

## Basin Report:

Questionnaire + Addendum

To review case study basins

with regard to their water governance regime, context and  
performance

## VOLGA River Basin

*With focus on the national part*

Case Study Review Workshop for the CABRI-Volga project

Chiang Mai, Thailand, 25 – 28.03.2010

## 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.

Prefilled questionnaires were discussed and completed in workgroup sessions during the Review Workshop in Berlin (05-07/05/10). Difficulties concerning indicators were discussed in the plenum. The most controversial indicator was no. 8, "*National basin organisation or comparable arrangement*". No formal basin organisation exists that is responsible for the total Hungarian part of the Tisza catchment. Instead, several sub-basin organisations care for water management and are relatively independent on management issues. This issue as well as further remarks and suggestions concerning several indicators are documented in the Tisza questionnaire.

Despite good progress during the workshop, final scores could not be determined for indicators 18, 19, 79 and 80. These indicators were post-processed after the workshop by participating experts who consulted:

- the water management sector of the newly organised Ministry of Rural Development (to which the previous Environmental and Water Ministry had been integrated),
- the Agricultural and Food Sciences Centre of the University of Debrecen, and
- the Trans-Tisza Region Environmental, Nature Protection and Water Inspectorate.

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](http://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
<b>I) Characteristics of environmental governance regimes</b>			
<b>a) Water policy, institutional &amp; legal framework (formal and informal)</b>			
1.	<b>Domestic water legislation (laws, by-laws, etc.) in place?</b>	<b>A</b>	<p>Domestic water legislation is in place. The major national water law is the RF “Water Code”, 2006 (entry into force 2007). It replaces the previous national Water Code of the Russian Federation, 1996. It sets the framework for water management at different levels. Elements of domestic water legislation are also contained in the following laws:</p> <ol style="list-style-type: none"> <li>1) Law on environmental protection 2002.</li> <li>2) Law on safety of hydro-technical facilities, 1997 FZ-117</li> <li>3) Law on land melioration, 1996 FZ-4</li> <li>4) Law on internal waters, territorial sea and adjacent zone of the Russian Federation, 1998</li> <li>5) Constitution of the Russian Federation, 1993 art. 9, 72, and others.</li> </ol> <p>The extensive system of by-laws is in place. <i>The experts' choice is not controversial.</i></p>
2.	<b>Domestic Water Law: Public character of water and legal status of water use rights</b>	<b>B</b>	<p>Water use rights are defined by the RF Water Code and by the existing civil legislation. Water Code envisages priority of federal property on water resources. Property of Russian Federation subjects, municipalities, individuals and legal entities is established only over ponds and water ravines located within private lands. Private property is limited in scope.</p> <p><b>Existing principles of water ownership are badly defined in the water laws and difficult to understand.</b></p> <p><i>The experts' choice is not controversial.</i></p>

No.	Indicator	Score	Comments
3.	<b>Domestic Water Law: Explicit recognition of traditional and indigenous water uses</b>	A	<p>RF Water Code 2006 recognises special rights for water use by <b>traditional and indigenous</b> people of the North, Siberia and the Far East of Russia. In this case the agreements on water use between the authorities and water users are not required. Thus, the law (art.11) envisages the simplified procedures for access to water resources by these stakeholders.</p> <p><i>The experts' choice is not controversial.</i></p>
4.	<b>Domestic Water Law: On flow availability, third party rights and ecological requirements</b>	A	<p>Water Code 2006 defines environmental priorities within the process of water use ( art.129, 209), environmental damage to water resources is prohibited</p> <p><b>Unclear formulation of Indicator - what is meant by third party rights and flow availability.</b></p>
5.	<b>Integration of domestic water legislation</b>	A	<p>RF Water Code 2006 is the basic and comprehensive national water law, and it integrates the water-related legislation.</p> <p><i>The experts' choice is not controversial.</i></p>
6.	<b>Multilevel structure of domestic water legislation and subsidiarity</b>	A	<p>RF Water Code 2006 reflects the multilevel structure of domestic water legislation and subsidiarity. It defines authorities, responsibilities and functions of respective water authorities in the Russian Federation subjects (39) entirely or partially located in the Volga Basin. It established further decentralisation of water management between federal-regional-local levels.</p> <p><i>The experts' choice is not controversial.</i></p>
7.	<b>Existence of formal domestic administrative structure for water governance</b>	A	<p>Federal Agency for Water Resources (FAVR), under the RF Ministry for natural resources and Federal Service for Control over Environment and Resource use are the main <i>national</i> authorities responsible for water management. There is a number of government ministries and bodies dealing with sectoral water management, including for example: RF Ministry for Emergencies (Emercom) that deals with floods; RF Hydrometeorological Service that deals with water monitoring. Other federal administrations involved in water governance include: RF Ministry for Economic Development, RF Ministry for Regional Development, RF Ministry for Agriculture, RF Ministry for Transport, RF Energy Ministry</p> <p>All federal administrative structures have territorial affiliations in the regions, including the provinces of the Volga Basin.</p> <p><i>The experts' choice is not controversial.</i></p>

No.	Indicator	Score	Comments
8.	National basin organisation or comparable arrangement	B	Basin water organisations are the major territorial administrations for basin water management in Russia. Four Water Basin Management authorities are in place in the Volga Basin – for each of the Volga sub-basins, i.e. the Upper Volga, the Moskva-Oka, the Kama, the Lower Volga. They are territorial bodies of the Federal Agency for Water Resources (FAVR). <b>Illogical division into 4 parts from a hydrological point of view.</b> The system of river basin councils has been recently introduced by the RF Water Code. Volga Basin Council is established (see the Ordinance of the RF Government dated by November 30, 2006 # 727 “On the Order of Basin Councils Establishment and Activities”.) <i>The experts’ choice is not controversial.</i>
9.	Formalised transboundary coordination organisation	na	Volga is the national river, so this indicator is not applicable
10.	Formal institution (legislation) that prescribes the basin management principle	B or A	Water basin management principle is sealed in the RF Water Code. Volga basin consists of four sub-basins: the Upper Volga, the Moskva-Oka, the Kama, the Lower Volga. <b>The Code divides the Volga into 4 parts which does not seem to be a very logical and effective way for integrated water management and administration.</b> <i>A or B – disagreement between experts (whether sub-basin principle applied to Volga basin is effective)</i>
11.	Water (basin) strategies, programmes and plans	A	Russia adopted the national Water Strategy up to 2020, and action plans consisting of 33 actions (“Plan of measures for implementation of water strategy up to 2020). Ordinance of RF Government N 1235-p, 27 Aug. 2009. National government programme “Clean Water” is being elaborated. Some regional authorities are adopting regional plans in their river basins. <i>The experts’ choice is not controversial.</i>
12.	Financing mechanisms: Degree of investment from private sector/ public/ other sources (e.g. international)	B	Dominance of public sources; new trends in expanding the share of private sources are registered. National Water Strategy up to 2020 envisage costs of about \$ 20 billion; federal financing accounts for about 75% International sources for water resources management are not substantial; declined since 1990s, when Russia had been highly dependent on foreign funding sources. <b>In practice, centralized financing is not used at the regional level to meet the real needs of improving water quality or water management practices. Centralized financing cannot properly take into account local specifics and needs.</b> <i>The experts’ choice is not controversial.</i>
13.	Economic instruments Is water for irrigation priced?	B	Yes, water for irrigation is priced. The price is too low. <i>The experts’ choice is not controversial.</i>

No.	Indicator	Score	Comments
14.	<b>Economic instruments Is water for households priced in urban areas?</b>	<b>B</b>	<p>Yes, water for households is priced, but at a low level. The tariff is regulated in different regions by different municipalities, it varies across regions. It is low because of cross-subsidies with enterprises. <i>The experts' choice is not controversial.</i></p>
15.	<b>Economic instruments Is water for industry priced?</b>	<b>B</b>	<p>Yes, water for industry is priced. The price is low (some \$ 10 per 1,000 cubic metres) for all industrial enterprises. For enterprises producing drinking water or generating power for households (for Mosvodokanal and hydro-power stations) the tariff is twice as low. It is too low and it provides no incentives for enterprises to take water-saving measures or for water recycling. <i>The experts' choice is not controversial.</i></p>
16.	<b>Tradable permits related to water abstraction/use</b>	<b>C</b>	<p>The system of tradable permits is not applied in Russia in general. Instead, the system of agreements between local\regional authorities and water users is in place. Enterprises should get an agreement with the regional authorities (formerly licence) for the right to use water in certain amounts (volumes). These quantitative tasks are set on the basis of water-balance schemes. If limits of water use are exceeded, the enterprises should pay 5-fold. Today, these taxes (charges) are allocated to the local and federal budgets on a 50:50 basis.</p> <p><b>The formulation of this indicator is to be improved – it is inapplicable to Russia and some other countries. This indicator should go together with N 20</b></p>

No.	Indicator	Score	Comments
17.	<b>Polluter pays principle (related to water)</b>	<b>B+</b>	<p>PPP has been introduced in Russia in early 1990s by the new environmental legislation in a course of environmental reforms. Recently there have been some further reforms in PPP system. Currently, about 19% of collected payments go to the federal budget, while 81% is accumulated in the territorial consolidated budgets of the federation subjects (with about a half of this amount transferred to the local budgets).</p> <p>PPP implementation is not effective enough to provide incentives for water polluters to reduce their discharges, to make investments into technological modernisation; many distortions exist. Sometimes polluters prefer not to pay charges, but to be fined, or to get preferential treatment from the local authorities by reaching some individual agreements with them. The tariffs of payments set by the state are too low and do not provide incentives to undertake water-protection measures both in terms of improving quality of water and of applying water recycling principle. This system does not work because enterprises have legal loopholes to circumvent it, and they win cases in courts.</p> <p><i>The experts' choice is not controversial.</i></p>
18.	<b>Environmental subsidies (related to water)</b>	<b>B</b>	<p>Environmental subsidies exist and are applied. They are spelt out in legislation, but they are not used in practice, since it is legally impossible to provide subsidies to commercial enterprises. They must be provided to state enterprises. All this leaves loopholes for corruption.</p> <p><i>The experts' choice is not controversial.</i></p>
19.	<b>Payment for ecosystem services (related to water)</b>	<b>C</b>	<p>No payment for ecosystem services. This concept is being developed now in Russia.</p> <p><i>The experts' choice is not controversial.</i></p>
20.	<b>Tradable permits (related to water quality, maximum, allowable loads etc.)</b>	<b>C</b>	<p>The system of tradable permits is not applied in Russia. However, the system of agreements is used which is not clearly defined and it leaves loopholes for enterprises allowing them to pay the minimum, even less than is prescribed by legislation (see also N 16).</p> <p><i>The experts' choice is not controversial.</i></p>
21.	<b>Environmental tax (related to water)</b>	<b>B</b>	<p>Water Tax is applied according to the RF Tax Code (ch.25.2). It defines: tax-payers, tax objects, tax basis, tax period, tax fee, procedures for tax calculation, requirements and dates of tax payments. The tax payers include organisations and individuals involved in water use. Those actors who signed the water use agreement are exempted from water tax in order to exclude double taxation. Enterprises pay for amounts of discharged pollutants into water bodies.</p> <p><i>The experts' choice is not controversial.</i></p>

No.	Indicator	Score	Comments
22.	<b>Presence of substituting informal institutions for management of water</b>	<b>C</b>	In the 1990s, during the transition period in Russia, the symbiosis of three elements – informal relations, privatisation and liberalisation – opened the way for oligopolistic structures. Market relations were included into the already existing system of informal relations in the sphere of resource management and ownership. Many attempts to establish efficient institutions often failed, while some new institutions simply were incorporated in the established system of illegitimate relations. Conflicts between the parties are settled on the basis of belonging to a certain interest group. The power to solve the conflict in favour of one of the parties may be exercised, if the key actors, irrespective of their official status, have real power. Despite numerous laws, codes and ordinances in water sector, the legal norms remain vague, with legal loopholes and non-implementation of laws. Corruption is wide-spread. In general, questions # 22 and 23 are rather confusing.
23.	<b>Presence of complementary informal institutions for water management</b>	<b>B</b>	Independent experts and NGOs play a certain role in water management and sometimes are used by the authorities to help resolve conflicts and improve the environment. In general, questions # 22 and 23 are rather confusing.
<i>23.a</i>	<i>Case-specific indicator(s)...</i>		
<b>b) Formalisation of IWRM principles &amp; Millennium Development Goals</b>			
24.	<b>Formalised IWRM principles</b>	<b>A</b>	Integrated principle is formally spelt out in domestic water legislation, and it has been in existence for a long time. But there is a gap between official principles and their real implementation. IWRM is incorporated in legislation and in planning (Federal Target Volga revival programme) but the actual importance of the programme became lower than it was planned because of insufficient financing and low stakeholder activity. <i>The experts' choice is not controversial.</i>
25.	<b>State of implementation of IWRM principles</b>	<b>B</b>	See above. Long-term Plans for 1998-2010 existed and were partly implemented, but then they were cancelled in 2006. IWRM principles are used in the new RF Water Strategy up to 2020. <i>The experts' choice is not controversial.</i>

No.	Indicator	Score	Comments
26.	<b>Capacity to implement IWRM</b>	<b>B</b>	Formally, the domestic capacity does exist (river basin authorities, basin councils, Federal Agency on Water Resources under the RF Ministry of Natural Resources) and it claims to apply IWRM. One of its drawbacks is the existence of overlapping authorities and functions. In the Volga Basin, certain human and financial resources are available, but due to conflict of interests between stakeholders, performance became lower during the cancelled phase of the Volga Revival Programme than it was during the initial phase of implementation. <i>The experts' choice is not controversial.</i>
27.	<b>Is universal and non-discriminatory access to safe drinking water and sanitation a goal?</b>	<b>A</b>	Formally, this goal is formulated in the RF Water Code (it even includes the equal right of indigenous population to safe drinking water). Water is purified and treated only for urban population. In rural areas, in wells, water quality does not correspond to drinking water quality norms. It is also one of the priority goals of the RF Water Strategy up to 2020. This goal was included in the Volga Revival Programme (VRP) – cancelled in 2004. Access of rural and riverside households to centralised water supply was not provided before VRP. <b>It is a very general principle – according to the logic of the Questionnaire it should be placed in the beginning.</b>
28.	<b>Integration of wetlands in IWRM and IRBM*</b>	<b>B</b>	The principle does exist, but it is not efficiently and fully applied in practice. Natural protected areas, including wetlands, were identified in the Volga basin and their protection was supported by Federal Law on Natural Protected Territories, by federal Volga Revival Programme and by regional authorities. <b>Why is there no option for C in the Guidelines?</b>
28.a	<i>Case-specific indicator(s)...</i>		
<b>c) Decision making regarding uncertainties</b>			

No.	Indicator	Score	Comments
29.	<b>General practices for dealing with uncertainties</b>	<b>B</b>	<p>Russian President adopted Climate doctrine in 2009.</p> <p>Russia adopted Water Strategy up to 2020 in 2009 and Action Plan for its implementation. The issue of uncertainties is covered in these documents.</p> <p>Uncertainties are considered an important element in strategic planning. Monitoring of climate change during the last century, and in the future, assessment of present and future impacts, and related adaptation measures is the major strategic goal while dealing with uncertainties. Adaptation programmes and plans are to be developed and implemented at the regional level.</p> <p><i>The experts' choice is not controversial.</i></p>
30.	<b>Dealing with uncertainties: Reversible and flexible options</b>	<b>B</b>	The implemented measures can be revised or adjusted sometimes; the level of flexibility and reversibility is not too high
31.	<b>Dealing with uncertainties: Safety margins</b>	<b>B</b>	Additional actions are taken, but not regularly
32.	<b>Are scenarios used for decision making?</b>	<b>C</b>	<p>Scenarios for decision-making purposes are used by ministries but were not included in water strategies. That means that unexpected climate variations were not provided by relevant scenarios</p> <p><i>The experts' choice is not controversial.</i></p>
33.	<b>Climate risks: Climate variability and change</b>	<b>B</b>	<p>Climate variability and climate change for previous period were taken in account and regional monitoring programmes started to identify future climate change and its impacts.</p> <p><i>The experts' choice is not controversial.</i></p>
33.a	<b>Case-specific indicator(s)...</b>	<b>B</b>	Positive and negative climate change impacts in the Volga basin, and hence, adaptation options <sup>1</sup> ?
<b>II) Actor networks with emphasis on the role and interactions of state and non-state actors and power relationships</b>			

<sup>1</sup> A – positive  
B – combined  
C - negative

No.	Indicator	Score	Comments
<b>a) Cooperation and coordination structures</b>			
34.	<b>Vertical coordination (governmental)</b>	<b>C</b>	<p>There is a trend towards clarification of tasks allocation in the course of decentralisation process. An attempt to clarify division of power between Russian Federation, federation subjects and municipalities is being made.</p> <p>Certain coordination between different levels exists, but cooperation is fragmented. Still, too much control and power are concentrated on the top level, and no real efforts to delegate power to regional and local authorities are being taken.</p> <p>Coordination between Moscow and 4 segments of the Volga exists at the level of the Ministry of Natural Resources.</p> <p><i>Different views had been expressed by experts.</i></p>
35.	<b>Horizontal coordination (governmental)</b>	<b>C</b>	<p>Horizontal cooperation in general in Russia is poor. Performance is facing problems because of poor practices in cooperation between different regions and different agencies. Horizontal coordination should be enhanced.</p> <p>Four segments of the Volga river cooperate and exchange information; there seem to be no serious conflicts between them.</p> <p><i>The experts' choice is not controversial.</i></p>
36.	<b>Role of local governments</b>	<b>B</b>	<p>Recently local governments are getting more broadly involved. Local governments participate in formation of basin level institutions - basin councils (Upper Volga Council), basin associations like Big Volga.</p>
36.a	<b>Case-specific indicator(s)...</b>	<b>B</b>	<p>Efficiency of coordination between 4 sub-basins of the Volga River (coordination at the level of the Ministry of Natural Resources<sup>2</sup>)</p>

<sup>2</sup> A – efficient  
 B – not very efficient  
 C - inefficient

No.	Indicator	Score	Comments
<b>b) Information sharing via formal rules, dependency relationships etc.</b>			
37.	<b>Kinds of knowledge included =&gt; Role of experts/ science, local/traditional knowledge</b>	<b>B</b>	Mainly scientific expert knowledge is taken into account. Local knowledge is taken into account irregularly. <b>Confusing question; views of experts differed. For example:</b> “A” for situations when politics and big business do not interfere “D” for option when politics and big business interfere (State environmental expertise abolished) Involvement of ST community and R&D results in the Volga region need improvement.
38.	<b>Access to information =&gt; about expert knowledge and management plans</b>	<b>B</b>	Official census and statistical data, major hydro meteorological information, official reports from ministries is available for free Although <i>glasnost</i> is introduced and according to the law the public has free access to information, in practice there are certain difficulties to obtain official information and data. For example, planning information is for restricted use only. <i>The experts' choice is not controversial.</i>
<b>38.a</b>	<b>Case-specific indicator(s)...</b>	<b>B</b>	Amount and quality of information (Reliability and accuracy and comprehensiveness <sup>3</sup> )
<b>III) Multi-level interactions across administrative boundaries and vertical integration across levels and horizontal integration across sectors</b>			
<b>a) Centralisation</b>			
39.	<b>One level one actor?</b>	<b>B</b>	Operational management is based on the model “one level - one actor”. Strategic management is based on multi stakeholder approach <b>A confusing question - IS IT GOOD OR BAD TO HAVE ONE ACTOR PER LEVEL?</b>

<sup>3</sup> A – reliable, comprehensive, free of charge

B - not very accurate, fragmented, free of charge

C – not accurate, fragmented, no public access to important information

No.	Indicator	Score	Comments
40.	Degree of centralisation	C	Implementation is coordinated by the centralized water agency Policy development and implementation in practice is more decentralized <i>The experts' choice is not controversial.</i>
41.	Technical capacity and economies of scale	B	Big corporations dominate in decision making <b>Question is not very clear, need to be formulated more clearly</b>
42.	Legal obligations and responsibility	B	Obligations and responsibility are not clearly established. Especially vague is their distribution among various stakeholders. Very poor distribution of obligations, especially for households and small business that appear in practice to have no environmental obligations at all. <i>The experts' choice is not controversial.</i>
42.a	<i>Case-specific indicator(s)...</i>		

## B) Context

No.	Indicator	Score	Comments
<b>I) Societal dimension</b>			
43.	Proportion of the population living in rural areas	27.1%	
44.	State of societal development	<b>B</b>	HDI for Russia: high human development (0.800-0.899) HDI = 0.817 (2007) Average annual growth rate during 1990-2007 period: -0.03% Russia, Income Index = 0.7667 (2004) <a href="http://www.undp.ru">www.undp.ru</a>
45.	Social sustainability (Gini Index)	<b>B</b>	Gini Index = 37.5 (2007) Richest 10% to poorest 10% = 11.0 <a href="http://www.undp.ru">www.undp.ru</a>
46.	Economic sustainability (e.g. GDP)	<b>D</b>	GDP 1,290.1 usd bln (2007) PPP 2,087.4 (2007) GDP per capita 9,079 usd; annual growth rate 1990-2007 at constant prices 1.2% <a href="http://www.undp.ru">www.undp.ru</a>
47.	Effectiveness of formal institutions	<b>E</b>	2.2
48.	Trustworthiness of economic institutional setting - degree of risk for foreign direct investment	<b>C</b>	BBB
49.	Presence of avenues of dissent – press freedom, freedom of speech	<b>E</b>	60.88

No.	Indicator	Score	Comments
49.a	<i>Case-specific indicator(s)...</i>	1-C 2-C	1. Level of NGO activities and impact <sup>4</sup> 2. Level of population's environmental awareness and responsibility <sup>5</sup>
<b>II) Good Governance Principles at the national level – legal basis at the national level</b>			
50.	<b>Participatory regarding decision making in the water sector</b>	<b>B</b>	Gender participation is guaranteed, but NGOs and local communities' influence is weak. <i>Experts' choice is not controversial.</i>
51.	<b>Transparency regarding water allocation</b>	<b>B</b>	Information regarding water allocation is available to a certain degree. <i>Experts' choice is not controversial.</i>
52.	<b>Effectiveness and efficiency regarding decision making in the water sector</b>	<b>B</b>	Weak mechanism of control, weak enforcement. Effectiveness hampered by poor coordination among government levels and institutes. However, recently institutions with special control and enforcement functions have been established, such as Rosprirodnadzor. <i>Experts' choice is not controversial.</i>
53.	<b>Equitable and inclusive</b>	<b>A</b>	Gender and ethnic groups equity is formally guaranteed. <i>Experts' choice is not controversial.</i>
54.	<b>Predictability – with regard to IWRM and climate change</b>	<b>B</b>	Existing water-related laws envisage that some risks are taken into account Monitoring now has been improved. <b>Confusing definition for the indicator in the Guidance</b>
54.a	<i>Case-specific indicator(s)...</i>		
<b>III) Environmental dimension</b>			

<sup>4</sup> A – highly active and influential

B – active but not very influential

C – activities limited by government

<sup>5</sup> A – active, aware and responsible

B – not very active, fragmented actions when their personal interests are involved, passively responsible

C – indifferent and passive

No.	Indicator	Score	Comments
55.	Köppen-Geiger climate classification (river basin)	DFb	
56.	Climate Moisture Index	SA SH	
57.	Climate Moisture Index Coefficient of Variation	B	
58.	Per Capita Equivalent of TARWA	D	D is assigned according to the data provided in the source, but it seems to be a mistake in the source. More likely the indicator should be B
59.	Average water availability at the river basin level (1995)	B-D	Regional variability in the basin is high
60.	Annual renewable water supply per person by river basin (1995)	A	4.000-10.000
61.	Projected annual renewable water supply per person by river basin (2025)	A	4 000-10 000
62.	Relative Water Stress Index	B	<0.2
63.	Climate Vulnerability Index	B	
64.	Degree to which water quality status restricts usability of users' types	B	Generally good water quality with hotspots where contamination is present, among others bacteriological issues with impact on drinking water. <b>Unclear question.</b>
65.	Extent of flow and channel modification	C	The Volga river basin is heavily modified. New norms and science-based regimes for operation of hydropower facilities, restoration of natural river channel processes and improvement of environmental flows for biodiversity are needed. <i>Experts' choice is not controversial.</i>
66.	Impact of land-use changes on hydrological processes	B-C	Modification in land-use has negative impacts on ecosystem services in the Volga basin. Changes in spatial planning with control and limiting the floodplain development, surface water run-off treatment as a part of plans for urban development are needed. <i>Experts' views differed.</i>

No.	Indicator	Score	Comments
67.	<b>Uncertainty associated to climate change predictions regarding precipitation for the basin</b>	<b>B</b>	<p>The Volga basin covers the huge area with a variety of climate zones: 4 major climatic belts are distinguished with the variability of main characteristics. Both decrease and increase of precipitation are predicted for different Volga regions. Thus, the variation in uncertainties increases. During 2010-2039 period in average the 9-10% change of river flow is forecasted. During 2011-2030 period 3-5 % changes in winter precipitation is forecasted, and -5+8% in summer; during 2041-2060 changes of 7-11% are forecasted for winter and -11+12% for summer. <i>“Assessment report on climate change and its impacts for Russian Federation”</i>, Hydromet, 2008, p.191</p> <p><b>This indicator should clearly define the forecasting period, as well as probability of both decrease and increase of precipitation in various sub-basins as it is in case of the Volga basin. ‘Average’ answer for this question is not applicable. Question should be improved. Experts’ opinions differed.</b></p>
67.a	<i>Case-specific indicator(s)...</i>	<b>B</b>	Impact of climate change on ecosystems and biodiversity <sup>6</sup> .

<sup>6</sup> A – weak impact  
B – strong impact

## C) Performance

No.	Indicator	Score	Comments
<b>I) Progress towards stated Goals</b>			
68.	<b>Progress towards sustainable access to safe drinking water (MDG drinking water target)</b>	<b>B</b>	<p>About 75% of total population in Russia has access to centralised water supply. But, the water quality in general does not meet domestic standards. Up to 59% of water meet standards on average, while in rural areas only 20%.</p> <p>Among the principle goals of the new RF Water Strategy up to 2020 is enhancing safe drinking water supply. It envisages review of standards, sets realistic ultimate goal to achieve standards, with step-by-step targets to be met in short- and mid- term perspective. It is to be implemented in 2 major phases, concrete action plans have been designed.</p> <p><b>How to define “Safe drinking water?” (matter of definition and day-to-day control)</b></p> <p><b>Information in Russia is provided to stakeholders only on extreme values, not on average values of water quality (necessary to include both).</b></p>
69.	<b>Proportion of population with access to improved drinking water</b>	<b>B</b>	97%
70.	<b>Proportion of rural population with access to improved drinking water</b>	<b>E</b>	27%
71.	<b>Progress towards sustainable access to basic sanitation (MDG sanitation target)</b>	<b>B</b>	
72.	<b>Proportion of population with access to improved sanitation facilities</b>	<b>C</b>	87%
73.	<b>Proportion of rural population with access to improved sanitation facilities</b>	<b>D</b>	70%

No.	Indicator	Score	Comments
73.a	<i>Case-specific indicator(s)...</i>		
<b>II) Good governance principles as indicators for the process dimension</b>			
74.	<b>Participatory regarding decision making in the water sector</b>	<b>B-C</b>	Real consultation with stakeholders with further obligatory taking into account the results in decision-making is poor. It happens only in some cases. B - for Cheboksary Reservoir case in the Volga where consultations mattered Competencies and rights of the newly established Basin Councils should be strengthened. <i>Experts' opinions differed.</i>
75.	<b>Transparency regarding water allocation</b>	<b>B</b>	The existing legislation defines the process for water allocation. Responsible agencies analyse water balance within the river basin and its sub-basins according to schemes of integrated water use and water protection and then allocate water. There are certain priorities within the allocation process: drinking water supply and water supply for households have top priority. Water allocation process takes into account the requirements of various sectors, including river transport. Seasonal water level fluctuations are also taken into account.  A serious drawback: operational management is not coordinated with strategic goals in Russia. <i>Experts' choice is not controversial.</i>
76.	<b>Effectiveness and efficiency regarding decision making in the water sector</b>	<b>B</b>	Reasonable success has been achieved within the process of the RF Water Code implementation. It provides a good basis for water management but implementation and enforcement still need to be improved, poor coordination between institutions is a problem. <i>Experts' choice is not controversial.</i>
77.	<b>Equitable and inclusive</b>	<b>A</b>	Formally, equitable access has been established a long time ago <b>Repeats N 53 indicator</b>
78.	<b>Predictability – with regard to IWRM and climate change</b>	-	<b>Confusing question. It repeats N 54 Indicator</b>

No.	Indicator	Score	Comments
78.a	<i>Case-specific indicator(s)...</i>	B	Efficiency of monitoring and enforcement of performance process in the Volga basin <sup>7</sup>
<b>III) Stakeholder participation</b>			
79.	<b>Deliberative engagement opportunities</b>	B	No systematic dialogue or consultations (public hearings are conducted in some cities or regions, but not in others). <i>Experts' choice is not controversial.</i>
80.	<b>Inclusiveness of stakeholder participation</b>	B	Formally the process envisages inclusiveness, but stakeholder participation in practice is poor. Real representation and participation of stakeholders representing various groups of water-users, NGOs, scientific community, and the public is needed. Their real inclusiveness is essential in the Basin Councils. There is a need to encourage representation from SMEs or their associations, and municipalities. <i>Experts' choice is not controversial.</i>
80.a	<i>Case-specific indicator(s)...</i>		
<b>IV) Response to climate change</b>			

<sup>7</sup> A – highly efficient  
B – moderately efficient  
C - inefficient

No.	Indicator	Score	Comments
81.	<b>Strategy for adaptation to climate change in the water sector</b>	<b>C</b>	<p>National climate doctrine was adopted in 2009 - only 2 weeks before COP-15. Adaptation to climate change is its important element. Decision-making on climate change strategy is undertaken at the high level; RF president instructed relevant authorities to develop by autumn 2010 respective action plans. Climate change risks are not explicitly (only indirectly) covered in the RF Water Code or RF Water Strategy. Among the major water related risks indicated in the latter are floods and droughts, but they are not directly linked to climate change. Russia is at the beginning of the way towards elaboration of its adaptation strategy.</p> <p><i>Experts' choice is not controversial.</i></p>
82.	<b>Availability of specific knowledge enabling adaptation</b>	<b>B</b>	<p>The results of the major national vulnerability to climate change assessment has been published in 2008. Reports on monitored climate change in Russia are available (on website of Hydromet). 5<sup>th</sup> RF National Communication to UNFCCC (submitted in 2010) contains respective knowledge. International reports in Russian are generally available. Involvement of science-and-technology community in sharing adaptation options and knowledge on 'good' water management and R&amp;D results in the Volga is essential, and is to be increased</p> <p><i>Experts' choice is not controversial.</i></p>
83.	<b>Awareness of water managers regarding adaptation to climate change</b>	<b>C</b>	<p>Results of impact assessments and adaptation options are not widely known among water managers. Management of water-related risks in the basin (floods, droughts, maintenance of hydrotech facilities) is not directly associated with climate change, but with other factors.</p> <p><i>Experts' choice is not controversial.</i></p>
84.	<b>Coordinated implementation process regarding adaptation to climate change: Program / Plan of activities and measures</b>	<b>C</b>	<p>Lack of inter-institutional vertical and horizontal coordination of adaptation measures. Russia is at the initial phase. It is supposed that after adaptation action plans will be elaborated and presented by various sectors (hopefully in 2010), the next phase will include the establishment of coordination mechanisms. Information-sharing is to be arranged.</p> <p><i>Experts' choice is not controversial.</i></p>

No.	Indicator	Score	Comments
85.	Operational activities (measures)	C	<p>No systematic approach to coordination of operational activities; their coordination is at initial phases of development.</p> <p><i>Experts' choice is not controversial.</i></p>
86.	Ways to deal with climate variability (floods and droughts)	B	<p>Although fragmented reactive and anticipative measures are introduced they do not provide so far for integrated management of climate variability. Flood risk assessment allowing for a multi-disciplinary approach combining social and economic assessments with technology solutions, including GIS, the capacity of existing centres needs to be upgraded to apply the risk assessment methodology at local/municipal levels and to apply participatory approaches in the Volga Basin. Public awareness relating to results and recommendations of the integrated risk assessment need to be raised</p> <p><i>Experts' choice is not controversial.</i></p>
86.a	<i>Case-specific indicator(s)...</i>		

## Addendum - Context

No.	Indicator	Score	Comments
<b>I) Basin Characteristics</b>			
67a	Sub-Basin Size	1358 mln sq km	
67b	Transboundary	no	

## Addendum - Performance

No.	Indicator	Score	Comments
<b>I) Environmental sustainability</b>			
<b>a) State of the water resources and the environment</b>			
87	<b>Aquatic biodiversity</b>	C	The variety of original native fish species had diminished in the Volga and its tributes, and its major native species of high value, such as sturgeon, starlet, white salmon, beluga had been significantly reduced. Hydro-engineering and cascades of hydropower stations significantly affected the native conditions in spawning and breeding areas, especially for native migratory species (only two hydro-locks from 11 are equipped with the lifting facilities). Significant deformation in annual river flow distribution has negative influence. High level of poaching during 1990s had negative impacts. Today, significant attention is paid to reproducing the variety of native species: new artificial reproduction farms and breeding plants are opened. Artificial sturgeon breeding is among the key directions in restoration of its genetic fund. Other native species are being restored as well.
88	<b>Invasive exotic species</b>	B	Invasive exotic species were never identified as a serious threat to the Volga itself. But the Volga-Don canal and the Lower Volga are considered as a possible route for invasive species transfer from the Black sea to the Caspian Sea. Recent invasion of a Ctenophore ( <i>Mnemiopsis Leidy</i> ) into the Caspian Sea may result in ecological catastrophe in this water body. Another types of species Ctenophora ( <i>Beroe Ovata</i> ) was found in the Caspian Sea. In addition to Ctenophores, the medusa ( <i>Aurelia Aurita</i> ) was recently found in the Caspian. At present, it is not certain whether <i>Beroe Ovata</i> and <i>Aurelia Aurita</i> are naturalized in the Caspian Sea.
89	<b>Surface and groundwater quality</b>	B	During the last two decades there has been the sharp decline in annual polluted water discharges into the Volga basin – more than by 30%. There is a number of areas within the Volga basin where the environment is still seriously stressed. Overall, however, recent monitoring results indicate that while not ideal, the water quality (according to chemical and biological parameters) in the Volga is better than that of the Rhine and the Elbe.

No.	Indicator	Score	Comments
90	Groundwater use	B	Five main artesian basins are located within the Volga. The approved groundwater resources account for 7,86 cubic km per year; they are used within sustainable yields (5,17 cubic km per year )
91	Water Exploitation Index (WEI)	A	1,5%. Score at national level <a href="http://www.FAO.org/nr/water/Aquastat/factsheets">www.FAO.org/nr/water/Aquastat/factsheets</a> (2002)
<b>b) Management practices</b>			
92	Water allocated for aquatic ecosystem	A	The infrastructure is usually managed and operated, and water resources are allocated throughout the river basin taking into account the river basin integrated management principles; the annual river water basin allocation plans are adopted, and their realisation is regularly monitored by specially established basin management task teams.
93	Water pollution incidents	A	The surface water pollution incidents are dealt with in a timely and appropriate fashion
94	Water quality monitoring	A	The water quality monitoring system in the Volga reports all necessary parameters envisaged by the national norms
95	Hydrometeorological monitoring – levels	A	The system of hydro-meteorological monitoring in the Volga is under innovation, restoration of multi-level monitoring infrastructure is underway today. This system was traditionally well organized and coordinated, which ensured high comparability of data; unfortunately, this strong network has been dismantled during the nineties in a course of the transition period. Today, it is being restored.
96	Level of understanding of groundwater resources	A	Good and adequate knowledge exists about groundwater resources recharge and withdrawals for management. Perspective plans for groundwater use are developed.



**Figure 1: The Volga River Basin**

Source: <http://www.cabri-volga.org>