Twin2Go

Coordinating twinning partnerships towards more adaptive governance in river basins

Basin Report:

Questionnaire + Addendum

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

Thames Basin

Case Study from the TWINBAS project

Twin2Go receives funding from the European Community's Seventh Framework Programme under grant agreement n° 226571.

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.

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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?**	A	Yes; Water Act 2003 and European environmental legislation, particularly the Water Framework Directive
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**	A	
4.	**Domestic Water Law: On flow availability, third party rights and ecological requirements**	A	
5.	**Integration of domestic water legislation**	A	
6.	**Multilevel structure of domestic water legislation and subsidiarity**	A	
7.	**Existence of formal domestic administrative structure for water governance**	A	
8.	**National basin organisation or comparable arrangement**	A	Environment Agency
9.	**Formalised transboundary coordination organisation**		Not relevant
10.	**Formal institution (legislation) that prescribes the basin management principle**	A	Water resources Act

No.	Indicator	Score	Comments
11.	**Water (basin) strategies, programmes and plans**	A	Water Resources Strategy for England and Wales, 2009
12.	**Financing mechanisms: Degree of investment from private sector/ public/ other sources (e.g. international)**	A	
13.	**Economic instruments Is water for irrigation priced?**	A	
14.	**Economic instruments Is water for households priced in urban areas?**	A	Yes
15.	**Economic instruments Is water for industry priced?**	A	
16.	**Tradable permits related to water abstraction/use**	B	
17.	**Polluter pays principle (related to water)**	A	
18.	**Environmental subsidies (related to water)**	A	
19.	**Payment for ecosystem services (related to water)**	A	
20.	**Tradable permits (related to water quality, maximum, allowable loads etc.)**	A	
21.	**Environmental tax (related to water)**	A	
22.	**Presence of substituting informal institutions for management of water**	A	
23.	**Presence of complementary informal institutions for water management**	B	
23.a	***Case-specific indicator(s)…***		

No.	Indicator	Score	Comments
b) Formalisation of IWRM principles & Millennium Development Goals			
24.	**Formalised IWRM principles**	A	WFD
25.	**State of implementation of IWRM principles**	A	
26.	**Capacity to implement IWRM**	A	
27.	**Is universal and non-discriminatory access to safe drinking water and sanitation a goal?**	A	
28.	**Integration of wetlands in IWRM and IRBM***	A	
28.a	***Case-specific indicator(s)…***		
c) Decision making regarding uncertainties			
29.	**General practices for dealing with uncertainties**	A	
30.	**Dealing with uncertainties: Reversible and flexible options**	A	
31.	**Dealing with uncertainties: Safety margins**	B	
32.	**Are scenarios used for decision making?**	B	
33.	**Climate risks: Climate variability and change**	A	
33.a	***Case-specific indicator(s)…***		
II) Actor networks with emphasis on the role and interactions of state and non-state actors and power relationships			

No.	Indicator	Score	Comments
a) Cooperation and coordination structures			
34.	**Vertical coordination (governmental)**	A	
35.	**Horizontal coordination (governmental)**	A	
36.	**Role of local governments**	A	
36.a	***Case-specific indicator(s)…***		
b) Information sharing via formal rules, dependency relationships etc.			
37.	**Kinds of knowledge included => Role of experts/ science, local/traditional knowledge**	A	
38.	**Access to information => about expert knowledge and management plans**	A	
38.a	***Case-specific indicator(s)…***		
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	
40.	**Degree of centralisation**	B	
41.	**Technical capacity and economies of scale**	A	

No.	Indicator	Score	Comments
42.	**Legal obligations and responsibility**	A	
42.a	***Case-specific indicator(s)…***		

B) Context

No.	Indicator	Score	Comments
I) Societal dimension			
43.	**Proportion of the population living in rural areas**	10.3	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**	A (0.947)	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)**	A (0.36)	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)**	A (31,580)	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**	A (7.7)	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**	A (AAA)	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**	A	Press Freedom Index Source: Reporters without Borders, http://www.rsf.org/en-classement1003-2009.html Values for 2009
49.a	***Case-specific indicator(s)…***		
II) Good Governance Principles at the national level – legal basis at the national level			
50.	**Participatory regarding decision making in the water sector**	A	
51.	**Transparency regarding water allocation**	A	
52.	**Effectiveness and efficiency regarding decision making in the water sector**	A	
53.	**Equitable and inclusive**	A	
54.	**Predictability – with regard to IWRM and climate change**	A	

No.	Indicator	Score	Comments
54.a	*Case-specific indicator(s)…*		
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
56.	**Climate Moisture Index**	H	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%20 Variation%20for%20Climate%20Moisture%20Index&site=b2_cmi_annual_cv
58.	**Per Capita Equivalent of TARWA**	A (59,648)	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	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)**	D	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)**	D	Source: World Resources Institute, EarthTrends 2001, http://earthtrends.wri.org/pdf_library/maps/2-4_m_WaterSupply2025.pdf
62.	**Relative Water Stress Index**	E	Source: UNESCO, World Water Development Report II, http://wwdrii.sr.unh.edu/download.html

No.	Indicator	Score	Comments
63.	**Climate Vulnerability Index**	A	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	WFD RBMP
65.	**Extent of flow and channel modification**	C	
66.	**Impact of land-use changes on hydrological processes**	B	
67.	**Uncertainty associated to climate change predictions regarding precipitation for the basin**	C	Source: Illustration from MAGICC-SCENGEN
67.a	***Case-specific indicator(s)…***		

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**	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**	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)**	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**	A (100%)	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**	A (100%)	Source: UN statistics of MDG progress, http://mdgs.un.org/unsd/mdg/Data.aspx Values for 2006
73.a	***Case-specific indicator(s)…***		
II) Good governance principles as indicators for the process dimension			
74.	**Participatory regarding decision making in the water sector**	A	

No.	Indicator	Score	Comments
75.	Transparency regarding water allocation	A	
76.	Effectiveness and efficiency regarding decision making in the water sector	A	
77.	Equitable and inclusive	A	
78.	Predictability – with regard to IWRM and climate change	A	
78.a	*Case-specific indicator(s)…*		
III) Stakeholder participation			
79.	Deliberative engagement opportunities	A	
80.	Inclusiveness of stakeholder participation	A	
80.a	*Case-specific indicator(s)…*		
IV) Response to climate change			
81.	Strategy for adaptation to climate change in the water sector	B	
82.	Availability of specific knowledge enabling adaptation	A	
83.	Awareness of water managers regarding adaptation to climate change	A	
84.	Coordinated implementation process regarding adaptation to climate change: Program / Plan of activities and measures	B	
85.	Operational activities (measures)	B	

No.	Indicator	Score	Comments
86.	**Ways to deal with climate variability (floods and droughts)**	B	
86.a	***Case-specific indicator(s)…***		

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
	Case-specific indicator 1			- A	(A)	
	Case-specific indicator 2			- A	(A)	
	Case-specific indicator 3			- A	(A)	
	Case-specific Indicator 4			- A	(A)	
	Case-specific Indicator 5			- A	(A)	

Addendum - Context

No.	Indicator	Score	Comments
I) Basin Characteristics			
67a	**Sub-Basin Size**	13000 km2	
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	Physical modifications are barriers to fish migration.
88	**Invasive exotic species**	B	
89	**Surface and groundwater quality**	B	24% of surface water is in good ecological status by 2015. 16 % of groundwater bodies will be in good overall status,(River basin management plan Thames river basin district, December 2009)
90	**Groundwater use**	B	Abstraction levels exceed the rates at which aquifers recharge
91	**Water Exploitation Index (WEI)**		
b) Management practices			
92	**Water allocated for aquatic ecosystem**	B	Physical modifications are barriers to fish migration. Plans in the ,(River basin management plan Thames river basin district, December 2009) indicates initiatives to address this before 2015.
93	**Water pollution incidents**	B	In particular related to discharge of industrial waste water pollution
94	**Water quality monitoring**	A	A comprehensive monitoring of chemical, physical and biological parameters
95	**Hydrometeorological monitoring – levels**	A	Long term time records (TWINBAS WP 4)
96	**Level of understanding of groundwater resources**	A	