



# The EU and Adaptation to Climate Change: Internal and External Dimensions

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- What are the challenges?
- What can the EU do?



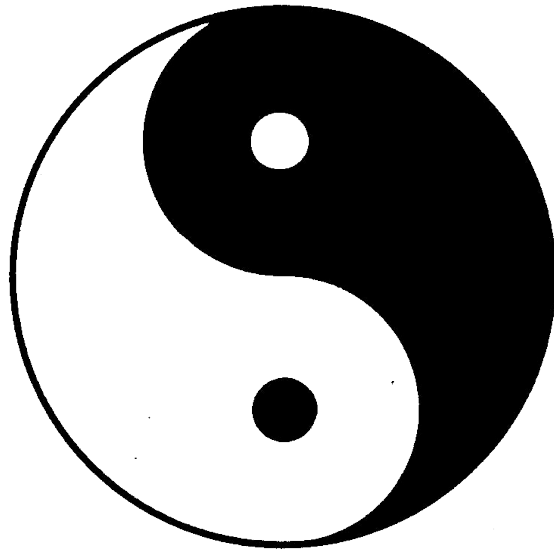


# Challenges



# Adaptation versus mitigation

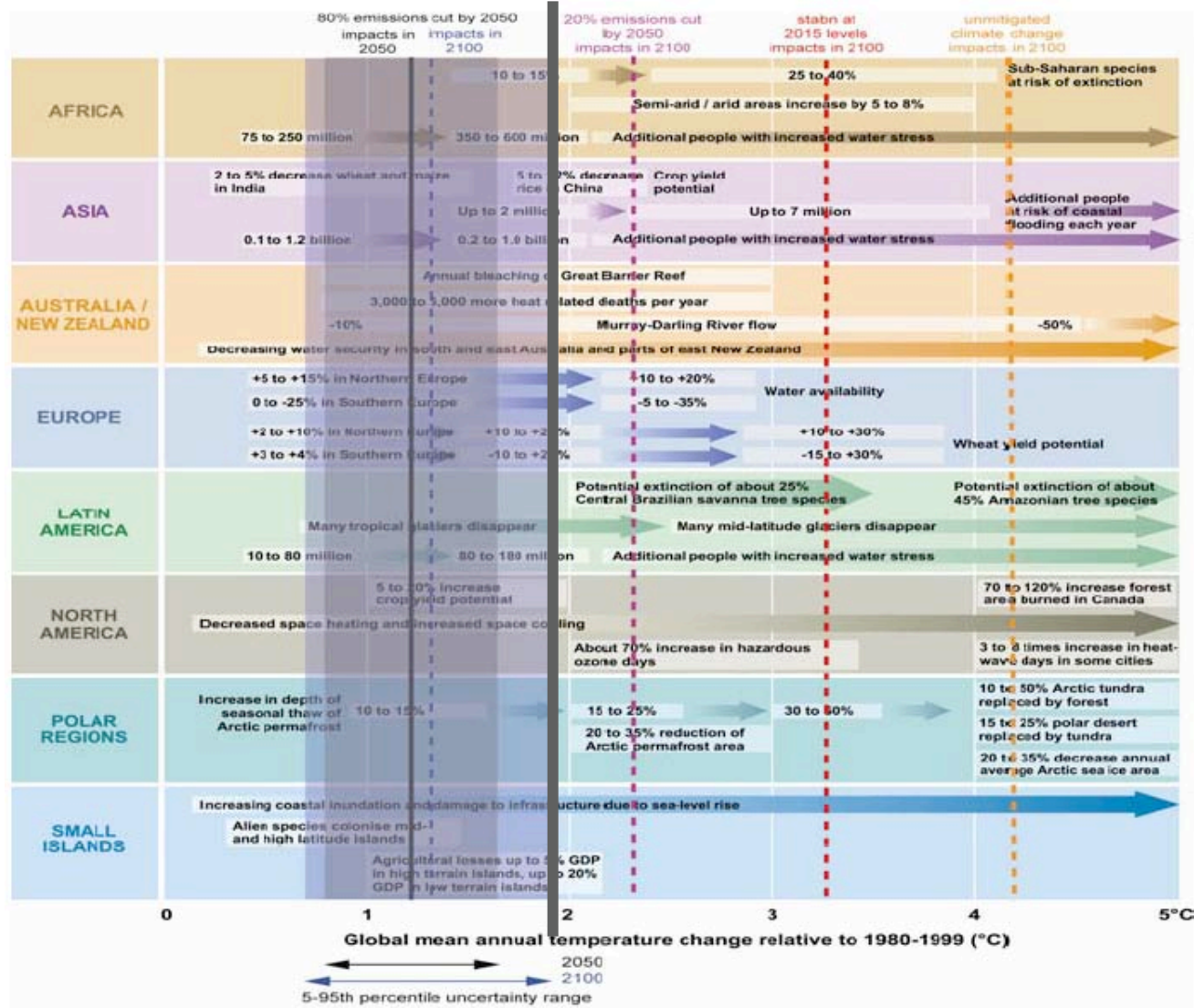
MITIGATION



ADAPTATION

- Despite our mitigation efforts, climate change is happening
- EU goal: to maintain global warming at + 2°C (pre-industrial times)
- Efforts in mitigation and adaptation are complementary- the more mitigation done the less adaptation needed and viceversa

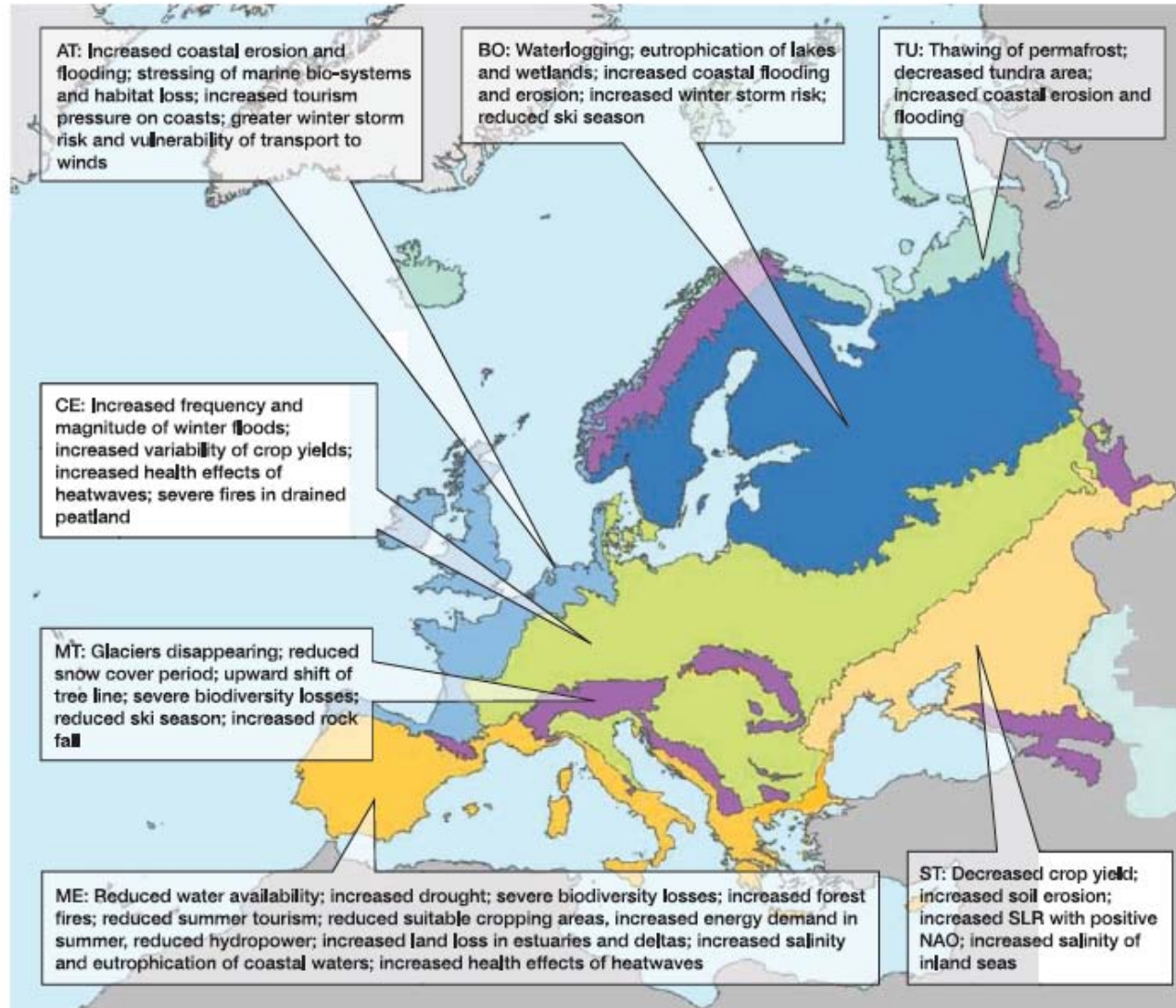
# Even with a temperature increase limited to two degrees, adaptation will be needed.



# Some effects of climate change in the EU

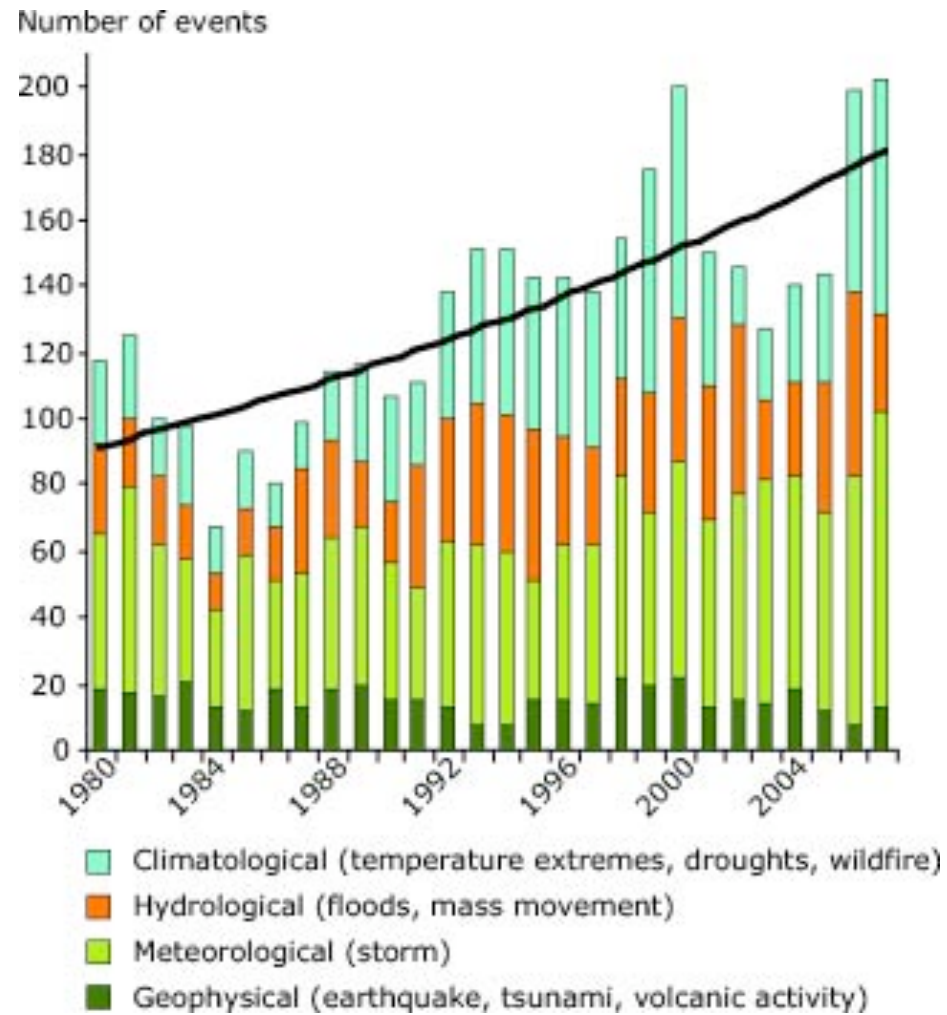
- **Water and precipitations:** Worsening differences between a wet Northern part of Europe and a dry South, - 20% less rain than a century ago in the Mediterranean. Increase of river floods across Europe but an increase in river droughts in the South (impacts on tourism, competing water demands cannot be met).
- **Global sea level** has increased up to 3.1 mm/year in the past 15 years.
- **Ice melting:** the reduction in Arctic sea ice has accelerated. Arctic species such as seals, whales and polar bears under threat. Glacier retreat in Europe's mountain systems.
- **Species move to the North** : 1000 km in the past 40 years for some fish (reduced cod stocks in the North Sea). Plants, birds, insects and mammals are moving further north and uphill. By the end of this century, plant species may have shifted several hundred kilometres to the north and up to 60 % of mountain plant species may face extinction.
- **Agriculture:** growing season is now longer, especially in the North. Although this may favour the introduction of new crops, crop yields will become more variable because extreme weather events are projected to increase.
- **Human health** is also significantly affected by climate change. The 70,000 excess deaths reported from 12 European countries in 2003 could be an example of health impacts to come.. Health system will need to be strengthened and action will need to be taken for particular vulnerable people, like the elderly, children or disadvantaged populations.
- **Main vulnerable areas** in Europe are mountainous regions, coastal zones, the Mediterranean and the Arctic.

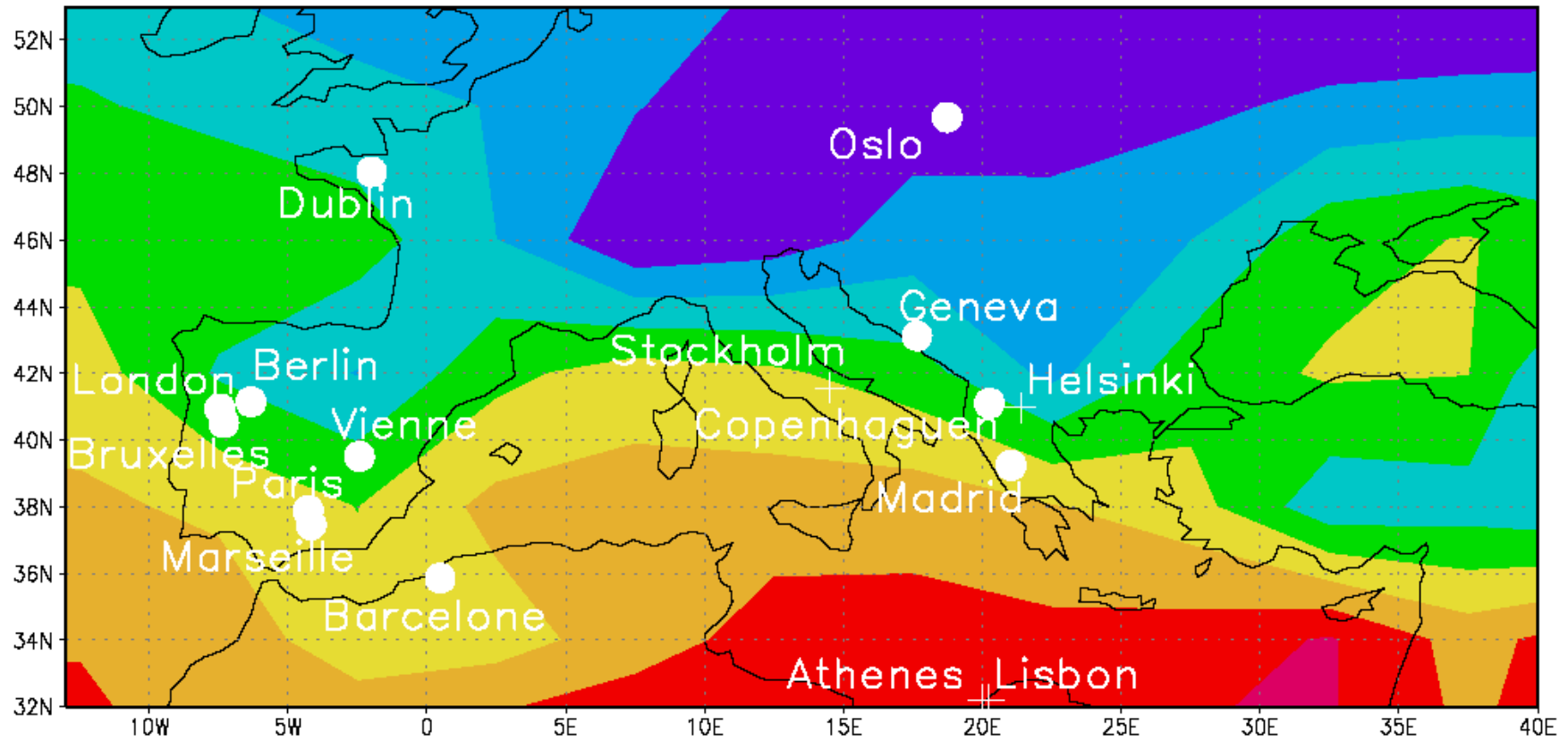
# Some effects in the EU



**Figure 12.3.** Key vulnerabilities of European systems and sectors to climate change during the 21st century for the main biogeographic regions of Europe (EEA, 2004a): TU: Tundra, pale turquoise. BO: Boreal, dark blue. AT: Atlantic, light blue. CE: Central, green; includes the Pannonian Region. MT: Mountains, purple. ME: Mediterranean, orange; includes the Black Sea region. ST: Steppe, cream. SLR: sea-level rise. NAO: North Atlantic Oscillation. Copyright EEA, Copenhagen. <http://www.eea.europa.eu>

# Natural disasters in Europe, 1980-2007









# Costs



## The global additional investment and financial flows needed for adaptation will be substantial.

- According to the UNFCCC, **49-179 billion dollars** in 2030 globally.
- A significant share of the additional investment and financial flows will be needed in developing countries (**USD 28–67 billion by 2030**).
- The immediate priority needs for **all LDCs** are likely to be above **\$1 billion**.
- The cost of non action will be larger, especially in the absence of successful mitigation policies and early adaptation actions.

## Additional investment and financial flows needed for adaptation in the EU.

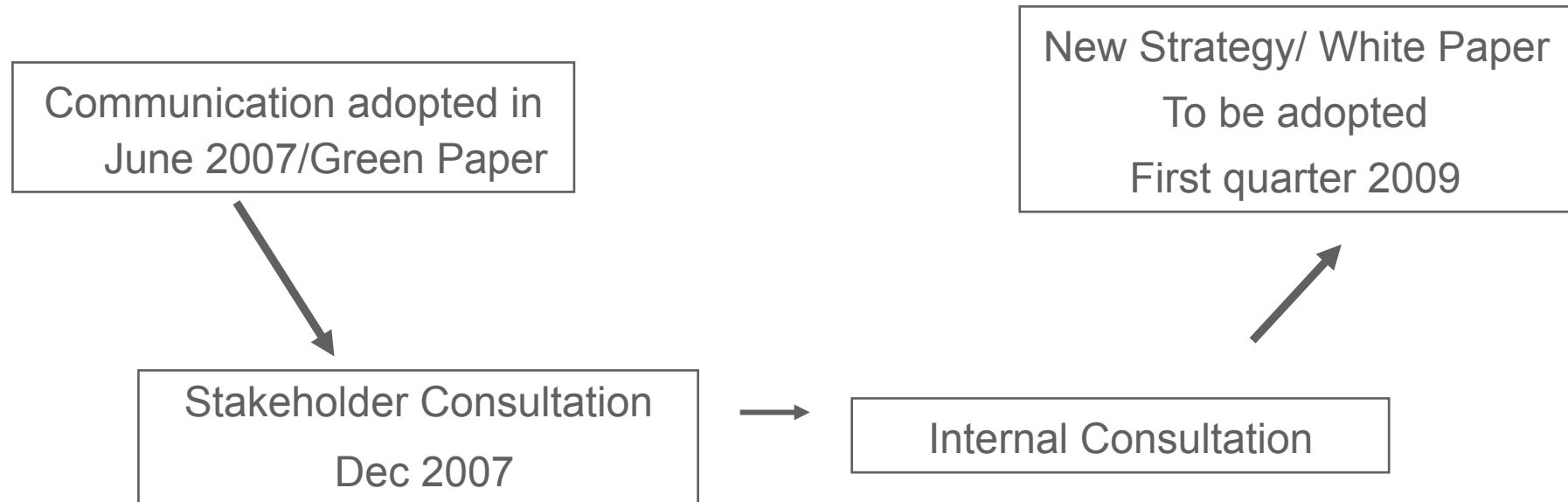
- Adaptation has an extremely important role **in reducing economic costs across Europe** and in many cases has benefits that dramatically outweigh costs.
- Cost of inaction:
  - in 2020 \$ 6 billion a year
  - rising to 57 billion by 2060
  - and 382 billion by 2100.
- The costs of adaptation
  - by 2060 are estimated at 42 billion/year,
  - and achieve benefits of 30 to 34 billion/year in 2060,
  - rising to 131 to 196 billion/year in 2100.



# Way forward in the EU



## Policy making process at EU level



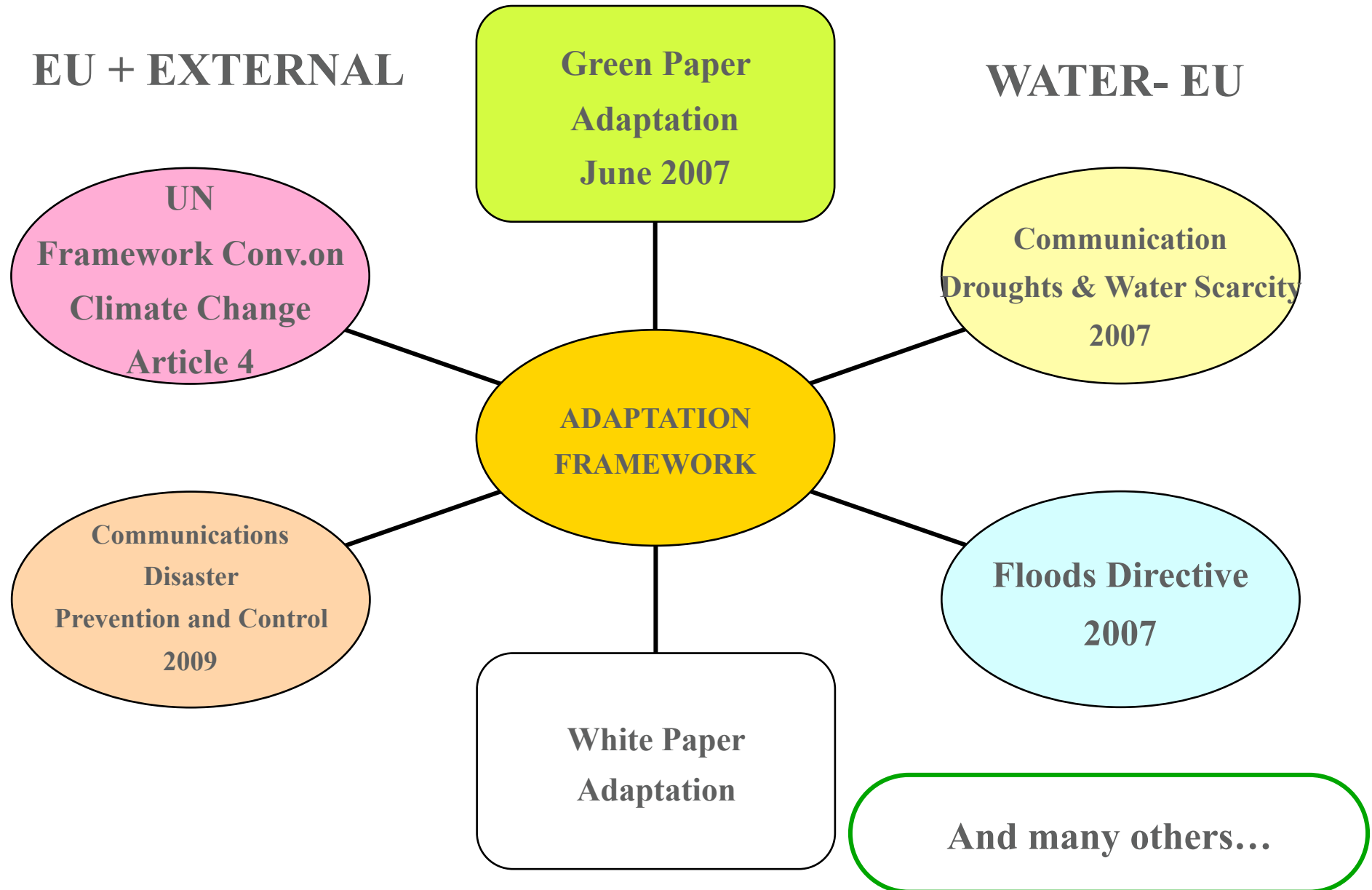
**Development of an EU Framework for Adaptation**

# The EU adaptation framework: objectives

Contributing to establish a European framework to:

- Improve the **resilience** of social and economical systems as well as ecosystems across Europe and in other parts of the world,
- Reduce their **vulnerability** to the impacts of climate change
- Ensure that **crucial areas** such as food security, human health, ecosystem protection, economic and social cohesion and energy supply are guaranteed

# Initiatives linked to adaptation



# Green Paper Adaptation to Climate Change

Based on four pillars

- Early action in the EU
- Integrating adaptation into EU external actions
- Reducing uncertainty by expanding climate research
- Involving European society in the preparation of comprehensive adaptation strategies

## Outcome of stakeholder consultation

- Easier for respondents to identify problems than solutions
- Areas **most vulnerable** identified: water, health and biodiversity, tourism and agriculture
- There is a **regional variation** with regard to vulnerable areas, impacts and policy responses
- A “one size fits all” approach will not work: a **flexible** EU Framework for action could be applied
- Urgent response is required
- **Adaptation and mitigation** must be considered together
- More research and knowledge gathering is required
- Greater public debate and awareness raising needed

## Possible components of White Paper

- The problem
- Benefits of early action at EU level vs only autonomous adaptation and national/regional adaptation
- Avoid maladaptation
- Setting up a process + conceptual framework
- Capacity building and knowledge gathering

# Steps

- Building a solid **knowledge** base
- **Integration:** Seek opportunities to mainstream adaptation into new and existing policies and developments.
- Multifaceted Approaches: apply a **combination** of policy instruments (awareness, raising, research, market based instruments, guidelines, public-private partnerships, funding schemes and regulations).
- **Forward planning**- Apply a short and long term planning and risk based approach to policy decisions.
- **Follow up**, report on progress with indicators and review the adaptation framework regularly.

## Principles for action

- **Synergies-** Priority to measures good for mitigation and adaptation.
- **No regret-** Priority to measures beneficial irrespective of uncertainties
- **Precautionary principle-** consider worst-case scenario measures, even if uncertainties are high (cases where the costs or the magnitude of the impacts in such scenarios would be unacceptable)
- **Solidarity-** between MS, regions, social groups
- **Flexibility and subsidiarity** - Adaptation policy should be dynamic and flexible
- **Knowledge based-** Adaptation policy should be based on scientific evidence



# Way forward at the global level



## EU Vision of Adaptation

- Adaptation must be treated with equal importance as mitigation
- Integration of adaptation into all relevant decision-making processes at all levels of society
- Catalytic role of UNFCCC
- Effective adaptation is responsibility of all countries: Developed and developing
- Shared challenges require shared solutions
- EU Proposal: A Framework for Action which an agreement that coherently sets out the responsibilities of all parties involved

# EU proposal post-2012: A Framework for Adaptation Action

- **Basic principles**

- Effective adaptation is the responsibility of all countries
- Adaptation is relevant to decision making at all levels of society

- **Developing Countries Responsibilities**

- Producing and implement climate resilient plans and budgets
- Prioritising adaptation measures
- Creating enabling environment for adaptation responses (policy, legislative, institutional)
- Ensuring a focus on the poorest and most vulnerable
- Sharing experiences, knowledge and data to enable others to adapt

- **Developed Countries Responsibilities**

- Improving access to new, additional and predictable financial flows
- Supporting capacity building efforts in developing countries
- Giving priority to the poorest and most vulnerable
- Delivering on mitigation commitments to reduce the scale and costs of adaptation
- Integrating adaptation into bilateral & multilateral development programmes
- Supporting availability of climate information, tools, methods and models

**=>A key challenge for development policies: mainstreaming adaptation to climate change.**

# Other parties positions

## SIDS

- Proposal for convention adaptation fund.
- support, capacity building, rapid assessment
- Balance mitigation/ adaptation
- Stay well below 2 degrees
- Stern type report on CC Implications for SIDS
- Insurance issues
- Framework for adaptation

## G77

### Adaptation :

- Is not given equal treatment
- Is needed even if stringent mitigation efforts taken
  - Needs financial/technical support- funding so far inadequate
  - Focus on most vulnerable

### Concerns re:

- fragmentation in Convention/funding/ institutional responses
- Governance of funds: lack of DC involvement

## African Group

- Africa suffers disproportionately
- Work on adaptation costing
- Specific Africa Fund

## China

- Adaptation a priority
- Adaptation Committee

## US

- Limited commitments, separate from mitigation
- Party responsibility/ international support
- Need for differentiation on basis of impact, adaptive capacity, nat. circumstances

## A make or break issue: scaling-up of predictable financial flows

- A commitment in Bali: new and additional funds for adaptation.
- Resources are small in comparison to the medium and long term adaptation needs.
  - The recently created Adaptation Fund (AF) under the Kyoto Protocol, financed by a two per cent levy on the investments under the Clean Development Mechanism, is expected to generate around \$300 million by 2012. After 2012 the AF may become much more important, depending on the outcome of the Copenhagen COP.
  - The World Bank proposed a Pilot Programme for Climate Resilience (PPCR) with a target size of \$ 300 – 500 million.
  - The cooperation dimension of EU's Global Climate Change Alliance (GCCA) is focused on adaptation in LDCs and SIDS.
  - €60 million of additional resources are available (2008-10) under the Environment and Natural Resources Thematic Programme (ENRTP).
- Although much adaptation will be undertaken by individual agents, notably where risks to private assets can be reduced or insured, many adaptation actions have the character of a public good, with no market mechanism in place to ensure sufficient private investment.

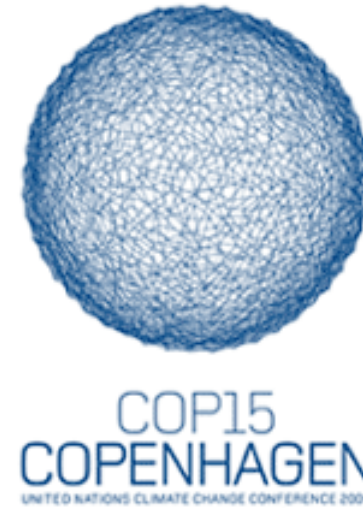
## Options for meeting urgent and immediate needs

- Global Climate Financing Mechanism (GCFM): frontload finance. €5 billion over 5 years (2010 – 2014)

## Options for new sources of finance

- The Council invited the Commission to consider innovative means of financing.
- EU Heads of State and Government confirmed in June 2008 their commitments regarding increased official development assistance (ODA) targets for 2010 and 2015 (to 0.56 per cent of GNI in 2010 and 0.7 per cent in 2015).
- Part of the 15% of the EU-ETS allowances for aviation that will be auctioned from 2012 onwards should be used for climate actions, and in particular to fund contributions to the Global Energy Efficiency and Renewable Energy Fund, and measures to avoid deforestation and facilitate adaptation in developing countries.
- At the international level, an option, which could have the advantage of complementing European contributions, would be to auction or sell a share of the Assigned Amount Units (AAUs), which could bring predictable finance at a high scale.
- Insurance mechanisms to reduce the economic risks from climate related disasters.

## Next steps



- Broad principles only
- Many details still to work out
- This agreement can be developed further as basis for discussion



## More information:

[http://ec.europa.eu/environment/climat/adaptation/index\\_en.htm](http://ec.europa.eu/environment/climat/adaptation/index_en.htm)

