



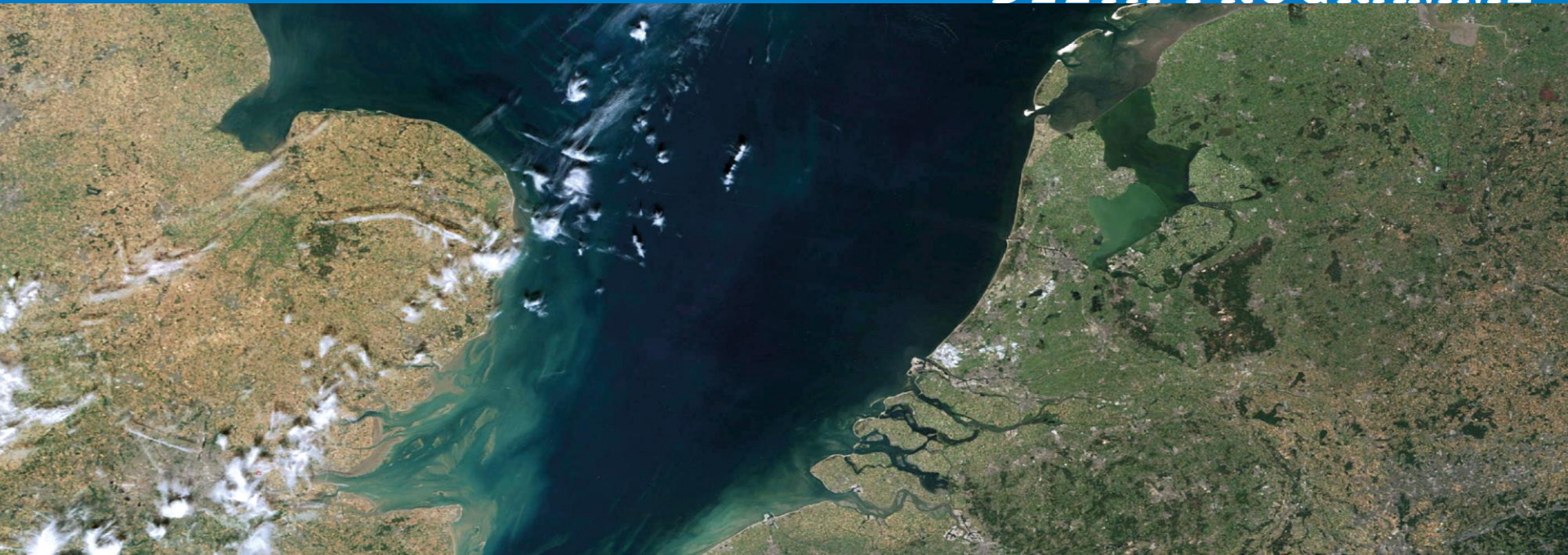
The Dutch Delta Programme

50 year Jubilee Symposium CHR

Wageningen, 21 October 2021

Peter C.G. Glas MSc LLM
Delta commissioner

NATIONAL
DELTA PROGRAMME





The Netherlands, a delta country





A history of water management



around 1580



around 1700



2000



20th Century: flooding and protection

- 1916 floods (North)

Damming off the Southern Sea, creation of Lake IJssel (1931)

- 1953 flood disaster (South-West)

Civil engineering solutions with dams and barriers

First Delta Programme, the Delta Works, shortening our coastline

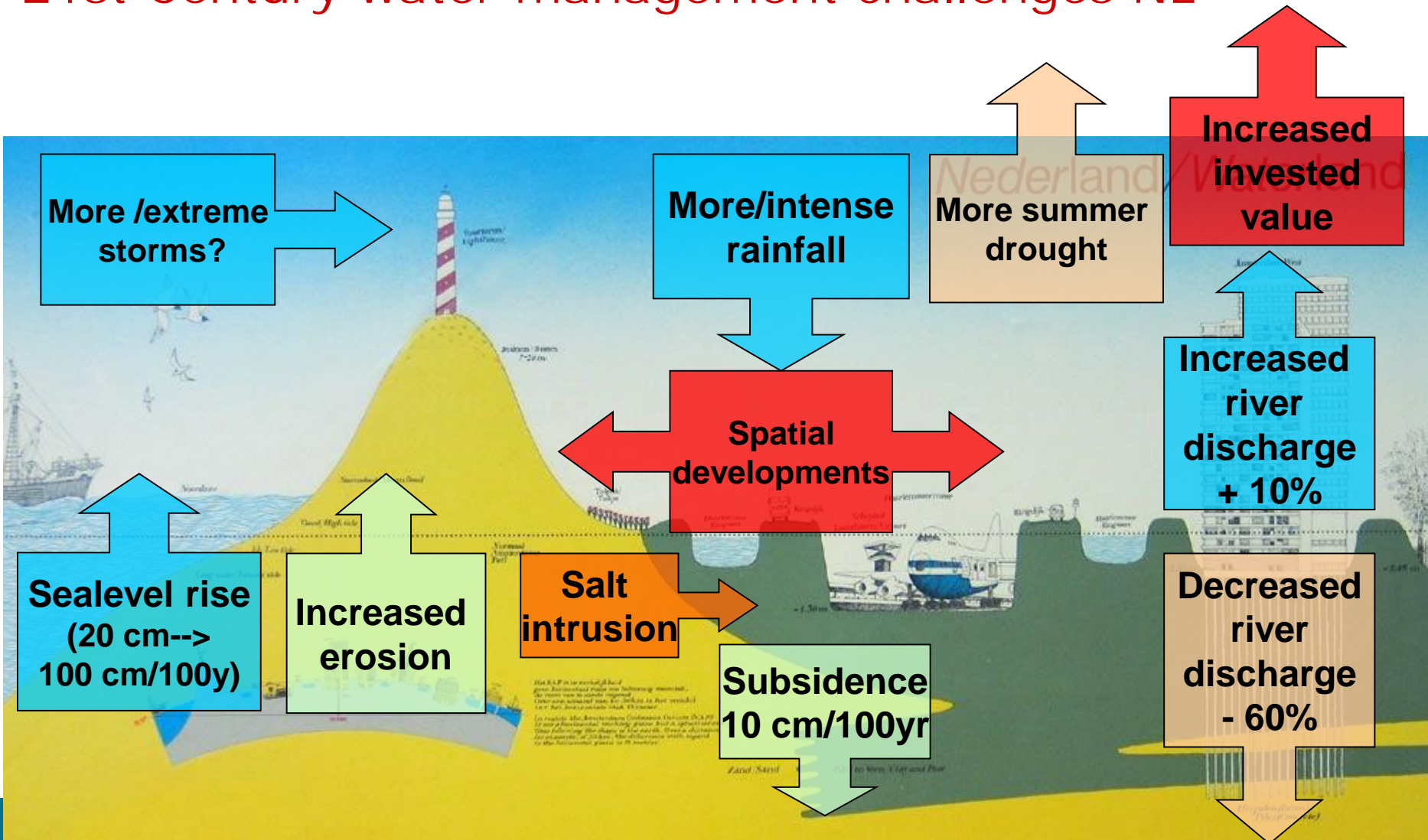
- 1993/1995 high water levels (rivers)

New concepts: **Room for the River and Building with Nature**





21st Century water management challenges NL





2nd Delta Programme

2008 2nd Delta Committee advice

2010 Delta Commissioner

2011 Delta Act, Delta Fund (1 Bln/yr)

2011-pres. Annual Delta programme:

- Flood protection
- Fresh water availability
- Spatial Adaptation

2014 Delta decisions & strategies

2017 New safety standards

2020 first 6yr Recalibration





THE NATIONAL DELTA PROGRAMME INVOLVES US ALL



NATIONAL AND
REGIONAL
GOVERNMENTS



DELTA PROGRAMME
COMMISSIONER
COORDINATION



BUSINESSES
AND NGOS



RESEARCH
INSTITUTES



RESIDENTS

NATIONAL
DELTA PROGRAMME



Long-term thinking: lessons from the Delta approach

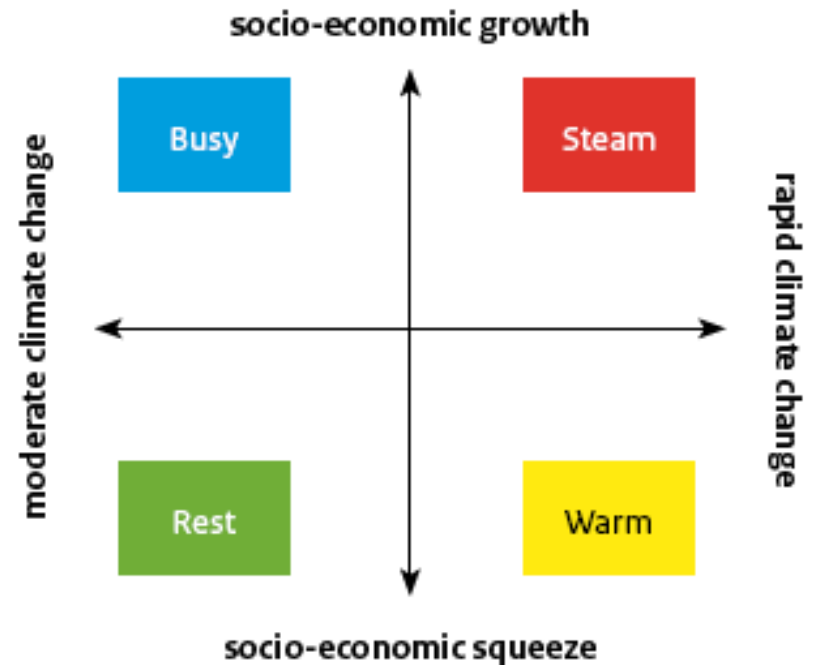


- Time scale 2020-2050-2100
#AdaptNow!
- Integrated approach
- National & regional orientation combined
- Political-administrative, legal and financial conditions are key
- Values: Solidarity, flexibility, sustainability
- Create a Delta community (communication, annual conference, social media)



Uncertain future → calls for adaptive strategies

- Climate change
 - sea level rise,
 - discharge,
 - rainfall,
 - Evaporation
- Socio-economic developments
 - population,
 - economy,
 - land use/urban development
 - fresh water demand



An aerial photograph of a wide river system. The river is divided into several channels and floodplains. Some areas are filled with water, while others are dry, showing brownish soil and vegetation. In the background, there are green fields, some buildings, and a distant city skyline under a cloudy sky. The text 'HIGH AND LOW RIVER DISCHARGE' is overlaid in white serif font.

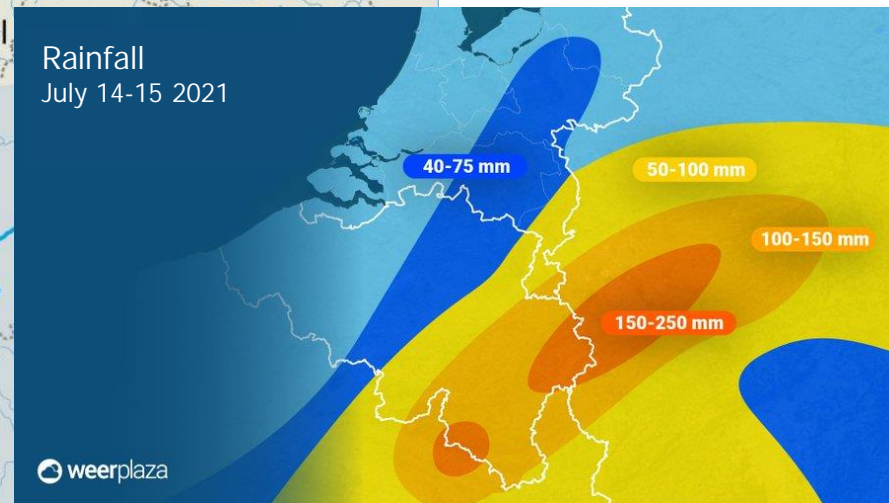
HIGH AND LOW RIVER DISCHARGE



High discharge – July 2021



Extreme rain





July 2021 (Ahrtal, Wallonia, Limburg)





Low discharge





Delta decision fresh water supply

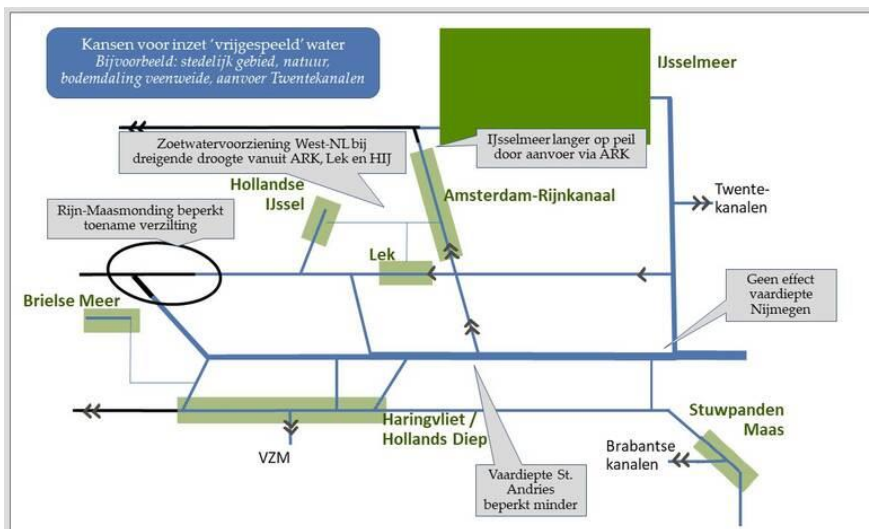
By 2050, the Netherlands must be resilient against freshwater shortages.

Drought of 2018, 2019, 2020





Strategy: efficient distribution of water from Rhine and Meuse, reduce and prioritize use and abstractions



Preventing salt water intrusion by flushing

Managing reservoirs



July 2021: lessons (to be) learned



In the Netherlands a **national evaluation** has been commissioned.
Aspects to be considered:

- “Unprecedented” weather conditions (area, rain intensity, season)
- Coinciding high water levels during summer with summer land use
- Connecting scales (continental, national, regional, local)
- International dimension including crisis management
- Relation water - land use (water retention, spatial planning, building and infrastructure guidelines)



Thank you for your attention



@delta_comm
peter.glas@deltacommissaris.nl
www.deltaprogramma.nl



Peter C.G. Glas MSc LLM
Delta commissioner