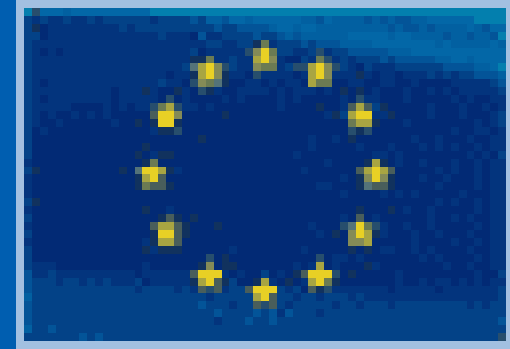
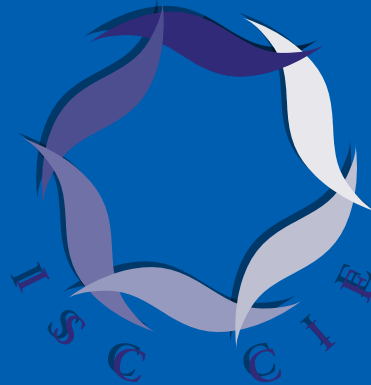




WWF-European regional session SERPT 3 : Adapt to long term water challenges linked to Climate Change and prevent extreme phenomena

UNECE water convention – EC DG Climate

A.Lefebure, Secretary General **International Commission of the Scheldt**

EUROINBO-EURORIOB_PORTO
29/09/2011

Adaptation to global changes & extreme phenomena

José Manuel Barroso: "*Climate change is a global threat requiring a global response*"

1. **Context**
2. **Be SMART and WISE**
3. **SERPT 3 : adaption to global change and extreme events**
 - ▣ Prevention & management of flood and marine submersion
 - ▣ Prevention & management of droughts and water scarcity
 - ▣ Other adaptation measures (green infrastructure, ...)

Adaptation to global changes & extreme phenomena

1. ***Context: main foreseen effects of climate change on water***

- A changing world: climate, population, biodiversity,...
- More extreme events : storms, floods, marine submersion
- More droughts
- Water scarcity: severe water stress in South and North

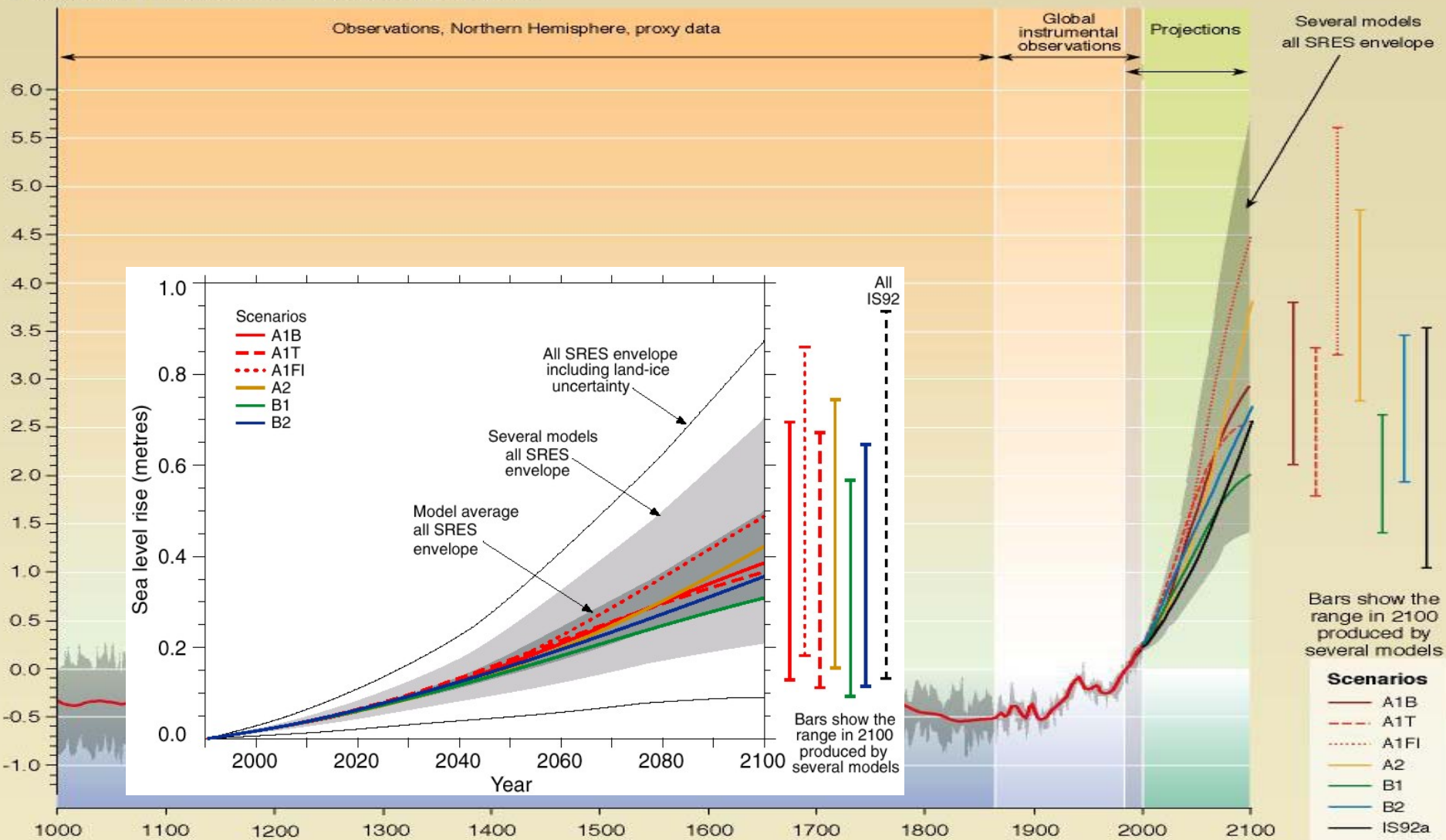


Which effects??



Variations of the Earth's surface temperature: 1000 to 2100

Departures in temperature in °C (from the 1990 value)

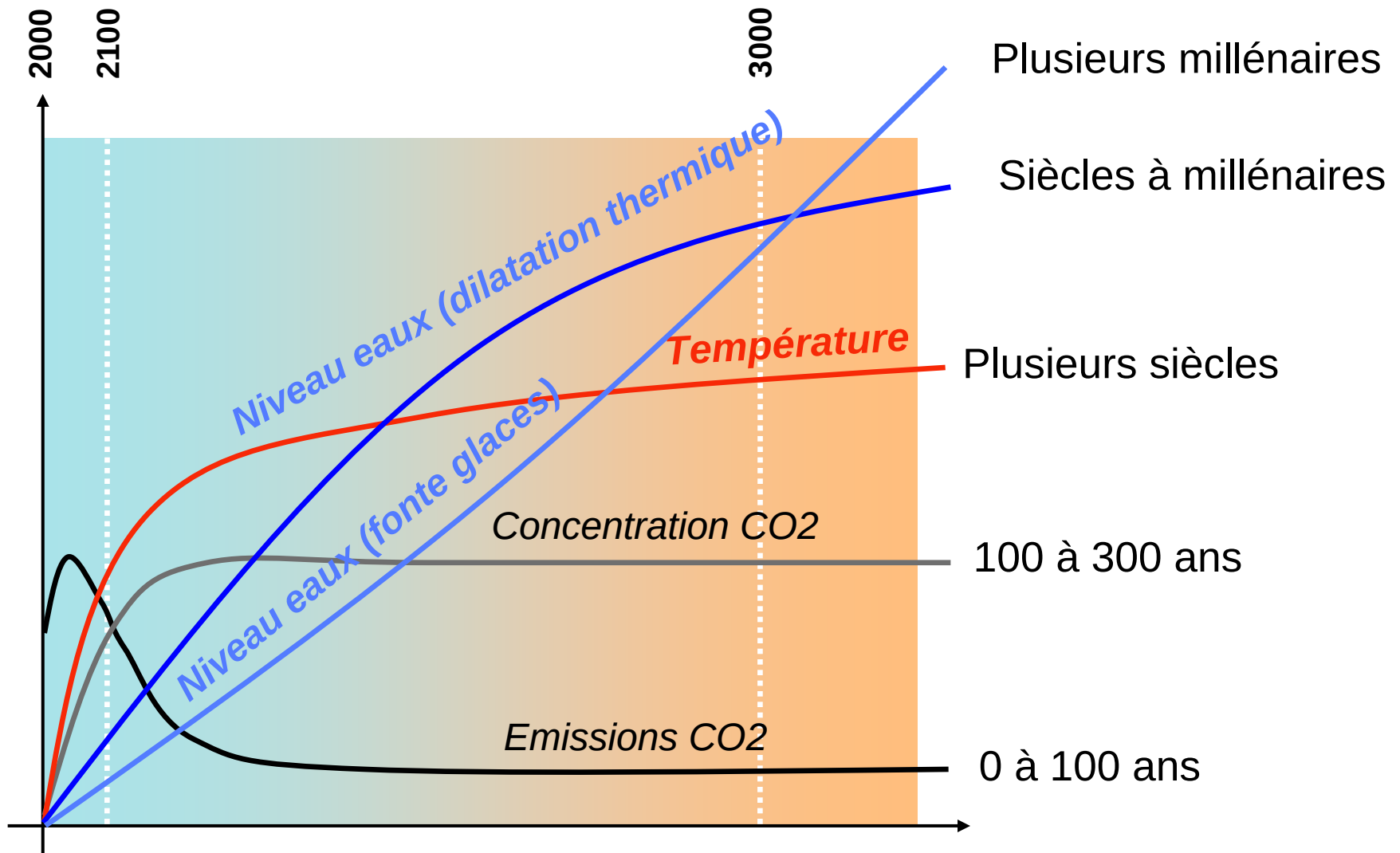


variation of sea level with temperature

Urgence dans un monde qui change

Amplitude des réponses

Temps pour obtenir l'équilibre





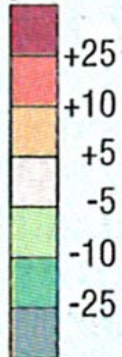
NORTH SEA: REGIONS UNDER SEA LEVEL IN CASE OF 1M RISE

Serious increase of marine submersions

L'évolution des sécheresses en Europe (de 1970 à 2070)

Aggravation et amélioration sur 100 ans en %

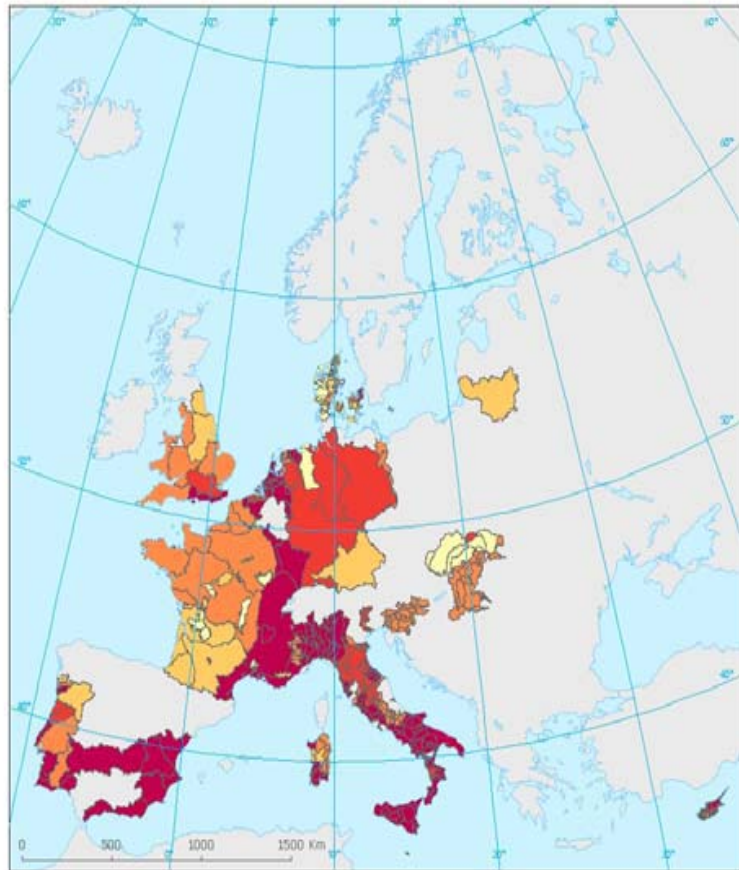
Aggravation



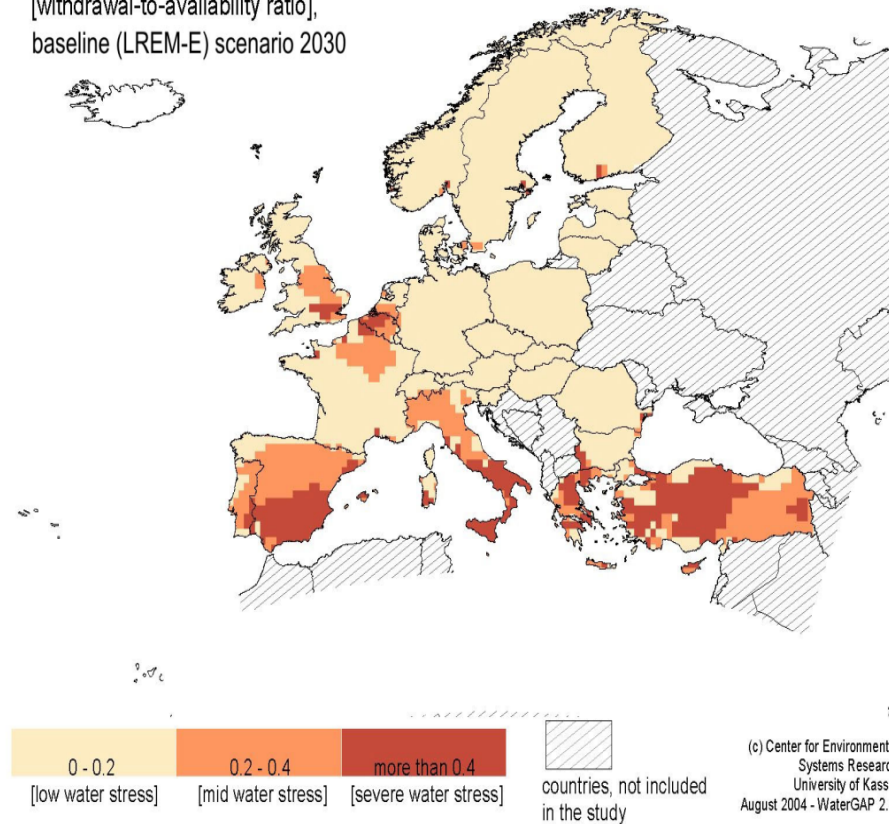
Amélioration

idé / Source : Commission européenne

Increase risk of severe droughts



Water stress according to drainage basins
[withdrawal-to-availability ratio],
baseline (LREM-E) scenario 2030



(c) Center for Environmental
Systems Research,
University of Kassel,
August 2004 - WaterGAP 2.1e

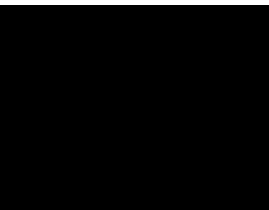
WATER SCARCITY

33 EU river basins affected so far, Min 100 Mio inhab., 17% of EU territory



EUROSION: COASTAL EROSION 'HOT SPOTS' IN EUROPE

Increase of coastal erosions, saline intrusion, loss of 'tidal flats'/biodiversity

- 
- 
- 
1. Which solutions have we?
 2. Be SMART and WISE!



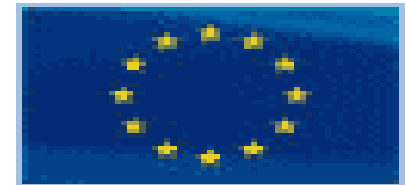
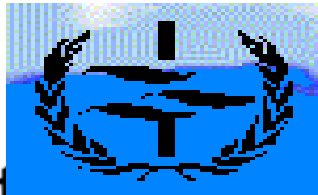
SERPT 3 : adaption to long term challenges linked to global change and extreme events



LE TEMPS DES SOLUTIONS

➤ Within the World Water Forum:
European Regional Session

➤ Chair: UNECE- water convention & EC DG Climate



➤ 3 targets

1. Prevention & management of flood and marine submersion
2. Prevention & management of droughts and water scarcity
3. Other adaptation measures (green infrastructure, ...)



Prevention and management of rivers' flood risk and marine submersion,

1. **Improve exchange of data:** Coordination of regional data on climate evolution: *DG Research EU platform?*
2. **Think global:** floods management plan: *Elbe, Moselle-Sarre transboundary floods plan, Delta plan?*
 - climate evolution?
 - socio-economic development?
 - biodiversity enhancement?
 - Coherence with water directive/convention
3. **Let the people know:** transboundary early warning systems for flooding : *the Dutch example?*
4. Sensibilisation, education, participation



Prevention and management of water scarcity and drought risk,

1. **Improve knowledge and coherence:**
 - assess vulnerability of water resources to climate change and man-made pressures [EU water blue print?](#)
2. **Adaption of river basin to climate change:**
 - transboundary strategy of adaptation considering water resources [Amice Interreg project?](#)
3. **Recreate a water saving culture:**
 - among the young [World Water Youth Parliament](#);
 - among population & culture [reappropriation of water](#) ;
 - among the cities [Conseil Général de Seine St Denis?](#)
 - Among agricultural practices [Spanish example?](#)
 - Among [industries label/certificate EWP&Coca-cola](#)



Prevention and management of water scarcity and drought risk,

4. **Improve water quantity management :**
 - flexibility of water level for transport [Union européenne de la batellerie artisanale](#) !
 - management impact of drought: common transboundary ground water resource management : [ScaldWIN Interreg project](#) –
 - relations ground water-surface water [lac leman](#)
5. **Impact on mountain systems:**
 - European_Mountains Water Information System- Alps Scarce project & Alps convention [Alpwaterscarce.eu](#)



Other measures, such as green infrastructures

1. **Manage the uncertainties** of the impacts of the climate change on the water resources and develop interface with science, politic & water management ([link with theme 3;3-2 & SERPT10](#))
2. **Think global and...** CC adaptation plans *CIPDR, CIPR*
3. Management of impact of CC:
 - subsidence: [Poland mine process](#) , [Wales example](#)
 - Hydroelectric power management: [Euroelectric](#)
 - Biodiversity and Eutrophication: [green algae](#)



Other measures, such as green infrastructures

4. Cooling systems: how to decrease urban temperature : [ex. Grand Lyon](#)
5. CC adaptation mechanisms – “Clearing – house’s water prototype” , rain water cisterns, new technologies and practices,...
6. Development of CC indicators ([fitness check](#) –[Deloitte](#))

CONCLUSIONS

Creation of an International Expert Group (GIE EAU)

Integration of different water management plan (WFD-Floods directive-Marine strategy,...)

Development of global change indicators to improve coherence, efficiency

Give priority to water in the World CC negotiations

BE OPPORTUNIST:

CC can become a chance for development!

THINK GLOBAL = 3 pillars :

1. Safety
2. biodiversity
3. Socio-economic development!



THANK YOU FOR YOUR
ATTENTION

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EUROINBO-EURORIOB _PORTO
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