



Vulnerability of water & environmental resources, Land-use planning

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Vulnerability, Resilience, Adaptation

- **Starting point: White paper on adapting to climate change:**

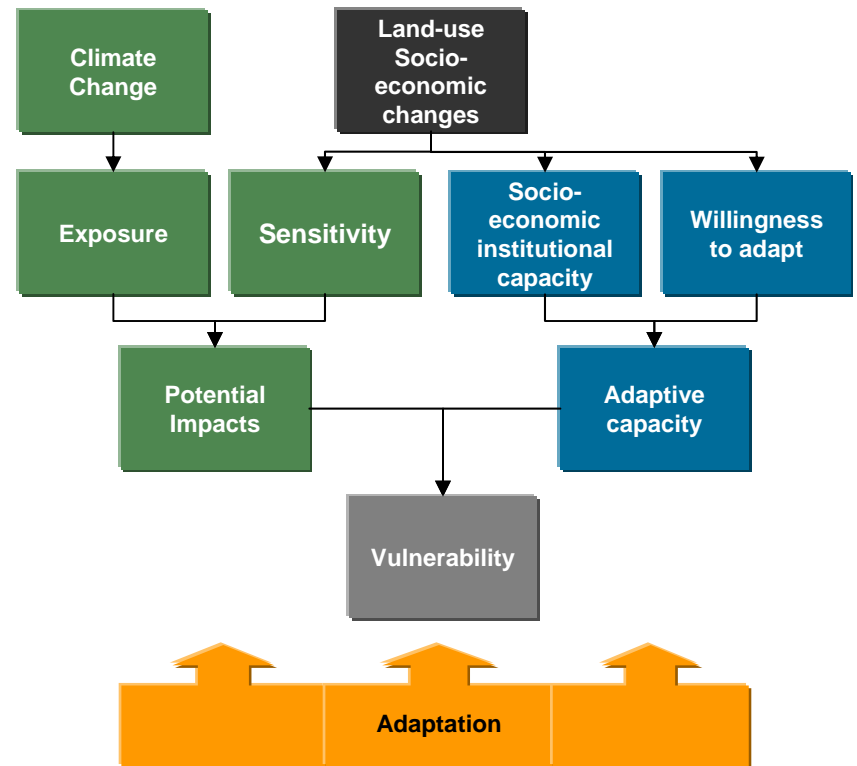
- Need to assess the vulnerability of ecosystems, economy and society to climate change impacts

- **Adaptation strategy to be based on a mix of approaches**

- Not only protect against potential impacts

- Increase resilience

- **Extension to other man-made pressures**



Update on roles and responsibilities of DG ENV and DG CLIMA

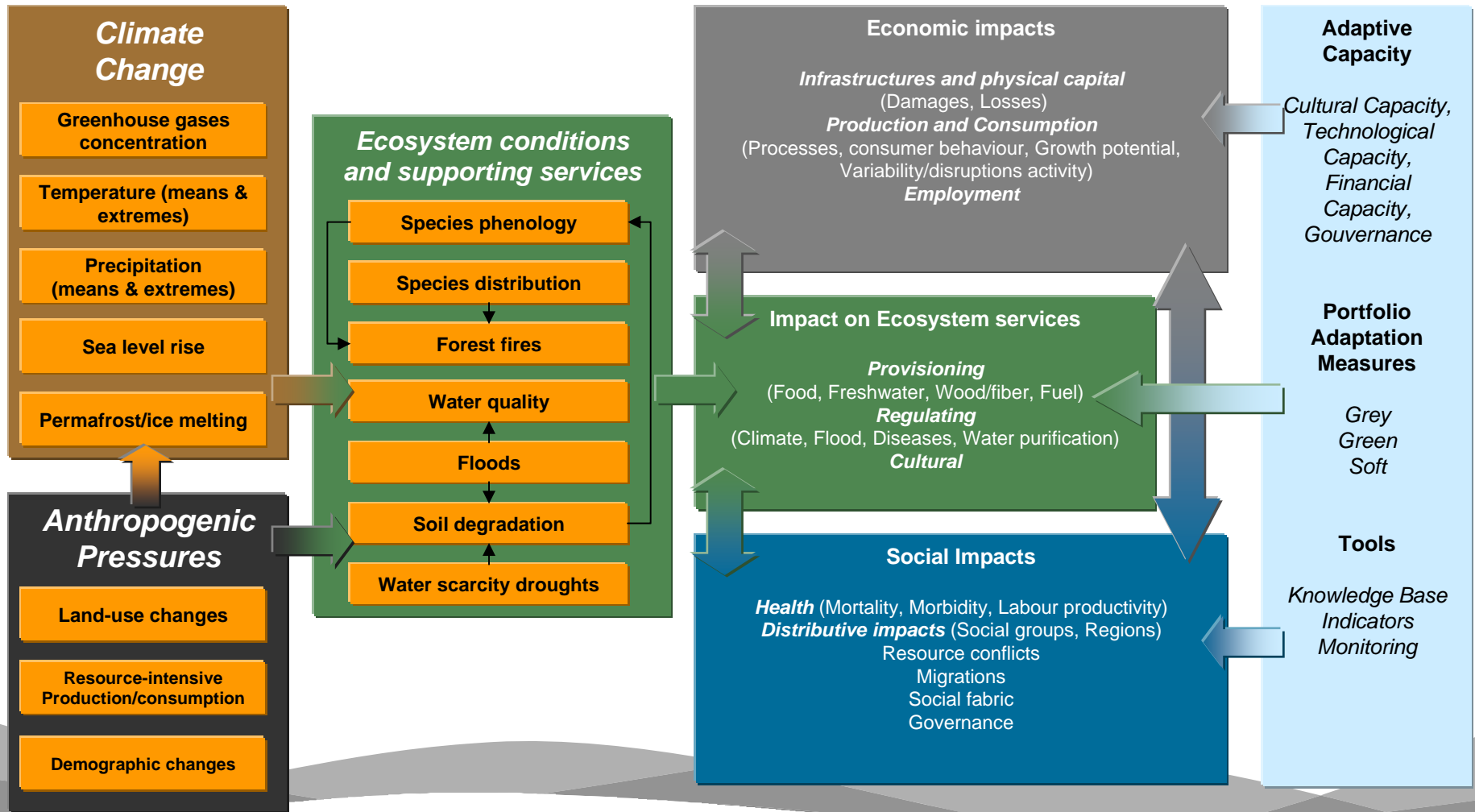
■ DG CLIMA created on 18/2/2010.

- Adaptation unit (C3) in « Mainstreaming Adaptation and Low Carbon Technology » Directorate
- Horizontal co-ordination of the implementation of White Paper
 - Knowledge base (incl Clearinghouse)
 - Mainstreaming into EU Policies
 - Policy and Funding Instruments

■ DG ENV focuses on:

- Assessment of the environmental pathway of vulnerability to Climate Change (and other anthropogenic pressures)
- Assessment of ecosystem-based approaches and environmental impact of adaptation measures
- Mainstreaming adaptation into Environmental Policies (Water, Marine, Biodiversity and Ecosystem, Resources, Eco-Innovation, etc.)

Vulnerability of environmental resources



EU Adaptation Clearinghouse

■ EU Clearinghouse Concept Note:

- <http://circa.europa.eu/Public/irc/env/cc/impacts/library?l=/public>

■ EU CCIVA Clearinghouse designed to answer specific questions

- Support further development of EU adaptation policy
- Support development of adaptation policy at National, regional/local and sectoral level
- Contribution to global adaptation action (NWP, GFCS)

■ Clear focus on building (on) interoperable assets

- ISO / INSPIRE compliance, link with GEOSS, REPORTNET
- No duplication with global/national/sectoral initiatives following the same approach

■ Working Group – Knowledge Base

- Science-policy interaction
- Methodological guidance to adaptation practitioners

■ Members

- Member States and EEA countries
- Key research projects, institutes, intergovernmental organisations
- European Commission services & EEA

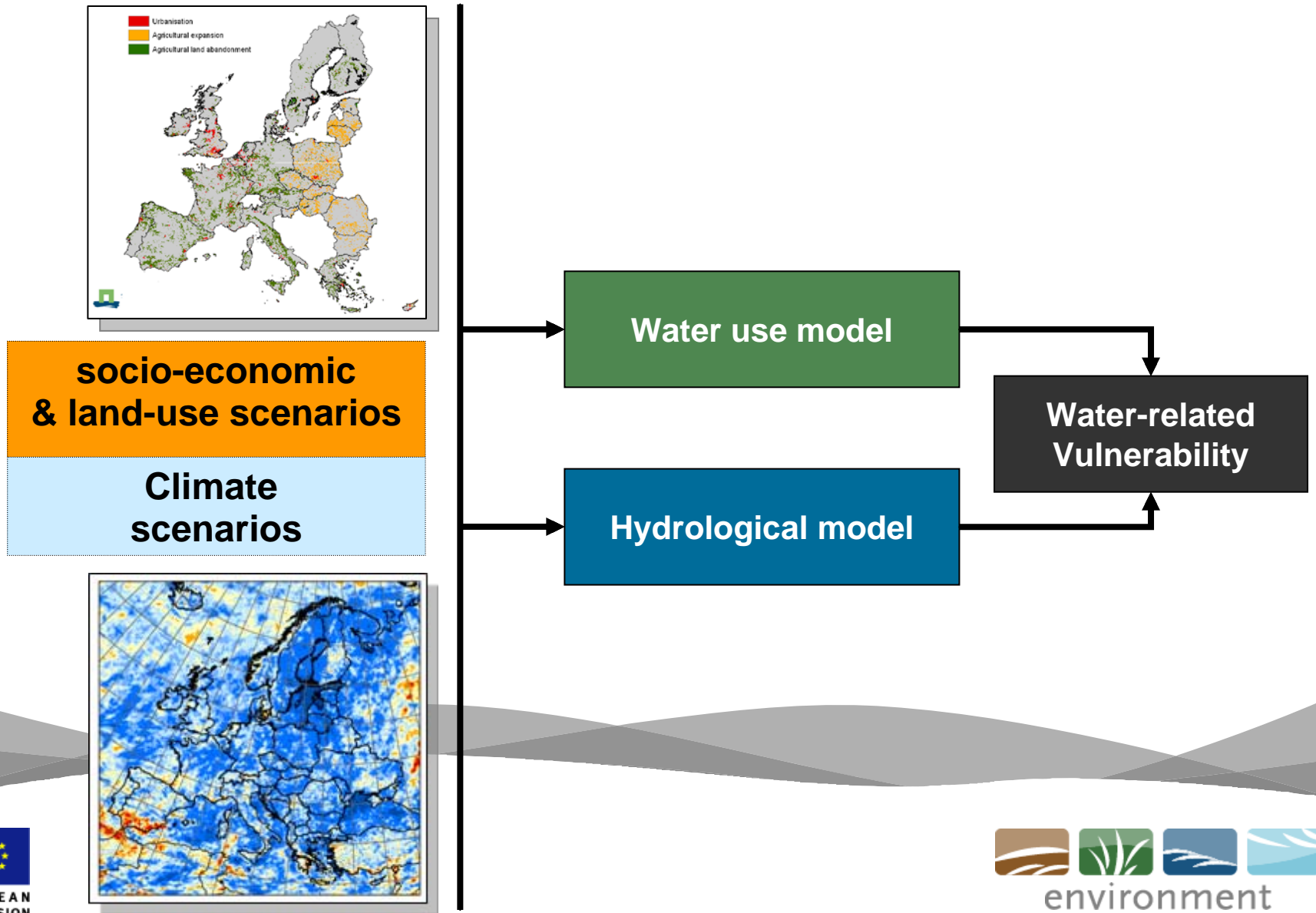
■ Phased approach:

- Since 21/4: evaluation call for tender (signature foreseen August)
- June WG-KB meeting: table of contents
- Phase 1 with limited number of sources and potential users
- Further definition of user needs & scope

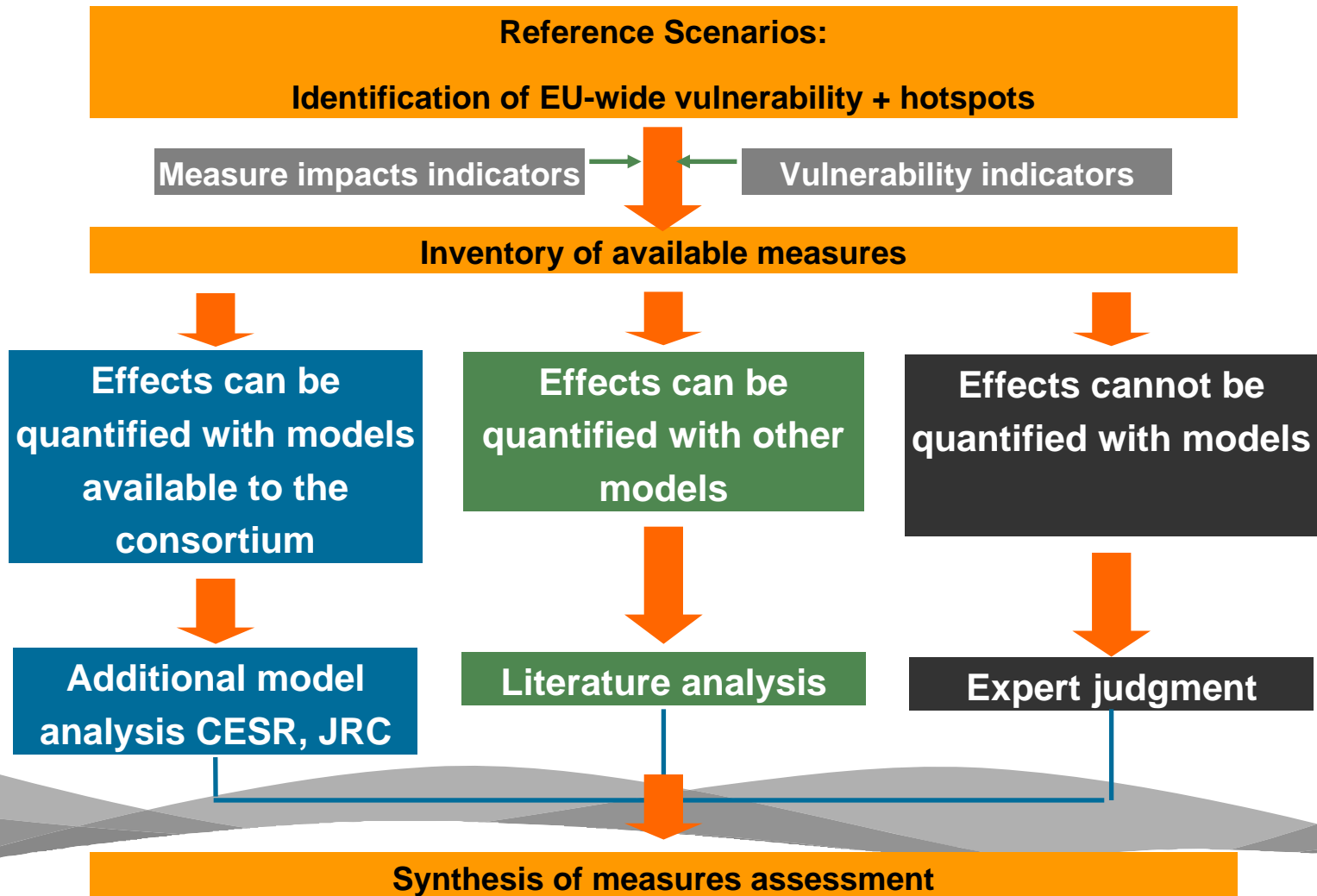
2012 Blueprint to safeguard EU Waters:

- The Blueprint will include:
 - Assessment of river basin management plans
 - Review of the Strategy for Water Scarcity and Droughts
 - Review of the vulnerability of water and environmental resources to climate impacts and man-made pressures.
- It will examine:
 - Balance between water demand and the supply of clean water, taking into account the needs of both human activities and of natural ecosystems.
 - Effectiveness of current policies
 - Need for further policies or measures necessary to strengthen the resilience of EU water policy
 - Support for data collection, and scientific and technological development.

Integrated assessment Framework



Identification & Assessment of adaptation measures



Expert and stakeholder involvement

- **Steering group (Commission + 3 external experts)**

- Review integrated assessment framework.

- **2 stakeholder meetings (Sept 2010, March 2011)**

- to identify and possibly fill knowledge gaps in terms of qualitative information

- to compile stakeholder knowledge and evaluations on relevant aspects of the individual adaptation measures,

- to evaluate and consolidate the scientific credibility and policy relevance of the modelling results.

- to evaluate both the attitudes (for/against) of different stakeholders regarding a particular measure, as well as the intensity of their support for/rejection of a particular measure.

- Role of WFD-CIS EG Climate Change & Water

Key challenges

■ Achieve a better understanding of water economics

- Cost curves water supply (incl social costs)
- Demand curves (effectiveness pricing, affordability)
 - Understand differences between sectors, regions, social groups
- How to shift water use from low social value to high social value activities?
 - Assess portfolio of instruments: Quotas, Pricing, Trading, Labelling, etc.

■ Knowledge base

- Indicators, accounts, integration information from various sources

■ Risk, vulnerability & resilience

- Combine CC and land-use, socio-economic scenarios
- Probabilistic approach ⇔ communication issues
- Robust decision making in a moving baseline
- Give practical sense to the concept of resilience

■ Ecosystem services

- Impact water quantity/quality on ecosystem conditions & services

■ Land-use planning

Land-use planning

- **Better understand impacts of land-use changes**

- Big trends (crops, land abandonment, de/re-forestation, urban sprawl, etc.)
- LU changes as drivers of local climate change

- **Concrete policy actions**

- « Room for the river », floodplains
- Sustainable Drainage Systems
- Water retention

- **How to identify, analyse and implement priority actions?**

- Analysis of costs and benefits

