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Fighting drought and floods: opposite manifestations of the same issue...

EUROPEAN RIVER SYMPOSIUM 2021

Session 2 :

Adaptation to climate change : the interest of basin management planning

*Leon Dhaene – Secretary General / International Scheldt Commission
26th May 2021 (via videoconference)*



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The International Scheldt Commission : *mission* *parties* *responsibilities*

➤ MISSION

Intergovernmental organisation for the coordination of joint actions and the monitoring of **water quality and quantity** (surface and groundwater) aiming at a **sustainable and harmonised water management**, at the international level in the International Scheldt District.

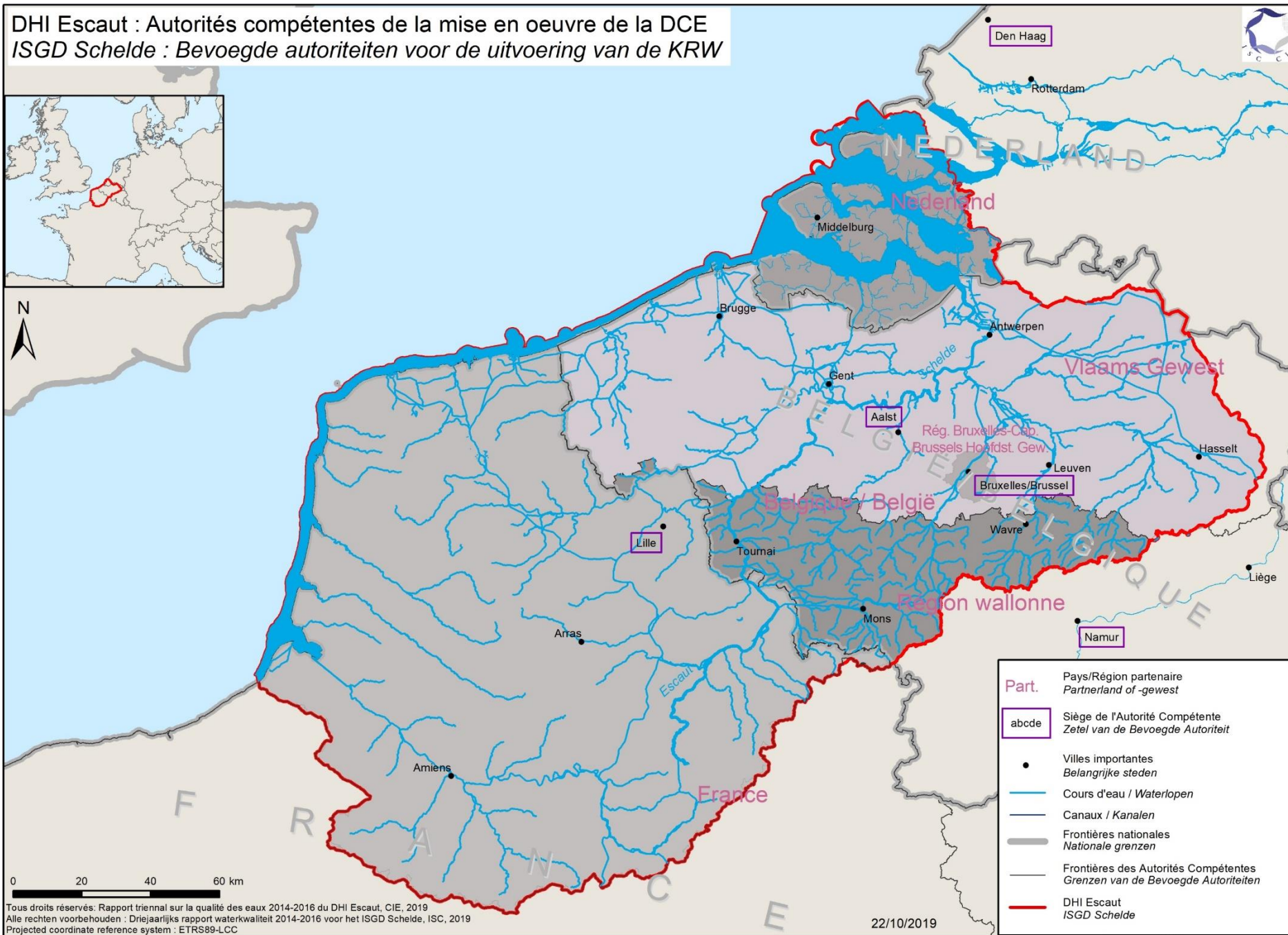
➤ PARTIES

- France
- Flemish Region
- Wallonia
- Brussels-Capital Region
- Belgian Federal State
- The Netherlands

➤ INTERNATIONAL FORUM FOR COÖRDINATION OF

- **European water directives** in the Scheldt district:
 - Framework Directive Water, establishing a framework for community action in the field of water policy (2000/60/EG),
 - The EU Floods Directive, on the assessment and management of flood risks (2007/60/EG),
- **Adaptation to climate change**, including measures to prevent and reduce the impact of drought
- Transboundary **management of accidental pollution** of all water bodies in the Scheldt District

DHI Escaut : Autorités compétentes de la mise en oeuvre de la DCE
 ISGD Schelde : Bevoegde autoriteiten voor de uitvoering van de KRW



Tous droits réservés: Rapport triennal sur la qualité des eaux 2014-2016 du DHI Escaut, CIE, 2019
 Alle rechten voorbehouden : Driejaarlijks rapport waterkwaliteit 2014-2016 voor het ISGD Schelde, ISC, 2019
 Projected coordinate reference system : ETRS89-LCC

22/10/2019

- Surface : 37,170 km²
- Population : > 14,5 mio
- High population density : > 100-2000 / km²
- Water scarcity
- Dense network of waterways and motorways
- Considerable industrial & urban structure
- Intensive agriculture
- Old industrial (polluted ?) sites
- High flood risk areas



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Droughts and floods : *causes*

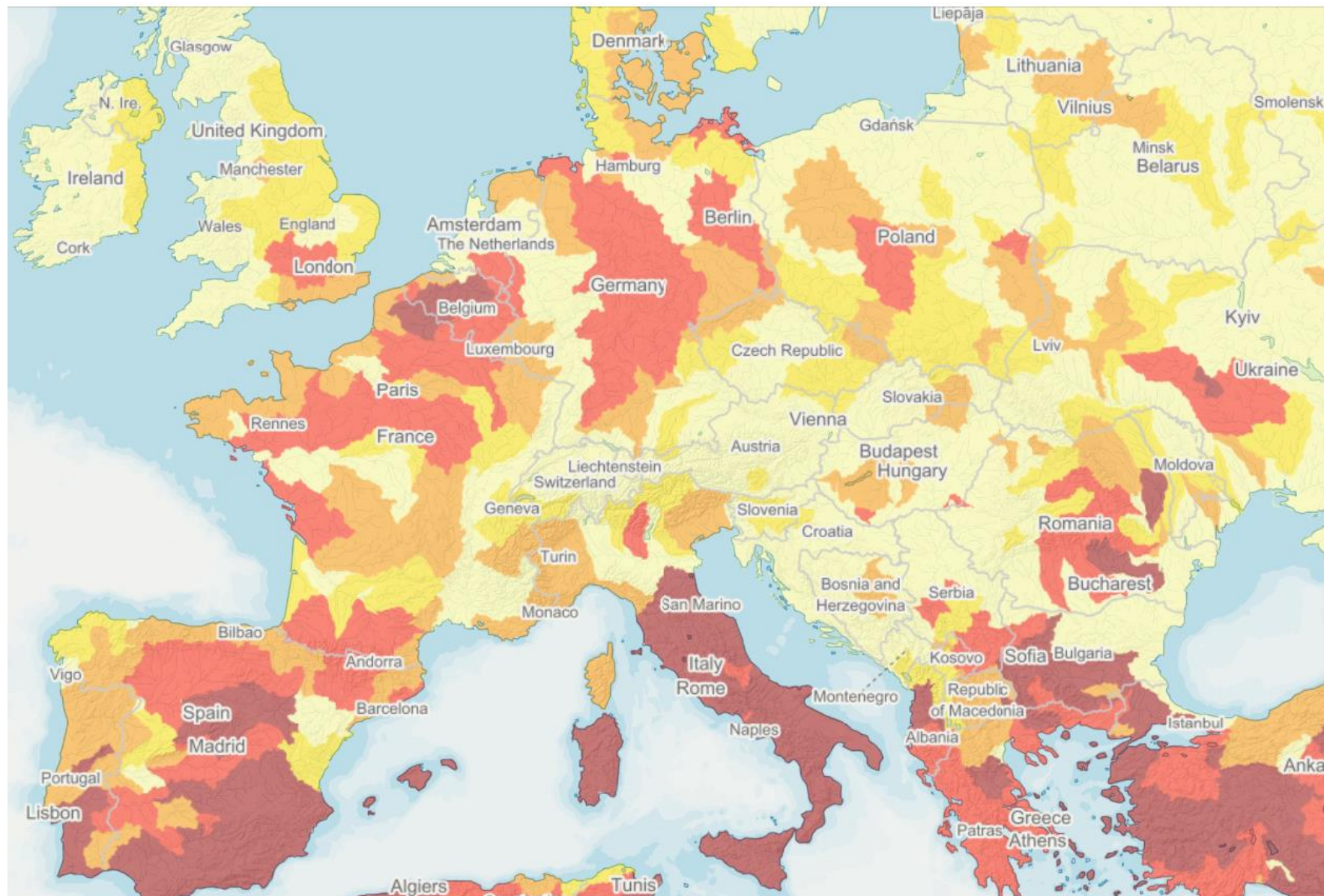
- Droughts are caused by :
 1. *Climate change*
 1. Increasing temperature = evaporation of water
 2. Fewer rain days, but heavy raindays
 3. Higher temperature = increased intensity of winds
- Floods are caused by :
 1. *Continuous heavy rainfall*, possibly combined with meltwater
 2. *Flooding from the sea*, due to a rise in the sea level, combined with storm surge
 3. *Pluvial floods*: large quantities of rain in a very short time (+ risk of overflow of wastewater from epuration systems)
 4. Combined with *relief* (the low countries) and *human praxis* (densely populated, urban, industrial, intensive agriculture,...)



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The Scheldt District : one of the *least sustainable* water areas in Europe.

(Map of levels of sustainable water bodies in Europe, based on most recent Eurostat data)



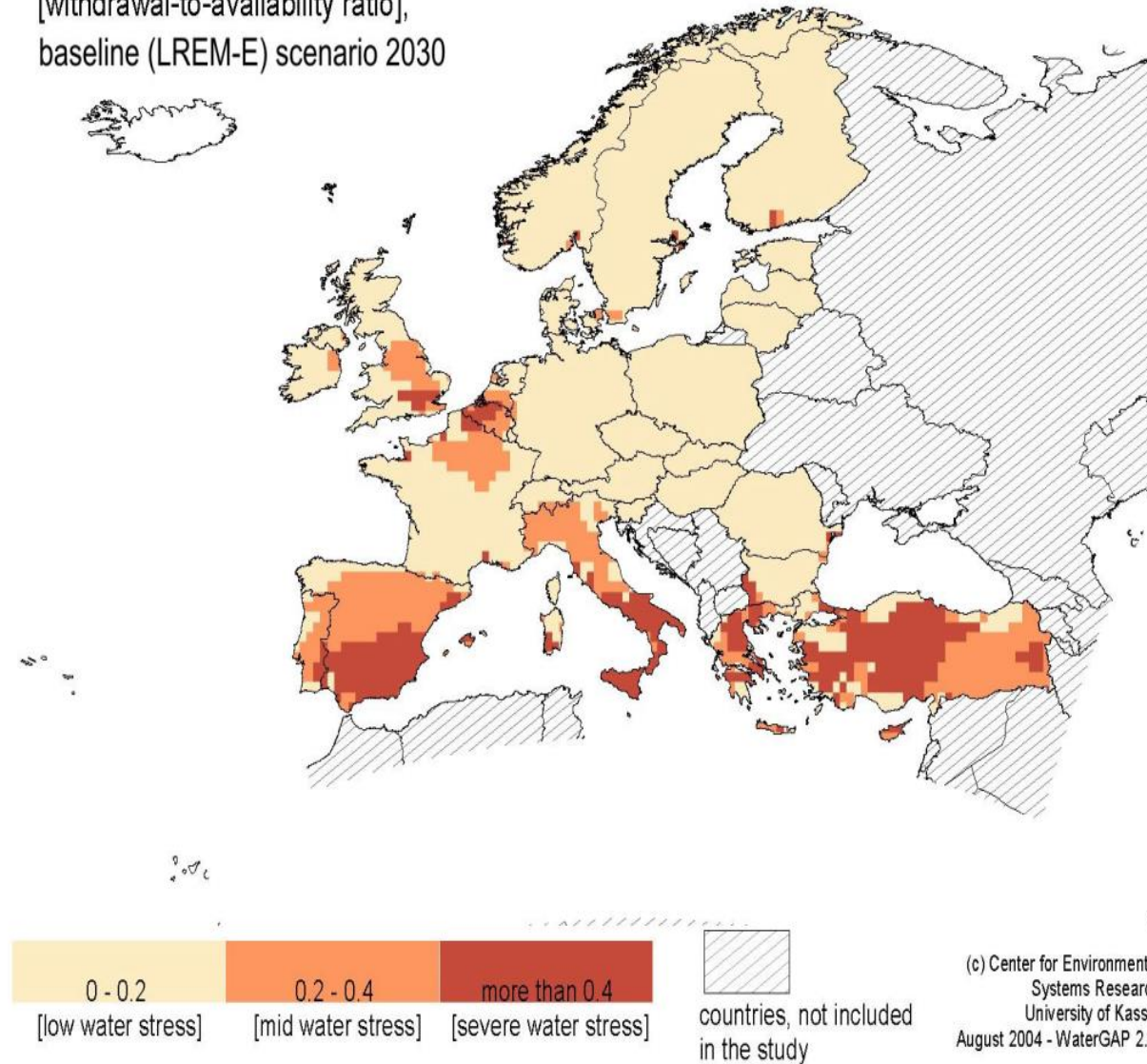


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The Scheldt District : an area which cannot autonomously meet the *water requirements* of its population

(Map of levels of water stress area's in Europe, based on LREM-E scenario 2016)

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



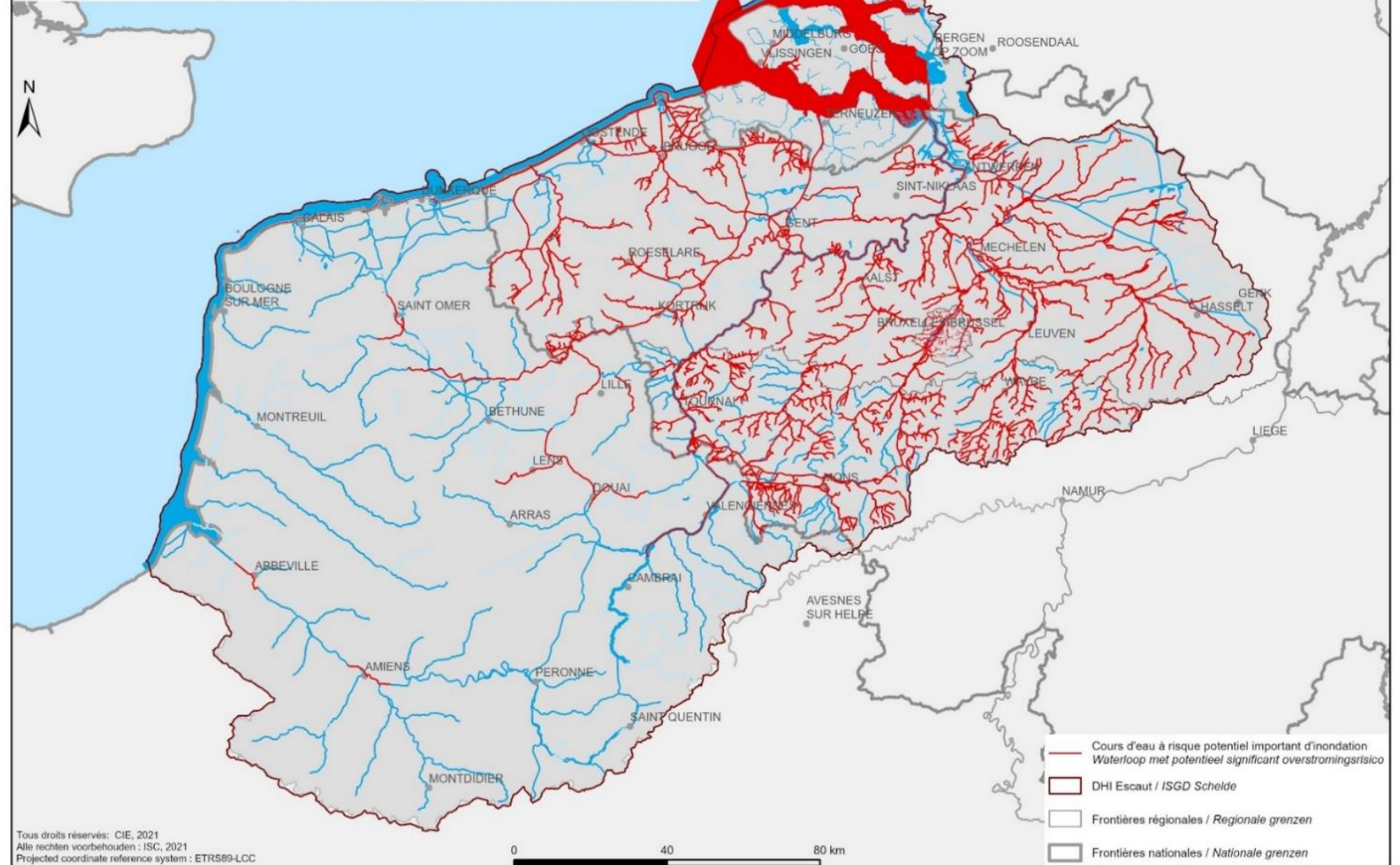


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The Scheldt
District : the
Low Countries
have numerous
watercourses
and a coastline
with a
*potentially
significant risk
of flooding*

(ISC WebGis 2021)

DHI Escaut - Mise en oeuvre de la DRI
Cours d'eau et littoral à risque potentiel important d'inondation
ISGD Schelde - Uitvoering van de ROR
Waterlopen en kustlijn met potentieel significant overstromingsrisico



Tous droits réservés : CIE, 2021
Alle rechten voorbehouden : ISC, 2021
Projected coordinate reference system : ETRS89-LCC



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The International Scheldt Commission : *International River Basin Second Management Plan Floods Directive 2022-2027*

- Three objectives :
 1. Strengthening cross-border coordination in the **planning and monitoring** of measures with cross-border impact
 2. Improve the **exchange of information** on floods and flooding
 3. Improve **knowledge exchange** in order to better explain decisions
- Actions undertaken:
 1. “**Protocol van Bergen**” : agreement on the exchange of information concerning high and low water **forecasts**
 2. Circulation of a **low-water notice**
 3. Knowledge exchange in the field of **water scarcity and droughts**
- Measures Programme 2022-2027:
 1. Establishment of the 3P strategy : **Prevention, Protection, and Preparedness**



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The International Scheldt Commission : *International River Basin Second Management Plan Floods Directive*

PREVENTION	PROTECTION	PREPAREDNESS
Avoidance : give space to water	Natural drainage and retention	Flood forecast / warning
Removal / relocation of potential damage to areas at lower risk of flooding	Intervention in watercourses, canals and coastal defences	Crisis management / contingency plan
Limiting consequential damage	Surface water management	Public awareness / preparedness
Maintenance programme: transboundary water barrier or sediment transport policy	Management of dykes and sediment	Repair of social and environmental damage

Green measures : promote ecosystem services

Blue measures : human based assistance to surface water

Grey measures : human interventionist policies

Red measures : information exchange and financial compensation



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The International Scheldt Commission : *Clash of two visions*

FUNCTIONAL VISION ON ENVIRONMENT	TRADITIONAL VISION ON ENVIRONMENTAL PROTECTION
Focus on ecosystem services	Harmonious relationship between man and nature
Give space to nature (water)	"Men comes first"- principle
Protection by anticipation	Protection by defense
Medium and long term solutions	Short term solutions (e.g. increasing dykes)
One off high investments	Continuous investments



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The International Scheldt Commission : *Some conclusions and issues*

- ***No unanimity*** on the long-term (2050-2100) climate change ***scenarios***
- ***Many aspects*** of the interaction between global warming and water are still ***unknown***
- Different ***vision*** and approaches
- ***Long-term*** consequences versus ***short-term*** policy
- Direct consequences of drought already visible, but measures do not bring immediate ***remediation***



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The
International
Scheldt
Commission :
*for more
information*

❖ International Scheldt Commission

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2000 Antwerpen

❖ **New public website** : <https://www.isc-cie.org>
(expected for yearend 2019)

❖ **Contact details Secretariat ISC** :
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