Recalling the approach to specific elements and components in the Second Assessment and introduction to the group discussions

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The logic of the presentation

* Recalling how some aspects were approached in the past assessment
* Bring forward questions, also for the group work
* Propose some options, initial thoughts

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General considerations for the Assessment

* Minimum common+ adjust the focus to the interest of the riparians and the level of existing cooperation; clustering of basins interested in a specific thematic (e.g. disaster risk reduction, ecosystems, nexus, sediments)
* The assessment approach has to be a mix of qualitative, semi-quantitative and quantitative information – insights needed from the groups
* Necessary to keep the expectations and the human and financial efforts reasonable
* While the content is important, the most important is that the information and the process makes the co-riparians revisit, discuss and agree about their challenges and possible responses

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Substantive scope of the Second Assessment

* Information included (DPSIR – Driving forces, Pressures, Status, Impact, Responses)
  * Surface and groundwater resources: **distribution** among the riparian countries within a basin/aquifer
  * **Pressures** and their importance (water uses, polluting activities, diversion etc)
  * **Quality and quantity status** of transboundary watercourses
  * Transboundary **impacts**
  * **Cooperation**: joint bodies, agreements, joint monitoring etc
  * **Trends**
  * **Response measures** taken
* DPSIR the basis of the group work

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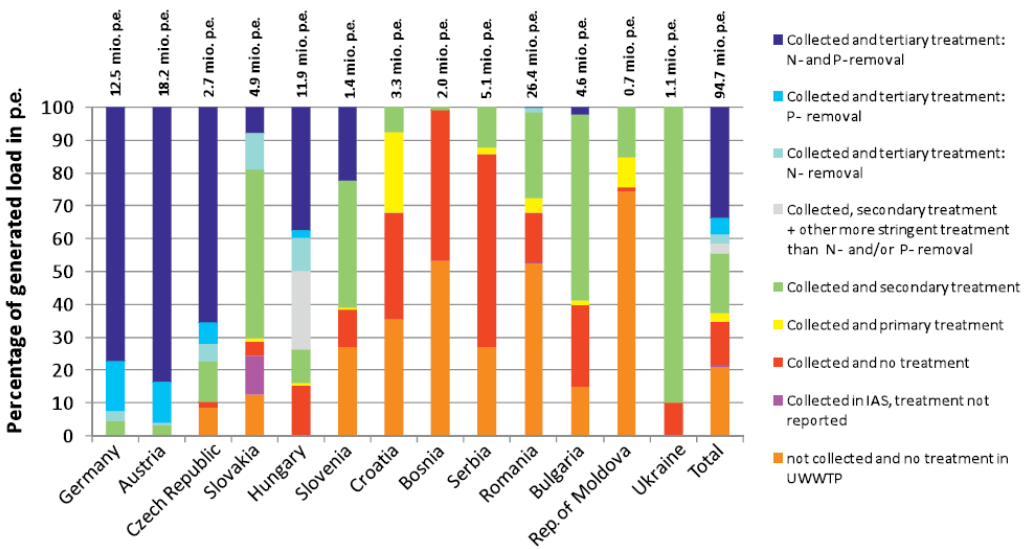
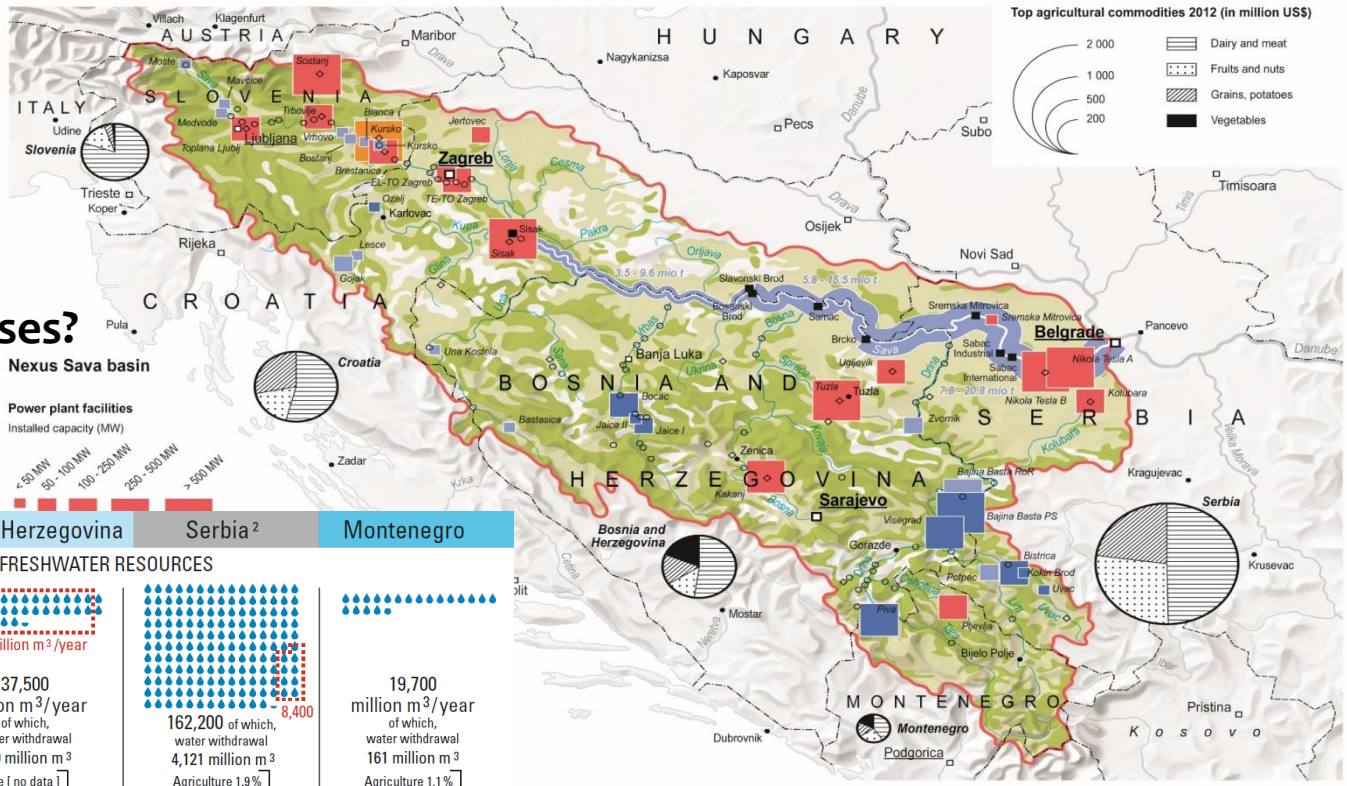
Drivers and pressures (2nd Assessment)

- *Some prominent pressures were identified by region (diffuse pollution, hydromorphological changes, flow regulation etc)*
- *Narrative description by basin about the pressures on water quantity specific to it*
- *Water uses by sector*
- *Population, land use/land cover*
- *Graphical regional overview of climate change*
- *Visual examples of pressures in selected basins*



Learning from the nexus assessment: How pressures could be reflected

Capture the spatial distribution of some pressures?
Capture the time variability of water uses?



Slovenia	Croatia	Bosnia Herzegovina	Serbia [2]	Montenegro
TOTAL RENEWABLE FRESHWATER RESOURCES				
Sava basin share: 18,600 million m³/year	37,300 million m³/year	35,500 million m³/year	8,400	
31,870 million m³/year of which, water withdrawal 942 million m³	105,500 of which, water withdrawal 629 million m³	37,500 million m³/year of which, water withdrawal 329 million m³	162,200 of which, water withdrawal 4,121 million m³	19,700 million m³/year of which, water withdrawal 161 million m³
Agriculture 0.2% Industry 82.3% Municipal 17.6%	Agriculture 1.4% Industry 13.7% Municipal 85%	Agriculture [no data] Industry 14.8% Municipal no data	Agriculture 1.9% Industry 81.6% Municipal 16.6%	Agriculture 1.1% Industry 39% Municipal 59.9%
INSTALLED ELECTRICITY GENERATING CAPACITY & HYDROPOWER				
3.4 million kW of which Hydropower 1.3 million kW *	4.2 million kW of which Hydropower 2.1 million kW *	4.3 million kW of which Hydropower 2.15 million kW	8.8 million kW of which Hydropower 2.8 million kW *	0.9 million kW of which Hydropower 0.7 million kW
Hydropower 37% Fossil fuels 36% Nuclear 21% Other renewables 6%	Hydropower 51% Fossil fuels 45% Other renewables 4%	Hydropower 50% Fossil fuels 50%	Hydropower 32% Fossil fuels 63% Other renewables 5%	Hydropower 76% Fossil fuels 24%

* including pumped storage

Reflect the importance of the basin for development?
SDG interlinkages?
Efficiency in water uses?

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Drivers and pressures: questions

* ***Intersectoral (nexus) dimension:*** *Input and participation of economic sectors: desirable / feasible? How to reflect the SDG interlinkages?*
* ***Sources of data for the drivers and pressures :*** *what should be harmonized and what should be tailored to the basin? (e.g. population can be harmonized, pollution less so)*
* *How do we reflect climate change impact?*

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Status of water resources: quantity (2nd Assessment)

* *Location and extent of transboundary surface water basins and aquifers/groundwater bodies*
* *Available water resources (volume): surface water and groundwater*
* *Variability of discharge (Long-term average, minimum, maximum)*
* *Reservoir storage not systematically determined. Only for Central Asia, aggregate capacity was shown*

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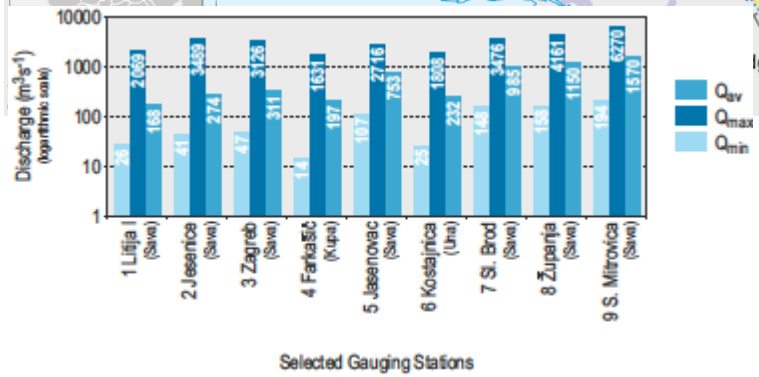
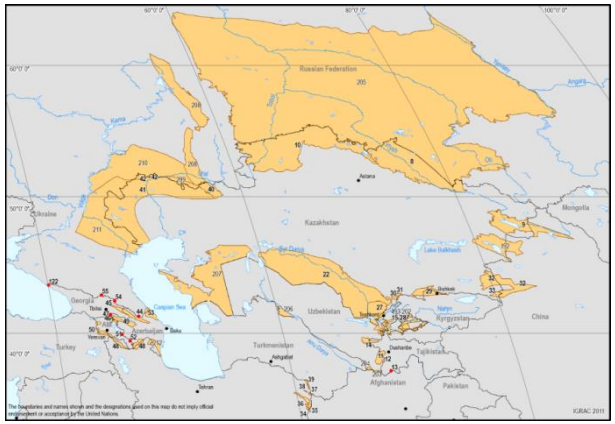
Distribution, volume and variability of water resources





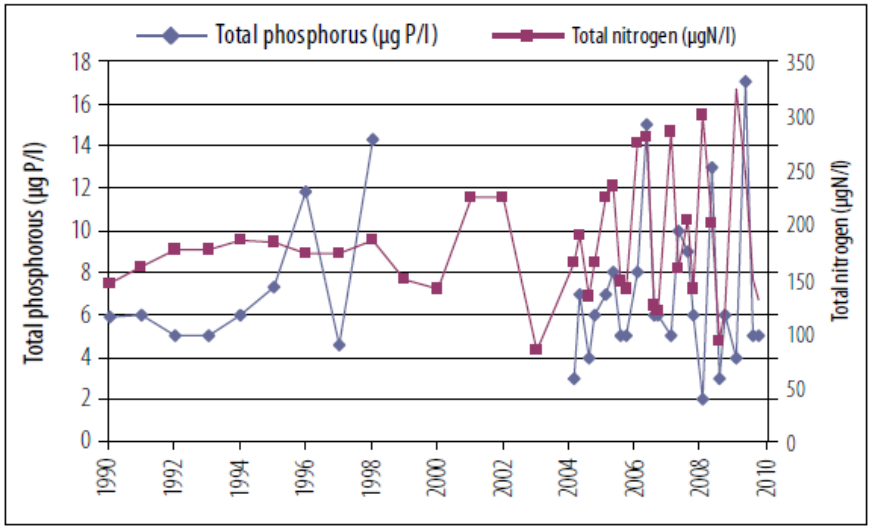
Status of water resources: quality (2nd Assessment)

Water quality classification in the Ili Basin

Location of observation in the Tobol Basin	Water pollution index[a] – water quality classification 2008	2009	Parameters exceeding MAC	Multiplier of MAC exceedence
Ili, Dobunj station (downstream from the border with China)	2.70; "moderately polluted" (class 3)	2.14; "moderately polluted" (class 3)	copper (2+)	7.13
			total iron	3.12
Tekes, Tekes station	1.89; "moderately polluted" (class 3)	1.73; "moderately polluted" (class 3)	copper (2+)	5.28
			total iron	2.53
Korgas, Baskunshy station	1.83; "moderately polluted" (class 3)	1.19; "moderately polluted" (class 3)	copper (2+)	4.42
Karkara, at the foot of the mountains	1.45; "moderately polluted" (class 3)	1.68; "moderately polluted" (class 3)	copper (2+)	1.68

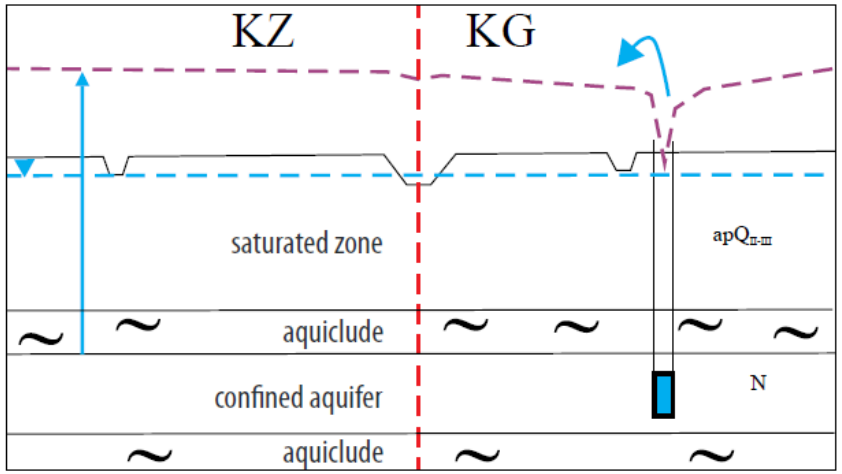
[a] The water pollution index is defined on the basis of the ratios of measured values and the maximum allowable concentratic
Source: Kazhydromet, Ministry of Environmental Protection of Kazakhstan.

FIGURE 4: Total phosphorus and total nitrogen concentrations in the Teno/Tana, measured in Seida, Norway[24] (approximately 30 km from the river's mouth; latitude 70° 14', longitude: 28° 10')



Groundwater (2nd Assessment)

FIGURE 2a: Sketches of the Chu/Shu aquifer (No. 29) (provided by Kazakhstan)



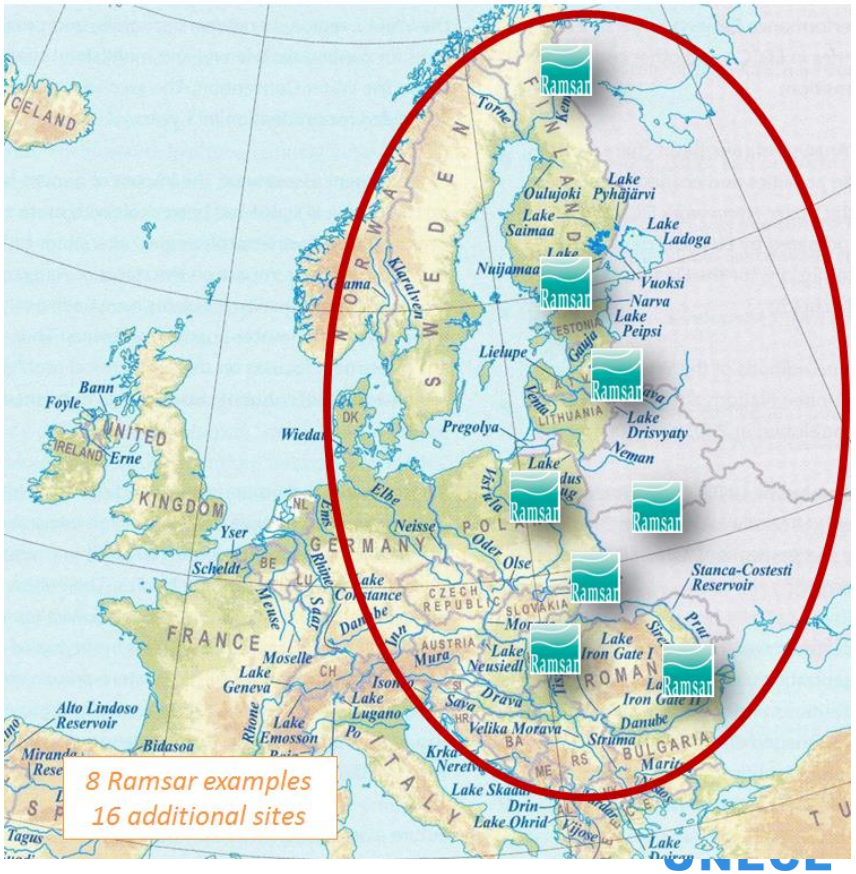
CHU/SHU AQUIFER (NO. 29)

	Kazakhstan	Kyrgyzstan
Type 3 and other (see Figure 2a and 2b); intergranular/multilayered, partly confined and partly unconfined; boulders, pebbles, gravel, sand, loam, clay; groundwater flow direction along the border from Kyrgyzstan (south) to Kazakhstan (north); strong links with surface waters.		
Border length (km)	200	
Area (km^2)	7 516	10 000
Thickness: mean, max (m)	250–300, 500	
Renewable groundwater resource (m^3/d)	~682 500	
Groundwater uses and functions	Drinking water 40%, irrigation 60%.	Drinking water, irrigation, industry mining, livestock, thermal spa (<25%).
Pressure factors	Water abstraction, and lack of data and information to make proper predictions.	Water abstraction, degradation of ecosystems, salt water upcoming and lack of data and information to make proper predictions.
Groundwater management measures	Need to introduce monitoring (quantity and quality) and data exchange. Need to improve transboundary institutions and abstraction management. Need to apply good agricultural practices and integrated river basin management.	Need to introduce monitoring (quantity and quality) and data exchange. Need to improve transboundary institutions, urban and industry wastewater treatment and abstraction management. Need to apply good agricultural practices and integrated river basin management, and to introduce protection zones.

Wetlands (2nd Assessment)

* 25 Ramsar sites or other wetlands of transboundary importance
* Scope of the wetland assessments
  * Ecosystem services
  * Cultural values
  * Biodiversity values
  * Pressure factors and transboundary impacts
  * Transboundary wetland management

Northern and Eastern Europe



Water quantity: some possible options

	Low data availability	Good data availability
Discharge/flow (surface water)	lower – long-term variability (min-average-max)	in addition, intra-annual variability
Groundwater resources	estimated resources (volume)	clear distinction about (annually) renewable and long-term stock (groundwater reserve)
Scarcity	semi-quantitative ranking by questions	illustrative distribution of water availability and needs
Storage	main reservoirs only, descriptive	current total storage capacity (and planned?) by riparian countries

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Water quality: some options/possible tiers

1) Common set of indicators for all countries

2) Specific assessment by basin, with the approach adjusted to data availability as follows:

Basis	Approach to water quality assessment
No data	expert qualitative assessment (e.g good – moderate - poor)
Some data	qualitative/quantitative assessment based on that
Good data availability	quantitative assessment based on national classifications
Joint approach	Harmonized quantitative assessment

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Status of water resources: Questions

* *Information availability different -> Would **a tiered approach** be effective to ensure some consistency but adequate ambition?*
* *What should be the limited set of **core indicators of water quality** could be applied across basins?*
* *To what extent and how should **water-dependent ecosystems** be included?*

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Impacts: experience from the 2nd Assessment & a question

* Weakest part in the 2nd Assessment, little information -> merged with status
* Difficult to ascertain **transboundary** impact because of the upstream-downstream controversy

* Should there be a focus on hot spots?
* If yes, how to define a hot spot?

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Responses (2nd Assessment)

- *Spanned a broad range of policy and management actions: legal, cooperation, infrastructure related*
- *Descriptive information provided about*
  - *measures taken or planned*
  - *Status of cooperation*
  - *Monitoring*
- *Responses were not well detailed in the questionnaires*

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Responses: some options

* *The information about cooperation and measures from the reporting under the Convention/indicator 6.5.2 should be used.*
* *Some information about the implementation of the measures - the extent, location and timing – would be necessary to add.*

* *What other information is needed to complete it?*

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Trends (cross-cutting) (2nd Assessment) & possible options

* *Link to different aspects – pressures, status etc.*
* *Important to look both at **historical trends** and **predictions about the future***
* *Make a historical timeline of development of cooperation compared to evolution of pressures and status (storylines to show the effect and benefit of cooperation on the development in and status of the waters)*
* *Trends at different levels: 1) Global and regional drivers, 2) National and basin level development plans*

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Governance (2nd Assessment)

* *Inventory of agreements*
* *Description of competent bodies in water management (national)*
* *Narrative description of the institutional basis for cooperation*

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Governance (2nd Assessment) option & question

* *Extend information on the legal basis, to also show the scope of cooperation (in terms of sectors and issues)*
* *Describing the institutional setting of transboundary cooperation*

* *How to capture the intersectoral coordination aspects?*

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Group work facilitation

* Governance and intersectoral (nexus) issues. Group host: Carol Chouchani Cherfane, ESCWA ; Annukka Lipponnen
* Driving forces and pressures. Group host: Tobias Salathe, Ramsar Convention; Eva Barrenberg
* Status and (transboundary) impacts. Group host: Nelson Gomoda, AMCOW; Francesca Bernardini
* Trends and responses: Group host: Saroj Srisai, ASEAN; Sonja Koeppel

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