

The Second Assessment of Transboundary Rivers, Lakes and Groundwaters: Eastern and Northern Europe

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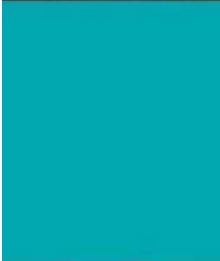
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Convention on the Protection and Use of Transboundary Watercourses and International Lakes

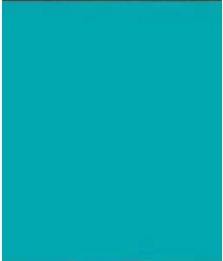
Scope

- Revisions to the summary of Eastern and Northern Europe assessment
- Main messages
- Gaps in the assessments by basin



Revisions

- Comments of EE & RO incorporated
- Annexes added:
 - Descriptions of how water management in each country is organized
 - A list of agreements
 - Status of ratification of selected international conventions
- More references to basins
- Groundwaters inventory revised, especially concerning linking to basins
- General consolidation





Eastern and Northern Europe

Legal and institutional framework

- A number of bilateral agreements in the eastern part are being revised to take into account provisions of WFD. All have also as basis the Water Convention.
- The countries that joined EU in the last enlargements have transposed WFD in their national legislation. Convergence plans for EU water-related directives are made in some of the non-EU countries.



Eastern and Northern Europe

Legal and institutional framework

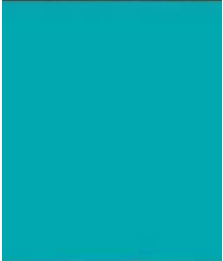
- Preparation of river basin management plans is well defined with set milestones in the EU countries (WFD); in the east it has been influenced by donor support. Preparation of joint plans with co-riparians across the EU border on the Danube is positive.
- Importance of IWRM principles is acknowledged, but implementation in the eastern part is limited, hindered by e.g. national institutional problems



Eastern and Northern Europe

Legal and institutional framework

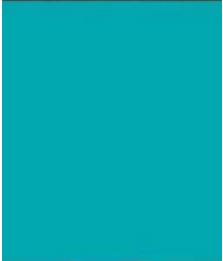
- Basin level institutions (especially river commissions) are more established in the western part of the subregion, facilitating studies, joint plans etc. In the eastern part, river basin approach needs to be applied more vigorously: there are some basins in which there is no basin commission but are just covered by bilateral agreements.



Eastern and Northern Europe

Legal and institutional framework

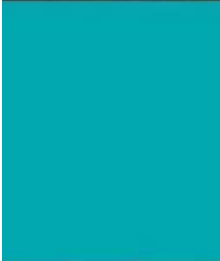
- While setting up river basin councils to advise water management authorities is welcome, in the case of transboundary basins their establishment at national level is not sufficient. There are indications of good intentions to invite co-riparians' representatives.
- Expanding representation in the councils with e.g. NGOs and professional organizations would strengthen their expertise, but limited funding for the councils to meet is a constraint.



Eastern and Northern Europe Monitoring

- Harmonizing of monitoring programmes and indicators/criteria used for assessing the status of transboundary basins important for reaching a common understanding as basis for measures. This remains as challenge even where data exchange is well established.
- Data exchange and harmonization of approaches need to be further strengthened, in particular in basins where the framework for transboundary cooperation is lacking or weak.





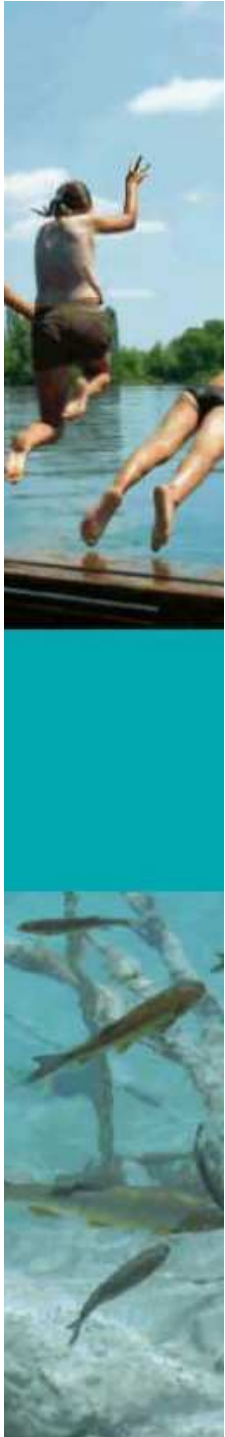
Eastern and Northern Europe Monitoring (*cont.*)

- In the eastern part of the subregion and across the EU border, the different water quality systems make it difficult to compare and agree about water quality status. WFD – which largely sets the monitoring requirements for EU countries - will over time increase harmonization.
- Physical-chemical monitoring emphasized; biological monitoring less developed.
- A number of countries in the eastern part are preparing or implementing a new system of surface water quality standards (some current systems still have MACs as basis), commonly with international project support.

Eastern and Northern Europe Monitoring (*cont.*)

- Flooding in recent years has drawn attention to the state of flood prediction and increased awareness about the need to cooperate with neighbouring countries. There are some encouraging examples of such transboundary cooperation.
- Use of information technology and GIS in monitoring and data management is increasing; related capacity needs strengthening.





Eastern and Northern Europe

Main problems, impact and status

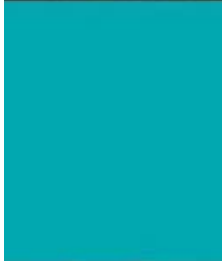
- Improvement of water quality has been observed in the past decade, influenced both by implementation of EU's water-related directives and also by reduced economic activities
- Discharges of non-treated or insufficiently treated municipal and industrial wastewaters is a major pressure and wide-spread. Addressing it is constrained by limited funds for upgrading aged infrastructure, especially in the east; in the EU it has driven by Urban Wastewater and Nitrates directives – with substantial cost and extensions to comply. Less pressure from population in the North.

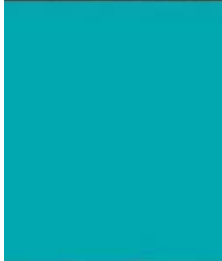


Eastern and Northern Europe

Main problems, impact and status (*cont.*)

- Agriculture is another major pressure factor in many transboundary basins (organic and nutrient pollution, water use), and practices need to be improved to reduce the impact. In the Danube, pollution by hazardous substances is a significant issue, pesticides among the their sources (including unauthorized ones).
- The impact from the diverse industries (food processing, pulp and paper, chemical, metallurgical etc) is variable, but includes heavy metal and hydrocarbon pollution. In some basins, mining is locally significant.



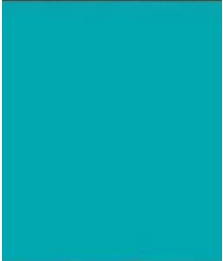


Eastern and Northern Europe

Main problems, impact and status (*cont.*)

- Hydromorphological pressure components like interruption of river and habitat continuity have so far been systematically assessed on the Danube, where they are driven by mainly flood protection and hydropower generation. A third of the channels along the main course is either severely modified or totally modified. Assessing this also elsewhere, and in more detail, is recommended. Such changes together with other anthropogenic pressures affect negatively wetlands.

Eastern and Northern Europe Climate

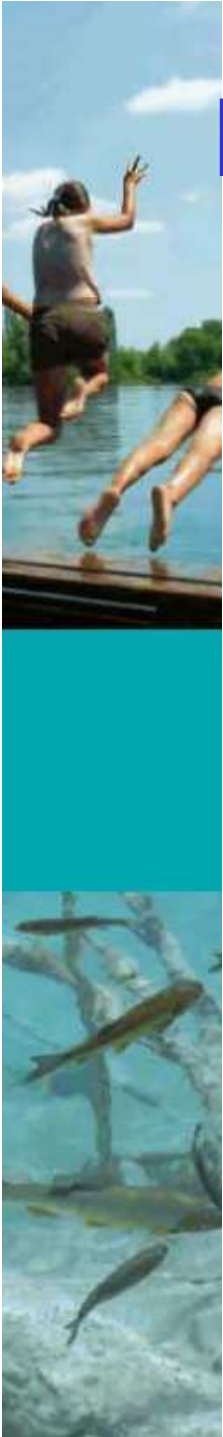


- There are some indications in the light of historical data about mean air T increase, and an increase is predicted for the coming 50 years. Due to the large N-S extent of the subregion, predicted impacts vary. Some predictions of increase in the frequency and intensity of extreme events, even though there are significant regional and local variations.
- A better quantification of predicted impacts on water resources and a better understanding about their spatial distribution is needed.



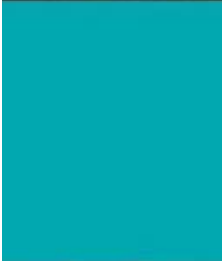
Eastern and Northern Europe Response

- In the EU part, response measures are aimed at meeting the requirements of water-related directives, notably environmental objectives of the WFD, reaching a good status on waters by 2015. This influences also legislative revision and e.g. rethinking water quality classification system in the eastern neighbours. Addressing one of the key pressures and nutrient sources - urban wastewater discharges - is constrained by limited availability of financing for the substantial investments required.

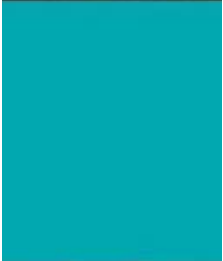


Eastern and Northern Europe Response

- Nutrient load reduction measures at basin level in the EU countries is mainly given direction to by the Nitrates Directive and to Urban Waste Water Directive, but the countries are also taking a range of supplementary measures. Practices especially in agriculture need to be improved and e.g. ICPDR has best practices recommendations to non-EU countries. Preparation of river basin management plans jointly helps coordination.



Eastern and Northern Europe Response



- Deterioration of the current situation of hydromorphological changes on the Danube should be prevented and measures taken to improve the situation. Basin approach needs to be applied to planning any hydrotechnical measures.
- Many problems are addressed in projects, but follow-up for sustainability is a concern

Eastern and Northern Europe

The way forward

- Revisions to many bilateral agreements on transboundary waters are expected. The many benefits of institutionalizing transboundary basin level cooperation demonstrated by the operating basin commissions will hopefully motivate such efforts further.
- There is a considerable number of infrastructure projects planned and prepared on the Danube with implications to the status of the basin

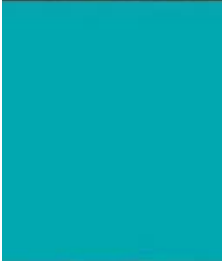


Eastern and Northern Europe

The way forward

- Despite the efforts made by the countries, some pressures on water quality - like untreated and poorly treated wastewaters – will not reduce quickly due to the sheer number of settlements/agglomerations that do not have their treatment plants meeting the requirements
- Water and health issues seem to have a low priority; more effort should be made to address related problems



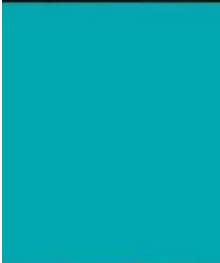


Remaining gaps (general)

- Very little updated information on the lakes; e.g. Drisvyaty/Druksiai, Galadus, Pyhäjärvi, Saimaa, Stanca-Costesti Reservoir need to be added/revisted
- Information missing on the Polish part of the basins it shares
- Minor riparians need to be consulted in some cases (Czech Republic on the Vah)

For finalization

- A lot of information in the basin assessments – challenging to summarize accurately
- Countries invited to review whether the document reflects the relevant issues
- Graphs and figures can be added
- Groundwaters: inventory & map need to be matched





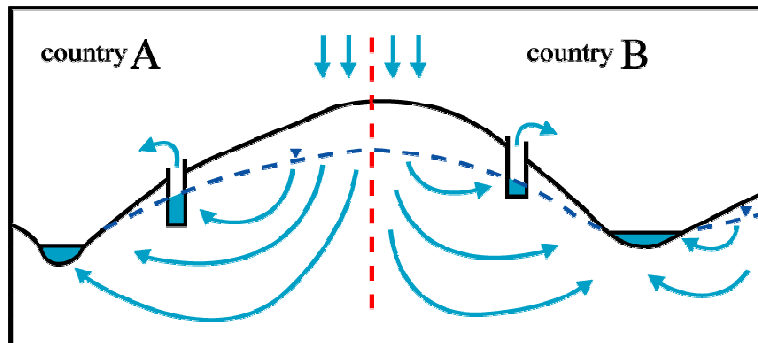
Remaining gaps (aquifers)

- Problem of matching aquifer sides: countries report on their part of an aquifer, no information from the sharing country – some could be the same
- Many aquifer/groundwater body locations and boundaries missing: matching of the narrative assessment and the draft map needs to be done
- Delineations needed (either as GIS or images, draft map by IGRAC as basis)
- Aquifer types commonly not specified
- Transboundary nature of some groundwater bodies shared by Slovakia and Hungary recently confirmed – need to be assessed and linked to basins

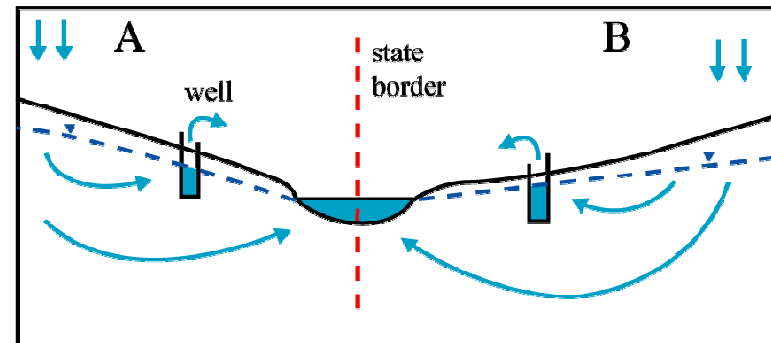




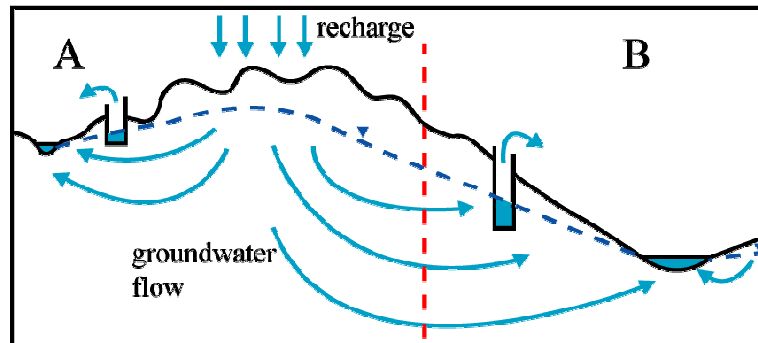
General conceptual models of transboundary aquifer types



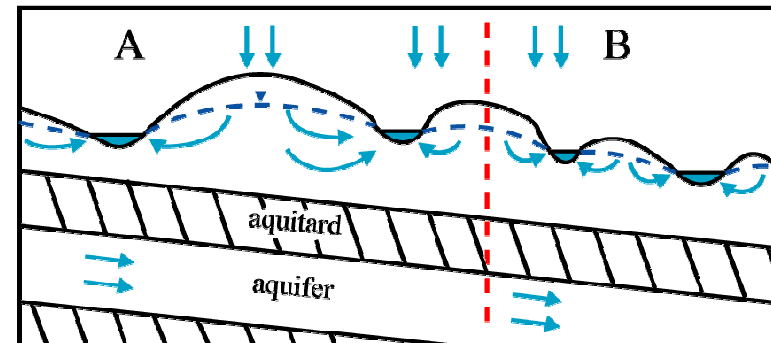
(1) state border follows surface water catchment and groundwater divide, little transboundary groundwater flow.



(3) state border follows major river or lake, alluvial aquifer connected to river, little transboundary flow.



(2) Surface water and groundwater divides separate from state border, recharge in one country, discharge in adjacent.

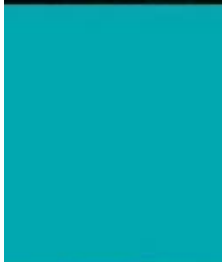


(4) Large deep aquifer, recharged far from border, not connected to local surface water and groundwater.



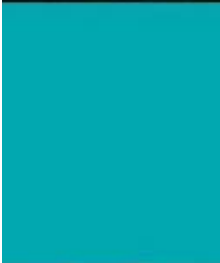
Common problems with tables and figures

- Population divided by area within the basin does not match with reported population density
- Limited coverage of land use/land cover data (only some classes reported)
- Gauging stations locations missing: needed as latitude & longitude for the maps, as river-km for the reader



Some considerations/observations

- The level of detail on the aquifers highly variable
- The rivers are very diverse in size and importance – the same level of information is not possible or even meaningful



Danube

- Main Danube surface water part prepared by the ICPDR secretariat, based on the DRBMP –complete
- Iron Gate I & II Reservoirs' assessment added from South-Eastern Europe (Serbia revised since MoP-5 but few figures available)



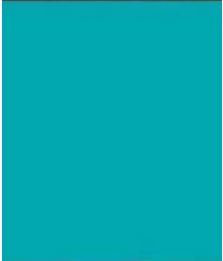
Danube (cont., groundwater)

- Transboundary aquifers include some from the assessment in ICPDR, some from the SEE assessment (done), some from the 1999 UNECE Task Force assessment
- Should the following aquifers be included?:
Silurian-Cretaceous (MD, RO, UA), Q,N1-2,Pg2-3,Cr2 (RO, UA), Tiszahat/Qall,N,Pg+K2 (HU, UA)
- More information on Slovensky kras / Aggtelek aquifer available (thickness, population)



Vah

- >97% of the area SK territory
- CZ, PL shares minor (<1.5% each)
- Population information missing
- Mesozoic of West Tatras TB aquifer (from 1999 assessment) left out because no TB GWB defined according to SK





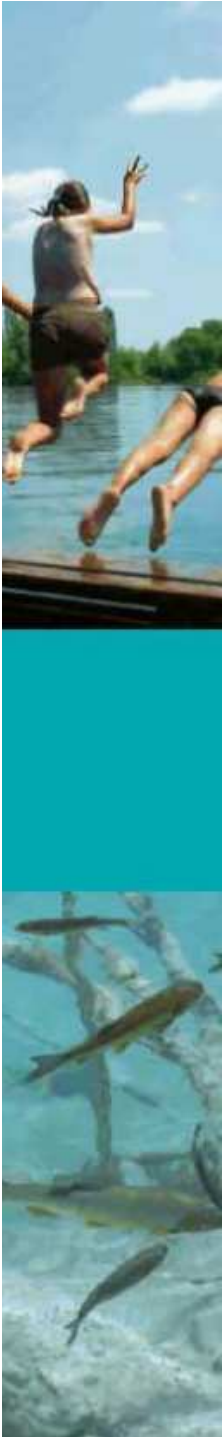
Ipel/Ipoly

- Both SK, HU provided input, commented - OK
- Quaternary alluvial sediments of Ipel/Ipol TB GWB/Ipoly völgy/ Alúvium Ipl'a aquifer: information on the Hungarian part needs to be added



Tisza

- Total water resources need to be summed up and per capita figures derived
- UA revisions to be added
- SK groundwater resource estimated comprises only one groundwater body
- Latitude, longitude needed for the following gauging stations: Szeged, HU; Senta, RS
- Cigánd, Tiszaroff, Hanyi-Tizzasüly and Nagykunság flood reservoirs
- Conclusions from the ITRBM Plan could be added



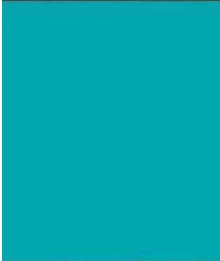
Tisza

- Aquifer information missing on the HU part: Körös – Crisuri holocene, pleistocene transboundary aquifer, Hortobágy, Nagykunság, Bihar northern part. aquifer, Körös-valley, Sárrét, shallow/Crişuri aquifer, Bodrog aquifer
- Attempt made to summarize pressures & their ranking in a table – the countries should check (Table 64, Black Sea); importance of floodplain forestation and specific hydromorphological issues not clear (HU); ranking from SK needed
- Status of waters could be shown as a table or a chart



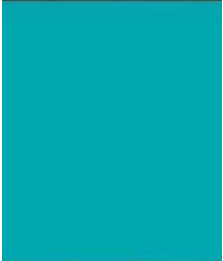
Somes/Szamos

- Input & comments from both countries - OK
- Revisions from RO to be incorporated
- Abstraction and land use/land cover for the Somes/Szamos alluvial fan aquifer in HU gaps since the SEE assessment – likely to remain



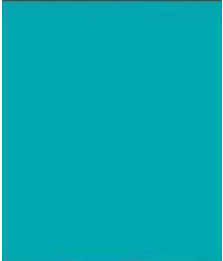
Mures/Maros

- Both countries provided inputs & commented - OK
- Land use/land cover for the Northeast Backa/Danube -Tisza Interfluve or Backa/Danube-Tisza Interfluve aquifer not available



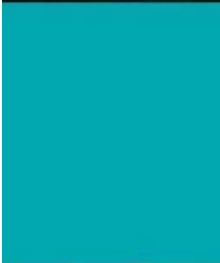
Siret

- OK
- Longitude, latitude of gauging stations "Storozhinets" , UA needed



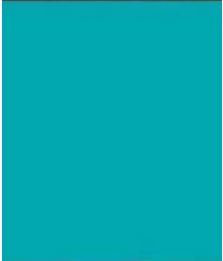
Prut

- UA comments to be incorporated
- A long list of tributaries: which ones are transboundary? Which countries share the sub-basins?
- Population information from MD needed
- Latitude, longitude of RO gauging stations missing
- Middle Sarmatian Pontian aquifer: very little information about MD part
- No withdrawal information from MD, for land use/land cover only about the forest cover
- Are landfills a concern in all the countries?
- Space & time frame of measurement and information system in the Pri-Carpathian area (UA)? Any transboundary cooperation?
- Stanca-Costesti Reservoir sections needs to be updated and complemented



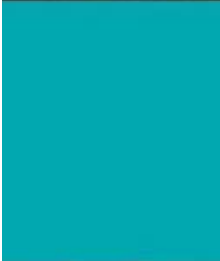
Kahul

- Comments from UA need to be incorporated
- No population information from either MD or UA
- Total area and UA share not known
- No land use/land cover information from UA, from MD incomplete
- No information about the flow or the pressures



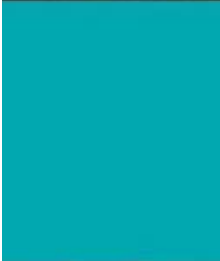
Yalpuh

- Comments from UA need to be incorporated
- Total area and UA share not known
- No land use/land cover information from UA, from MD incomplete
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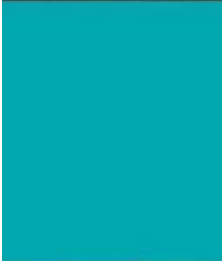


Cogilnik

- Total area and UA share not known
- No land use/land cover information from UA, from MD incomplete
- No information from UA about withdrawals



Dniester



- Potential discrepancy in MD water resources figures – to be checked
- No information on aquifers
- Gauging stations location needed: Galitsh & Mogilev-Podolskyi, UA
- % of wetlands for UA calculated from datasheet input – UA to check
- Total surface area of protected areas in MD?
- MD to check groundwater use (unit)
- Do discharges from quarries (a local pressure) have transboundary impact?
- Is tree-cutting and over-grazing a problem in UA (aggravating erosion)?

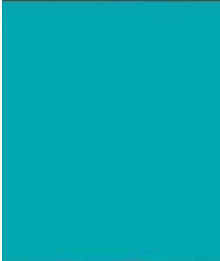
Dniester (cont.)

- Any specific activity on-going in UA for modernizing wastewater treatment?
- Any transboundary involvement in the work of the Dniester River Basin Council in UA?
- There is mention of a cooperative environmental monitoring programme between the state hydrometeorological services. What does it involve?
- MD, UA: Is the water quality situation expected to improve?

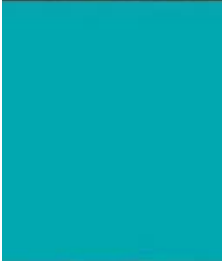


Kuchurhan

- Total surface area of the basin and MD share not known
- UA to check that distribution of groundwater resources correct in the text
- Land use/land cover in MD missing, in UA incomplete
- No withdrawal information from MD; UA figures are for surface water only?
- Extent of drying of the river to be clarified. Reported (UA) that 26 km of the river runs dry and 39 km is partially dry. Reason?
- MD confirmed a lack of data



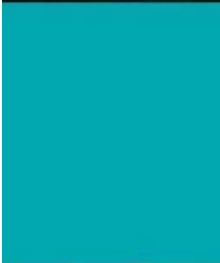
Dnieper



- Population information missing
- Lat., long. needed for gauging stations: Orsha, Rechitsa and Mogilev, BY
- Information on UA and RU parts of aquifers missing
- Land use/land cover needed from RU, UA
- Clarify meaning of meliorated (improved) land =drained for agriculture or forestry?
- Add an update on the pressure from industry (UA)
- Could the building and reconstruction of wastewater treatment facilities be somehow quantified?

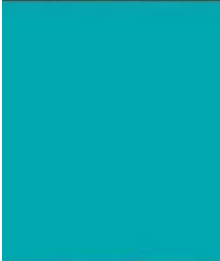
Dnieper (cont.)

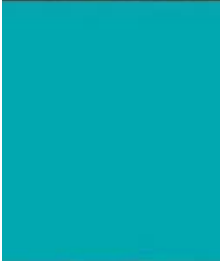
- Clarify involvement of industry in monitoring (BY)
- The situation of the draft agreement where the establishment of a joint commission was foreseen?
- Is the RU-BY joint monitoring working well?
- inter-agency commission for establishing modes of operation of reservoirs and water management systems for different periods of the year, covering river basins Seversky Donets, Dnieper and Azov region, is national only or transboundary?



Pripyat

- Population information missing
- Latin spelling of tributary names to be checked (UA)
- Order of magnitude of the water resources in UA missing
- Gauging station locations missing: Ljubjaz, Pinsk, Mozyr (BY, UA?)
- Information needed on the UA part of the aquifers
- Aquifer types to be clarified
- Land use/land cover information for UA incomplete
- Is the calculated wetlands % for UA correct?
- Wastewater discharge, UA: unit to be checked



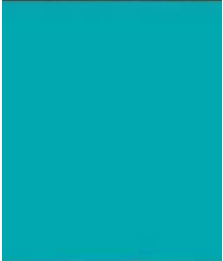


Pripyat (cont.)

- Situation with pressure from wastewaters in BY to be clarified: potassium industry in Soligorsk?
Importance of Slutshkoe as source of wastewater?
Pressure in BY only local and moderate? (UA ranked more severe)
- When were the protection zones around water bodies established in BY? Recently?
- UA: NATO project for flood forecasting was national only?
- What is the present situation with eutrophication?
- UA: Any explanation to the decreased copper?
- Actual number needed for reproducing the graphs; which ones should be prioritized
- UA: Why no variation observed in 2005 in nitrite?

Elancik

- Population information missing
- Long., lat. of the Efremovka gauging station
- More detailed information needed from the RU about the aquifers. “Kurgan” geological period not widely known; when was it?
- RU: Was clean-up of accumulated pollution among the motivations of the dredging of the river?



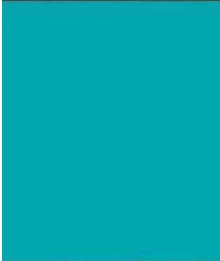
Mius

- Population information missing
- Lat., long. needed for Kuibyshev gauging station from RU
- RU: Can some specific aquifers be identified as tranboundary?
- Do some sources form UA need to be referenced?
- Frequency of water quality data exchange UA-RU?

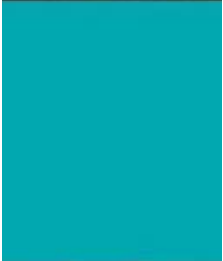


Siversky Donets

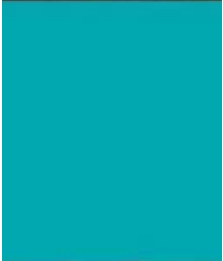
- RU: population data needed
- RU should verify the water resource estimate
- Locations of gauging stations in RU needed: Ogurtsovo, Kruzhilovka
- RU: clarification needed concerning in apparent inconsistency: links of groundwater with surface water are reported to be strong but the aquifers are mainly artesian
- Land cover/land use information missing from RU



Siversky Donets



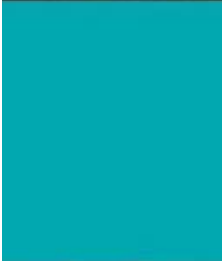
- RU refers to the filling of locks during the navigation period and related oil spills. Some elaboration would be helpful.
- RU, UA: Are pesticides being used a lot in agriculture?
- RU: public utilities are mentioned as a pressure source. In which sectors they operate?



Siversky Donets

- controlled releases amounting to 20.0 m³/s have been agreed upon on the basis of the “Scheme of complex use and protection of water resources of rivers in the basin of the Don” (1987). Is that plan still being followed or is there a more recent document which could be considered “an integrated river basin management plan”? Is the purpose to secure an ecological minimum flow?

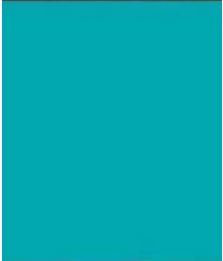
Oulanka



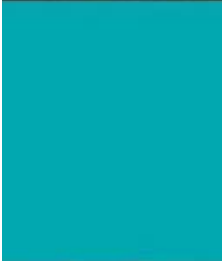
- Are the Savinajoki, Kitkajoki and Aventojoiki NATIONAL tributaries?
- Population in RU missing
- Location & lat.,long. Of gauging stations needed: Oulankajoki (FI), station 4.3 r-km (RU; lat.long. only)
- Max&min flow in the Oulankajoki need to be clarified (FI)
- No long-term average flow or water resources from RU side
- Clarify concerning climate change prediction whether « spring floods may decrease » refers to frequency or amplitude/volume

Tuloma

- Estimate of water resources missing in RU
- Lutto site coordinates need to be converted to lat., long.; flow needs to be expressed as mean, max, min; lat., long. for Tainionkoski
- RU to check withdrawal figures; energy use assumed non-consumptive
- No withdrawal information from FI
- RU to confirm that loads are expressed as yearly amounts
- A brief explanation of the Russian water quality classification needed



Tuloma (cont. graphs)



- RU: Any possible explanation(s) to the observed increase of the ammonium-nitrate concentrations in the late 1990s? Was there some change in the collection and discharge of wastewaters, for example?
- RU: Is the decrease of the nickel concentration related to stopping the mining?

Jakobselv

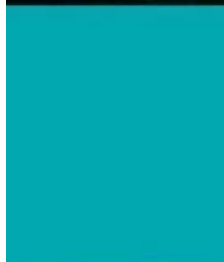
- Population information missing from RU
- Information needed on the Russian part of the Grense Jakobselv aquifer
- Long-term average discharge would be better from RU
- No information reported on land use/land cover (NO, RU)
- No withdrawals reported (likely very small because of the small population)





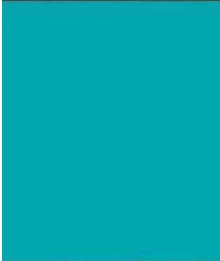
Paatsjoki

- Information on Lake Inari needs to be complemented and updated
- Any explanation to increased groundwater levels in RU?
- Capacities of the hydropower stations in RU?
- If the RU gauging station is close to Kaitakoski (station FI reported on) discharge could be left out
- Lat., long. for Kaitakoski & Paatsjoki gauging stations?
- RU: The reported consumptive uses do not add up to 100%. What is the remaining 20%?
- Pasvikeskeren aquifer: max & mean thickness reported by NO the same; no information on the RU part
- No land use/land cover information from NO (ok? Small basin share)
- Weeds reported to affect forestry negatively in the Russian part; are these alien species or what?



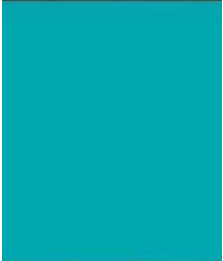
Näätämö

- Surface water resources in NO need to be checked
- Discharges at Iijärvi station should ideally be reported as mean, max, min



Teno

- Information missing on FI part of the aquifers
- Land use/land cover information missing on NO part



Kemijoki

- No population figures from NO, RU but due to the very small area shares, FI figures are a sufficient approximation
- Gauging station locations needed as lat.,long.: Isohaara, FI
- From 2008 to 2009, a slight tendency of water quality getting worse was observed. [Russian Federation, has any possible reason been identified?]



Kemijoki

- Compared with the concentrations recorded in the 1980s and early 1990s, at least organic matter (as indicated by BOD_5) and ammonium nitrogen levels have markedly decreased. [Russian Federation: Is there any explanation to this observed change? The analytical methods remained unchanged? Has the monitoring been continued since 2004, which is the last year for which results are shown?]



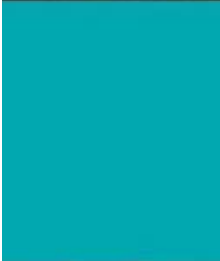
Oulujoki

- Population, land cover/land use and withdrawal information from RU missing but area share very small (ok?)
- Merikoski gauging station location needed in lat., long.

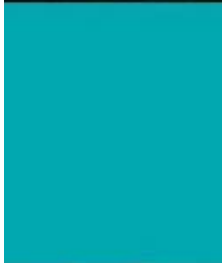


Jänisjoki

- Population information needed from RU
- Lat., long. needed for Ruskeakoski station (FI); discharges should ideally be reported as average, max, min
- Is Juvanjoki a transboundary tributary? If yes, the discharge should be added.
- Information needed on the RU part of the Kanunkankaat aquifer
- No withdrawal information from Finland



Jänisjoki



- There is some difference in the amount of flow across the border: surface water resources in FI $520.3 \times 10^6 \text{ m}^3/\text{year}$, transboundary flow to RU $680 \times 10^6 \text{ m}^3/\text{year}$. Is the Russian estimate based on a period when discharges were high? At present time, the closest operating gauging station is reported to be 34 km downstream from the border. If there is no obvious explanation for the difference, a comment can be added.
- Should the mention of transboundary flow be removed?

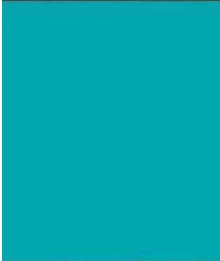
Kiteenjoki-Tohmajoki

- No population information from RU
- Lat., long. needed for the Kontturi gauging station (FI), Pitkääkoski HPS (RU)
- No withdrawal information from either country -> table to be removed



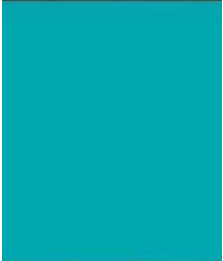
Hiitolanjoki

- Population information missing on the RU part
- No estimate of water resources in the RU part
- Lat., long. needed for the Zastava gauging station
- Land use/land cover information in RU incomplete
- No withdrawal information from Finland
- In 2008-2009, quality of river water where it is withdrawn for Tounan did not comply with Russian sanitary requirements. RU: Has low quality persisted? Are such situations common?



Vuoksi

- Information on Lake Saimaa and Lake Pyhäjärvi needs to be complemented and updated; any change in pressure situation?
- Population information missing on the RU part (also for basins of the lakes)
- RU please clarify: Is the average discharge 547 m³/s measured at Svetogorsk or Lesogorsk hydropower station?
- Lat., long. for Tainionkoski gauging station (FI)
- Land use/land cover information missing from RU
- Has the preparedness plan for oil spills between the rescue departments been recently prepared? Timing?



Juustilanjoki

- No separate section now on Lake Nuijamaanjärvi. Update on the lake needed.
- Population & land use/land cover information missing from RU
- Withdrawal information from FI limited
- Any future developments/trends predicted?



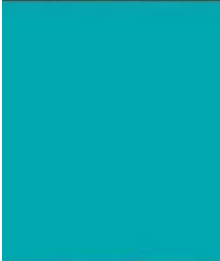
Rakkolanjoki

- Information on population, land use/land cover, estimate of water resources missing from RU
- No withdrawal information from either FI or RU -> table to be removed



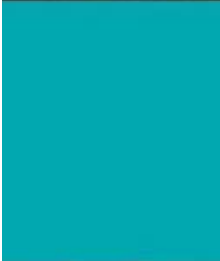
Urpalanjoki

- Information on population, land use/land cover, estimate of water resources missing from RU
- No withdrawal information from FI
- Russian Federation: In the first Assessment, the water quality was reported to be in class 4 (moderate; now 3a and 3b, “polluted” and “very polluted”). The same classification system? Has the water quality degraded somewhat?
- RU: please provide the MAC values



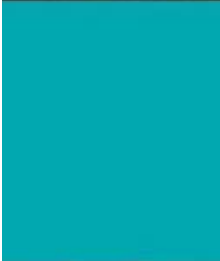
Narva

- Population in the EE part needed
- Lat.long. needed for Narva City gauging station
- Long-term discharge data available from RU?
- RU needs to check this different grouping of the use categories is appropriate
- RU should ideally be more specific about the measures taken now or recently
- RU, Please confirm if “CKMOBO” plan has already been prepared or is it still in the making
- Copper barely exceeds the MAC. Is it worth mentioning?



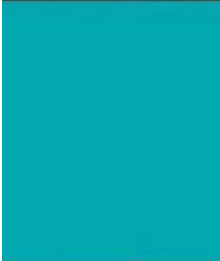
Salaca

- Withdrawal information from EE missing
- Of water resources, only groundwater resources estimated
- No information about management response or future at all



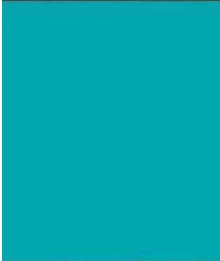
Gauja/Koiva

- Information about the EE part of aquifers D5, D6 & P missing; probably information about the stratigraphy or delineation would be needed for identification of the corresponding aquifers in EE
- No information about withdrawal in EE
- Advisory council coordinating between sectors at national level in LV mentioned. Common/standard in the EU countries? Worth mentioning?



Daugava

- Population information from BY, RU missing
- Basin shares have been modified from the 1st Assessment (total & BY changed)
- RU needs to check the basin area share: Reported figures on Smolensk and Pskovsk oblast do not add up to the amount
- Gauging station locations as river-km & lat., long. needed for Velizh (RU), Vitebsk (BY)





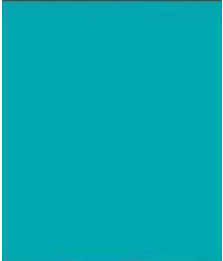
Daugava (cont. groundwater)

- LV could not yet confirm whether D10 and Polotsk and Lansky terrigenous complex of Middle and Upper Devonian aquifer are the same, as well as D9 and Upper Devonian terrigenous-carbonate complex aquifer
- LV asked for « groundwater body » (GWB) to be used instead of aquifer in some cases, but the use of terminology is confusing (groundwater body consisting of several aquifers)
- No match identified for GWB D8 on the Estonian side; information on the RU part (if EU/non-EU share, both aquifer & GWB to be used?)



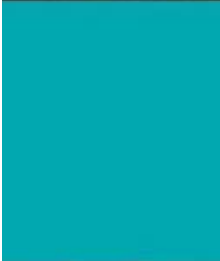
Daugava (cont.)

- Minimum wastewater treatment requirements needed from BY
- Information need to be added on Lake Drisvyaty/Druksiai
- Land use and pressure factor information missing from RU



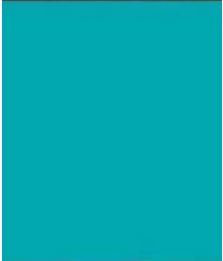
Lielupe

- LV population information only at main basin level (sub-basins missing)
- No water resources estimate from LT
- No information about pressures and management response from LT



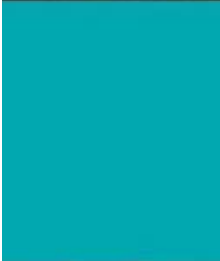
Venta, Barta & Sventoji

- No water resources estimate from LT
- Only very minimal information from LV on aquifer F2
- Hardly any information from LT about pressures & management response



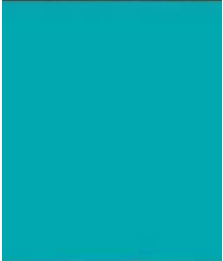
Neman

- Population information missing BY, PL, RU
- At least from LT water resources estimate would still be needed (PL?)
- Location needed for gauging station Grodno (BY), lat.& long. For Smalininkai (RU)
- Mazursko-Podlashi region aquifer: information on the BY & RU parts missing
- Upper Cretaceous aquifer: information on the RU part missing



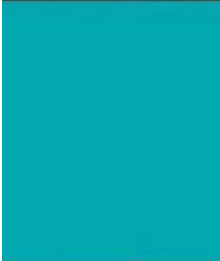
Neman

- According to RU, total basin area 98,200 km² instead of 97,864 km²; with BY, RU area changed, shares (%) need to be revised
- land use in PL missing, RU incomplete
- Information on the PL part lacking in general
- Lake Galadus/Galandusys needs adding & updating



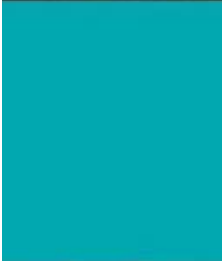
Pregel

- Information on the PL part missing
- Gauging station lat.& long. For Berestovo, Rodniki & Gvardeisk (RU)
- Land use information from RU incomplete
- RU & PL wastewaterdischarge figures from the 1st Assessment; any update?
- RU: According to the classification, water quality at Kaliningrad was the best in 2009, the end of the time series. improvement of water quality? because of some measures taken?



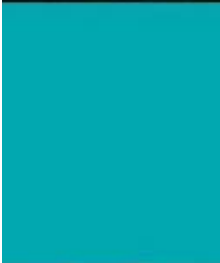
Prohladnaja

- Information on the PL part missing
- Population needed from both countries
- Land use information from RU minimalistic
- Gauging station lat., long. Svetloe (RU)?
- No information on the status & future, hardly anything on response



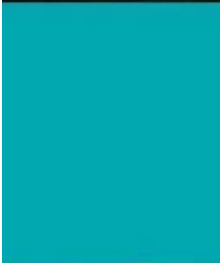
Vistula

- Information on the PL part lacking
- Area and population information missing from BY, PL, UA (related to the following point)
- Inclusion of sub-basin information (Bug)?
- BY, PL withdrawal and land use information?
- SK area to be checked, 1,950 km² (in the datasheet was 1 959)
- UA: confirm if the groundwaters of the Bug are included
- Suggestion to describe transboundary cooperation at the level of Vistula



Bug

- Information on the PL part lacking
- UA to check the water resources per capita figure
- Should the Bug aquifer appear as a distinct aquifer (or are the other described aquifers parts of it?)
- Gauging station locations needed (BY, UA)
- Unique names needed for the « alluvial Quaternary aquifer » and « Paleogene-Neogene » aquifer, Oxfordian-Cenomanian (BY, PL)
- Cretaceous Hostislavskiy aquifer in BY transboundary?
- Are there currently on-going or recent developments that impact potentially on the hydromorphology?



Dunajec and Poprad

- Information on the PL part missing
- Has the issue of wastewater collection and treatment been addressed in the past few years?

