

Basin Report:

Questionnaire + Addendum

To review case study basins with regard to their water
governance regime contact and performance

Nura Basin

Case Study from the TWINBAS project

About this questionnaire

This questionnaire was developed within the scope of the Twin2Go project. It serves to record case study data about a river basin's water governance regime, its context and its performance. An explanation of the indicators, pre-defined scores and potential data sources is provided in the guidance on this questionnaire. (Twin2Go, Guidance on the Questionnaire of the Twin2Go - Case Study Review Workshops. 13/03/10).

Scores to each of the indicators are assigned according the suggested score scheme proposed in the guidance. In the case of numerical indicators like indices, the numerical values are added in brackets after the score, e.g. "B (0.178)" or "C (12,534)". For a better understanding of the recorded issue, additional information is added in the "comments" column.

- ❖ If not specified differently, the indicators refer to the national part of the basin of interest. The report only considers the national part of the basin.
- ❖ In general, you should check the GWP toolbox for papers, reports, etc. as data sources of your region, especially with regard to the water governance regime.

The questionnaire was completed by Twin2Go staff in collaboration with local experts previously involved in TwinBas.

Based on the preliminary synthesis results and discussion during the Twin2Go synthesis workshop (Stockholm, 01-02/09/10) an addendum was made with some additional parameters. This addendum has been filled by the same experts.

The resulting data will be post-processed and added to the Twin2Go database. Should you feel these scores do not reflect the situation of the basin accurately, or want to contest any of the information included, you may contact the project organisers. Contact information as well as additional information regarding the project and the results can be found on www.twin2go.eu.

Names of participating experts have been removed for confidentiality purposes.

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A) Water governance regime

No.	Indicator	Score	Comments
I) Characteristics of environmental governance regimes			
a) Water policy, institutional & legal framework (formal and informal)			
1.	Domestic water legislation (laws, by-laws, etc.) in place?	B	Water Code (2003) is the main water law. Draft National IWRM and Water Efficiency Plan, Kazakhstan, 2005,
2.	Domestic Water Law: Public character of water and legal status of water use rights	A	
3.	Domestic Water Law: Explicit recognition of traditional and indigenous water uses	C	The water act does not make recognition of traditional uses
4.	Domestic Water Law: On flow availability, third party rights and ecological requirements	A	Ecological requirements are recognised, normally planned as a fixed percentage of the overall flow
5.	Integration of domestic water legislation	B	The water code is only partly integrated with other laws- like e.g. environment law.
6.	Multilevel structure of domestic water legislation and subsidiarity	A	The water code describes three levels (national, basin level and water user at local level).
7.	Existence of formal domestic administrative structure for water governance	B	Administrative structure for water governance exists
8.	National basin organisation or comparable arrangement	A	National water commission
9.	Formalised transboundary coordination organisation	A	Nura is a national basin- however Kazakhstan participates in transboundary coordination of other rivers.

No.	Indicator	Score	Comments
10.	Formal institution (legislation) that prescribes the basin management principle	B	The Water Code prescribe the basin management principle and the National IWRM planning project (2006) recommends the hydrological basins.
11.	Water (basin) strategies, programmes and plans	B	Draft River basin strategies have been developed however not finalised and agreed yet. Nura-Ishim River basin Management project, 2002)
12.	Financing mechanisms: Degree of investment from private sector/ public/ other sources (e.g. international)	B	Primarily domestic budgets
13.	Economic instruments Is water for irrigation priced?	C	Water abstraction fees
14.	Economic instruments Is water for households priced in urban areas?	B	Yes, but not sufficient to cover costs- and as a result the infrastructure is degrading (OECD EAP Task Force studies)
15.	Economic instruments Is water for industry priced?	B	Yes, but not sufficient to cover costs- and as a result the infrastructure is degrading (OECD EAP Task Force studies)
16.	Tradable permits related to water abstraction/use	C	Yes
17.	Polluter pays principle (related to water)	B	Pollution fees are collected, however its cheaper to pay the fee than to treat the water.
18.	Environmental subsidies (related to water)	C	No
19.	Payment for ecosystem services (related to water)	C	No
20.	Tradable permits (related to water quality, maximum, allowable loads etc.)	C	Permits are given on the basis of specific applications and cannot be traded.
21.	Environmental tax (related to water)	B	An environmental tax system exists, however not related to water and funds do not benefit the water sector.
22.	Presence of substituting informal institutions for management of water	A	No only formal institutions play a role in water management

No.	Indicator	Score	Comments
23.	Presence of complementary informal institutions for water management	C	Not of importance
<i>23.a</i>	<i>Case-specific indicator(s)...</i>		
b) Formalisation of IWRM principles & Millennium Development Goals			
24.	Formalised IWRM principles	A	Water Code (2003) is the main water law. Draft National IWRM and Water Efficiency Plan, Kazakhstan, 2005,
25.	State of implementation of IWRM principles	B	Water Code (2003) is the main water law. Draft National IWRM and Water Efficiency Plan, Kazakhstan, 2005,
26.	Capacity to implement IWRM	B	Capacity is limited however exists at the national level
27.	Is universal and non-discriminatory access to safe drinking water and sanitation a goal?	A	Yes and according to national statistics the goal is close to being fulfilled.
28.	Integration of wetlands in IWRM and IRBM*	B	Nura-Ishim River basin Management project, 2002 and TWINBAS described the integration of the downstream wetland of the Nura basin, Kurgaldzhino, into the basin planning. The wetland is highly sensitive to increased abstraction upstream the wetland.
<i>28.a</i>	<i>Case-specific indicator(s)...</i>		
c) Decision making regarding uncertainties			
29.	General practices for dealing with uncertainties	A	By using different models for water flow and floods.
30.	Dealing with uncertainties: Reversible and flexible options	B	
31.	Dealing with uncertainties: Safety margins	B	
32.	Are scenarios used for decision making?	B	Not practiced.

No.	Indicator	Score	Comments
33.	Climate risks: Climate variability and change	C	Climate risks models are not used. However assessment of impacts from climate variability and change is studied at research level.
<i>33.a</i>	<i>Case-specific indicator(s)...</i>		
II) Actor networks with emphasis on the role and interactions of state and non-state actors and power relationships			
a) Cooperation and coordination structures			
34.	Vertical coordination (governmental)	D	Formal structures exists- however coordination is limited
35.	Horizontal coordination (governmental)	C	
36.	Role of local governments	B	
<i>36.a</i>	<i>Case-specific indicator(s)...</i>		
b) Information sharing via formal rules, dependency relationships etc.			
37.	Kinds of knowledge included => Role of experts/ science, local/traditional knowledge	B	Research organizations on hydrology and water management exists and they are involved in research activities
38.	Access to information => about expert knowledge and management plans	B	
<i>38.a</i>	<i>Case-specific indicator(s)...</i>		
III) Multi-level interactions across administrative boundaries and vertical integration across levels and horizontal integration across sectors			
a) Centralisation			
39.	One level one actor?	B	The national level Committee for Water Resources is the main actor

No.	Indicator	Score	Comments
40.	Degree of centralisation	C	Centralisation of legislation and policy making and planning is strong.
41.	Technical capacity and economies of scale	B	Capacity exist at national level and in some RBO's.
42.	Legal obligations and responsibility	A	Legal obligations are well defined in the water code.
42.a	<i>Case-specific indicator(s)...</i>		

B) Context

No.	Indicator	Score	Comments
I) Societal dimension			
43.	Proportion of the population living in rural areas	42.9	Source: United Nations Population Division (2008): World Urbanization Prospects: The 2007 revision Population Database, http://esa.un.org/unup/ Values for 2005
44.	State of societal development	B (0.804)	Human Development Index Source: UNDP: Human Development Report Values for 2009 http://hdrstats.undp.org/en/countries/country_fact_sheets/cty_fs_SWE.html
45.	Social sustainability (Gini Index)	B (0.34)	Gini Index Source: UNDP: Human Development Report 2009, http://hdr.undp.org/en/media/HDR_2009_EN_Complete.pdf - Values were calculated based on data by World Bank (2009d)
46.	Economic sustainability (e.g. GDP)	C (8,699)	GDP per capita (US-\$, PPP-corrected) Source: World Bank, http://siteresources.worldbank.org/ICPINT/Resources/icp-final-tables.pdf Values for 2005 Gini Index Source: UNDP: Human Development Report 2009, http://hdr.undp.org/en/media/HDR_2009_EN_Complete.pdf - Values were calculated based on data by World Bank (2009d) GDP per capita (US-\$, PPP-corrected) Source: World Bank, http://siteresources.worldbank.org/ICPINT/Resources/icp-final-tables.pdf Values for 2005

No.	Indicator	Score	Comments
47.	Effectiveness of formal institutions	D (2.7)	Corruption Perception Index Source: Transparency International, http://www.transparency.org/policy_research/surveys_indices/cpi/2009/cpi_2009_table Values for 2009
48.	Trustworthiness of economic institutional setting - degree of risk for foreign direct investment	C (B-BBB+)	Rating by the rating agency "Standards & Poor Source: The Guardian (article from 22.05.2009), http://www.guardian.co.uk/business/2009/may/22/recession-government-borrowing#zoomed-picture
49.	Presence of avenues of dissent – press freedom, freedom of speech	D	Press Freedom Index Source: Reporters without Borders, http://www.rsf.org/en-classement1003-2009.html Values for 2009
49.a	<i>Case-specific indicator(s)...</i>		
II) Good Governance Principles at the national level – legal basis at the national level			
50.	Participatory regarding decision making in the water sector	B	Stakeholder participation is very limited.
51.	Transparency regarding water allocation	B	Information on water allocation is not accessible to the public.
52.	Effectiveness and efficiency regarding decision making in the water sector	B	
53.	Equitable and inclusive	B	
54.	Predictability – with regard to IWRM and climate change	B	IWRM is implemented in the water code.
54.a	<i>Case-specific indicator(s)...</i>		

No.	Indicator	Score	Comments
III) Environmental dimension			
55.	Köppen-Geiger climate classification (river basin)	CSa BWk BSk	Source: Kottek, M., J. Grieser, C. Beck, B. Rudolf, and F. Rubel (2006), http://koeppen-geiger.vu-wien.ac.at/present.htm#maps
56.	Climate Moisture Index	A	Source: GWSP Digital Water Atlas (2008), GWSP Digital Water Atlas (2008), http://atlas.gwsp.org/index.php?option=com_wrapper&Itemid=53&id_desc=98&itemId_desc=63&id_ds=146&itemId_ds=52&header=Climate%20Moisture%20Index&site=b1_cmi_anWSAG1_0
57.	Climate Moisture Index Coefficient of Variation	A	Source: GWSP atlas (2008), http://atlas.gwsp.org/index.php?option=com_wrapper&Itemid=53&id_desc=126&itemId_desc=63&id_ds=171&itemId_ds=52&header=Coefficient%20of%20Variation%20for%20Climate%20Moisture%20Index&site=b2_cmi_annual_cv
58.	Per Capita Equivalent of TARWA	C (7120)	Source: UNESCO, UN World Water Development Report, http://www.greenfacts.org/en/water-resources/figtableboxes/3.htm Values for 2005
59.	Average water availability at the river basin level (1995)	E	Source: University of Kassel, WaterGAP 2.0, http://www.env-edu.gr/Documents/World%20Water%20in%202025.pdf
60.	Annual renewable water supply per person by river basin (1995)	E+C	Source: World Resources Institute, EarthTrends 2001, http://earthtrends.wri.org/pdf_library/maps/2-4_m_WaterSupply1995.pdf
61.	Projected annual renewable water supply per person by river basin (2025)	B	Source: World Resources Institute, EarthTrends 2001, http://earthtrends.wri.org/pdf_library/maps/2-4_m_WaterSupply2025.pdf
62.	Relative Water Stress Index	B	Source: UNESCO, World Water Development Report II, http://wwdrii.sr.unh.edu/download.html

No.	Indicator	Score	Comments
63.	Climate Vulnerability Index	D	Source: Oxford Centre for Water Research (OCWR), 2008-2010, http://ocwr.ouce.ox.ac.uk/research/wmpg/cvi/
64.	Degree to which water quality status restricts usability of users' types	B	WFD RBMP
65.	Extent of flow and channel modification	B	Many rivers have regulated flows and channel modification is high
66.	Impact of land-use changes on hydrological processes	B	Land use changes has a high impact on water resources and water quality.
67.	Uncertainty associated to climate change predictions regarding precipitation for the basin	C	Source: Illustration from MAGICC-SCENGEN
67.a	<i>Case-specific indicator(s)...</i>		

C) Performance

No.	Indicator	Score	Comments
I) Progress towards stated Goals			
68.	Progress towards sustainable access to safe drinking water (MDG drinking water target)	A	Source: WHO & UNICEF (2008), Progress on Drinking Water and Sanitation: Special Focus on Sanitation, http://www.wssinfo.org/en/40_MDG2008.html Values for 2006
69.	Proportion of population with access to improved drinking water	B (96%)	Source: UN statistics of MDG progress, http://mdgs.un.org/unsd/mdg/Data.aspx Values for 2006
70.	Proportion of rural population with access to improved drinking water	B (91%)	Source: UN statistics of MDG progress, http://mdgs.un.org/unsd/mdg/Data.aspx Values for 2006
71.	Progress towards sustainable access to basic sanitation (MDG sanitation target)	A	Source: WHO & UNICEF (2008), Progress on Drinking Water and Sanitation: Special Focus on Sanitation, http://www.wssinfo.org/en/40_MDG2008.html Values for 2006
72.	Proportion of population with access to improved sanitation facilities	B (97%)	Source: UN statistics of MDG progress, http://mdgs.un.org/unsd/mdg/Data.aspx Values for 2006
73.	Proportion of rural population with access to improved sanitation facilities	B (98%)	Source: UN statistics of MDG progress, http://mdgs.un.org/unsd/mdg/Data.aspx Values for 2006
73.a	<i>Case-specific indicator(s)...</i>		
II) Good governance principles as indicators for the process dimension			
74.	Participatory regarding decision making in the water sector	C	Actual participation in decision making is very limited.
75.	Transparency regarding water allocation	B	Information is not freely accessible.

No.	Indicator	Score	Comments
76.	Effectiveness and efficiency regarding decision making in the water sector	B	
77.	Equitable and inclusive	B	
78.	Predictability – with regard to IWRM and climate change	C	
78.a	<i>Case-specific indicator(s)...</i>		
III) Stakeholder participation			
79.	Deliberative engagement opportunities	B	Stakeholder participation limited.
80.	Inclusiveness of stakeholder participation	B	Stakeholder participation limited.
80.a	<i>Case-specific indicator(s)...</i>		
IV) Response to climate change			
81.	Strategy for adaptation to climate change in the water sector	B	A strategy for adaptation in the water sector has not been developed.
82.	Availability of specific knowledge enabling adaptation	B	Kazakhstan has prepared national communications to UNFCCC:
83.	Awareness of water managers regarding adaptation to climate change	B	Awareness exists at the national level in the Water Resources Commission, however no plans has been developed.
84.	Coordinated implementation process regarding adaptation to climate change: Program / Plan of activities and measures	C	No plan of measures exist
85.	Operational activities (measures)	D	No operation measures established for the Nura basin.

No.	Indicator	Score	Comments
86.	Ways to deal with climate variability (floods and droughts)	B	Floods assessments have been made, but not systematised.
<i>86.a</i>	<i>Case-specific indicator(s)...</i>		

Addendum – Context

No.	Indicator	Score	Comments
I) Basin Characteristics			
67a	Sub-Basin Size	57600 km ²	
67b	Transboundary	No	

Addendum - Performance

No.	Indicator	Score	Comments
I) Environmental sustainability			
a) State of the water resources and the environment			
87	Aquatic biodiversity	B	Some impacts have been observed. Draft National IWRM and Water Efficiency Plan, Kazakhstan, 2005, TWINBAS Classification of Water Bodies, 2007
88	Invasive exotic species	A	Not studied in detail, the assessment is still native fish population. raft National IWRM and Water Efficiency Plan, Kazakhstan, 2005, TWINBAS Classification of Water Bodies, 2007
89	Surface and groundwater quality	C	Nura basin has a significant level of mercury pollution. Draft National IWRM and Water Efficiency Plan, Kazakhstan, 2005, TWINBAS Classification of Water Bodies, 2007
90	Groundwater use	B	Draft National IWRM and Water Efficiency Plan, Kazakhstan, 2005, TWINBAS Hydrological Modelling and water abstraction. 2007
91	Water Exploitation Index (WEI)		

No.	Indicator	Score	Comments
b) Management practices			
92	Water allocated for aquatic ecosystem	A	Allocated as a fixed percentage of the flow. Draft National IWRM and Water Efficiency Plan, Kazakhstan, 2005, TWINBAS Classification of Water Bodies, River basin management Plan, 2007
93	Water pollution incidents	B	Nura basin has a significant level of mercury contamination.. Draft National IWRM and Water Efficiency Plan, Kazakhstan, 2005, TWINBAS Pollution Pressure and impact analysis, 2007
94	Water quality monitoring	B	Primarily chemical monitoring. TWINBAS Monitoring report, 2007
95	Hydrometeorological monitoring – levels	A	Adequate network. Draft National IWRM and Water Efficiency Plan, Kazakhstan, 2005, TWINBAS Hydrological Modelling and water abstraction. 2007
96	Level of understanding of groundwater resources	B	Draft National IWRM and Water Efficiency Plan, Kazakhstan, 2005, IWRM national roadmap including proposed project outline (2006)