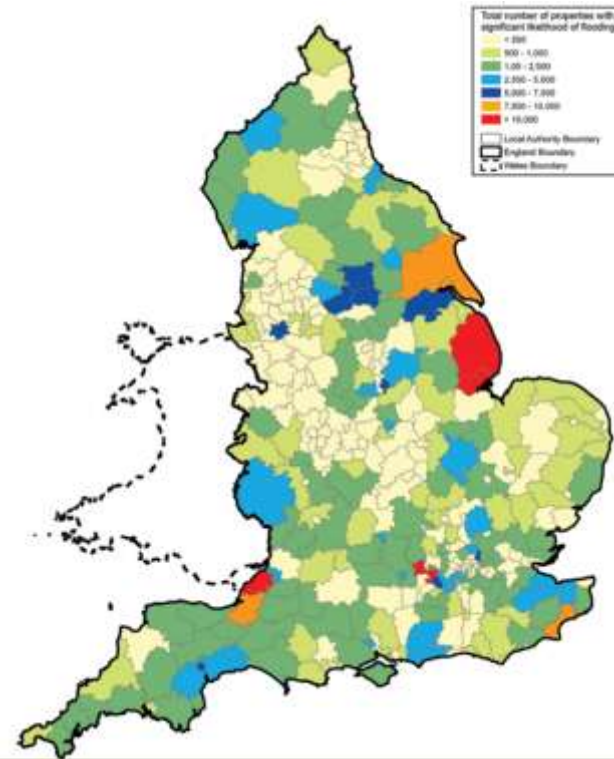


What are the new challenges for flood risk management in Europe?

Floodcom Conference

24th September

High degree of exposure to floods



10 millions people
26% of lands under sea level

5 millions properties

19 millions people

Damages in the last decade

Between 2002 and 2013 in Europe :

363 major floods

1000 fatalities

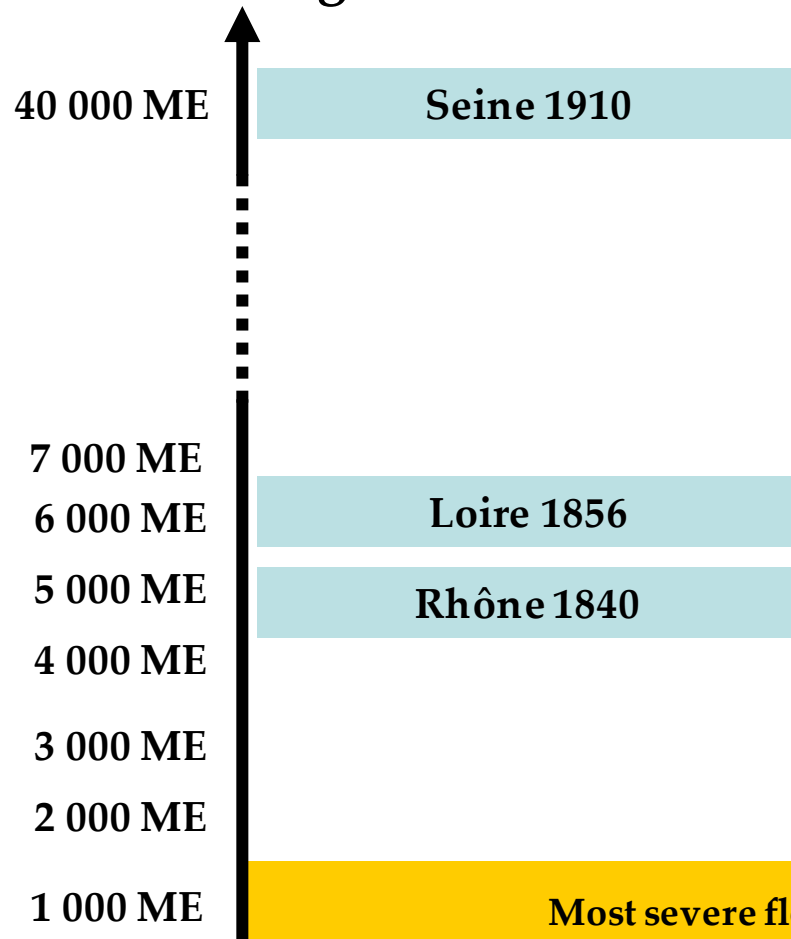
150 billions euros

**Troubling increasing costs
Uncertainty for the future with the
impacts of climate change and sea
level rise**

Considerable potential additional damages

France : no major flood since 1910

Potential damages



Paris 1910

Main challenge

**Avoiding human, social and economical
collapse of our cities**

Disaster in New Orleans in 2005 : a worrying illustration



Global impacts

- ❑ 1300 fatalities more than 200.000 people evacuated évacuées sur 450.000 hab.
- ❑ 200.000 houses destroyed
- ❑ Networks, public services : OUT
- ❑ 70 billions dollars of damages



Which strategy ?

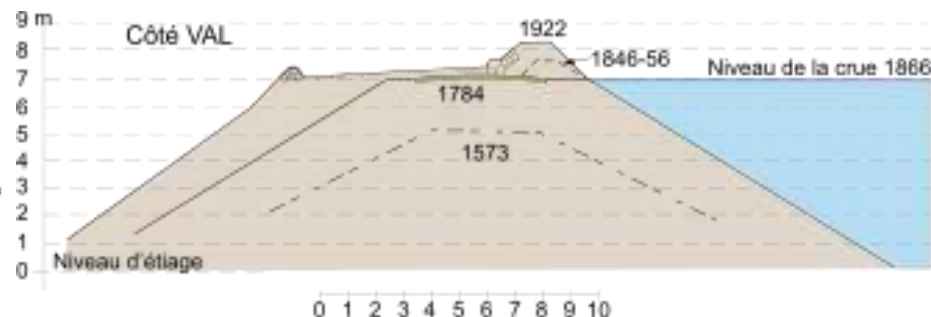
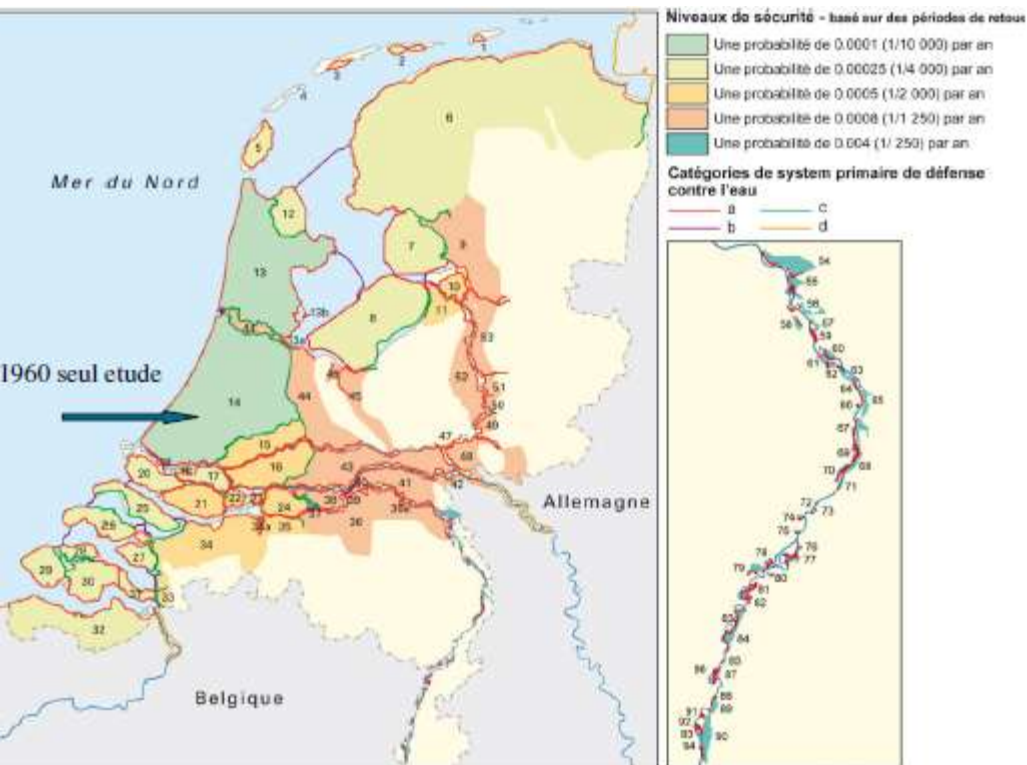
3 strategies :

Better defense

Preparation and adaptation of what it is already exposed

Building a sustainable future

Better defense



France: Raising levees during the 5 past centuries



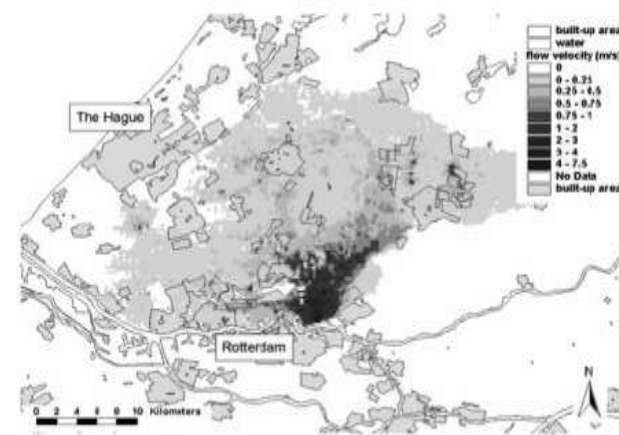
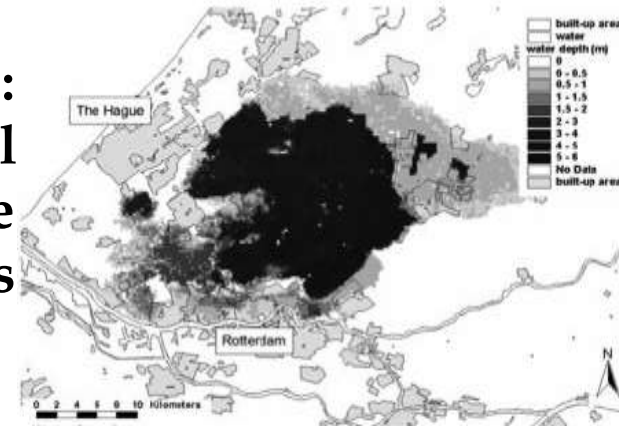
Germany: Action plan on floods along the river Rhine

The Netherlands: Safety standards, Delta plan 1, 2, programm « room for the river »



UK 2007: « The biggest civil emergency since the 2nd world war »

**The Netherlands:
70 000 potential fatalities in case of breach in dikes**



France 2010: Xynthia



Germany: August 2002

Marks of new paradigm

Europe: Flood directive : « Floods are natural phenomena which cannot be prevented »

England: National Emergency framework : focus on crisis management, risk awareness, building adaptation

Pays Bas : Multilayer safety approach

France: Reduction of vulnerability actions are compulsory to get public funding

New York : Post Sandy Plan : 1.5 billion dollars to adapt houses to flood

A new way to manage flood is emerging : « living with floods »



New Orleans



River Vilaine

« Accepting » Floods



Somme



River Seine

New questions

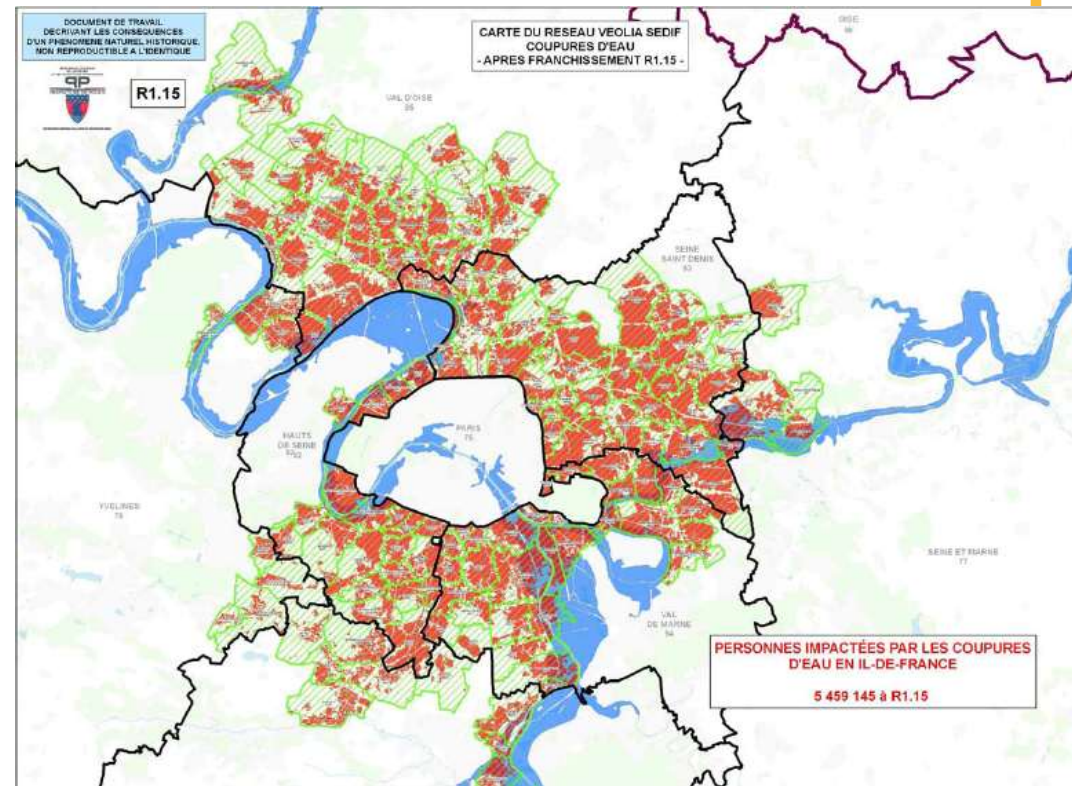
Are we able to adapt our existing built territories to floods ?

Are we able to build a sustainable future ?

Built lands are often not adapted to floods



« Vendéennes style » houses
in la Faute sur mer – Xynthia
Storm



Disruption of water supply in case
of major flood in Paris



Reduction of vulnerability :
adaptation of houses, BCP of
companies, public services critical
infrastructures...

Adapting exposed territories



People awareness



Recovery :
Insurance system
Flood waste management
..



Crisis
management



Flood forecasting,
warning system

Building a sustainable future in flood prone areas



Conclusion

Combining strategies : hard work !
Working on multifunctionnality



Thank you for your attention !

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