



Institute of Environmental
Systems Research
University of Osnabrück



Introduction to the Management and Transition Framework - MTF

*Claudia Pahl-Wostl
Professor Resources Management
University of Osnabrück*

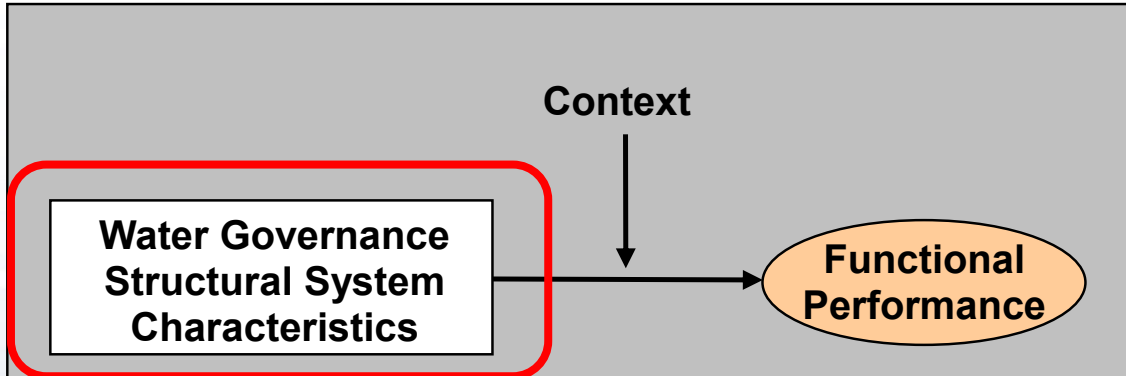
The Management and Transition Framework (MTF)

- ▶ ... has been developed in the context of a major EU funded project on adaptive and integrated water management
- ▶ ... is a flexible (methodological) framework to analyse complex water systems and transition processes
- ▶ ... is applicable in and supports analysis of different environmental and governance contexts
- ▶ ... provides a base for comparative analysis (standardized language)

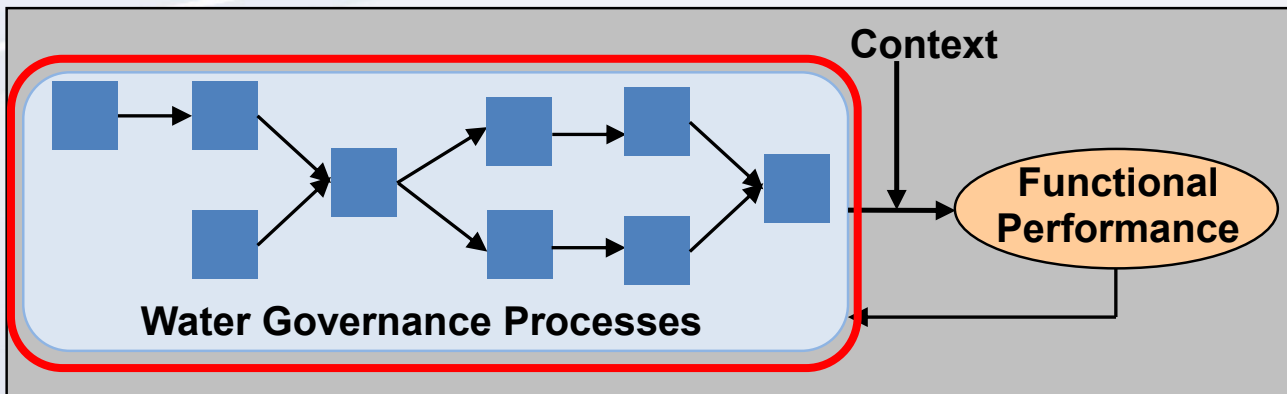
Key Research Questions to be Addressed with the MTF

- ***What are the characteristics of effective integrated and adaptive water governance and management systems?***
- ***How to determine if only adaptation or major (and which) structural transformations (= transitions) are needed?***
- ***How to support transformative change?***

Diagnostic Approach supported by the MTF

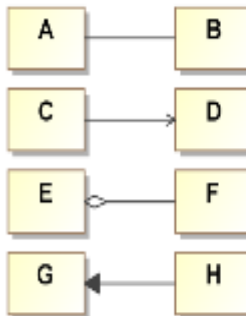
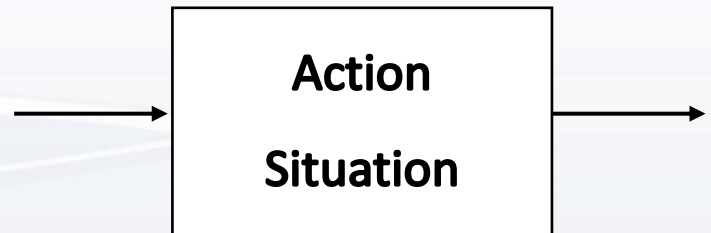
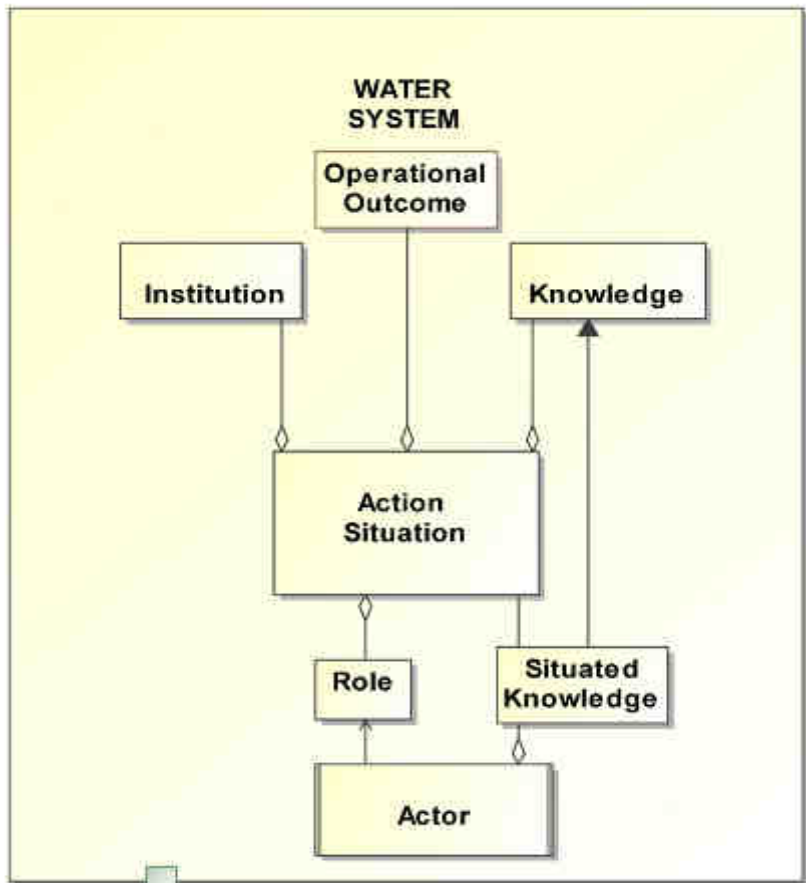


.... a configuration-based approach



.... a process-based approach

Elementary Building Blocks



A — B Association: Relationship between objects of class A and objects of class B with unspecified direction of the relationship.

C → D Uni-directional Association: Relationship between objects of class C and objects of class D with specified direction of the relationship.

E ◊ F Aggregation: Objects of class E contain objects of class F.

G ← H Generalization: Class H is a specialized form of class G.

Action Arena

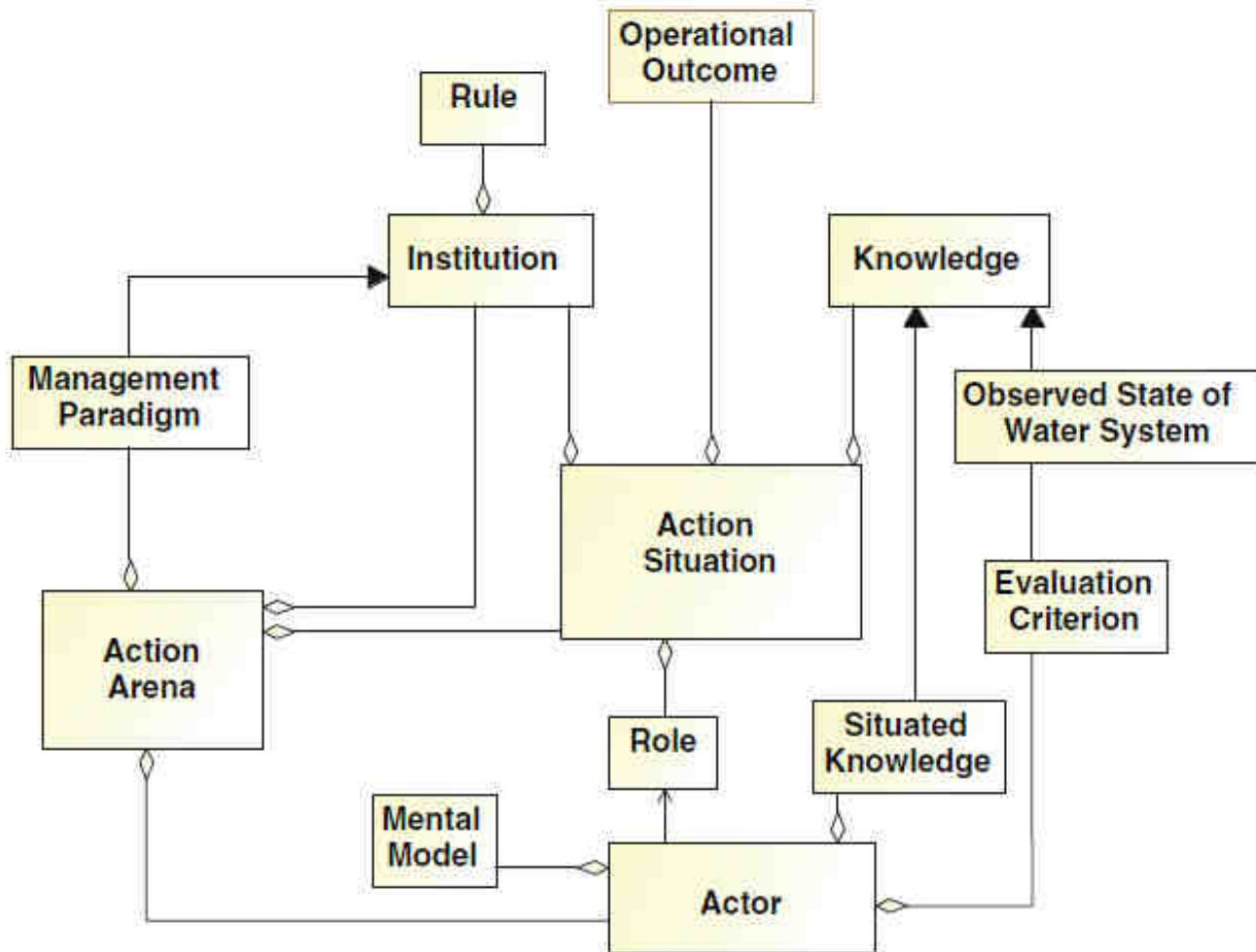
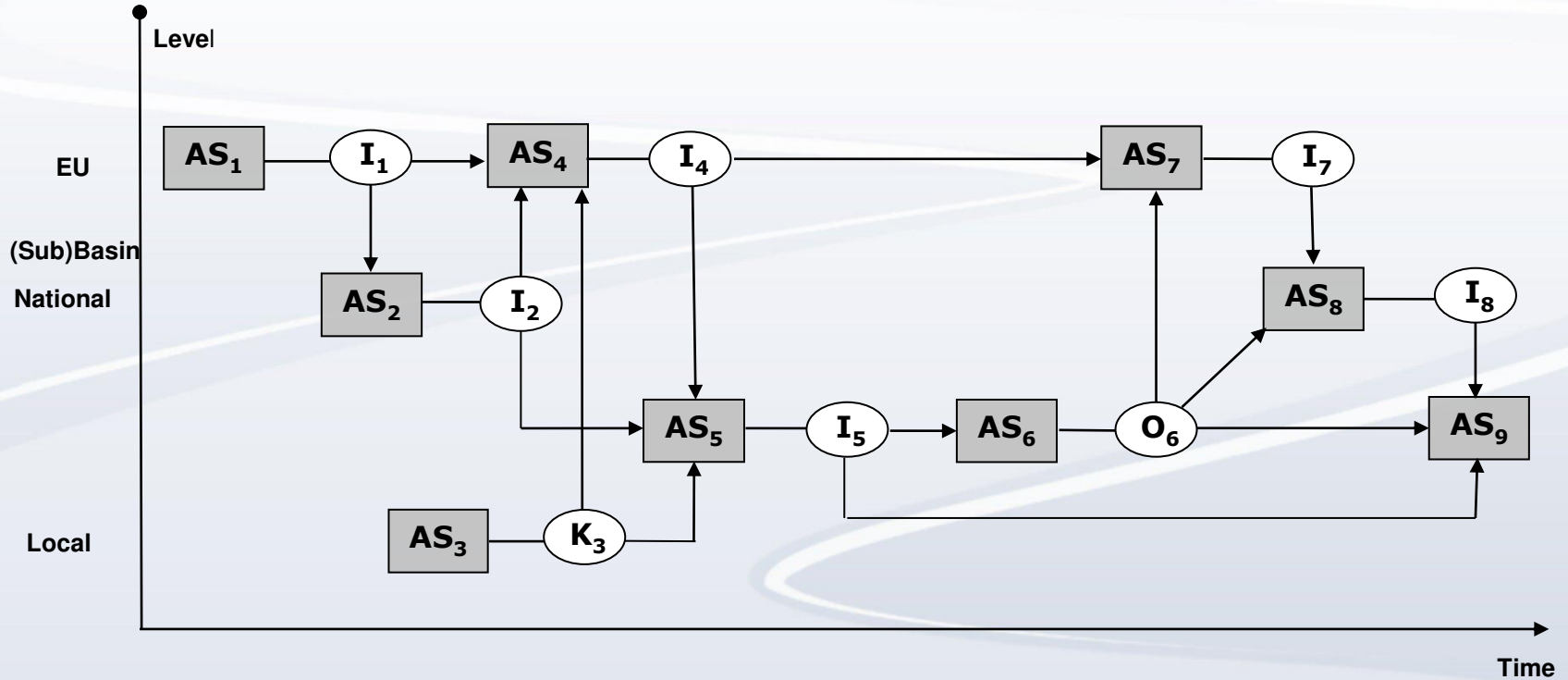


Fig. 4.3 Elementary building blocks of an Action Arena as represented in the MTF in UML notation (Unified Modelling Language). (Expansion of Fig. 3.5—see also for explanation of UML notation)

Chronological Mapping of Multilevel Water Governance Processes

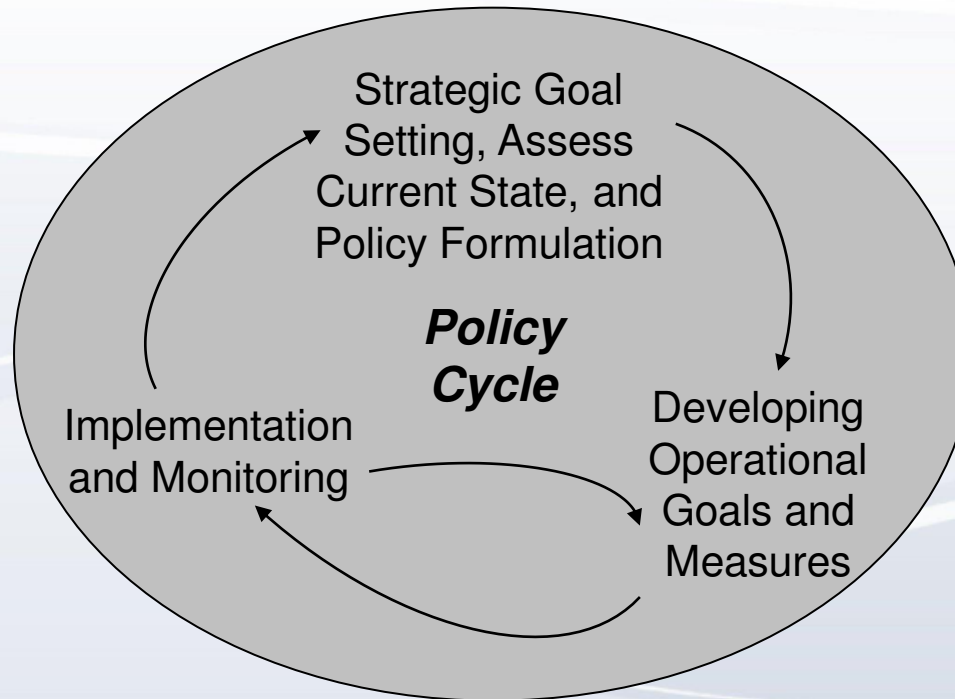


Operationalization of Water Governance System Properties

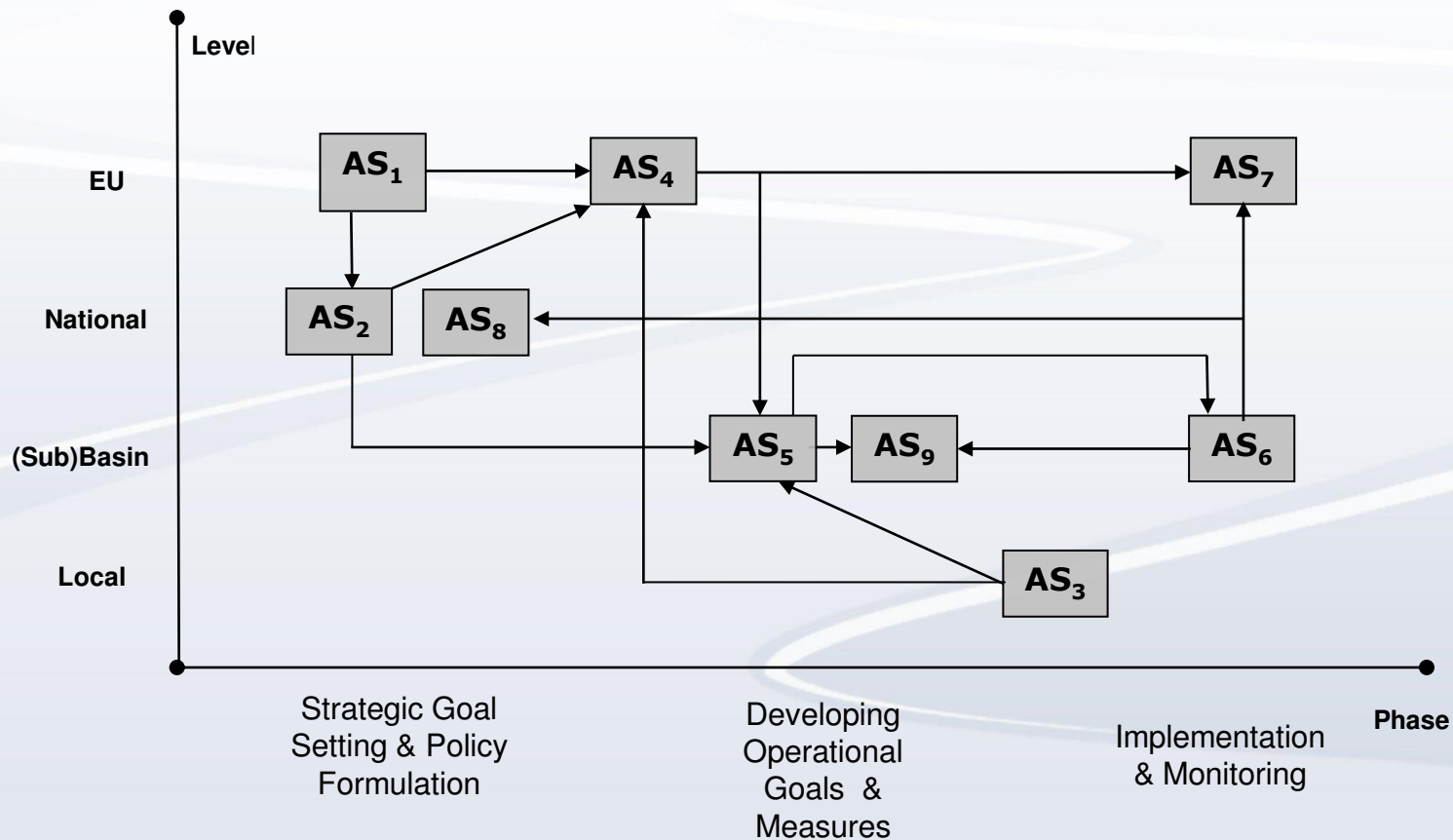
Table 9.3 Examples of operationalizing governance system properties using the MTF and derived relational databases (Pahl-Wostl et al. 2014)

Governance system property	Indicator	Operationalization in MTF database
Vertical integration	Link via institutions	Number of links between two levels by institutions connecting ASs and direction of influence
	Link via knowledge	Number of links between two levels by knowledge connecting ASs and direction of influence
	Link by actors	Number of actors from different levels participating in an AS
	Actors as integrators	Single actor is active on multiple scales by participating in ASs at several levels

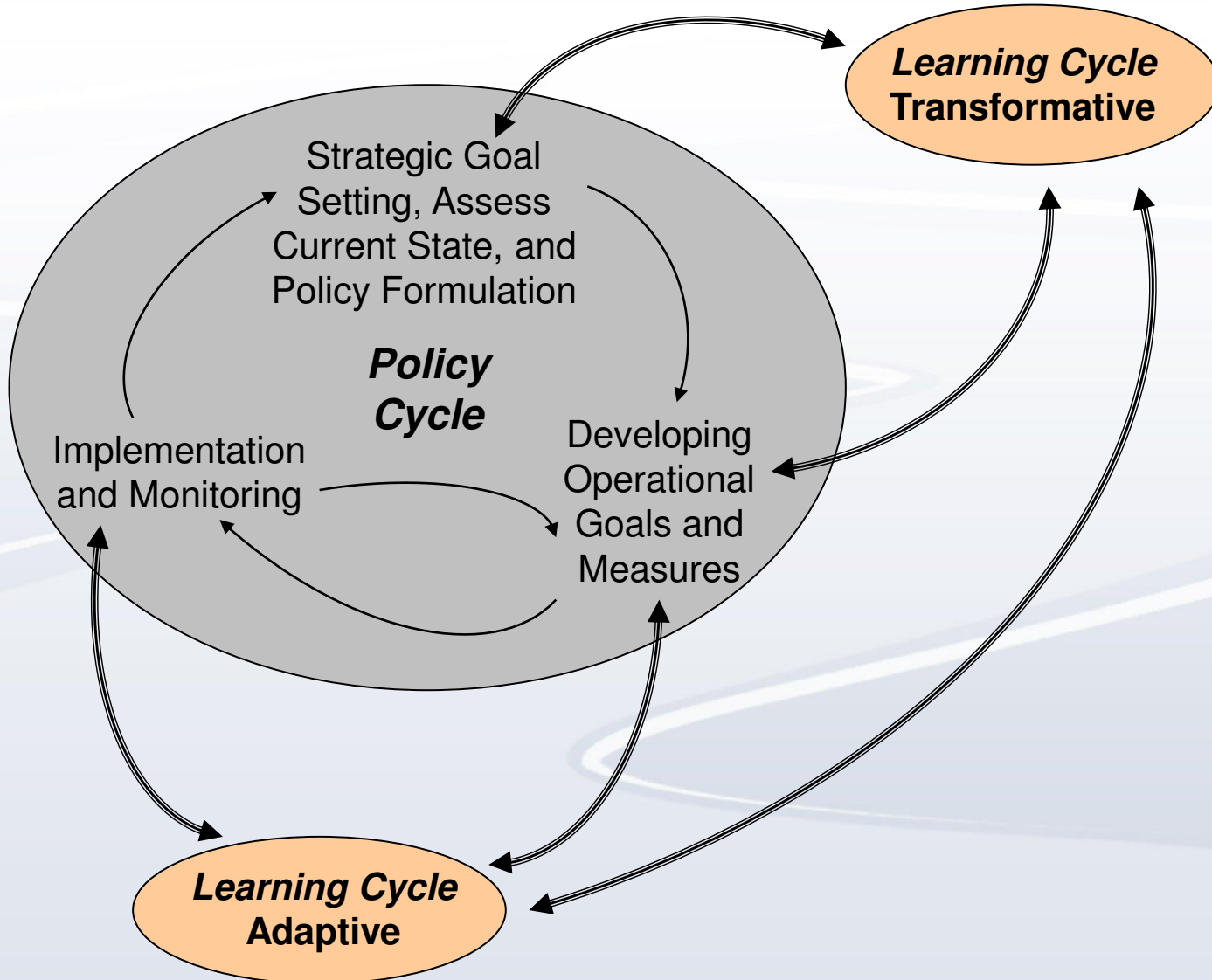
Stylized Representation of Policy Cycle



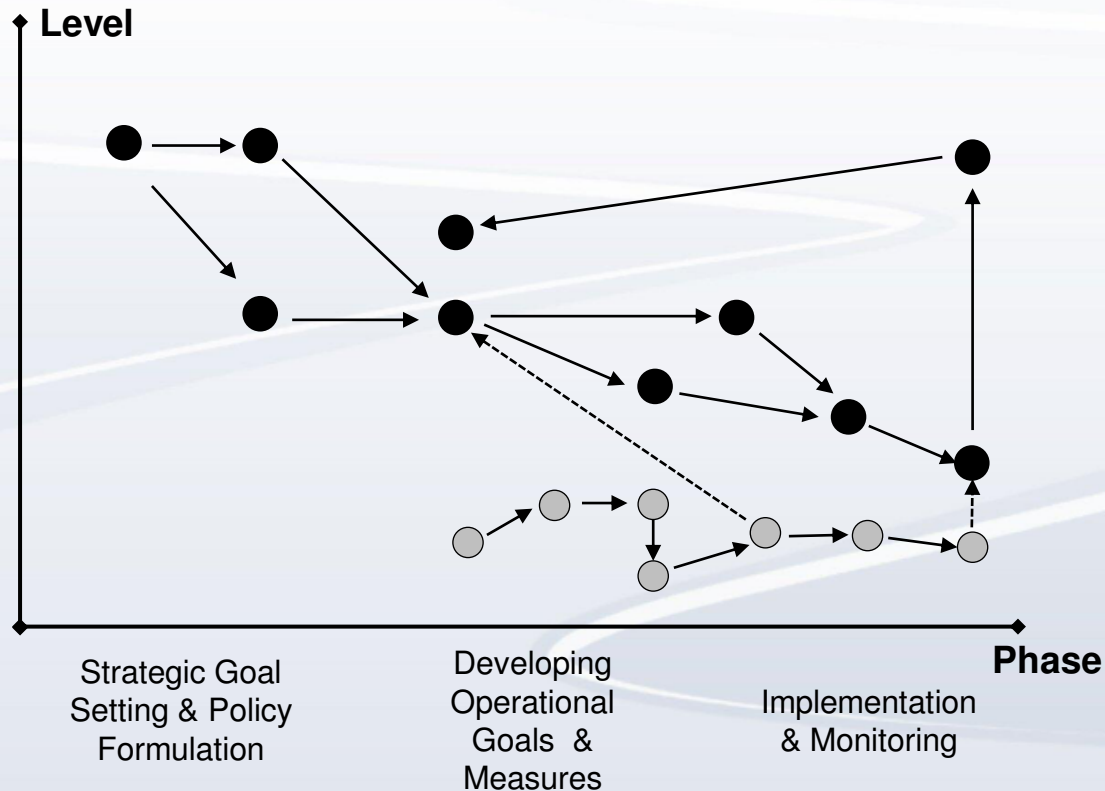
Mapping of Multilevel Water Governance Processes to Phases of Policy Cycle

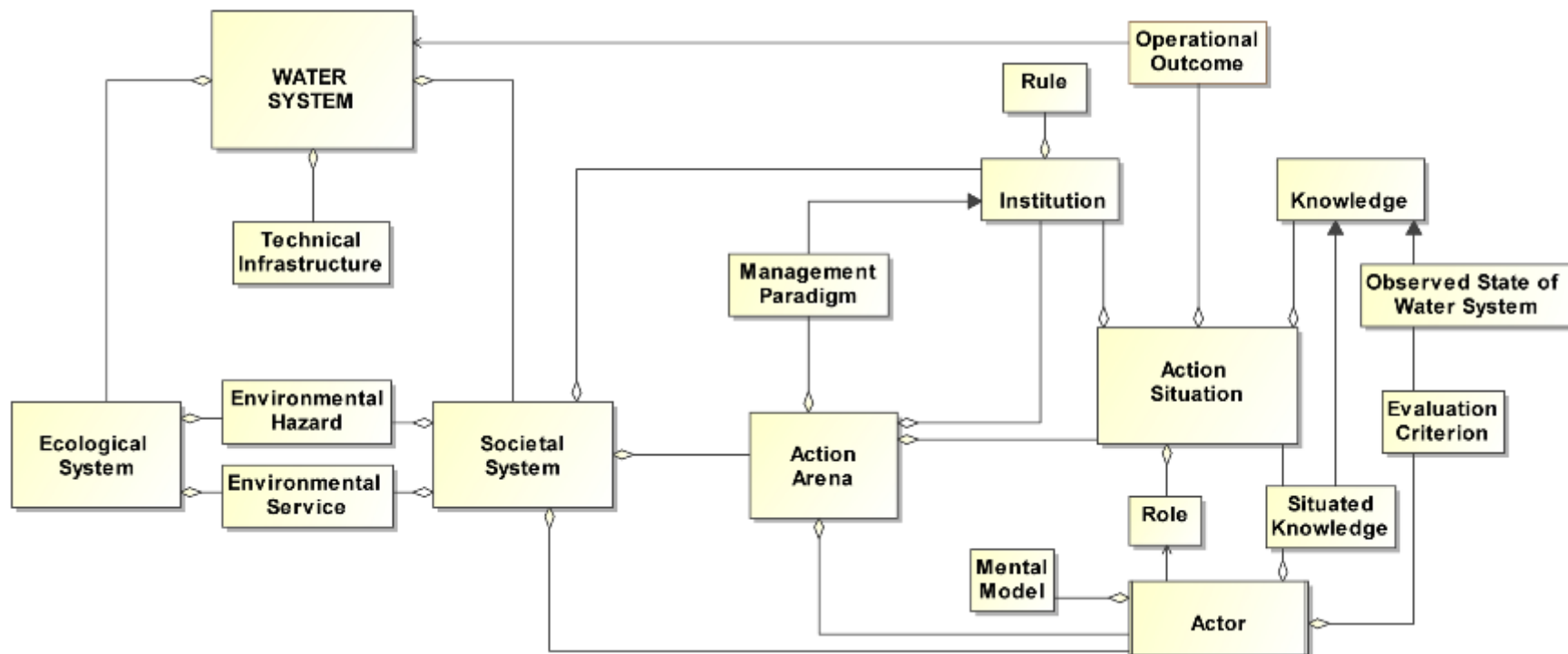


Stylized Representation of Learning and Policy Cycles



Multilevel Representation of Links between Learning and Policy Cycles





Legend

- Association:** Relationship between objects of class A and objects of class B with unspecified direction of the relationship.
- Uni-directional Association:** Relationship between objects of class C and objects of class D with specified direction of the relationship.
- Aggregation:** Objects of class E contain objects of class F.
- Generalization:** Class H is a specialized form of class G.

Class XY