

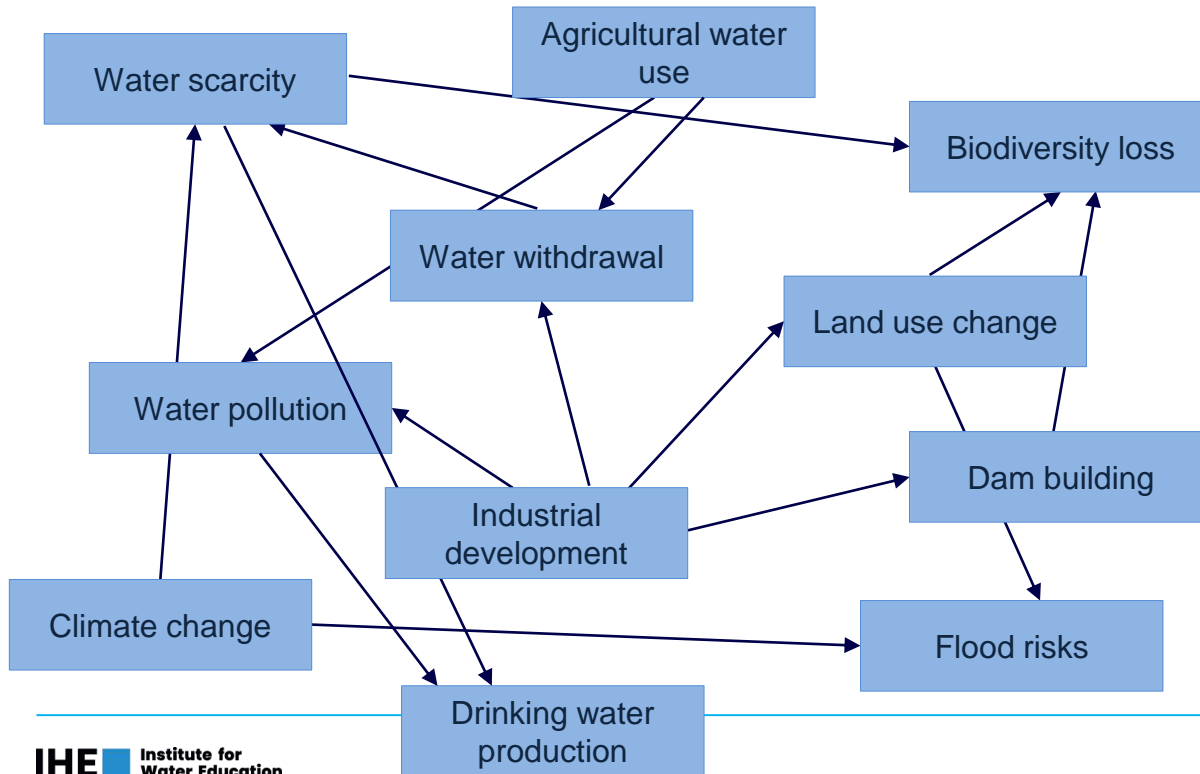
International cooperation for water quantity and quality

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Challenges



Sharing precious resources

- Water resources are used by different actors and sectors
- But also shared through
 - 313 shared river basins
 - > 300 shared aquifers
 - > 300 transboundary wetlands
- Those
 - cover nearly half of world's land surface
 - inhabit > 50% of the world's population
 - provide > 60% of freshwater flow

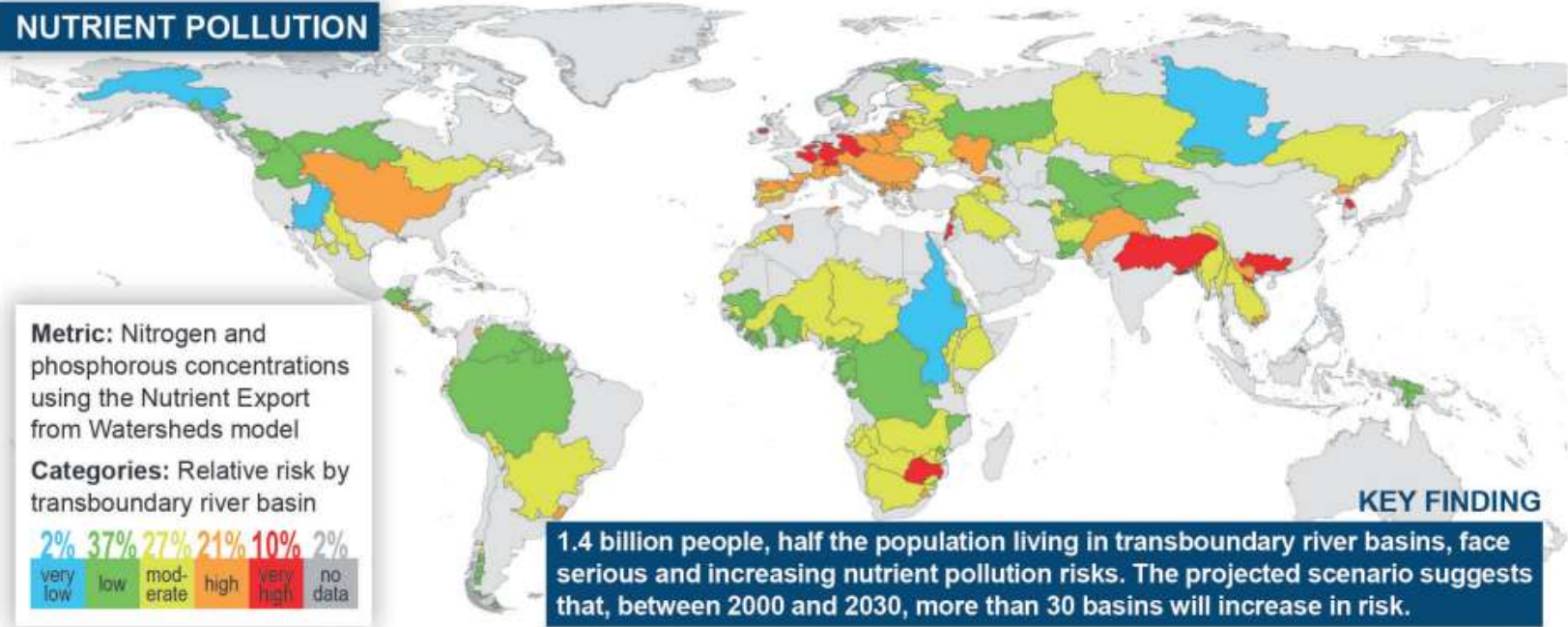


Water quality

NUTRIENT POLLUTION

Metric: Nitrogen and phosphorous concentrations using the Nutrient Export from Watersheds model

Categories: Relative risk by transboundary river basin



KEY FINDING

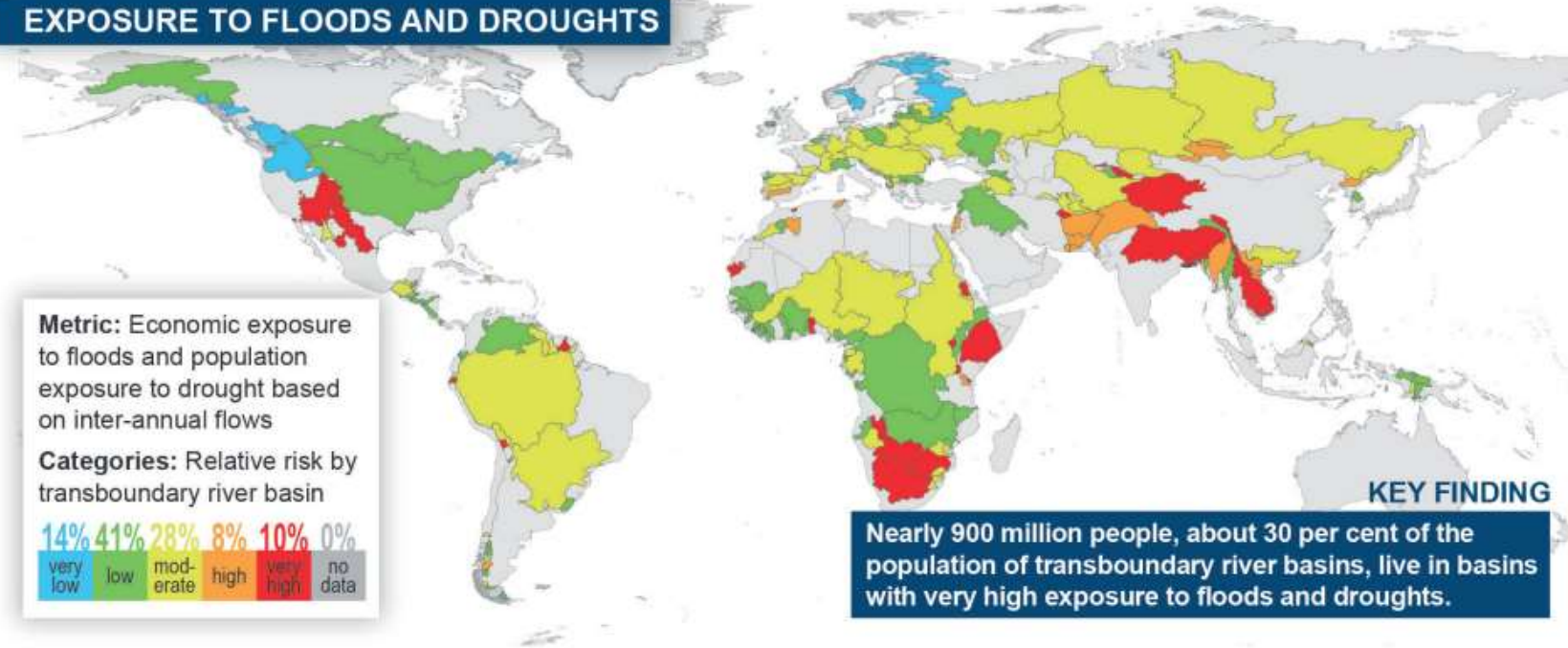
1.4 billion people, half the population living in transboundary river basins, face serious and increasing nutrient pollution risks. The projected scenario suggests that, between 2000 and 2030, more than 30 basins will increase in risk.

Water quantity and flows

EXPOSURE TO FLOODS AND DROUGHTS

Metric: Economic exposure to floods and population exposure to drought based on inter-annual flows

Categories: Relative risk by transboundary river basin



KEY FINDING

Nearly 900 million people, about 30 per cent of the population of transboundary river basins, live in basins with very high exposure to floods and droughts.

A risk of conflict

Water: A Global Crisis

Risk of water wars rises with scarcity
Almost half of humanity will face water scarcity by

Water scarcity a contributing cause of
DROUGHTS ARE A THREAT TO PEACE IN EUROPE – WHY WE NEED DEMOCRATIC WATER MANAGEMENT IN THE EU

MIKOLAJ DARIIS

Europe's next crisis: Water

The Continent is bracing for yet another drought after a winter with little rain and snow.

Europe's Drought-Riven Future Is Here, Decades Earlier Than Expected

'Without water, we are nothing!': Spain's crippling drought reignites tensions over Tagus river

Drought in Europe and water conflicts on the rise

Spain's water war gets political

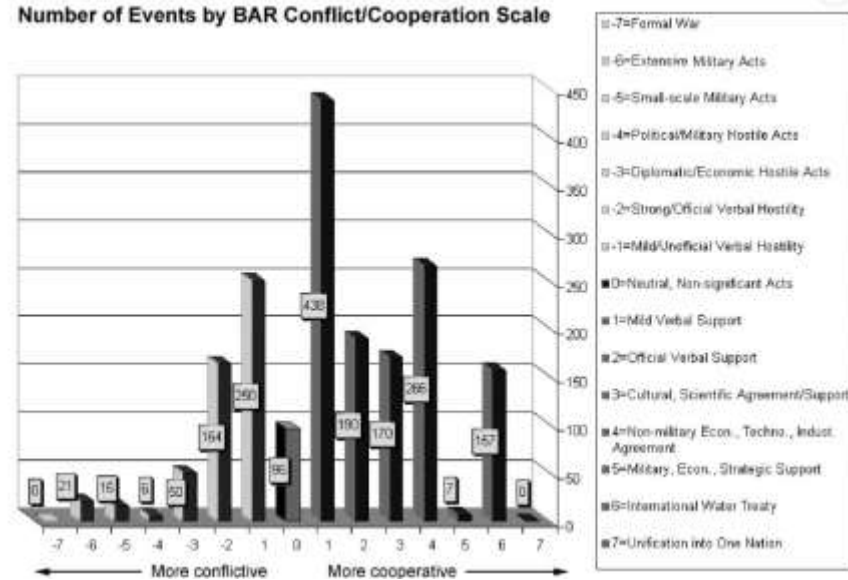
'Very precarious': Europe faces growing water crisis as winter drought worsens

Water stress is a major and growing concern in Europe

risks
Mel
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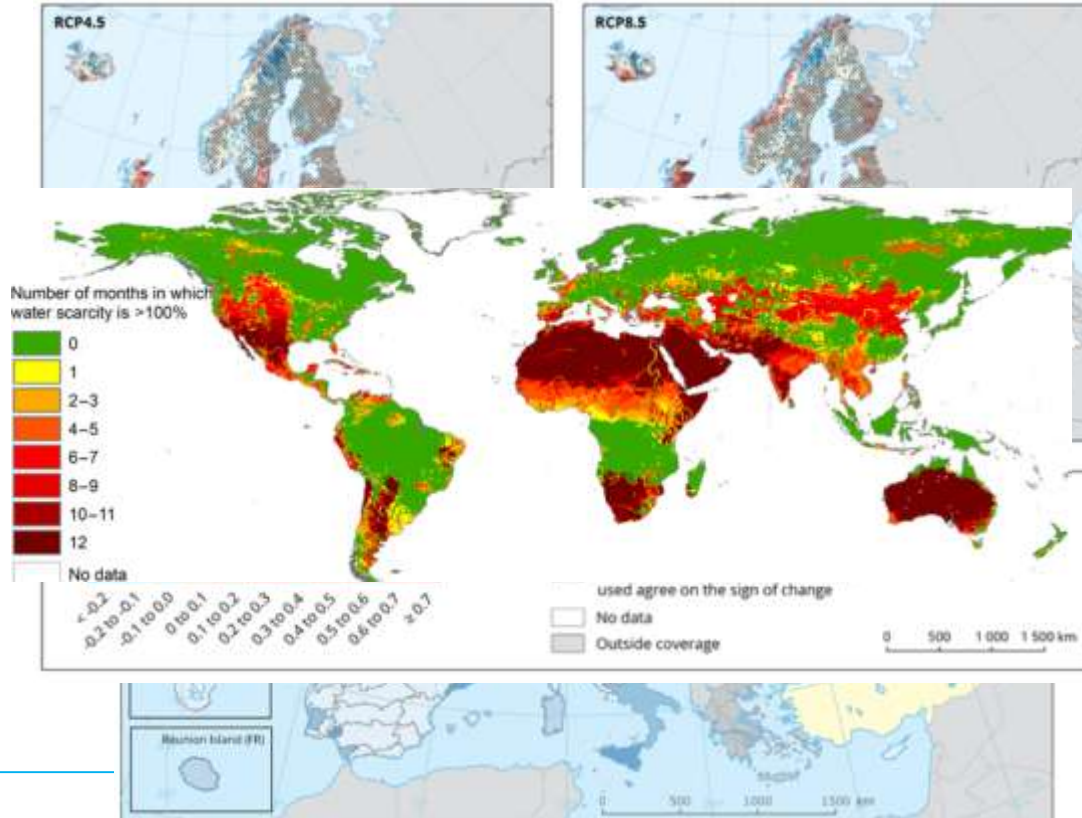
... but cooperation prevails

- Worldwide, cooperative events prevail over conflictive events
- Where conflict occurs, it almost always remains below the threshold of violence
- Conflict is more common in certain regions than in others
- Conflict is more often triggered by infrastructure than other issues
- Conflict/cooperation largely depend on factors other than water
- **However: absence of conflict ≠ cooperation**



Will the future look the same?

- Increasing complexity of challenges and interdependency
- High pressure on water for economic development
- Influence of/decisions by other sectors
- Decline of multilateral system and institutions



Will the future look the same?

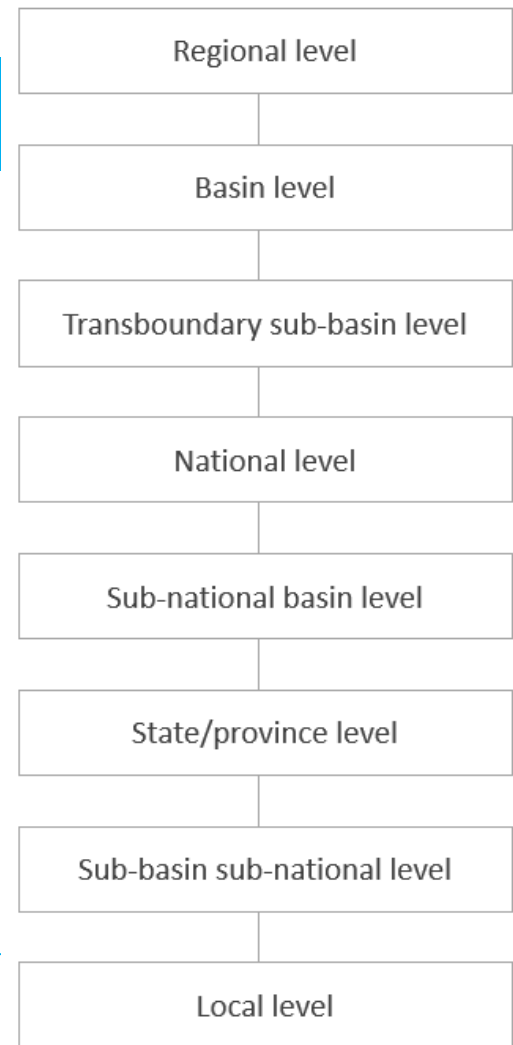
- So far, countries have been relatively successful in avoiding conflict, but less successful in ensuring true cooperation over shared water resources
- Many new challenges emerge
 - How to deal with interdependencies between different uses?
 - How do deal with conflicting goals of water management?
 - How to meet increasing water needs?
 - Who gets how much water in times of scarcity?
 - Who decides about water allocation?
 - Whose interests weigh more than others?
 - Are priorities clearly defined and based on sound legal instruments?
 - Who takes policy decisions and at which level?
 - Will courts decide in case of conflict? And on what basis?

Institutionalizing cooperation

- Preventing and mitigating conflict requires rules, processes and means for exchanging
- Benefits of joint action can only be generated through real cooperation – the absence of conflict is a necessary but not a sufficient condition
- Institutions provide
 - Ways to define jointly agreed upon rules and principles
 - Platforms for continuous exchange and negotiations
 - Mechanisms for basin management and planning
 - Mechanisms for data and information sharing
 - Instruments for joint or coordinated activities
 - Mechanisms for dispute prevention, mitigation and resolution

Multi-level governance of water

- Water resources matter from the most local to the most global level
- Their governance also alternates between different levels
- Complexity is added by the mismatch between hydrological and political boundaries
- This also depends on historic, political, legal or economic choices
- The subsidiarity principle typically plays a role – but to varying degrees



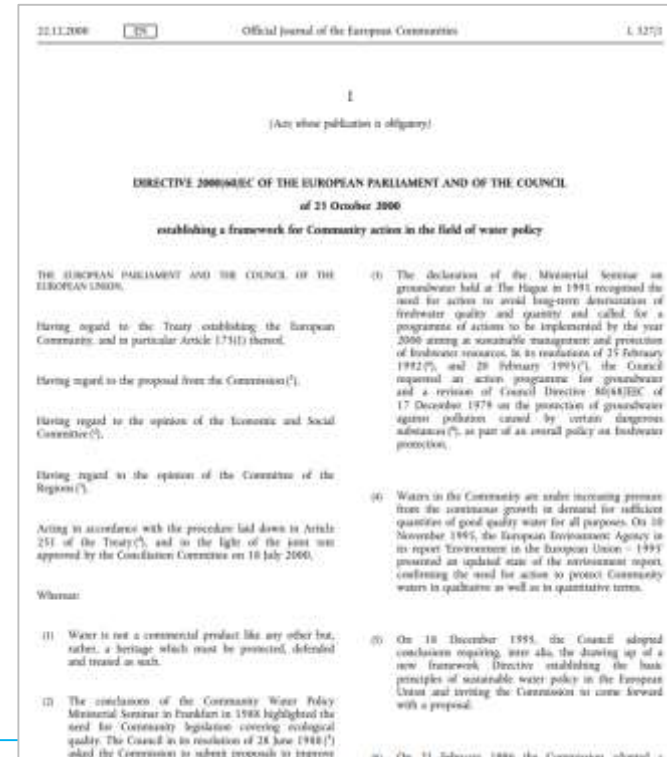
Global water conventions and global frameworks

- 1992 Helsinki Convention
- 1997 UN Watercourses Convention
- 2008 ILC Draft Articles on Transboundary Aquifers
- 2023 UN Water Conference
- Broader global environmental instruments and processes



The EU WFD – A unique framework, but fit for the future?

- Is a unique framework for water resources management worldwide
- Is legally binding and enforceable and based on strong political commitment
- Has largely focused on water quality and its different dimensions
- Increasingly question whether
 - EU WFD has been effective in achieving underlying objectives
 - EU WFD is fit for the future and newly emerging challenges



The Danube River Protection Convention

- Commits member states to cooperation on conservation, improvement and rational use of water
- Defines specific objectives and requirements under these general goals
- Defines procedural issues such as decision-making, dispute-resolution, amendment, etc.
- Establishes the ICPDR as basin organization with clear mandate and tasks



The Mekong Agreement

- Is a very detailed agreement that goes beyond most European examples
- Defines in great detail rights and obligations of states in specific circumstances
- Is complemented by subsequent procedures, further detailing certain provisions
- Has been put to test over dam development – now trying to adapt to new challenges



Basin organizations

- Take institutionalization one step further by providing permanent platforms for cooperation
- Ensure constant exchange – formally and informally – between riparians
- Support various basin management and development cooperation activities
- Facilitate data and information exchange, monitoring, etc.
- Make “real cooperation” happen on a day-to-day basis



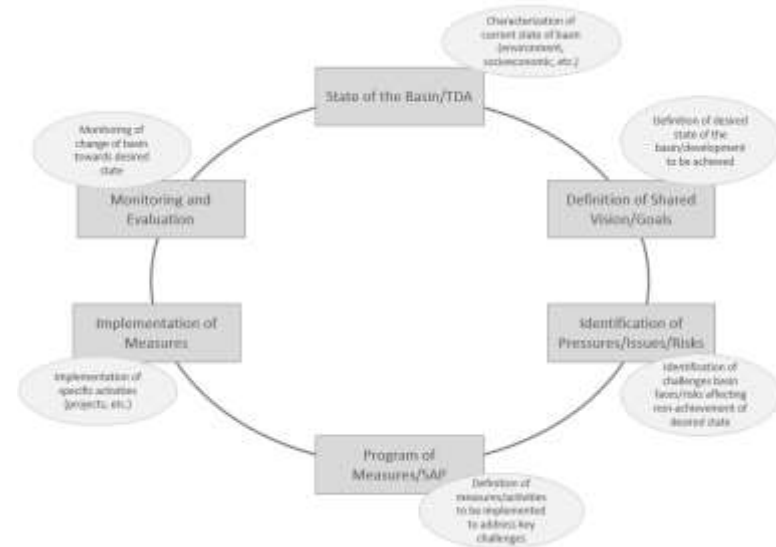
The International Sava River Basin Commission

- Established between former Yugoslav countries under conflict conditions
- Based on 2004 Agreement and subsequent protocols for further development
- Mandated to deal with water resources management, floods, droughts, pollution, navigation
- Strong decision-making role and strong anchoring into member states



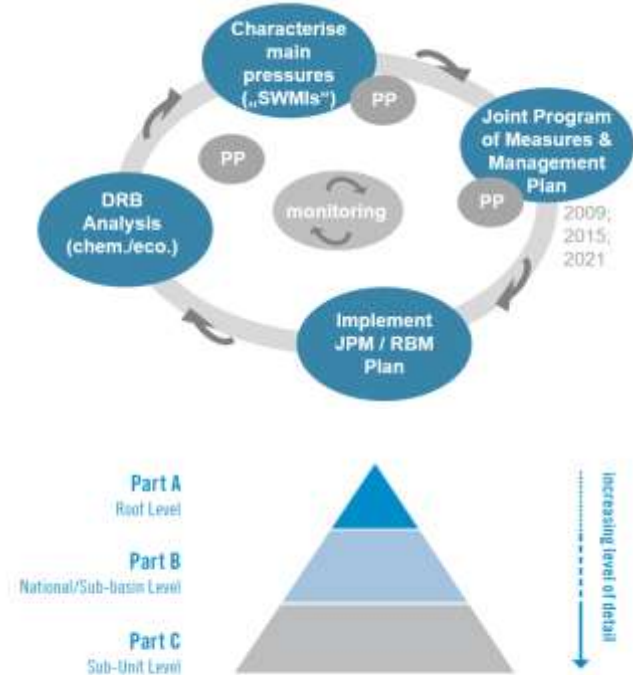
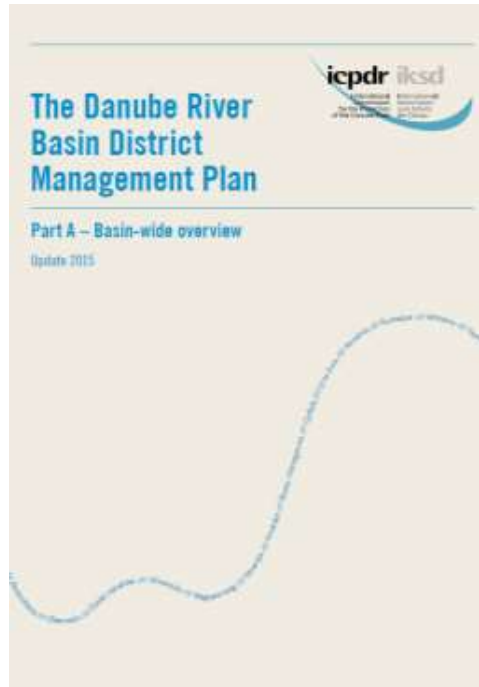
Basin management plans as a means of cooperation

- Key function of basin organizations and basis for any joint action
- Ensures joint vision and related action plan/clearly defined tasks and objectives
- Allows for assessing change and progress towards jointly agreed upon objectives
- Can help build trust and commitment to cooperation



The Danube River Basin Management Plan (DRBMP)

- Is the key instrument for Danube management
- Is the basis for EU WFD implementation in the basin
- Defines clear objectives, timelines and measures
- Links different governance levels
- Provides for stakeholder engagement



- Part A: Danube River Basin = ICPDR
- Part B: Countries, bi-lateral, sub-basin organisations
- Part C: Management units within country

What does the future hold?



How to build resilience?

- Research shows that conflicts are more likely if change in a basin exceeds the institutional capacity to deal with this change
- Institution building/strengthening is thus crucial for resilience – but not easy and often context-dependent
- Resilience in light of future challenges means
 - Knowledge of and awareness for newly emerging issues
 - Commitment of states and other actors to address a newly emerging issue
 - Technical capacity to address new issues
 - Organizational and financial capacity to change
 - Willingness to change
 - ...

Balancing different needs and interests

- Needs diverge within countries (across sectors and actors) and between countries
- Increasing pressure on water resources increases potential incompatibilities of needs
- Question how to identify best (or least harmful) combination of needs to be met
- Relates to increasing benefits of cooperation – “making the whole more than the sum of the parts)
- BUT: who defines the “best” balance and on basis of which/whose criteria



From water quality to quantity – an integrated approach?

- Pollution remains a challenge, with progress towards EU WFD goals insufficient
- Several other challenges exist around this – biodiversity, wetland degradation, etc.
- Water scarcity (hydrological/economic/perceived) comes on top of this and aggravates existing challenges
- Adds new complexity in terms of issue to be tackled, but also in terms of underlying risks of disagreement (zero-sum-game)



(Internal) governance and management challenges

- Institution-internal effectiveness and resilience are often overlooked challenges
- In many treaties and basin organizations, internal processes and mechanisms are insufficiently defined
- Linkages between different management levels and entities requires coordination, which is cost-intensive and tedious
- Water sector and water institutions typically not very powerful among different sectors
- Financial crises or periods of budget constraints often affect the water sector and related institutions over-proportionally

The Orange River Basin



Water as a source of cooperation in the Sava River Basin



Key take aways

- Cooperation over water is the only way forward to address water, environment and development challenges
- Challenges that need to be addressed are becoming ever more complex and interdependent
- Institutions are key for effectively addressing these challenges – but they need to be adaptive and resilient
- Willingness of different actors to cooperatively address challenges varies and needs to be enhanced
- Water cooperation (and conflict) is embedded in the broader context – the poly-crisis
- At the same time, water can be a source of cooperation and peace beyond water – a potential that should be harnessed



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Sources pictures, etc.

- <https://www.nationalgeographic.com/environment/article/europes-water-crisis-drought-worse-grace>
- <https://www.eea.europa.eu/soer/2015>
- <https://www.eea.europa.eu/data-and-maps/figures/projected-change-in-meteorological-drought-1>
- https://www.un.org/waterforlifedecade/water_cooperation_2013/sava_commission.shtml