

# D.1.2: Minutes of Methodology Workshop

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with contributions from all Twin2Go Partners

**Twin2Go** Coordinating twinning partnerships towards more  
Adaptive governance in river basins

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## Document Information

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<b>Deliverable number</b>	D 1.2
<b>Deliverable description</b>	The aim of Twin2Go is to review and synthesise the research on adaptive and integrated water resources management in basins around the world. A key element for scaling up the results of the different IWRM projects is to elaborate a comprehensive methodological framework that allows evaluating all important attributes of adaptive water management and adaptive governance in the context of the impacts of and adaptation to climate change. The purpose of the comparative analysis of Twin2Go is an assessment of the performance of governance regimes with the focus on adaptation to climate change. This deliverable refers to project task 1.2: “Adaptation for analysis of selected projects/ basins with emphasis on adaptive water management, water governance as well as impacts of and adaptation to climate change”. Building upon the methodological experiences in the different projects a methodology workshop was conducted to find the basis for the synthesis of an adaptive methodological framework. The report at hand are the minutes of this methodology workshop
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## Content

1. Data basis for the Methodology Workshop
2. Presentations
3. List of Participants

## 1. Data basis for the Methodology Workshop:

### Inventory of available data in the Twin2Go projects and their basins regarding governance factors (First overview)

Number of basins for which data were delivered: 19

- Brahmatwinn: Lhasa River (Tibet); Wang Chu (Bhutan); Assam (India); Salzach (Germany, Austria); Lech (Germany/ Austria)
- NeWater: Rhine, Elbe, Tisza, Guadiana, Orange, Amudarya
- WETwin: Gemenc floodplain and the Danube basin, Nabajuzzi wetland and basin
- CABRI: Volga
- TwinBas: BioBio, Chile; Norstrom basin, Sweden; Thames basin, UK; Nura Basin, Kazakhstan; Okavango, Southern Africa

### First overall conclusion on data availability:

#### A) Water governance regime

##### I) Characteristics of environmental governance regimes

- Institutions and the relationship and relative importance of formal and informal institutions:
- Formalization of IWRM principles
- Decision making regarding uncertainties:

##### II) Actor networks with emphasis on the role and interactions of state and non-state actors and power relationships.

- Cooperation and coordination structures: data basis currently insufficient in most cases (particularly Twinbas and Brahmatwinn, but also in other projects the structures were not analysed in detail; At least some data are available in nearly all basins regarding “Kinds of cooperation structures within government”, “Vertical and horizontal coordination” and “PPP”
- Moderate data basis in all basins regarding Stakeholder participation. However, cultural and historical aspects of participation have not been investigated specifically in any of the basins
- Information sharing and Power relationships via formal rules, dependency relationships etc.: information should be very easy to get for European cases; in general none of the basins has investigated these issues, but for most of the basins it is assumed that information should be easily available

##### III) Multi-level interactions across administrative boundaries and vertical integration across levels and horizontal integration across sectors;

- Degree of centralization (Regime characteristic): moderate basis of data for all basins, except of “Frameworks for Diffusion of innovations” and “Flow of authority bottom-up and/or top-down?”, moreover: no information provided for Twinbas

#### B) Context

##### I) Societal dimension

- Data basis quite diverse, but basic data should be quite easily available
- At least “state of societal development” and “Effectiveness of formal institutions” were investigated in nearly each basin

## II) Environmental dimension

- No problem at all, nearly all factors have been investigated in each basin

## C) Performance

### I) Good governance principles as indicators for the process dimension

- - Data basis quite diverse, good data basis for Brahmawinn, NeWater, Wetwin (Nabajuzzi) and CABRI, large gaps for the other projects; these data are not easily to assess

### II) Response to climate change

- moderate data basis for general questions, such as Is climate change happening? Expected changes/impacts, status of the adaptation strategy
- more diverse is the data basis in the projects, when it comes to the more specific questions: for the European basins, information is usually available; within the non-European basins information is available particularly for the African cases,
- Twinbas: information virtually only available for the European cases (Sweden and UK)
- In general: the issues regarding the response to climate change have to be assessed on the national scale – data re the river basin scale are hardly available

## A) Water governance regime

### I) Characteristics of environmental governance regimes

#### a) Institutions and the relationship and relative importance of formal and informal institutions:

	Brahmatwinn	NeWater	WETwin	CABRI	TwinBas
Spatial scale	national	investigation scale: (sub)basin, institutions: mainly national	investigation scale: (sub)basin, institutions: mainly national	national	basin
Formal regulatory frameworks	legislation documents are listed	WFD, FD, national water acts, water resolutions,	List related to floodplain available, partly also for gen. water management	National Water Code, 2006, list available	WFD and water codes
National water legislation	Water legislation (at least clauses) in all cases, partly characterised	Water legislation (at least resolutions) in all cases, most are characterised	Water legislation (at least clauses) in all cases, partly characterised	Water code, in detail characterised	National water legislation or water code, partly characterised
Do specific quality/ quantity norms exist	Only for German/ Austrian cases	Yes, in most cases, often via WFD	yes	yes	2 basins via WFD, two basins: unknown, Biobio: partially,
regulations/ norms were investigated	all available legislation documents re water, land use, ... with focus on floods	Yes, WFD, flood management in most cases,	Wetland buffering capacity, access rights, Water Balance activities, papyrus harvesting, fisheries, livestock grazing	?	?
investigation distincts between water users' categories	e.g. nature conservation, drinking water, but not industry, agriculture	Mainly regarding agriculture, but stakeholder analyses are available	Only for Gemenc: main water uses are nature conservation, fishing, recreation	Yes	Yes, except for the Biobio
basin organization or comparable arrangement	Only for Danube (ICPDR), not for the other basins	Yes, ICPE/ ICPR, Confederaciones Hidrográficas, GUAD; ICWC in AMU, WMAs in SA,	ICPDR, Lake Victoria Env. Organisation, NBIs	WMA	Only Okavango Commission, all other basins have no RBA or only arrangements

formal role of basin organization	Yes for Danube	Yes, at least formal role was investigated	Investigated for Nabajuzzi Wetland, not for Danube	organisational structure, goals are considered	?
Design of the regime	Project research question: control mechanism via laws/ norms, Does the law allow enforceable review of government decisions by courts?	Partially, rather regarding implementation of hard or soft measures, less on enforcement structures, CPI available	General information available	information available	?
Financing mechanisms	No information available	Partially investigated, not in detail, information for some basins easily available	information available	information available	?
Economic instruments	Partially: water rights, insurance structures	Partially, exemplary (drinking water cooperations, subsidies, WFD), but not in detail,	Will be investigated (some data for Nabajuzzi already available)	information available	?

? = no information provided in the Excel file

### b) Formalization of IWRM principles

	Brahmatwinn	NeWater	WETwin	CABRI	TwinBas
formalized IWRM principles	Yes	yes	yes	yes	Yes
State of implementation of IWRM principles	investigated	investigated	Investigated in Nabajuzzi basin	investigated	investigated
Roles and responsibilities	Not investigated for Assam, for others sometimes only regarding specific relationships of certain actors	investigated	Investigated in Nabajuzzi basin	Investigated	investigated
Institutionalised capacities	Not assessed	Assessed to some extend, sometimes only for specific institutions (e.g. Elbe or Rhine and flood management)	Investigated with regard to floodplains	considered	Not assessed
Three pillars of sustainability	Investigated, but not for Tibet and India	Investigated for all basins, sometimes only social and ecologic pillar	Mainly ecologic pillar, social to some extend	Volga: Addressed and formalised	Addressed and formalised as part of the planning process in Sweden and UK, no information re other basins
Transboundary RBM	Investigated for all basins	Investigated for all basins	Not assessed for Demenc, but considered for Nabajuzzi	Volga = Inland basin	Only OKACOM was assessed (Okavango river)
Participation	investigated	investigated for WFD, partially for flood management	investigated	Considered	Investigated, but limited in the case studies
Integration		?	Not assessed	Considered	Investigated
Planning		?	Not assessed	Considered	Investigated

? = no information provided in the Excel file

### c) Decision making regarding uncertainties:

	Brahmatwinn	NeWater	WETwin	CABRI	TwinBas
Which kind of uncertainties are included	focus on runoff variabilities	uncertainty, not only about technical or data issues but also about strategic behaviour, different frames and action	Not considered at this stage of the project	hydrological viriability	?
Norms for risk management	Considered (no detailed information)	Investigated mainly for flood and drought management	Not considered at this stage of the project	risk management including floods and other hydrological hazards are regulated by the national law	?
Tools for risk management	Yes, regarding flood risk management	Investigated in general terms (soft or hard measures, etc., planning tools)	Not considered at this stage of the project	investigated	S and UK: Flood (and drought) management plans developed
“Good“ practices for dealing with uncertainties	Investigated, Buthan and Donau countries provide examples	not investigated, further: a goal of the project to come up with “good practices”	Not considered at this stage of the project	investigated	?
Are scenarios used for decision making	only in the project: IPCC emission scenarios:	Yes, in nearly all basins; information is available	Yes		S and UK: yes at sub-basin level; Okavango: in progress
Are modelling tools or Decision Support Systems used?	only in the project MULINO	Yes, in some basins; information is available	Yes		Partially within the projects

? = no information provided in the Excel file

## II) Actor networks with emphasis on the role and interactions of state and non-state actors and power relationships.

### a) Cooperation and coordination structures

	Brahmatwinn	NeWater	WETwin	CABRI	TwinBas
Kinds of cooperation structures within government	Research questions: divisions of responsibility among different government levels, duplication/ overlap, integration of levels via institutions	yes, at least the formal structure was always investigated	Partially investigated for Nabajuzzi	Investigated	Not assessed
Vertical and horizontal coordination	No information	yes, at least the formal structure was always investigated	Investigated	Investigated	Considered, but no details
PPP	Considered, some information available (not for all basins)	investigated only for Orange and Tisza	Investigated for both basins	investigated	Not assessed
Formal vs informal cooperation structures	No information	Investigated for AMU and Orange only, less for the European; some information on shadow networks	Investigated for Danube only	?	Not assessed
bottom up movements	not assessed	?	Investigated for Danube only	Poorly developed in Volga basin	?



### b) Stakeholder participation

	Brahmatwinn	NeWater	WETwin	CABRI	TwinBas
How is participation happening	Considered for WFD (Germany, Austria), Virtually non-existent in India and Tibet, unknown for Bhutan	investigated	Stakeholder engagement strategy	Investigated, but poorly developed; some examples of NGOs activities in the Volga basin	?
Instruments and processes of participation	Data only re WFD cases	Yes, re WFD and Flood Management,	Will be considered	Investigated, see above	?
Cultural norms/ history of participation	Not assessed	Partially, for some basins at least implicitly by the analysis of the institutional development	Most likely not assessed	Investigated, see above	?

? = no information provided in the Excel file

### c) Information sharing and d) Power relationships via formal rules, dependency relationships etc.

	Brahmatwinn	NeWater	WETwin	CABRI	TwinBas
Kinds of knowledge included	Some information available for Bhutan, India and the Danube cases	Information available, but not investigated in detail	not assessed, but data are available for Danube only	Investigated	Not assessed, UK: 10 point toolkit
Quality of deliberation	Some information available for all basins	Not investigated	not assessed, but data are available for Danube only	Not advanced in Volga basin	Information available for S and UK only
Access to information	Not considered, but some information available for all basins	Where not considered, information is easily available (e.g. EU directive)	not assessed, but data are available for Danube only	investigated	Good for S, UK and Okavango, limited for the other two basins
avenues to dissent	Considered, at least some general information is available for all basins	Where not considered, information is easily available	not assessed, but data are available for Danube only	not assessed, but data are available	data are available for S and UK only

### III) Multi-level interactions across administrative boundaries and vertical integration across levels and horizontal integration across sectors;

#### a) Degree of centralization (Regime characteristic)

	Brahmatwinn	NeWater	WETwin	CABRI	TwinBas
One level one actor?	?	Investigated for all, picture very diverse - depending on the case	Investigated: mainly one level one actor	Investigated: one level one actor	Investigated for Biobio and Nura Basin: one level one actor
Centralisation within or across sectors	For Tibet, Bhutan and India some information, not assessed for Danube?	Across: investigated, Within: not assessed	Centralisation within sectors	Centralisation within sectors	?
Frameworks for Diffusion of innovations	No information	No information	Not assessed	New mechanisms are introduced	?
Degree of vertical and horizontal integration via 1) actors 2) knowledge 3) institutions	No information, exception Bhutan: low hierarchical structures	Investigated: Institutions and actors	Not assessed	Investigated: formally integrated	?
Flow of authority bottom-up and/or top-down?	?	Investigated for all basins, diverse picture	?	?	?

? = no information provided in the Excel file

## B) Context

### I) Societal dimension

	Brahmatwinn	NeWater	WETwin	CABRI	TwinBas
State of societal development	Investigated for all basins	Investigated for all basins	Investigated for Nabajuzzi only	Data available	?
Cultural properties	?	Partially investigated for all basins	Investigated for Nabajuzzi only	?	?
Social sustainability (e.g. Gini Index)	?	Investigated for all basins	Investigated for Nabajuzzi only	No assessed	?
Economic sustainability (e.g. GDP)	?	Investigated for all basins	Investigated for Nabajuzzi only	Data available	?
Effectiveness of formal institutions	Investigated for all basins	Partially investigated for all basins	Investigated for Nabajuzzi only	Considered, some Data available	?

## II) Environmental dimension

	Brahmatwinn	NeWater	WETwin	CABRI	TwinBas
Water availability and its variability	Investigated for all basins	Investigated for all basins	Investigated in Gemenc	Data available	Investigated for all basins
Natural Storage Capacity	Investigated for all basins	Investigated for all basins	Not assessed	Data available	Investigated for all basins
Degree of Human Influence	Investigated for all basins	Investigated for all basins	Investigated in Gemenc and Nabajuzzi	Data available	Investigated for all basins
Water Quality	Investigated for all basins	Investigated for all basins	Investigated in Gemenc	Data available	Investigated for all basins
Biodiversity Classification	Investigated for all basins	Investigated for all basins	Investigated in Gemenc and Nabajuzzi	Data available	Investigated for all basins

## C) Performance

### I) Good governance principles as indicators for the process dimension

	Brahmatwinn	NeWater	WETwin	CABRI	TwinBas
Participatory	Investigated	Investigated	Not for Gemenc, but planned for Nabajuzzi in 2010	low	?
Consensus oriented	Investigated	Not assessed	“	medium	Investigated
Accountable	Investigated	Not assessed	“	medium	?
Transparent	Investigated	Not assessed	“	medium	?
Responsive	Investigated	Partially assessed	“	low	?
Effective and efficient	Investigated	Partially assessed (effectiveness)	“	medium	?
Equitable and inclusive	Investigated	Not assessed	“	low	?
Follows the rule of law	Investigated (accountability)	Partially assessed	“	medium	?

### II) Response to climate change

	Brahmatwinn	NeWater	WETwin	CABRI	TwinBas
Is climate change happening?	Yes in all basins	Yes in all basins	Yes in all basins	Yes	Yes, but not always documented for each basin
Which changes of climate are expected in the region	Information available	Information available	Information available	Information available	Information partially available
What are expected climate change impacts in the region	Information available	Information available	Information available	Information available	Information partially available
status of the adaptation strategy implementation	Tibet: Slow start Bhutan and India: progressed Germany and Austria: progressed	All basins: Adaptation to climate change starts, but slowly, in West-European basins progressed	Gemenc/ Danube (Hungary): progressed; Nabajuzzi: between traditional and slow adaptation	Slow start of adaptation	Where information is available: slow start
attempt to integrate the climate change issue under other policies	Yes, in all basins integration into other policies/ institutions takes place	Yes, at least in most cases	Yes, in both cases	Formally yes	Only in UK, no info for other basins

Related to climate change:	Brahmatwinn	NeWater	WETwin	CABRI	TwinBas
shared recognition of climate change related problems?	Yes for Bhutan and India, Tibet (in provinces) No information for the other basins	Not for AMU, unknown for Tisza, Yes for all other basins	Some information available (national level Hungary? And Nabajuzzi basin level)	Investigated	No data for Biobio, UK, Kazakhstan; Some info for S and Okavango
shared vision for an adaptation strategy and action plan?	No, often even contrary plans (India and Tibet), Danube: basin wide flood management plan	Not for AMU, unknown for Tisza, Yes for all other basins	Some information available (national level Hungary? And Nabajuzzi basin level)	Not assessed	No data for Biobio, Kazakhstan; Some info for S and UK
Program / Plan of activities and measures related to adaptation?	Upcoming in next years in Bhutan, no info for other basins Danube: basin wide flood management plan	Not for AMU, Via WFD, some information available	Some information available (national level Hungary? And Nabajuzzi basin level)	Investigated	In UK only (S: no info, the others: no plan)
institutional adaptations taking place or planned	Upcoming in next years in Bhutan, India: Disaster management act; Danube: basin wide flood management plan	Not for AMU, via WFD and FD in Europe, to some extend also in the other basins	(national level Hungary? And Nabajuzzi basin level)	not assessed	In UK and S only (the others: no inst. adaptation)
public awareness programmes	In all cases except of Bhutan (which is weird considering the development...)	Yes for all, for Tisza, AMU, Guadiana unknown	For Nabajuzzi only, none for Hungary	Some are available	In UK and S only (the others: no information)
co-operation structures between different sectors	Information available for Danube only	Yes for all, for Tisza, AMU, Guadiana unknown	For Nabajuzzi only, none for Hungary	interdepartmental comission under ministry for natural resources	In UK and S only (the others: no information)
co-operation structures with non-gov. actors? If yes, do they contribute to agenda setting, etc.? and do they undertake actions themselves?	Information available for Danube only, but no details	Informally yes for all (Orange only little), unknown for AMU and Guadiana,  No details available	For Nabajuzzi only (non-gov.: scientists with own actions), none for Hungary	Not assessed or no co-operation? But: some governmental actors take actions themselves	In UK and S only, but no further details  (the others: no information)
Existing or planned adaptation measures	Information available for the Danube	Some Information available	Investigation planned for Nabajuzzi, but not for Gemenc	not investigated, but data is available if needed	Information available, but not for Kazakhstan
drivers for developing an adaptation strategy	Not assessed	Information available	Investigation planned for Nabajuzzi, but not for Gemenc	Not assessed	Information available, but not for Kazakhstan
barriers for developing an adaptation strategy	Not assessed	Information available	Investigation planned for Nabajuzzi, but not for Gemenc	Not assessed	Information available, but not for Kazakhstan

## 2. Presentations

# Twin2Go

Coordinating **T**winning partnerships  
towards more adaptive **G**overnance  
in river basins

## Analysis of the inventory table

Anita Bartosch

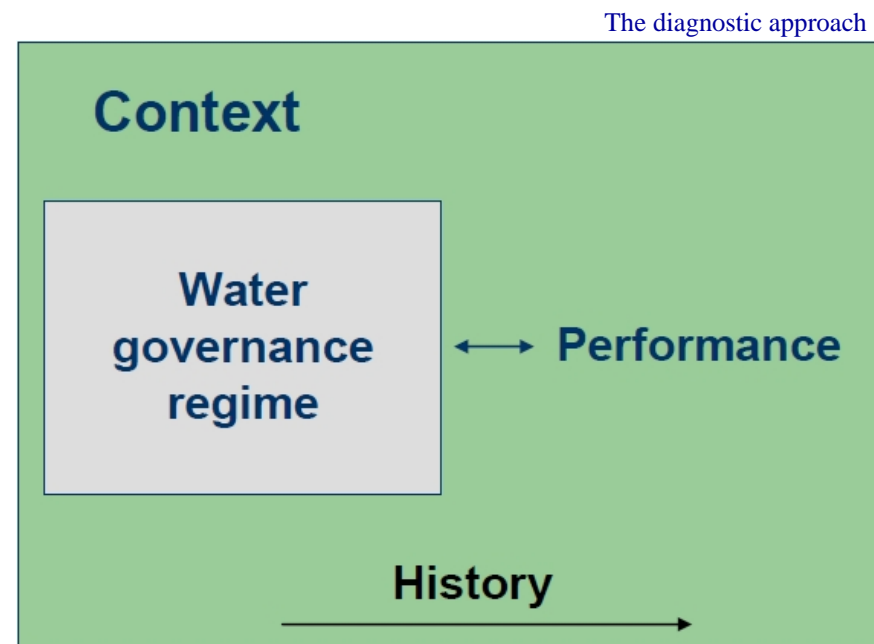
Osnabrück, 02. December 2009

## Inventory table

- Methodology framework was developed in October
- table has to be filled out for each project and basin until 18/11/09
- constitutes base for a comparison, which information is available, which not (focus on governance issues)

main domains:

- **Water governance regime**
- **Context**
- **Performance**



## Domains of the diagnostic approach



<b>A) Water governance regime</b>	
<b>B) Context</b>	
<b>C) Performance</b>	
<b>I) Good governance principles as indicators for the process dimension</b>	
Have the good governance principles been investigated or are information easily available:	
	1) Participatory
	2) Consensus oriented
	3) Accountable
	4) Transparent
	5) Responsive
	6) Effective and efficient
	7) Equitable and inclusive
	8) Follows the rule of law
<b>II) Response to climate change</b>	
	Is climate change happening?
	Which changes of climate are expected in the region?
	What are expected climate change impacts in the region? Positive and negative
	What is the status of the adaptation strategy implementation:
	1) Only traditional water management, no signs of moving to climate change adaptation
	2) Adaptation to climate change starts, but slowly
	3) Progress is visible: existing adaptation strategy, some measures are implemented, other planned
	4) Is there an attempt to integrate the climate change issue under other policies (particularly water policy, disaster management and land use planning)?



# Projects and River Basins



<b>Brahmatwinn</b>					
Lhasa River (Tibet)	Wang Chu (Bhutan)	Assam (India)	Salzach (Germany/Austria)	Lech (Germany/Austria)	
<b>NeWater</b>					
Rhine (Germany)	Elbe (Germany)	Tisza (Hungary)	Amudarya (Uzbekistan)	Orange (South Africa)	Guadiana (Spain)
<b>WETwin</b>					
Gemenc floodplain and the Danube basin	Nabajuzzi wetland and basin	Inner Niger Delta + Upper Niger basin	GaMampa wetland + Olifants basin	Ambras de Mantequilla wetland	
<b>CABRI Volga</b>					
Volga					
<b>TwinBAS</b>					
BioBio (Chile)	Norstrom basin (Sweden)	Thames basin (UK)	Nura Basin (Kazakhstan)	Okavango (South Africa)	
		ASEM Water Net			
		TWINLATIN			
Projects: 5 Basins:22					

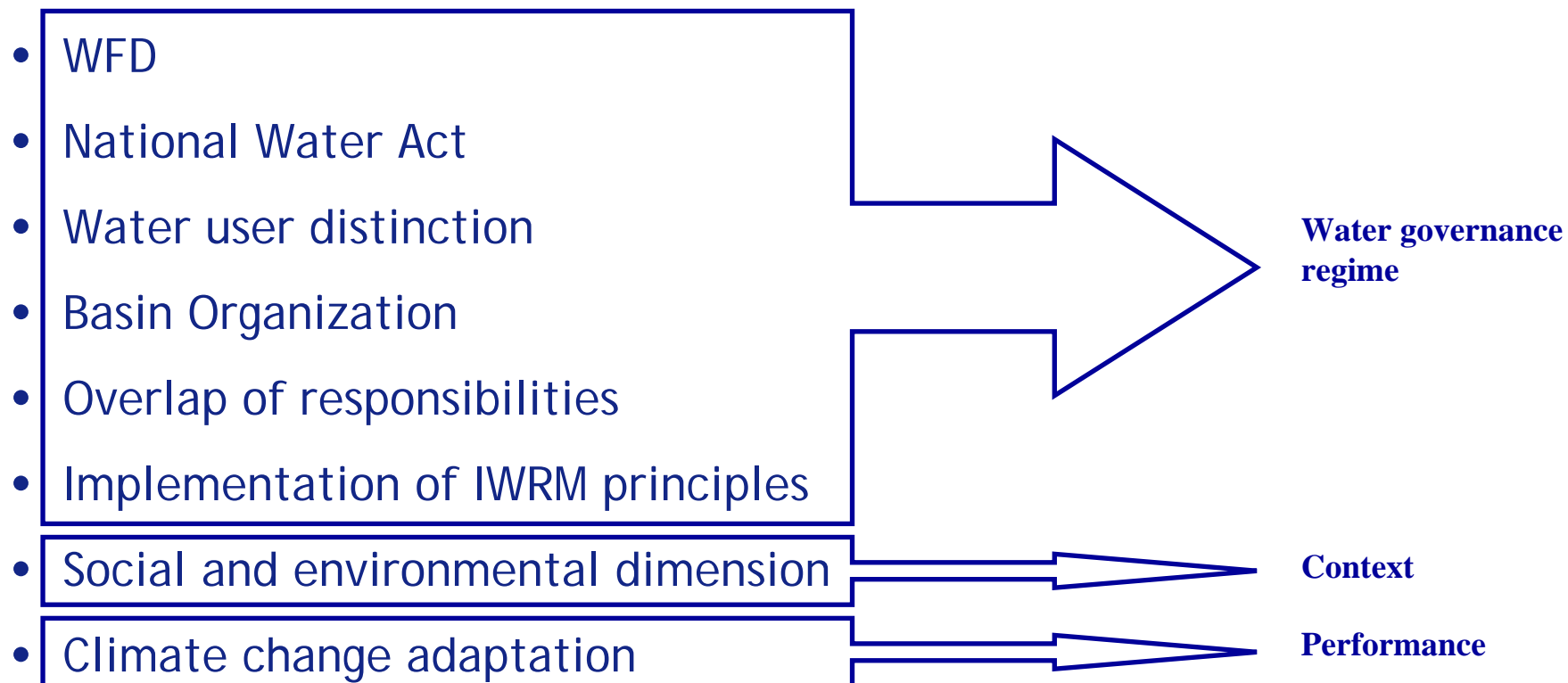
## First analysis considers

1. Identification of major data gaps and data problems in the basins
2. Issues of interest: water law, climate change adaptation, basin organization, IWRM principles, participation

## 1. Identification of major data gaps and data problems in basins

- **WETwin**, gaps because project has just started (run time 2008-2011), nearly no info: Inner Niger Delta + Upper Niger basin, GaMampa wetland + Olifants basin, Ambras de Mantequilla wetland, better: Gemenc floodplain and the Danube basin, Nabajuzzi wetland and basin
- **BRAHMATWINN**, less information to water governance in Tibet, problems to get data (e.g. data sharing between Tibet and India)
- **CABRI Volga and NeWater**, good data basis
- **Twinbas**: gaps in governance regime and performance in each basin

## 2. Issues of interest for first synthesis:



## Water governance regime I

- **WFD as formal regulatory framework** in Salzach, Lech, Rhine, Elbe, Tisza, Guadiana/ Spain, Norstrom basin, Thames
- **National water act:** in german basins, Lhasa River/ Tibet, Tisza/Hungary, Orange/ SA, Guadiana/ Spain, Nabajuzzi wetland and basin/ Uganda, Volga, Bio Bio/ Chile, Nura Basin/ Kazakhstan
- National water legislation is existing in each country
- Water users distinction: considered for most of the basins
- **Basin organization** existing for: Danube tributaries (incl. Tisza), Rhine and Elbe, Guadiana, Nabajuzzi wetland and basin (Lake Viktoria Org), Volga, Thames, Okavango
- **Definitively not existing** for Lhasa/ Tibet, Bio Bio/ Chile, Nura Basin/ Kazakhstan

## Water governance regime II



- **overlap and unclear responsibilities** or fragmentation: Tisza/Hungary, Assam, Tibet
- **Less information:** financial mechanism, design of regime (control mechanism), economic instruments, norms for risk management, „Good“ practices for dealing with uncertainties
- **Pillars of sustainability** adressed and formalized in most basins, also participation
- **IWRM principles** - formalised for each basin (some as draft), embedded in:
  - WFD in European basins,
  - Water mangement legislation in Bhutan (2003),
  - National Water Resource Strategy in SA (2004)
  - Water Policy and Water Act in Uganda (10 yrs)
  - Water legislation in Russia is based on IWRM (Volga, 40 yrs)...
- Gaps: actor networks (cooperation structures, stakeholder participation)
- Multi level interactions mostly assessed in NeWater basins (Rhine + Elbe)

## Context

- **Societal dimension** not considered in TwinBas
- Considered for Nabajuzzi wetland within WETwin
- NeWater basins and Brahmatwinn considered social issues for each basin
- For Volga some information to cultural properties and effectiveness of formal institutions
- **Environmental dimension** considered in all basins

## Performance

- Little information in WETwin, TwinBAS, more in NeWater and Brahmatwinn
- Good governance principles not investigated in WETwin and TwinBas basins, partly in NeWater and Brahmatwinn, for german river basins gaps in respect if governance principles are **responsive, effective and equitable**

### CC adaptation strategies:

What is the status of the adaptation strategy implementation:

1) Only traditional water management, no signs of moving to climate change adaptation	-
2) Adaptation to climate change starts, but slowly	Lhasa, Tisza, Guadiana, Nabajuzzi wetland and basin, Bio Bio, Okavango
3) Progress is visible: existing adaptation strategy, some measures are implemented, other planned	Wang Chu (Bhutan), Assam (India), german basins, Orange, Volga, Norstrom basin
4) Is there an attempt to integrate the climate change issue under other policies (particularly water policy, disaster management and landuse planning)?	Wang Chu, Assam, german basins in form of WFD, Orange, Gemenc floodplain and the Danube basin



## Summary

- No project covers all governance issues
- most gaps in WETwin basins (only Gemenc floodplain and Nabajuzzi wetland)
- most comprehensive: NeWater basins
- IWRM approaches or drafts are existing in each basin
- for projects ASEM WaterNet and TWINLATIN no comparison possible

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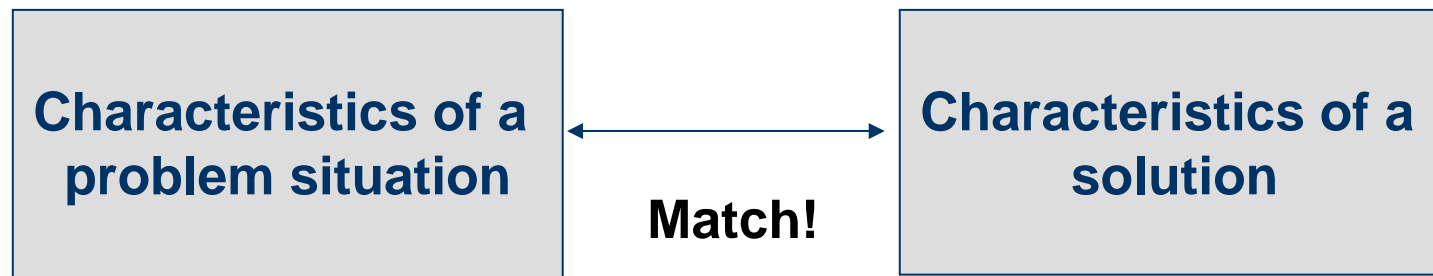
# Steps to develop methodology - WP1

- **KickOff – exchange and agreement on basic assumptions - elements**
- **Core group**
  - Develops template for review of existing approaches
  - Develops first outline for approach to be used in Twin2Go
- **Workshop (Dec 2009)**
  - Refinement of and agreement on approach developed by core group
  - Development of work plan how to apply method to analysing projects

# **Methodology for comparative analysis and diagnostic approach**

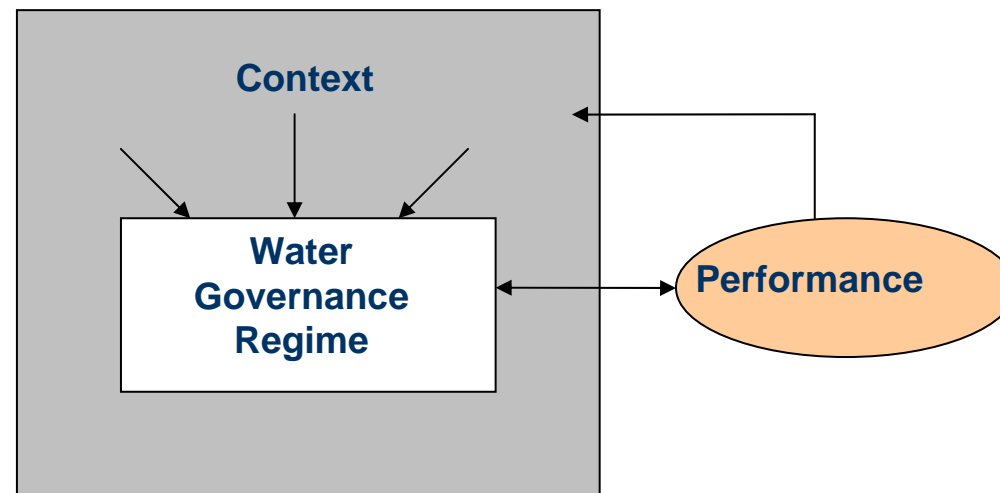


# A diagnostic approach



**No panaceas but context sensitive solutions (processes, instruments....) to improve the performance of water governance and management**

## A diagnostic approach cont...



Analyse how certain characteristics of a water governance regime influence its performance given a certain context in which the regime is embedded

# Context

- **Characteristics of the ‘water system’ that are assumed to have a strong influence on the nature of a water governance regime and its performance**

# Context Society

- State of societal development as indicator for available capacity (e.g. measured by the Human Development Index)
- Cultural properties
- Social sustainability (e.g. Gini Index as indicator for extent of inequality of basic assets)
- Economic sustainability (e.g. GDP related measures)
- Effectiveness of formal institutions (e.g. measured by the corruption perception index)



# Context Environment

- Water availability and its variability
- Natural Storage Capacity
- Degree of Human Influence
- Water Quality
- Biodiversity Classification
  
- Climate change - expected

# Water governance regime

***Water governance regime refers to the range of interdependent political, social, economic and administrative systems that have co-evolved over time and are now in place to regulate development and management of water resources and provisions of water services at different levels of society***

Derived from UNDP 2000 water governance definition

# Characteristics Water Governance Regime

- Institutions and the relationship and relative importance of formal and informal institutions;
- Actor networks with emphasis on the role and interactions of state and non-state actors and power relationships.
- Multi-level interactions across administrative boundaries and vertical integration across levels and horizontal integration across sectors

## *Hypotheses on characteristics of ....*

	<i>.....Integrated, Adaptive Regimes</i>
<b>Governance style</b>	Polycentric, horizontal, broad stakeholder participation
<b>Sectoral Integration</b>	Cross-sectoral analysis identifies emergent problems and integrates policy implementation
<b>Scale of Analysis and Operation</b>	Transboundary issues addressed by multiple scales of analysis and management
<b>Information Management</b>	Comprehensive understanding achieved by open, shared information sources
<b>Infrastructure</b>	Appropriate scale, decentralized, diverse sources of design, power delivery
<b>Finances and Risk</b>	Financial resources diversified using a broad set of private and public financial instruments

# Performance of water governance

**Indicators for the achievement of sustainable water resources management and the provision of water related services to different levels of society**

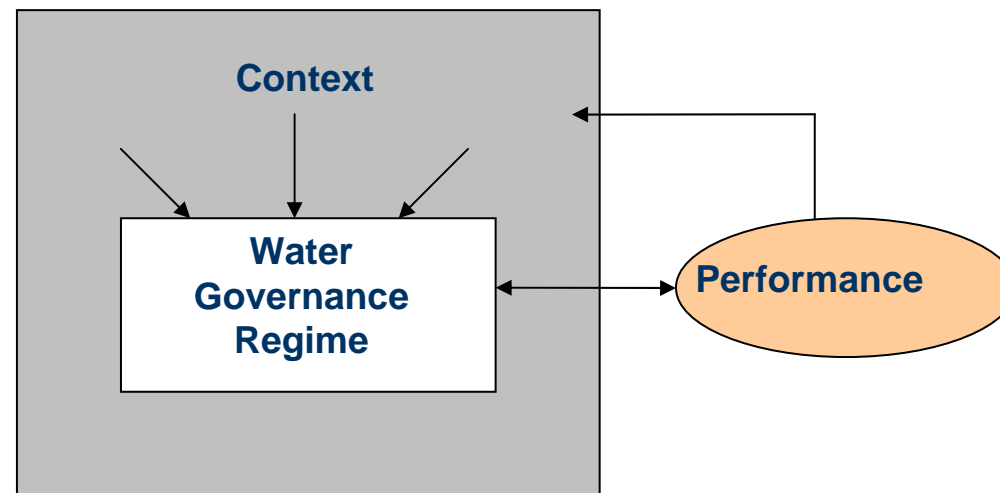
# Performance

- **Achievement of stated goals**

**Normative:**

- **Good governance principles**
- **Sustainability**
- **Adaptive capacity**
- **Response to climate change**

# How to perform the analyses...



.... analyse how certain characteristics of a water governance regime influence its performance given a certain context in which the regime is embedded

# Factors to be taken in consideration

- Heterogenous data base regarding availability and quality
- Limited possibility to collect further data

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- Set priorities for essential variables to be included and assess difficulty to get them
- Develop scoring scheme for each variable and possibly aggregated indicators
- Identify major data gaps and possibilities to close them



# Approach for comparisons

- **Qualitative comparison only – no attempt to use statistical methods like clustering analyses**
- **Comparison of individual variables**
- **Comparison of aggregated indicators**
- **Potential of grouping the cases in different types?**

# Example - Regime Centralization

**Working hypothesis:**

**A high degree of centralization has a negative impact on the ability of the regime to adapt to climate change in particular with respect to innovative and non-structural measures**

- **Expected would be that regimes with a high score in centralization have a low score in CC adaptation in general, and regarding non-structural measures in particular**
- **Might be influenced by some context variables – e.g. worse if formal institutions are non-effective**

**The knowledge base to be developed should allow to analyse at least in a qualitative way such statements.**

**It also should allow to search in a qualitative way for patterns of dependence relationships.**

# Approach for comparisons

- **Subjective expert judgement**
  - Assign score on a scale from 1 to X.
  - Calibrate method by clear defining upper and lower limit.
- **Ranking according to indicators**
  - Assign qualitative or quantitative scale to a scoring dimension
  - Define indicators that allow to assign the score

# Methods for scoring

- **Qualitative comparison only – no attempt to use statistical methods like clustering analyses**
- **Comparison of individual variables**
- **Comparison of aggregated indicators**
- **Potential of grouping the cases in different types?**

# Two Working Groups

## Topic:

- **Governance regime (Context social system)**
- **Performance (Context Environmental System)**

## Develop...

- ....protocol to characterize essential elements in different cases
- ....scoring scheme for variables and how to apply it

## List of Participants

### TWIN2GO Methodology Workshop 1<sup>st</sup> – 4<sup>th</sup> of December 2009 Osnabrück

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