

Basin Report:

Questionnaire + Addendum

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

Elbe Basin

With focus on the German part

Case Study Review Workshop for the NeWater project

Berlin, 05. – 07.05.2010

The questionnaire was post-processed after the workshop with regard to formatting.

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, i.e. the German part of the Elbe basin.

A few weeks before the Case Study Review Workshop in Berlin (May 5-7 2010) started, the questionnaire was sent to the invited case study experts. So the experts had enough time to prepare themselves by studying the questionnaire intensively. They pre-filled a lot of answers and marked ambiguities and misunderstandings related to nearly a dozen of questions. During the group discussions it was possible solve the problems they had with single questions.

The questionnaire was discussed and completed in workgroup sessions during the workshop. Difficulties concerning indicators were discussed in the plenum.

The questions 3, 4, 10, 11, 12, 25, 41, 50, 52, 62, 66, 67, 74, 76, 81 were the most discussed ones. Most times the experts addressed misunderstandings on basis of formulation and recommended formulations, which make the questions more unambiguous. All these recommendations are documented in the Elbe questionnaire.

Sometimes the scoring schemes were responsible for the controversies. Nonetheless, nearly every question could be answered after profound discussions. But the experts could not give clear answers despite deep discussions about the questions 62, 76 and 81. This had different reasons, e.g. inappropriate scoring or no access to required information. All suggestions are documented in the Elbe questionnaire.

Based on the preliminary synthesis results and discussion during the Twin2Go synthesis workshop (Stockholm, September 1-2 2010) an addendum was made with some additional parameters.

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.

Table of Contents

A) Water governance regime	4
I) Characteristics of environmental governance regimes.....	4
a) Water policy, institutional & legal framework (formal and informal)	4
b) Formalisation of IWRM principles & Millennium Development Goals	7
c) Decision making regarding uncertainties	7
II) Actor networks with emphasis on the role and interactions of state and non-state actors and power relationships	8
a) Cooperation and coordination structures	8
b) Information sharing via formal rules, dependency relationships etc.	8
III) Multi-level interactions across administrative boundaries and vertical integration across levels and horizontal integration across sectors.....	9
a) Centralisation	9
B) Context.....	10
I) Societal dimension.....	10
II) Good Governance Principles at the national level – legal basis at the national level	11
III) Environmental dimension.....	12
C) Performance	15
I) Progress towards stated Goals.....	15
II) Good governance principles as indicators for the process dimension.....	15
III) Stakeholder participation	17
IV) Response to climate change	17
Additional case-specific indicators.....	19
Addendum - Context.....	20
I) Basin Characteristics	20
Addendum - Performance	21
I) Environmental sustainability	21
a) State of the water resources and the environment	21
b) Management practices	22

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?	A	Federal Water Management Act (Wasserhaushaltsgesetz, WHG), State Water Laws (Landeswassergesetze, LWG) WHG §1 "Die Gewässer sind als Bestandteil des Naturhaushalts und als Lebensraum für Tiere und Pflanzen zu sichern." Sorgfaltspflicht, Vorsorgepflicht, Wohle der Allgemeinheit, constraints for water use despite ownership (§1(4))
2.	Domestic Water Law: Public character of water and legal status of water use rights	A	WHG, LWG
3.	Domestic Water Law: Explicit recognition of traditional and indigenous water uses	A	WHG §20/21: protection of former/ user rights
4.	Domestic Water Law: On flow availability, third party rights and ecological requirements	B	- Environmental flow is prescribed in the approval of power plants, ecological requirements are often discussed - WHG §22
5.	Integration of domestic water legislation	A	WHG
6.	Multilevel structure of domestic water legislation and subsidiarity	A	Federal Constitution Act and LWG, WHG
7.	Existence of formal domestic administrative structure for water governance	A	

No.	Indicator	Score	Comments
8.	National basin organisation or comparable arrangement	D	<ul style="list-style-type: none"> - River Basin District (FGG) Elbe - For the German Elbe basin, ten different Länder have got formal responsibility whereas the FFG Elbe (Flussgebietsgemeinschaft Elbe) has got only the task to coordinate and support cooperation but has got no legal or financial means to implement management actions/ measures.
9.	Formalised transboundary coordination organisation	A	<ul style="list-style-type: none"> - IKSE - At international level there is a Ministry conference to decide on international issues, supported by ICPE secretary. This has got only the task to coordinate and support cooperation but has got no legal or financial means to implement management actions/ measures.
10.	Formal institution (legislation) that prescribes the basin management principle	A	<ul style="list-style-type: none"> - WFD → WHG and federal states' law
11.	Water (basin) strategies, programmes and plans	A	<ul style="list-style-type: none"> - River Basin Management Plans (RBMPs), Program of Measures (PoMs) - So far for the main stream, action plans have been approved at international and implemented at national level on water quality and flood.
12.	Financing mechanisms: Degree of investment from private sector/ public/ other sources (e.g. international)	B	<ul style="list-style-type: none"> - To be checked in RBMP Elbe/ answer refers to RBM, with regard to drinking water/ sanitation answer would be probably different <p>Taxes, water withdrawal fee, European funds> mainly public.</p> <p>Only drinking water and sewage is suppose to be organized along the cost-recovery principle. (how can A be achieved?)</p> <ul style="list-style-type: none"> - Depending on federal states
13.	Economic instruments Is water for irrigation priced?	A	<ul style="list-style-type: none"> - RBMP Elbe - Public water provision is priced equally for all users; but differs regionally - Direct water withdrawal

No.	Indicator	Score	Comments
14.	Economic instruments Is water for households priced in urban areas?	A	<ul style="list-style-type: none"> - RBMP Elbe - Public water provision is priced equally for all users; but differs regionally - Direct water withdrawal
15.	Economic instruments Is water for industry priced?	A	<ul style="list-style-type: none"> - RBMP Elbe - Public water provision is priced equally for all users; but differs regionally - Direct water withdrawal (Grundwasserentnahmegebühr)
16.	Tradable permits related to water abstraction/use	C	Permits are linked to specific use
17.	Polluter pays principle (related to water)	A	<ul style="list-style-type: none"> - WFD → RBMP Elbe - Yes, a basic principle fixed in various paras in WHG; the AbwAbG provides incentives for not polluting. PPP not applied for agriculture.
18.	Environmental subsidies (related to water)	A	Partially, e.g. financial incentives for agriculture to reduce impact on water from agricultural practices (CAP)
19.	Payment for ecosystem services (related to water)	B	<ul style="list-style-type: none"> - Fresh water is priced
20.	Tradable permits (related to water quality, maximum, allowable loads etc.)	C	<ul style="list-style-type: none"> - Permits are not tradable for pollution but linked to the permit as such. Permits for withdrawal can be allocated; there is no “open market” but a strong link to the regional water provider.
21.	Environmental tax (related to water)	A	Wasserpfeennig
22.	Presence of substituting informal institutions for management of water	A	Conflicting interests from stakeholders like agriculture and energy
23.	Presence of complementary informal institutions for water management	A	Network among water managers, e.g. DWA (german water association)
23.a	<i>Case-specific indicator(s)...</i>		

No.	Indicator	Score	Comments
b) Formalisation of IWRM principles & Millennium Development Goals			
24.	Formalised IWRM principles	A	WFD → WHG, LWG
25.	State of implementation of IWRM principles	B	RBMP
26.	Capacity to implement IWRM	B	Deficits in integrating across sectors and scales
27.	Is universal and non-discriminatory access to safe drinking water and sanitation a goal?	A	Not formulated as a “goal”, but considered to be implemented already
28.	Integration of wetlands in IWRM and IRBM*	A	WFD → WHG, RBMP Elbe
28.a	<i>Case-specific indicator(s)...</i>		
c) Decision making regarding uncertainties			
29.	General practices for dealing with uncertainties	B	<ul style="list-style-type: none"> - Addressed in CIS-Guidance and dealt with in GLOWA-Elbe, but degree to which incorporated in Elbe river basin unclear - They try to incorporate quantified uncertainties if available
30.	Dealing with uncertainties: Reversible and flexible options	B	<ul style="list-style-type: none"> - Push to favour these options, but no analysis conducted - Options are decided at regional level
31.	Dealing with uncertainties: Safety margins	B	<ul style="list-style-type: none"> - Safety margins are the only explicit approach to uncertainty
32.	Are scenarios used for decision making?	A	<ul style="list-style-type: none"> - Used in RBMP Elbe and in scientific projects (GLOWA-Elbe, NeWater) - Uncertainties in scenarios have kept them from being considered
33.	Climate risks: Climate variability and change	A	RBMP, GLOWA-Elbe, International Commission for the Protection of the Elbe (ICPE)
33.a	<i>Case-specific indicator(s)...</i>		

No.	Indicator	Score	Comments
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)	B	<ul style="list-style-type: none"> - Formal structures set-up, degree of cooperation not evaluated - E.g. through LAWA, FGG
35.	Horizontal coordination (governmental)	C	<ul style="list-style-type: none"> - Sectoral integration and coordination depends strongly on specific civil servants - Across provincial borders: FGG Elbe coordinates - Different federal states interests dominate basin approach
36.	Role of local governments	B	<ul style="list-style-type: none"> - Relating to programs and plans (institutions?) - Local governments are treated as stakeholders (mainly involved through participatory processes)
<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	A	<ul style="list-style-type: none"> - Public participation following WFD requirements <p>This is not the same all over the basin. E.g Schleswig-Holstein and Thuringia build strong on local knowledge gathered through their participatory processes then e.g. Lower Saxony.</p> <p>Also, the traditional situation was that water authorities had a high expertise with no need for additional knowledge in daily management.</p> <ul style="list-style-type: none"> - Often there is interest in scientific knowledge but its application/ relevance might be not in the way the scientists have wished for.
38.	Access to information => about expert knowledge and management plans	B	<p>Public participation following WFD requirements</p> <ul style="list-style-type: none"> - At the level of EU submitted reports. For the level of C-reports or even more detailed stakeholders claim (at least in Lower Saxony) often lack of transparency.

No.	Indicator	Score	Comments
<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?	A	<ul style="list-style-type: none"> - We assumed that is a collective actor - Different water related sectors have different ministries
40.	Degree of centralisation	B	<ul style="list-style-type: none"> - RBMP Elbe - Policy development is centralized on a country level and on the federal states level
41.	Technical capacity and economies of scale	B	<ul style="list-style-type: none"> - Local level lacks often capacity & resources, as do some of the federal states - At basin scale they discussed priority areas - Rather general score.
42.	Legal obligations and responsibility	A	
<i>42.a</i>	<i>Case-specific indicator(s)...</i>		

B) Context

No.	Indicator	Score	Comments
I) Societal dimension			
43.	Proportion of the population living in rural areas	D: 26.6% CZ: 26.5%	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	D: A (0.947) CZ: A (0.903)	Human Development Index Source: UNDP: Human Development Report, online at http://hdr.undp.org/en/statistics/ Values for 2007
45.	Social sustainability (Gini Index)	D: A (28.3) CZ: A (25.8)	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)	D: A (30,496 \$) CZ: B (20,281 \$)	GDP per capita (US-\$, PPP-corrected) Source: World Bank, http://siteresources.worldbank.org/ICPINT/Resources/icp-final-tables.pdf Values for 2005
47.	Effectiveness of formal institutions	D: A (8.0) CZ: C (4.9)	Corruption Perception Index Source: Transparency International, http://www.transparency.org/policy_research/surveys_indices/cpi/2009/cpi_2009_table Values for 2009

No.	Indicator	Score	Comments
48.	Trustworthiness of economic institutional setting - degree of risk for foreign direct investment	D: A (AAA) CZ: B (A- to AA+)	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: A (3.5) CZ: A (5.0)	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.	<u>Participation</u> regarding decision making in the water sector	A	<ul style="list-style-type: none"> - Required by WFD → WHG; - Other consultation procedures are in place for developing legislation - `Verbändeklage` as a tool for organize stakeholders
51.	Transparency regarding water allocation	A	
52.	Effectiveness and efficiency regarding decision making in the water sector	A	<ul style="list-style-type: none"> - A only referring to effectiveness - Ecological efficiency we cannot assess - Referring to the establishment of existing control mechanism: In the context of the WFD both e.'s have been considered and are (intended to be) implemented. However cost-efficiency is often criticized for not being sufficiently implemented. Economic issues of the WFD implementation belong to the most strongest discussed.
53.	Equitable and inclusive	A	- With regard to water
54.	Predictability – with regard to IWRM and climate change	B	

No.	Indicator	Score	Comments
54.a	<i>Case-specific indicator(s)...</i>		
III) Environmental dimension			
55.	Köppen-Geiger climate classification (river basin)	Cfb	Source: Kottek, M., J. Grieser, C. Beck, B. Rudolf, and F. Rubel (2006), http://koeppen-geiger.vu-wien.ac.at/present.htm#maps For period from 1951 to 2000
56.	Climate Moisture Index	SH, sub-humid (up and headwaters) SA, semi arid (middle lowland part) H, humid (delta area)	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 Reported are the dominant values in the Elbe basin
57.	Climate Moisture Index Coefficient of Variation	C , high (upper and middle part) B, (Between delta and middle part) A, delta	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 Reported are the dominant values in the Elbe basin
58.	Per Capita Equivalent of TARWA	D: D (1,870 m³/yr) CZ: D (1,290 m ³ /yr)	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)	B (100-200 mm/yr)	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)	C (1,000-1,700 m ³ /yr)	Source: World Resources Institute, EarthTrends 2001, http://earthtrends.wri.org/pdf_library/maps/2-4_m_WaterSupply1995.pdf

No.	Indicator	Score	Comments
61.	Projected annual renewable water supply per person by river basin (2025)	C (1,000-1,700 m ³ /yr)	Source: World Resources Institute, EarthTrends 2001, http://earthtrends.wri.org/pdf_library/maps/2-4_m_WaterSupply2025.pdf
62.	Relative Water Stress Index	B (low) with patches of E (very high)	Source: UNESCO, World Water Development Report II, http://wwdrii.sr.unh.edu/download.html Downstream is average value The illustration (I4) has bad quality. Please check if the judgement is appropriate.
63.	Climate Vulnerability Index	D: B (medium low) CZ: B (medium low)	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	A	Art. 5 report <ul style="list-style-type: none"> - For fishery: B <ul style="list-style-type: none"> o Chemical pressures (from the sediments; in the water also often coming from CZ, but also from German former industrial sites) restrict eating fish/fishery. o Elbe mouth in Hamburg/ O2 deficit, especially in summer blocks connectivities as does the only weir in the German Elbe stream. Downstream of Talsperren, temperature problems for fishes in outflow.
65.	Extent of flow and channel modification	B	- RBMP Elbe - According to Art 5 report, > 50% of surface water bodies and groundwater bodies will not reach the good ecological status/potential by 2010. Connectivity is one of the main issues in the sub-basins.
66.	Impact of land-use changes on hydrological processes	B	Floodplains have been used for agriculture/ building but are increasingly "given back" e.g. Biosphärenreserverat. Floodplain establishment has led to constraints to agriculture for the contamination of the sediment brought with the floods. Local increase of flood risk due to sealed land (more sub-basin issue)

No.	Indicator	Score	Comments
67.	Uncertainty associated to climate change predictions regarding precipitation for the basin	Upstream: C to D (0.2-0.4) Mid- and downstream: B (0.6-0.8)	Source: Illustration from MAGICC-SCENGEN tool at the end of the guidance document Comment by group: introduce different scores; highest uncertainty should be C. (too late. Scores won't be changed). Also hypotheses as laid out in the guidance document is questioned, since high uncertainty is not necessarily the problem but the potential for extreme changes makes the process more difficult.
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)	D: A CZ: 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	D: A (100%) CZ: A (100%)	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	D: A (100%) CZ: A (100%)	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)	D: A CZ: C	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	D: A (100%) CZ: B (99%)	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	D: A (100%) CZ: 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			

No.	Indicator	Score	Comments
74.	Participatory regarding decision making in the water sector	B-	<ul style="list-style-type: none"> - Obligatory and widespread hearing of experts and interested parties in comprehensive formal arrangements for public participation (Raadgever & Mostert, NeWater Del. 1.3.1, Chap. 2.5) - However: Stakeholders often claim that they don't know how their comments have been taken into account, especially at regional/local (even though they participated in active-involvement institutions; may be C instead of B) <p><u>Post-processing comment:</u> The score was changed from "B/C" to "B-". According to the comments "C" appears too strict as overall score.</p>
75.	Transparency regarding water allocation	A	<ul style="list-style-type: none"> - Water allocation is not a big issue until now
76.	Effectiveness and efficiency regarding decision making in the water sector	B-	<ul style="list-style-type: none"> - There is a high uncertainty on how to achieve the env. Objectives of the WFD at all, let alone in an efficient way. So if you consider the env. Obj. The goals of WRM you might say C. However, comparing this with other non-European basins, maybe it's also a level of ambition might be considered rather high. - Achievements of WFD obj is most certainly not efficient because a basin scale approach is not applied in the selection, planning and implementation of measures. Cost-efficiency methodology has now only been applied in a rather pragmatic and limited way. <p><u>Post-processing comment:</u> The score was changed from "B (in general), C (WFD implementation)" to "B-", because the indicator refers to water management in general, even though the WFD is an important aspect.</p>
77.	Equitable and inclusive	A	
78.	Predictability – with regard to IWRM and climate change	A	<ul style="list-style-type: none"> - Adaptation strategies to climate change is under development
78.a	<i>Case-specific indicator(s)...</i>		

No.	Indicator	Score	Comments
III) Stakeholder participation			
79.	Deliberative engagement opportunities	B	<ul style="list-style-type: none"> - Public participation following WFD requirements - There is no national stakeholder platform in the Elbe basin. The international stakeholder forum meets about every two years.
80.	Inclusiveness of stakeholder participation	A	<ul style="list-style-type: none"> - Public participation following WFD requirements - Not for all processes stakeholder analysis
80.a	<i>Case-specific indicator(s)...</i>		
IV) Response to climate change			
81.	Strategy for adaptation to climate change in the water sector	C+	<ul style="list-style-type: none"> - Specific Annex on climate change impacts on RBMP exists. Adaptation strategy at regional level (Federal States) are in preparation with reference to water - Problems with the options/ scores
82.	Availability of specific knowledge enabling adaptation	B	<ul style="list-style-type: none"> - Ongoing process with partial regional results - In some regions A
83.	Awareness of water managers regarding adaptation to climate change	B	Awareness raised by Development at EU level (CIS-Guidance on CC and water), International Elbe level (International Commission for the Protection of the Elbe, ICPE), national (LAWA, BMU) and regional level
84.	Coordinated implementation process regarding adaptation to climate change: Program / Plan of activities and measures	A	National Adaptation Action Plan due 2011, backed by strategies & programs at Federal State Level (implementation)
85.	Operational activities (measures)	C	Activities are in progress

No.	Indicator	Score	Comments
86.	Ways to deal with climate variability (floods and droughts)	A	<ul style="list-style-type: none"> - National + International forecast systems - For flood events, there are well working early warning systems and disaster management structures in place. For heat/drought, until now the events haven't been too extreme to cope with and currently research/ governmental activities exist to develop strategies/ practices to cope with them
86.a	<i>Case-specific indicator(s)...</i>		

Additional case-specific indicators

Please briefly define all case-specific indicators, which you have added, in the following table.

No.	Indicator	Definition	Hypothesis/ statement on relationship	Scoring scheme	How to assign scores (i.e. which indicators/ on which basis are scores allocated)	Comment on data source
	<i>Case-specific indicator 1</i>			- A	(A)	
	<i>Case-specific indicator 2</i>			- A	(A)	
	<i>Case-specific indicator 3</i>			- A	(A)	
	<i>Case-specific Indicator 4</i>			- A	(A)	
	<i>Case-specific Indicator 5</i>			- A	(A)	

Addendum - Context

No.	Indicator	Score	Comments
I) Basin Characteristics			
67a	Sub-Basin Size	96,932 km ²	<p>The total size of the Elbe basin is 148,268 km².</p> <p>Source: Krysanova, V., Blažková, S., Košková, R., Hesse, C., Martínková, M., Möllenkamp, S. I. Borowski (2005): Baseline Assessment of the Elbe Basin. [online] URL: http://www.newater.uos.de/deliverables/D331_Baseline_Assessment.pdf (= Deliverable 3.3.1 of the NeWater project)</p>
67b	Transboundary	Yes	<p>The Elbe basin is mainly shared by Germany and the Czech Republic. Tiny parts are located in Austria and Poland.</p> <p>Source: Krysanova, V., Blažková, S., Košková, R., Hesse, C., Martínková, M., Möllenkamp, S. I. Borowski (2005): Baseline Assessment of the Elbe Basin. [online] URL: http://www.newater.uos.de/deliverables/D331_Baseline_Assessment.pdf (= Deliverable 3.3.1 of the NeWater project)</p>

Addendum - Performance

Comment: Scores for the following indicators were chosen with reference to the river basin management plan by the FGG Elbe for the German part of the Elbe catchment (http://www.fgg-elbe.de/tl_fgg_neu/interaktiver-bericht.133/berichte-nach-art-13.html).

No.	Indicator	Score	Comments
I) Environmental sustainability			
a) State of the water resources and the environment			
87	Aquatic biodiversity	B	<p>The ecologic status of the German Elbe according to WFD as follows: 53% of the overall length of rivers and 2% of the overall area of lakes fail the good status because of the biological component “fishes”. These numbers relate not solely to the proportion of original native fish in the RB. Instead they are the result of a multi-criteria evaluation including age-structure, etc.</p> <p><u>Post-processing comment:</u> The missing score was set to “B”. According to table 2 in the document specified below, out of the 48 fish and cyclostomata species that had been present in the German part of the Elbe basin until 1900, three were extinct in 1990-1999. This corresponds to an extinction rate of 6.25%. Moreover, several species are threatened.</p> <p>Source: Gaumert, T. (2000): Die Entwicklung des Fischartenspektrums der Elbe mit Berücksichtigung der Neozoen-Problematik. [online] URL: http://www.arge-elbe.de/wge/Download/Texte/FischNeoz.pdf</p>
88	Invasive exotic species	A	<p><u>Post-processing comment:</u> The score was not changed. Gaumert (2000, see indicator 87) states that invasive fish species have not caused profound change in the fish fauna up to now.</p>

No.	Indicator	Score	Comments
89	Surface and groundwater quality	B-	7 % of all river water bodies and 6 % of lake water bodies fail the good chemical status (relating to thresholds of chemical concentration of a defined list of chemicals) (RBMP FGG Elbe, p. 69); 45% of all groundwater bodies have a “bad” chemical status (out of two possible status – “good” or “bad”) <u>Post-processing comment:</u> The score was changed from “B for SW, C for GW” to “B-“, because the value for surface water was weighted stronger than the one for groundwater.
90	Groundwater use	B+	4% of all groundwater bodies have a bad quantitative status (mainly due to salt mining activities) <u>Post-processing comment:</u> The score was changed from “A” to “B+“, because the comment states that “4% of all groundwater bodies have a bad quantitative status”.
91	Water Exploitation Index (WEI)	C (28%)	<u>Post-processing comment:</u> The score was changed from “A” to “C”. This is the WEI value calculated by Twin2Go partner DHI. It is based on the following source: Score at basin level (national part). Data reported by Germany to the EU Commission for the “Scarcity and Drought, 2. Interim report”, 2010.
b) Management practices			
92	Water allocated for aquatic ecosystem	A	No specific allocation rules, but no drought or water scarcity situation
93	Water pollution incidents	A	Extensive monitoring network and appropriate emergency response plans in place
94	Water quality monitoring	A	Extensive monitoring networks in place covering biological, physical, chemical and quantitative quality
95	Hydrometeorological monitoring – levels	A	
96	Level of understanding of groundwater resources	A	