efficiency must be complemented by systemic behavioural change

- Technologies that enhance efficiency are indispensable but not sufficient to achieve environmental targets in a green economy
- The 'rebound effect': innovations that deliver greater efficiency can lower production costs, increasing consumption
- We therefore need innovations that produce systemic change, notably in managing demand and reducing pollution at source
- The focus shifts to other sectors, demanding measures in agriculture, fisheries, transport, energy, industry and so on.

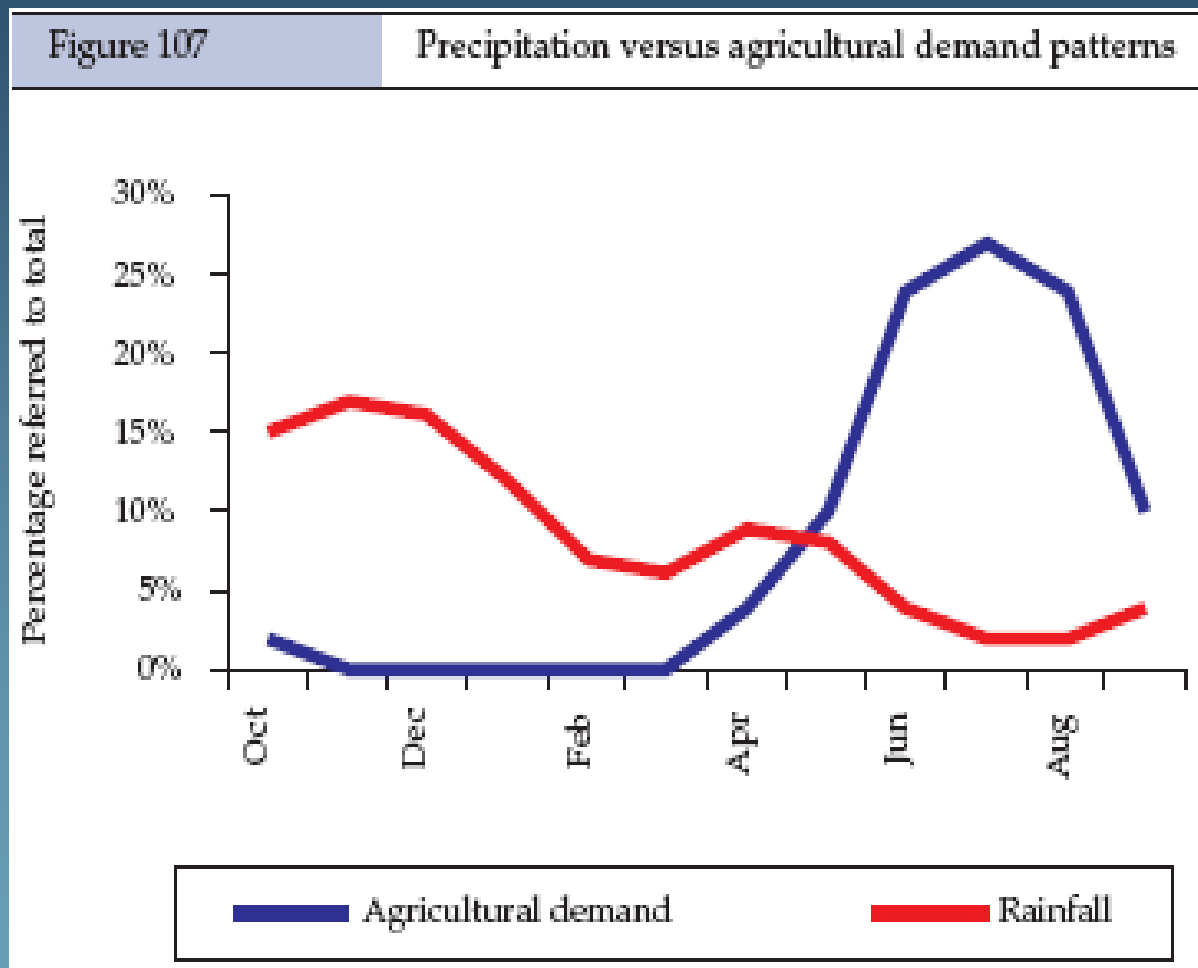


2. There is a critical need for innovations that also manage demand not just efficiency

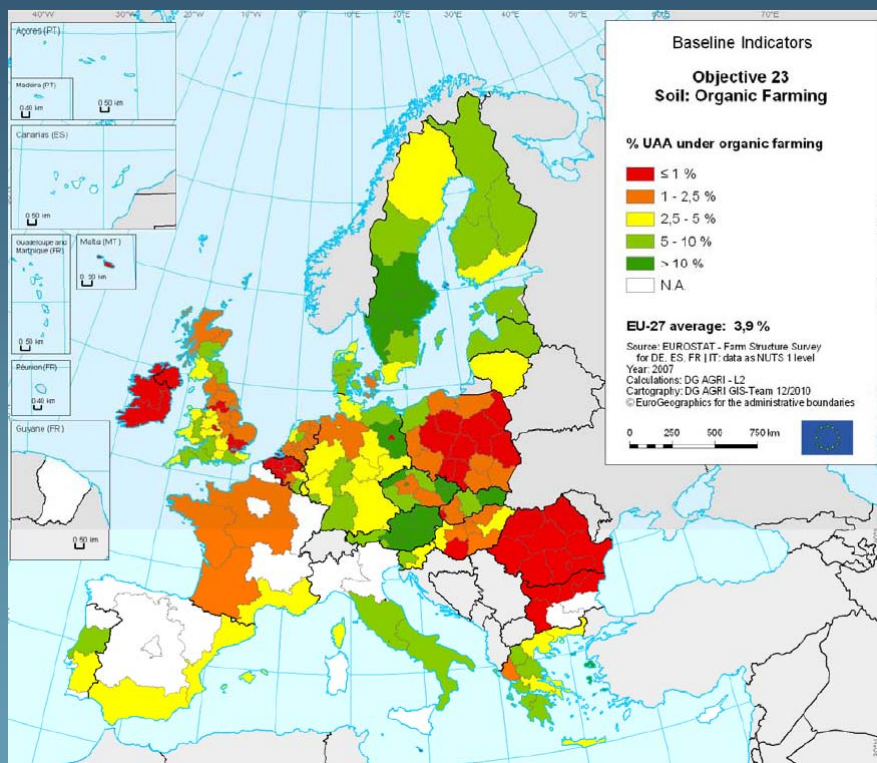
Water abstraction for irrigation, manufacturing industry, energy cooling and public water supply (million m³/year) in the early 1990s and 1998–2007



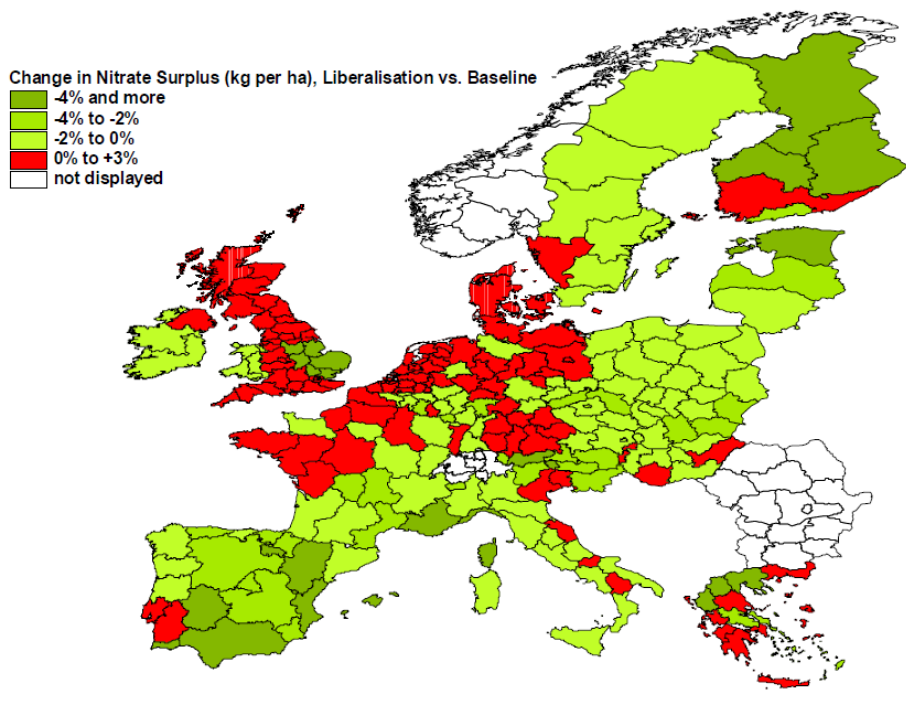
Agricultural Water Demand peaks in summer when natural availability is at a minimum



2. Example: area under organic farming and projected changes in nitrate surplus



Changes in nitrate surplus (kg per ha): liberalisation vs. baseline.



3. The knowledge base for water management

A variety of methodologies enable us to quantify the way that water flows through the global hydrological system, through different ecosystems and ultimately through economies:

- Water accounting
- Water footprinting
- Life-cycle analysis
- Corporate water reporting

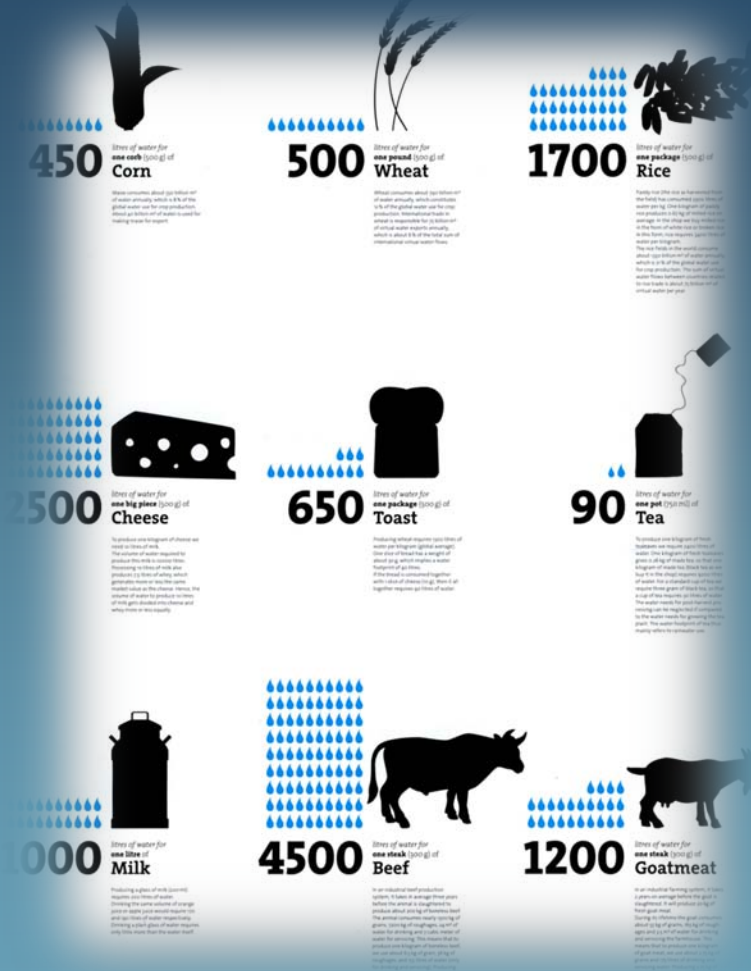
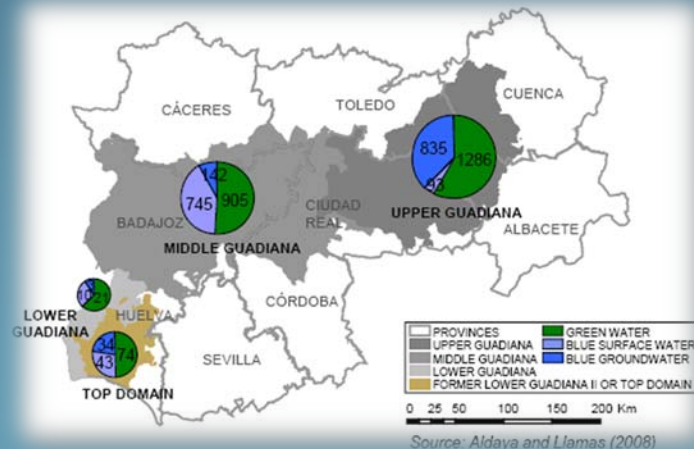


The knowledge base for water management

Around the world there are numerous applications of different water accounting methods – providing insights into the allocation of scarce water resources.

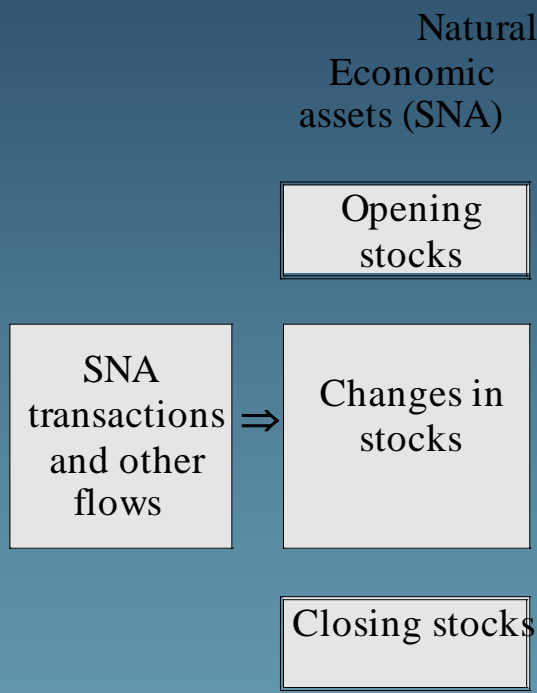
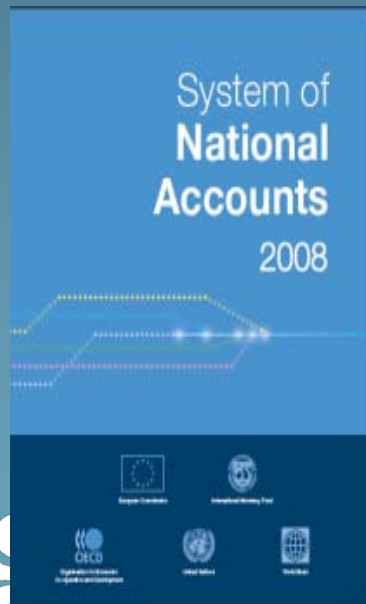
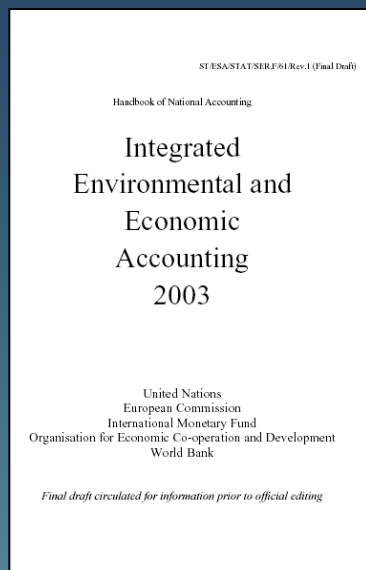
Studies globally underline the need to use varying approaches, depending on local realities.

- Andalusia
- Chile
- Australia



UN manual for environmental-economic accounting: SEEA2003

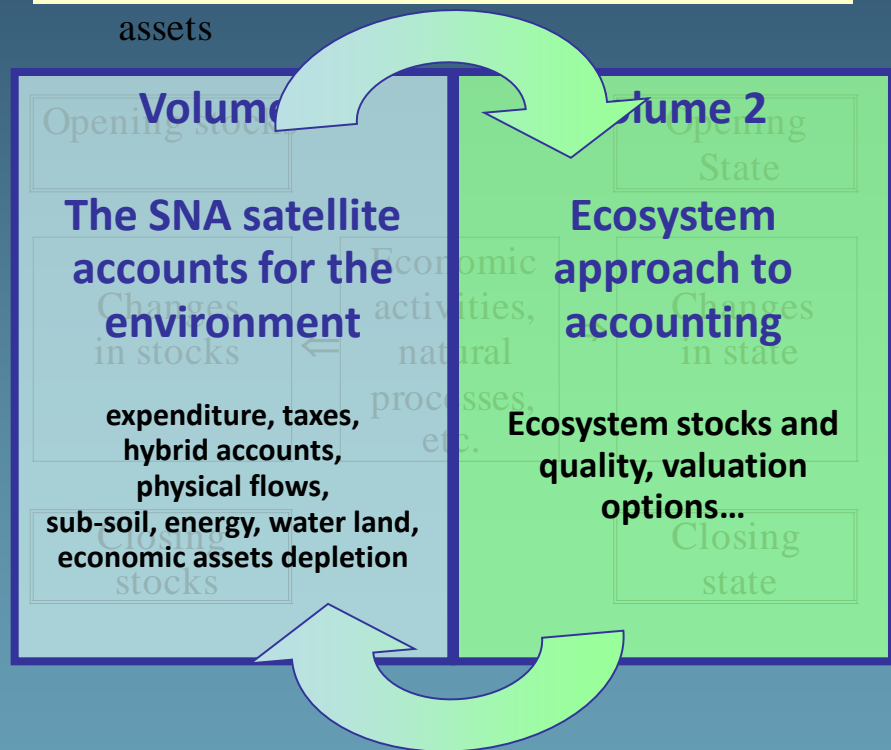
Enlargement of SNA1993 (now 2008)



Described in SNA

Revision → SEEA2012/13

Impacts on ecosystem capacity of delivering services/benefits



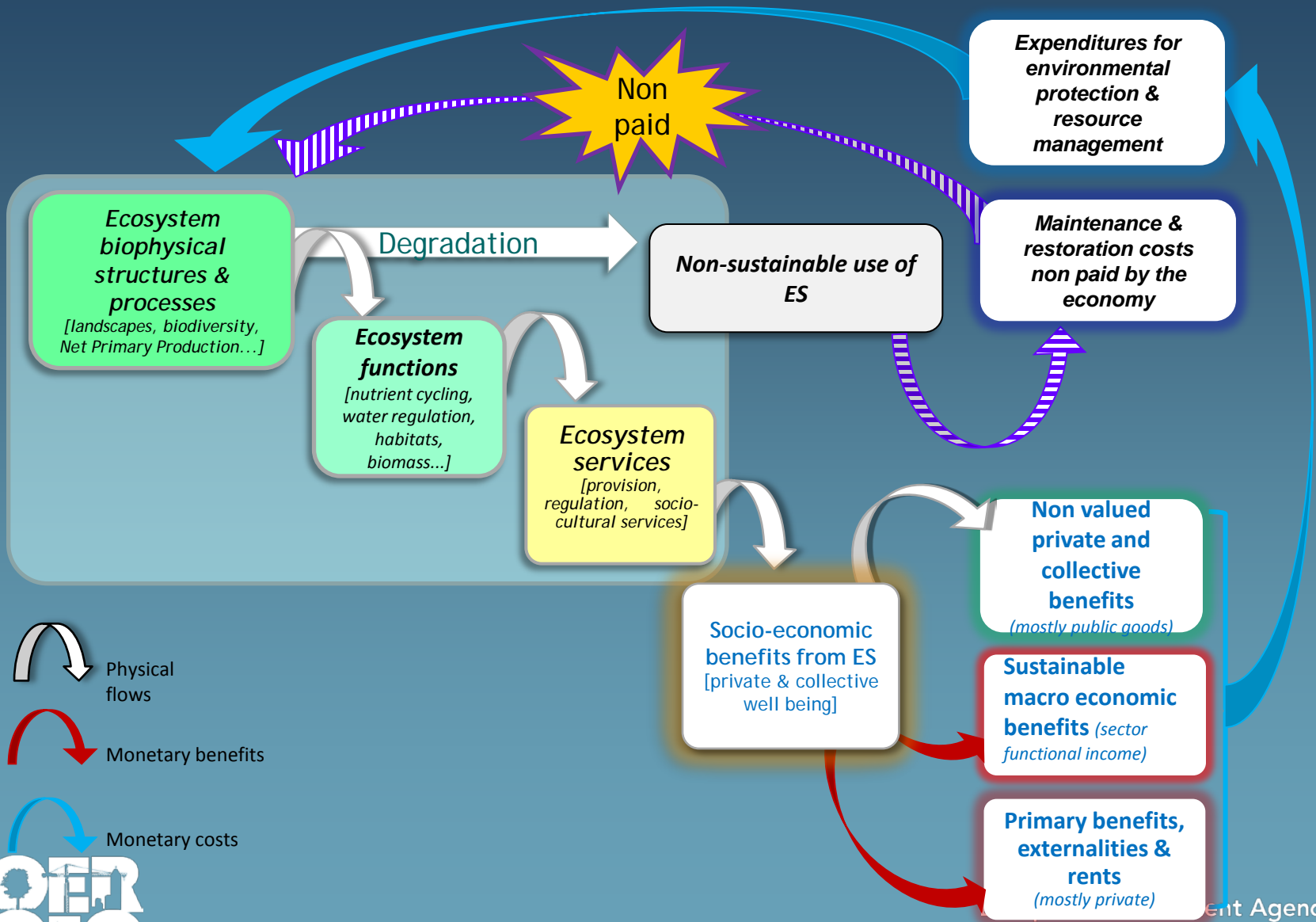
RM HASSAN - UN The System of Environmental and Economic Accounting
RANESA Workshop June 12-16, 2005 Maputo

Negative feedbacks of ecosystem degradation on production and wellbeing

European Environment Agency

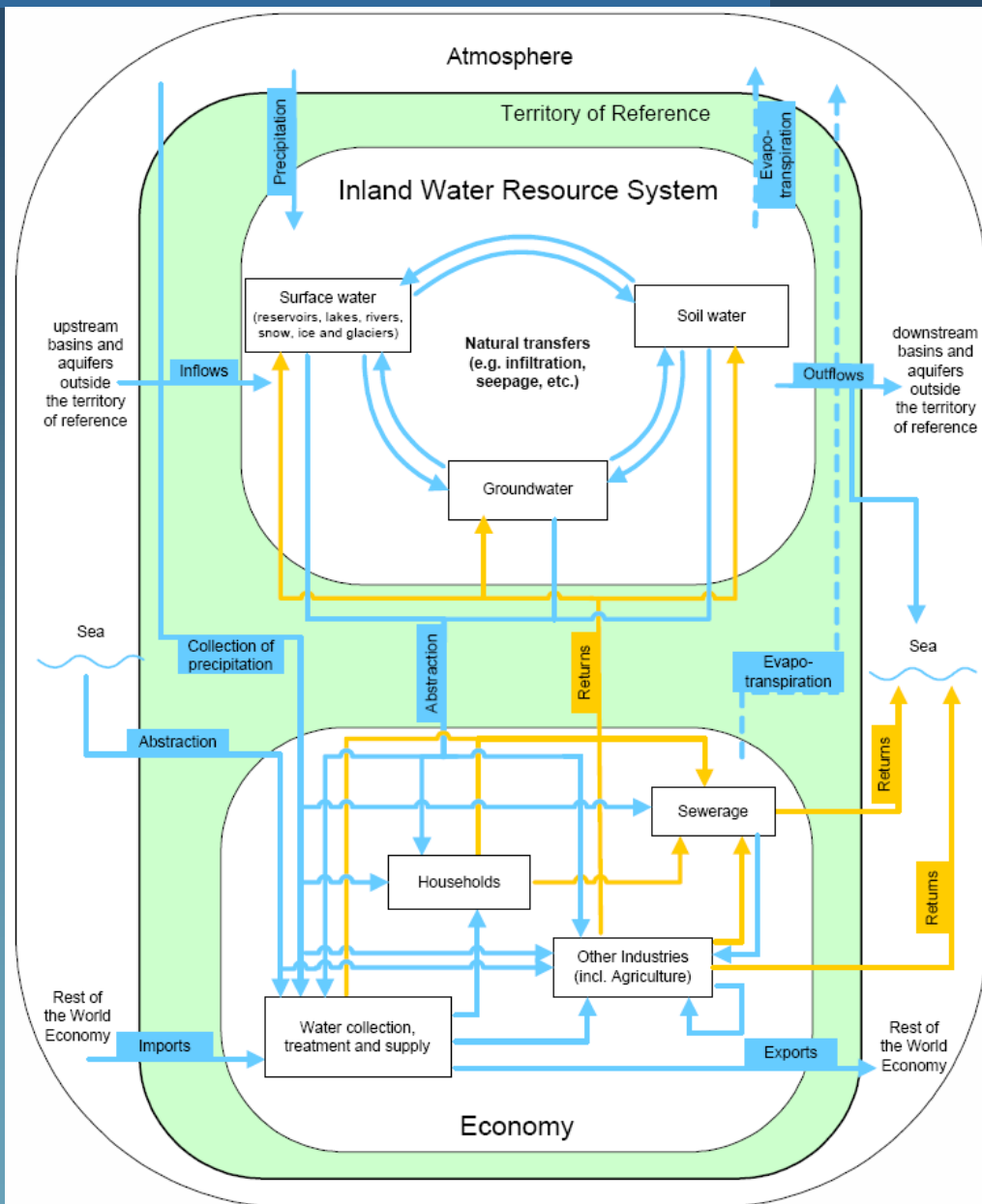


Ecosystem capital: systems & services, benefits & costs



Water Accounts - SEEAW

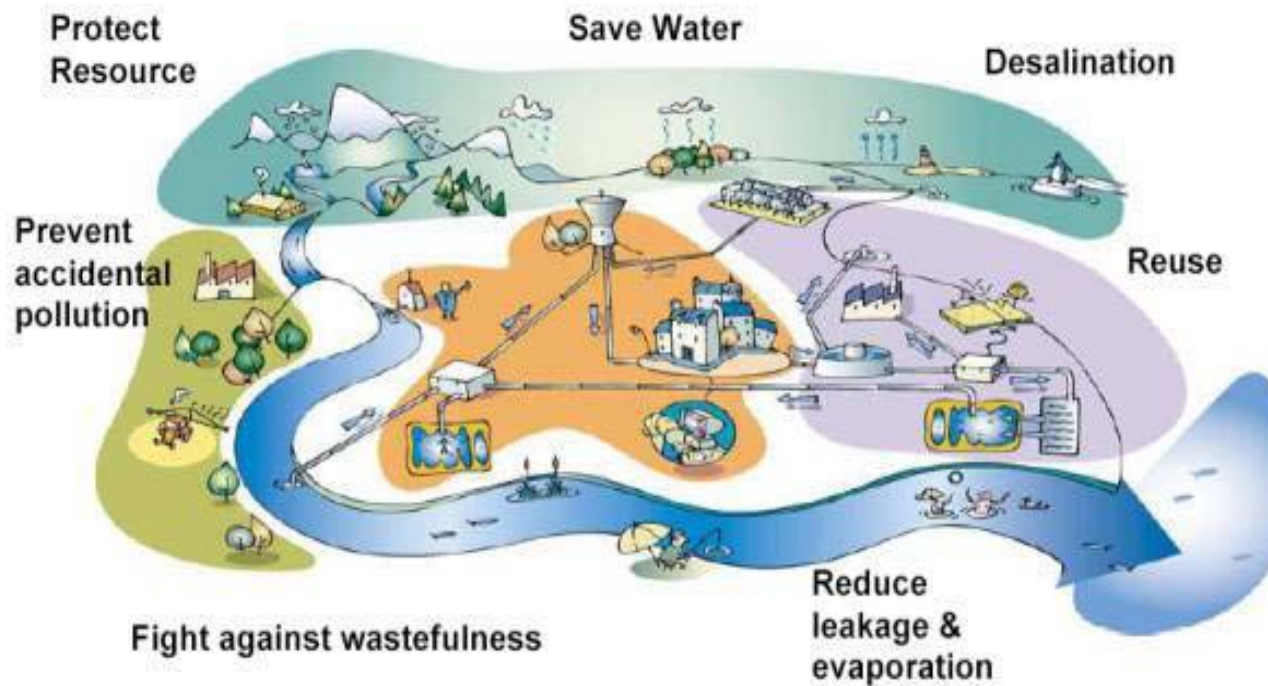
- River basin scale water accounts
- Monthly basis
- Stocks, flows, abstractions, returns, transfers of water
- All sectors
- Identify water stress to link human activities to environmental impacts
- Provides framework for economic analysis



The International Panel for Sustainable Resource Management



**International Panel
for Sustainable
Resource Management**



Thank you

