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Secretariat of the International Meuse  
Commission

**International Cooperation  
to face extreme events**

19<sup>th</sup> International Conference EUROPE-INBO  
8-10 December 2021  
Malta

**Session 4 “International cooperation & basin  
management”**

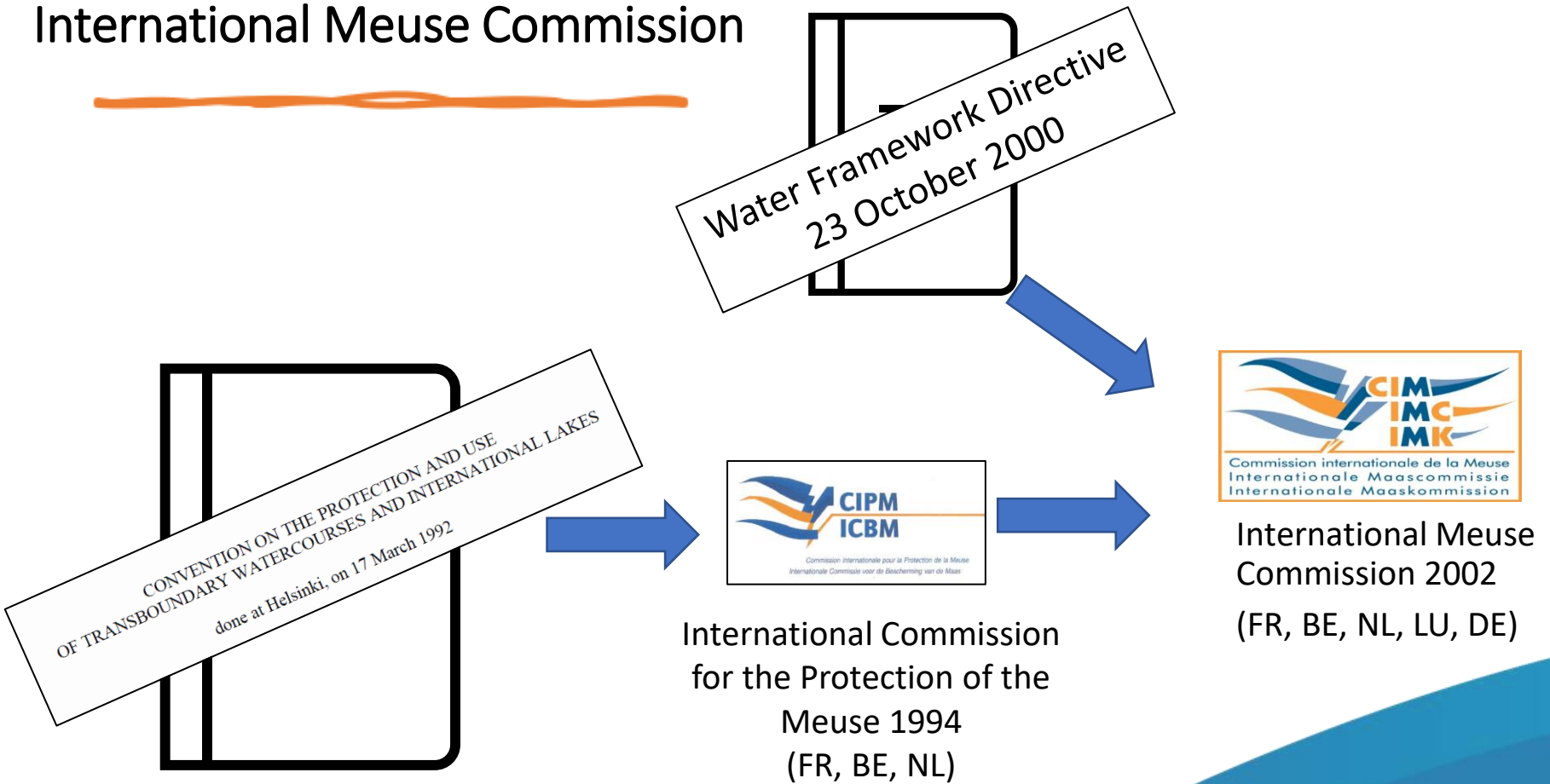


# Meuse River

- 35 000 km<sup>2</sup> - 905 km
- Pluvial regime
- about 9 Million inhabitants
- 5 countries
- Main water uses: drinking water, agriculture, inland navigation...



# Presentation of the International Meuse Commission



<http://www.meuse-maas.be/Accords.aspx>

# From Floods...

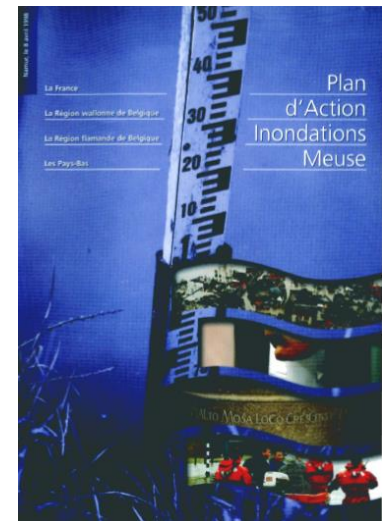


Important floods in 1993 and 1995  
100 year return period

April 1998



Source: L1.nl



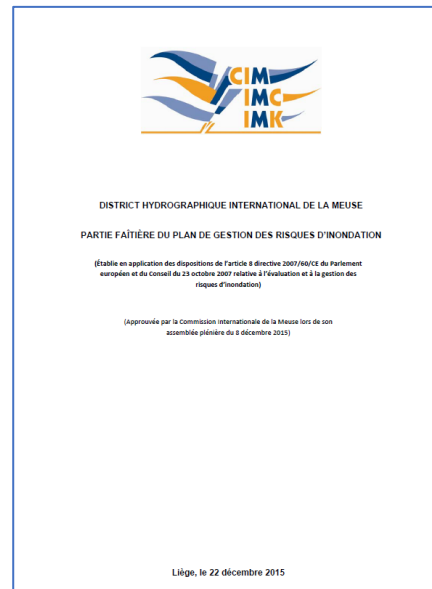
Source: ANP



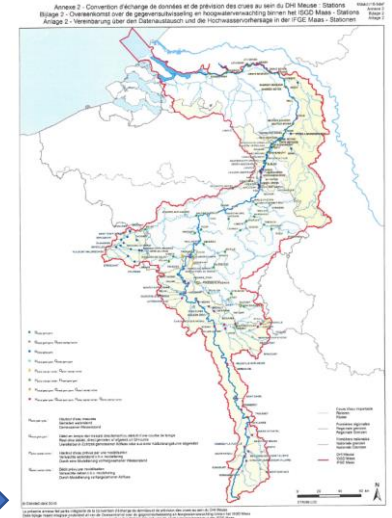
Source: rws.nl

# From Floods...

Directive on the assessment and  
management of flood risks  
23 October 2007

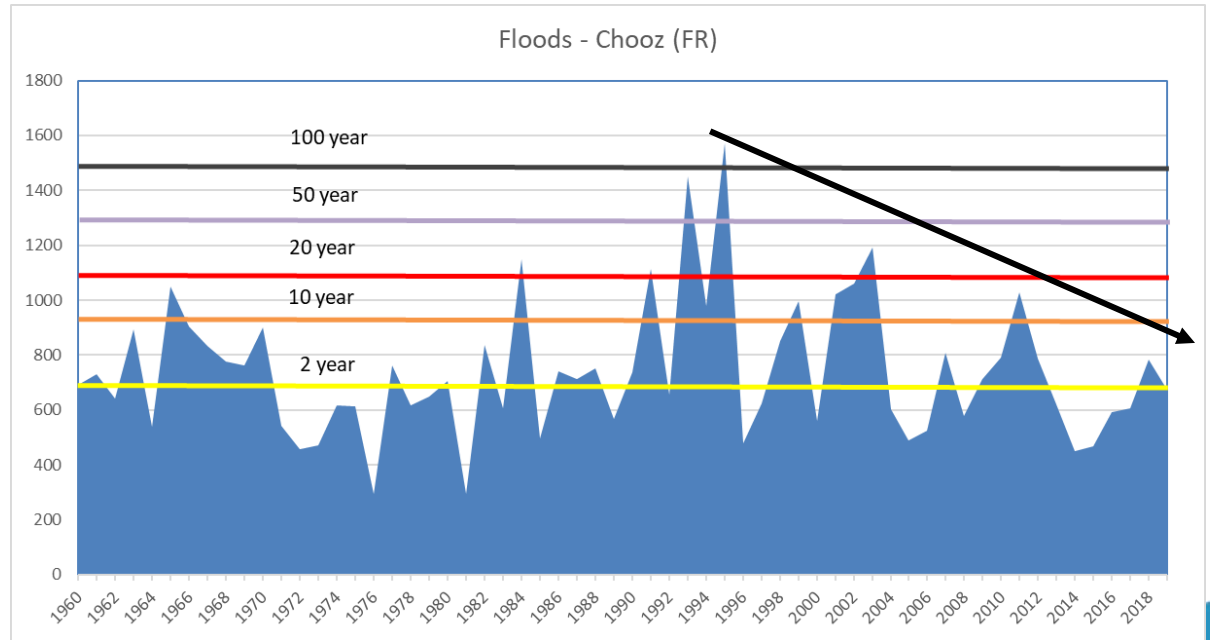


Flood Risks Management Plan  
December 2015 (+2021)



Data Exchange and Flood  
Forecasting Agreement –  
2017  
\* 160 stations (real time  
data)  
\* incl. 60 stations (forecasts)

# From Floods...





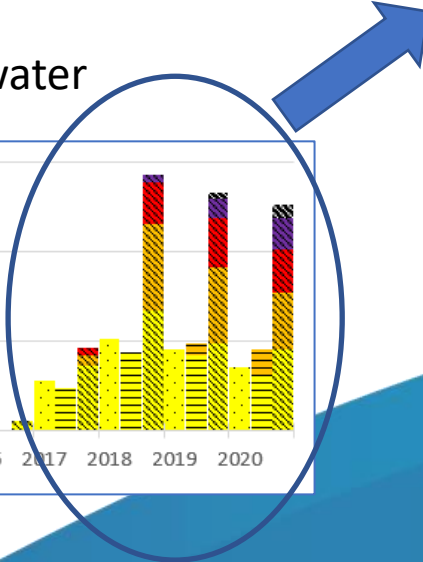
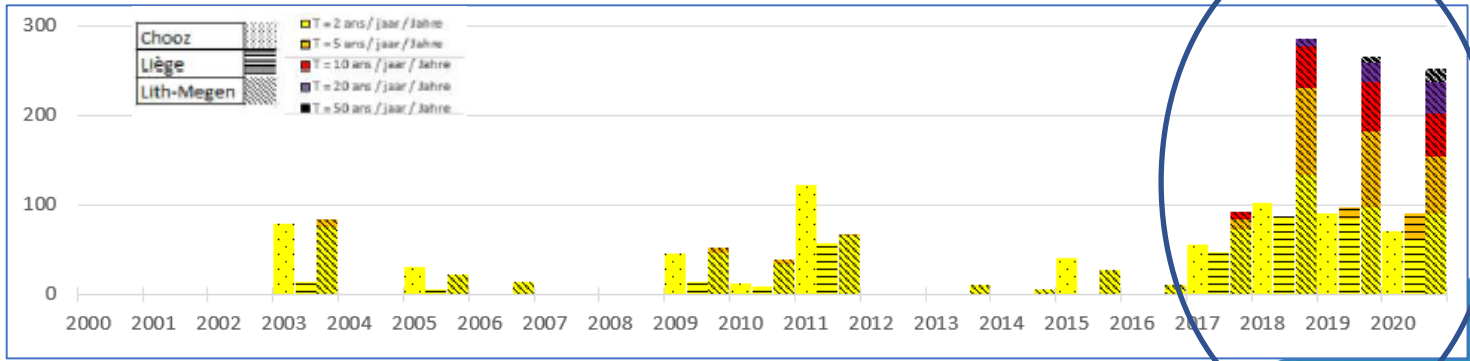
# to Droughts...




Plan of approach for exceptional low water events in the Meuse basin

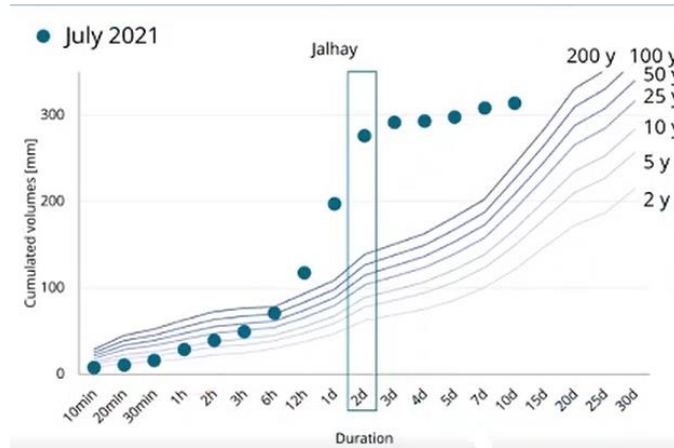
December 2020

4 years in a row with exceptional low-water

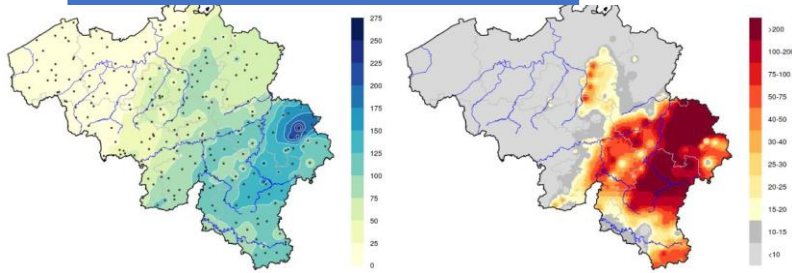




# ...to Flash Floods

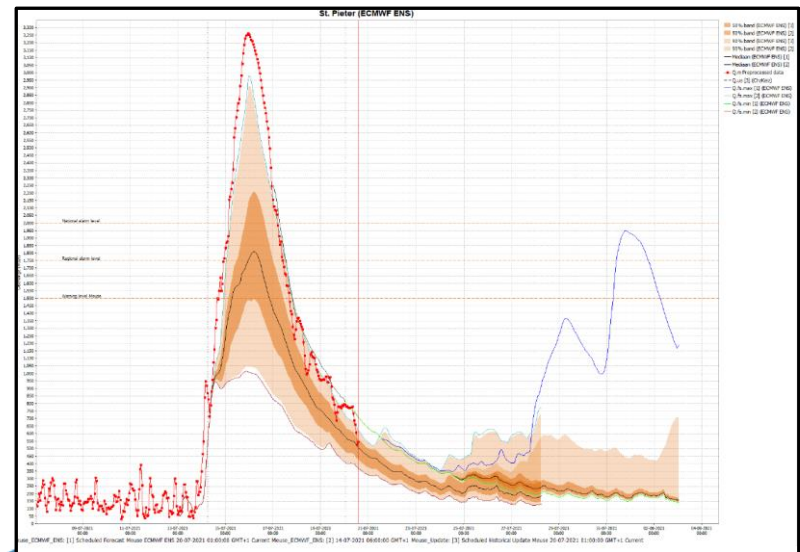


Extreme Rainfall,  
> 250 mm in 48 hours locally  
after 3 weeks of high accumulated precipitation



In St. Pieter (NL), Flood wave of  $3.260 \text{ m}^3/\text{s}$  !  
In comparison, the highest discharge was  $2.200 \text{ m}^3/\text{s}$  in summer 1980 and  $3.039 \text{ m}^3/\text{s}$  in winter 1993

+40 % increase / previous summer flood record !



# ...to Flash Floods



Source : <https://lameuse.sudinfo.be>

Exchange seminar for flood prevention services in the Scheldt and Meuse basins

16-17 September 2021 – Liège

-> Many proposals to improve transboundary cooperation



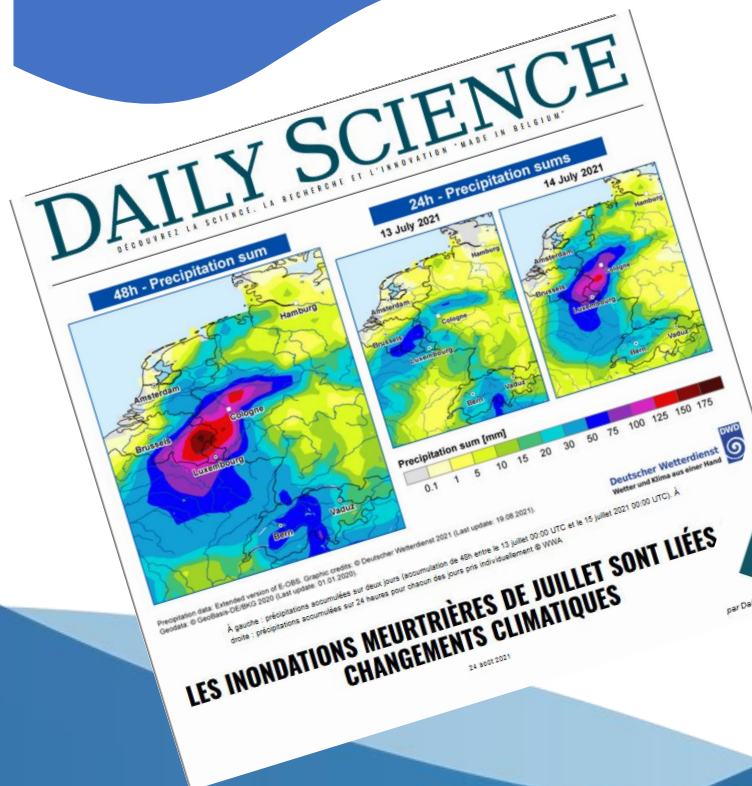
# What about the future ?

## Climate Change 2021: The Physical Science Basis

The Working Group I contribution to the Sixth Assessment Report is the most up-to-date physical understanding of the climate system and climate change, bringing together the latest advances in climate science, and combining multiple lines of evidence from paleoclimate, observations, process understanding, and global and regional climate simulations.

IPCC – AR6 : Physical Science Basis  
“Heavy precipitation has *likely* increased on the continental scale over three continents: North America, Europe, and Asia”

“Heavy precipitation will generally become more frequent and more intense with additional global warming.”



Thank you for your attention

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