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)
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 COORDINATION 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
• 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
Droughts are caused by:

1. **Climate change**
   1. Increasing temperature = evaporation of water
   2. Fewer rain days, but heavy rainfalls
   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,...)
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)
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)
The Scheldt District: the Low Countries have numerous watercourses and a coastline with a potentially significant risk of flooding

(ISC WebGis 2021)
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*
### Prevention
- **Avoidance**: give space to water
- **Removal / relocation**: potential damage to areas at lower risk of flooding
- **Limiting consequential damage**
- **Maintenance programme**: transboundary water barrier or sediment transport policy

### Protection
- **Natural drainage and retention**
- **Intervention in watercourses, canals and coastal defences**
- **Surface water management**
- **Management of dykes and sediment**

### Preparedness
- **Flood forecast / warning**
- **Crisis management / contingency plan**
- **Public awareness / preparedness**
- **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
<table>
<thead>
<tr>
<th>FUNCTIONAL VISION ON ENVIRONMENT</th>
<th>TRADITIONAL VISION ON ENVIRONMENTAL PROTECTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Focus on ecosystem services</td>
<td>Harmonious relationship between man and nature</td>
</tr>
<tr>
<td>Give space to nature (water)</td>
<td>&quot;Men comes first&quot;-principle</td>
</tr>
<tr>
<td>Protection by anticipation</td>
<td>Protection by defense</td>
</tr>
<tr>
<td>Medium and long term solutions</td>
<td>Short term solutions (e.g. increasing dykes)</td>
</tr>
<tr>
<td>One off high investments</td>
<td>Continuous investments</td>
</tr>
</tbody>
</table>
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**
International Scheldt Commission
Theaterbuilding – 19th floor
Italiëlei 124
2000 Antwerpen

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

Contact details Secretariat ISC:
Telephone: +32 3206 0680
Mail: sec@isc-cie.org