



# THE CHALLENGE OF CLIMATE CHANGE

## EU APPROACH TO ADAPTATION





# CONTENTS

---

- **Impacts of Climate Change**
- **Mitigation and Adaptation  
Complementary Efforts**
- **Adaptation - Role in Reducing Costs**
- **Towards an EU Adaptation Framework –  
Key Elements**
- **Conclusions**



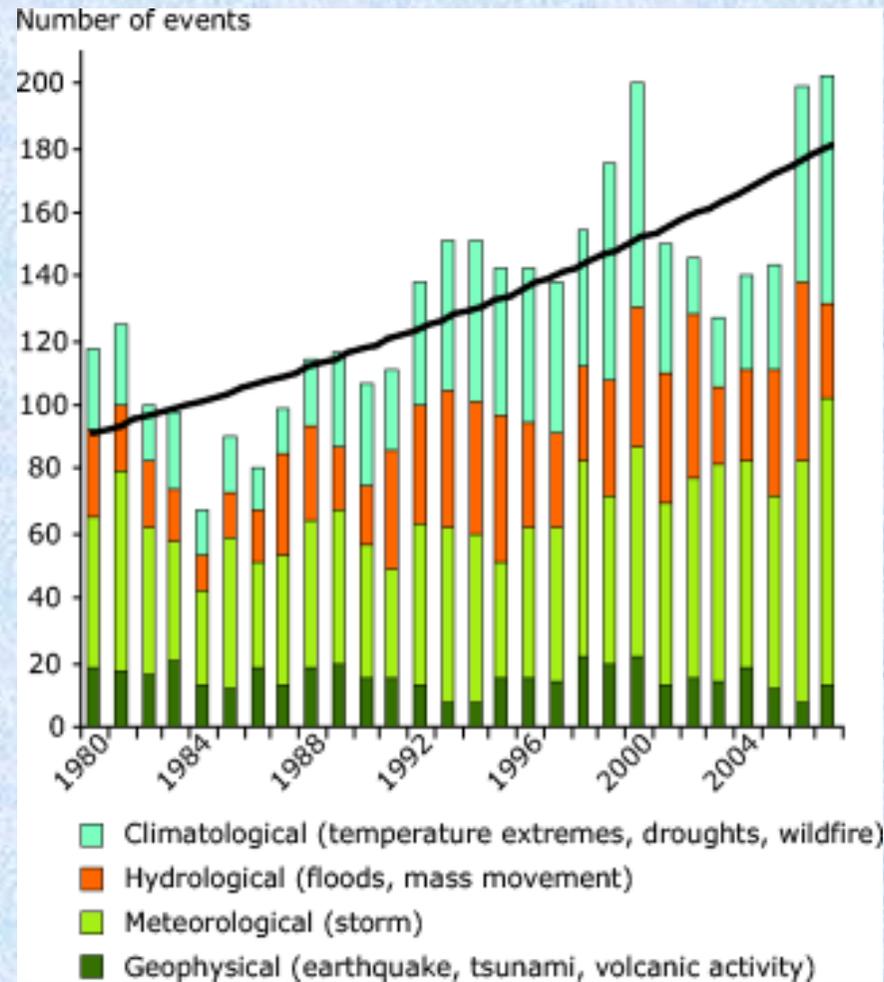
# IMPACTS OF CLIMATE CHANGE

---

- **Higher temperature increases (Global Warming)**
- **Water and precipitation patterns (Droughts, Floods)**
- **Ice melting**
- **Sea levels (Coastal erosion, loss of land)**
- **Species move to the North (Health and Biodiversity implications)**
- **Energy and transport**
- **Agriculture and land planning**
- **Migrations**

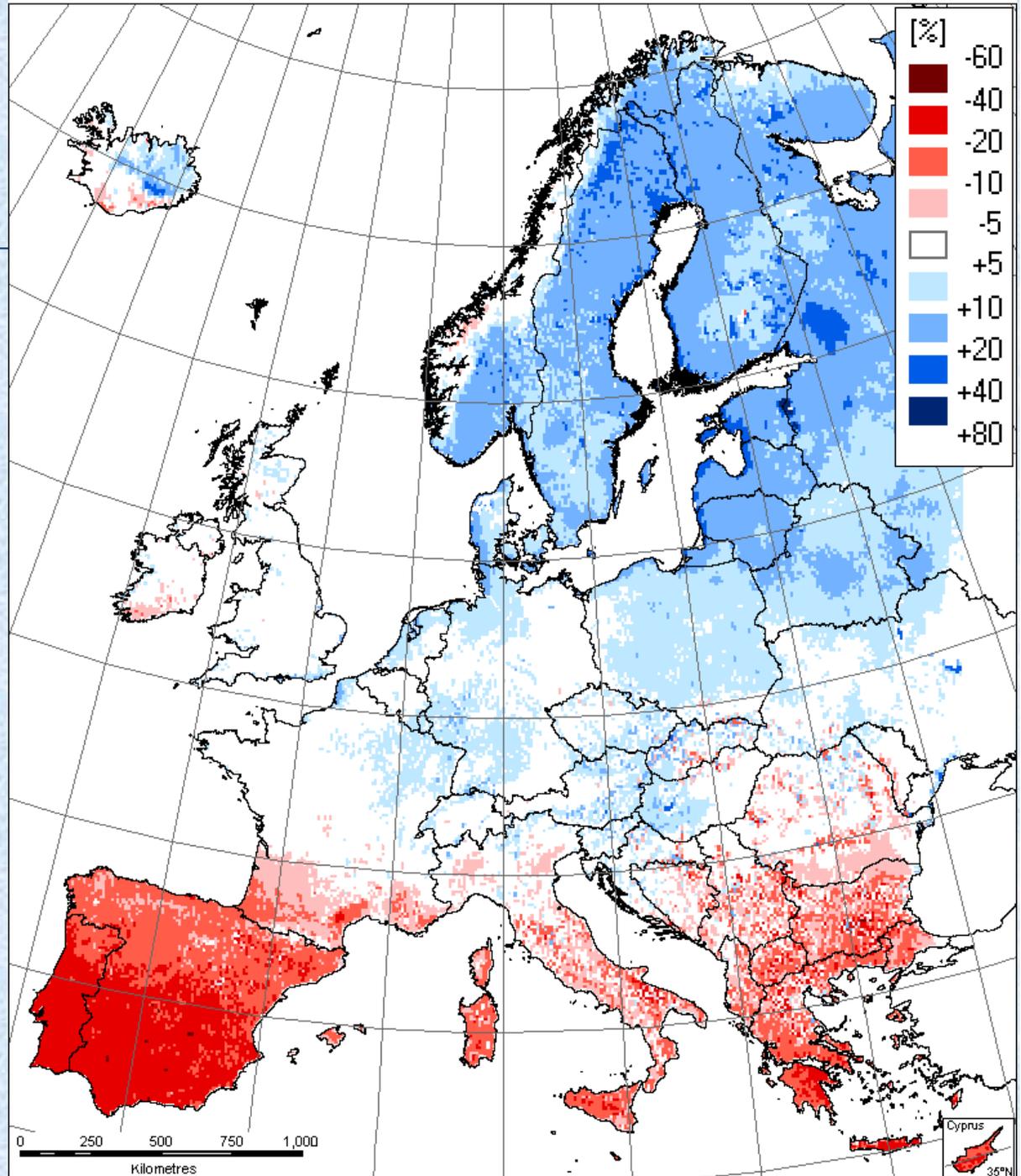


# NATURAL DISASTERS IN EUROPE, 1980-2007





Precipitation: change in annual amount [%]



**Northern Europe:  
increased rainfall  
and snowfall**

**Southern Europe:  
more frequent  
droughts**

European Commission, DG Environment



## IMPACTS OF CLIMATE CHANGE

---

***Since 1998 Europe has suffered more than 100 major floods causing more than 700 deaths, displacing more than a million people and bringing more than 25 billion EUR damage***



## ***Flooding in Northern Europe during 2007***





## **IMPACTS OF CLIMATE CHANGE** (EEA Report 2008)

---

EEA REPORT “Impacts of Europe’s Changing Climate”  
(2008) based on 40 Key Indicators highlights that:

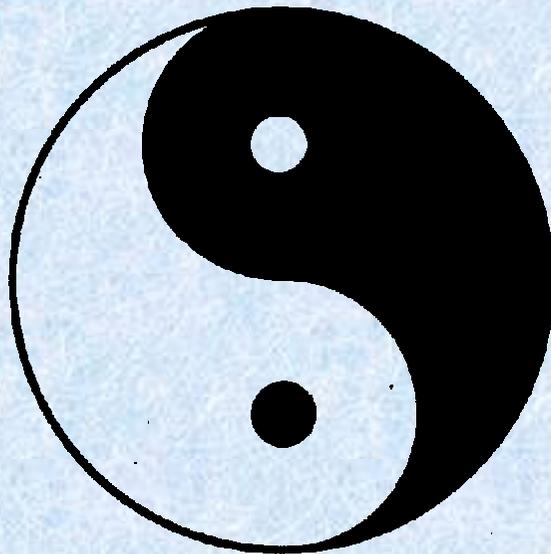
- Vulnerability to Climate Change varies widely across regions and sectors in Europe
- Main Vulnerable Areas are Mountainous regions, Coastal Zones, the Mediterranean and the Arctic
- Improved Monitoring - necessary



## MITIGATION AND ADAPTATION COMPLEMENTARY EFFORTS

---

### MITIGATION



### ADAPTATION

- EU Goal: to maintain global warming at + 2°C (pre-industrial times)
- This Goal will limit the risks and magnitude of climate change but will not avoid all impacts
- Adaptation will be a necessary and complementary effort to mitigation
- The more Mitigation the less Adaptation will be required and vice versa



## ADAPTATION ROLE IN REDUCING COSTS

- 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.

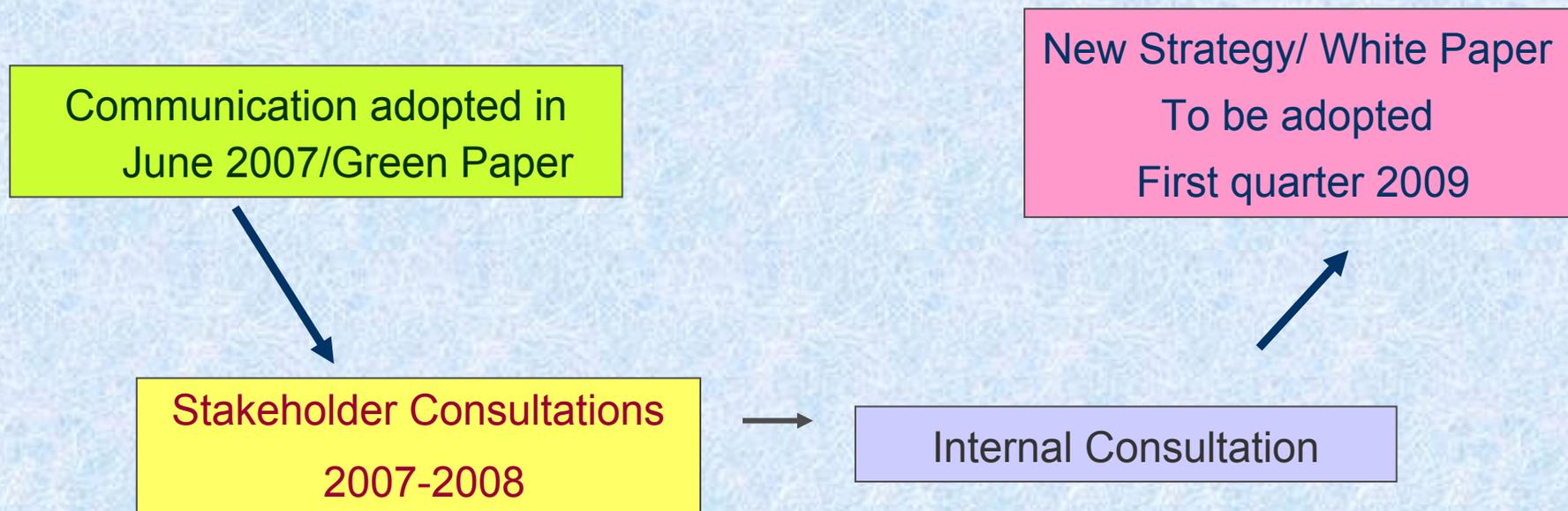


# ***TOWARDS AN EU ADAPTATION FRAMEWORK***





## POLICY MAKING PROCESS AT EU LEVEL



### Development of an EU Adaptation Framework



## **EU ADAPTATION FRAMEWORK**

---

The EU Adaptation Framework building on the Green Paper will:

- 1) Strengthen the Knowledge/Evidence Base
- 2) Mainstream climate Adaptation into key policy areas
- 3) Advance work internationally on Adaptation
- 4) Work in Partnership



## STRENGTHENING THE KNOWLEDGE BASE – AN ESSENTIAL STEP FORWARD

- 
- Sound **scientific results** are paramount
  - Current **reporting mechanisms** are fragmented.
  - EU Strategy will focus on strengthening the knowledge base.
  - Important starting point –

### **European Clearing House Mechanism (CHM)**



## **MAINSTREAM ADAPTATION INTO KEY POLICY AREAS**

---

### **Building Resilience – core theme**

- Step by step approach
- Review risks, Consider options
- Short-term and long-term actions



## **ADVANCE WORK INTERNATIONALLY ON ADAPTATION**

---

The EU is committed to working with third countries to improve their resilience and capacity to adapt to the adverse effects of climate change through for example:

- The Global Climate Change Alliance
- The UNFCCC - EU Proposal for a Comprehensive Framework for Action on Adaptation (FAA)
- Bilateral and Regional Agreements



## WORKING IN PARTNERSHIP

---

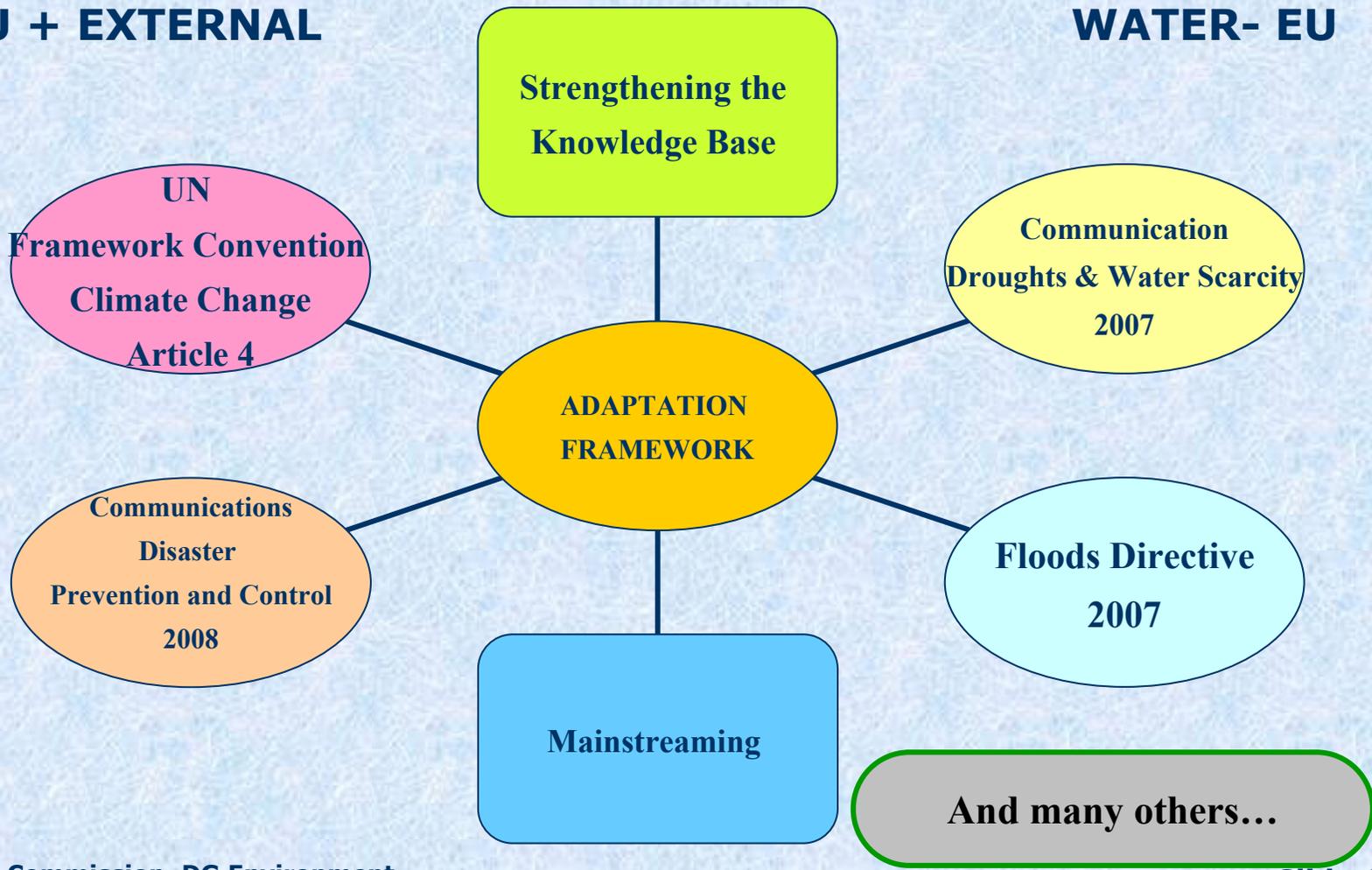
- Adaptation involves co-operation at all levels
- Close co-ordination with EU Member States is essential in preparing effectively to address the impacts of Climate Change



# INITIATIVES LINKED TO ADAPTATION

**EU + EXTERNAL**

**WATER- EU**



# YOU CONTROL CLIMATE CHANGE.



TURN DOWN. SWITCH OFF. RECYCLE. WALK. **CHANGE**

- [http://ec.europa.eu/environment/climate/climate\\_action.htm](http://ec.europa.eu/environment/climate/climate_action.htm)
- [http://ec.europa.eu/environment/climate/adaptation/index\\_en.htm](http://ec.europa.eu/environment/climate/adaptation/index_en.htm)