

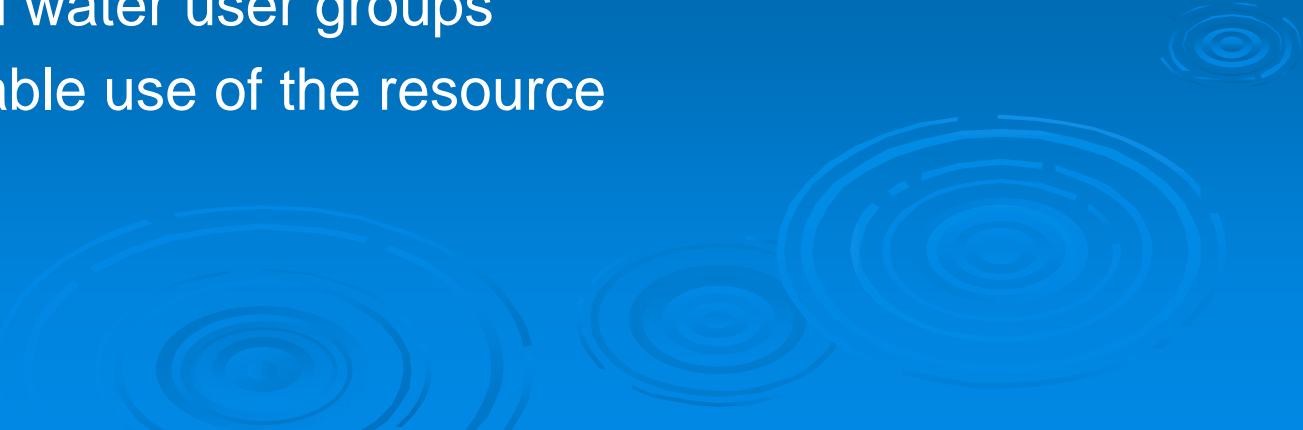
ENVIRONMENTAL WATER ALLOCATIONS AND WATER RESOURCES PROTECTION

Statistical, Economic and Social Research and Training Centre for Islamic Countries
Higher Council for Environment and Natural Resources
“Water Resources Management”

23rd-24th November, 2011
Khartoum, Sudan

Water legislation

Water legislation converts policy into law and should:

- Clarify the entitlement and responsibilities of user and water providers
 - Clarify the roles of the state in relation to other stakeholders
 - Formalise water allocation system
 - Provide legal status for water management institutions of government and water user groups
 - Ensure sustainable use of the resource
- 

Water legislation

- Procedures for policy/strategy/plan development
 - Water allocation and water rights
 - Water organizations
 - Water quality control
 - Systems of licenses, taxes and charges for water pollution control
 - Financing and cost recovery
 - Monitoring, policing, sanctioning
 - International and trans-boundary arrangements
- 

Legal instruments


- International agreement, treaty
 - Resolution, Directive, Regulation (EUWFD)
- Formal law
- Regulations
 - Minister, province
 - River basin authority
- Statutes, by-laws for RBOs and WUAs
- Plans
- Enforcement instruments
- Contracts
 - Public private partnerships

Water rights

- Systems of rights and permits
 - Characteristics
 - Legal pluralism
- Water allocation criteria
- Economic allocation
 - Tradable water rights
- Customary rights



IWRM applications

- Equitable water allocation
 - Allocation principles
 - Trans-boundary water allocation
 - Public participation and stakeholder involvement
 - Decision making
 - Planning
 - Enforcement
 - Public private partnerships
 - NGOs for water management
- 

Institutions (for IWRM)

- Institutional environment
 - Policies, strategies, legislation, financial arrangements
 - Water management organizations
 - River Basin Organizations
 - Water Users Associations
 - Institutional arrangements
 - Functional decentralization
 - Integrated planning arrangements
- 

Institutional framework (1)

- **Role of the government as facilitator and regulator**
 - Water resources planning and management is a central part of government responsibility
- **Agreeing on the level of government involvement**
 - Where does government responsibility cease?
 - Autonomous water services management bodies and/or community-based organisations



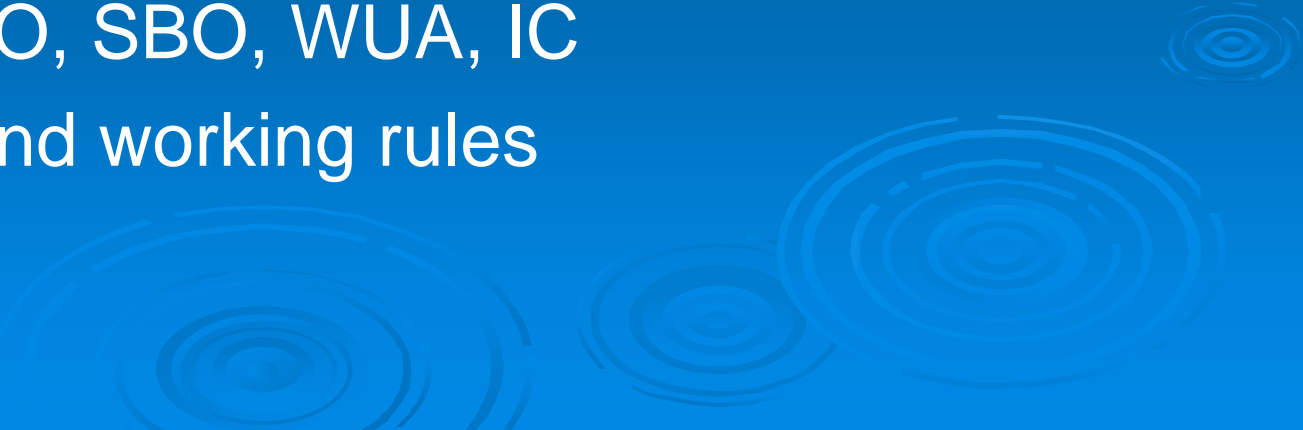
Institutional framework (2)

Institutional requirements

- Stakeholders to be involved in decision making
- Water resources management to be based on hydrological boundaries (e.g. a river basin)
- Organisational structures at a basin and sub-basin levels to enable decision making at the lowest appropriate level
- Government to co-ordinate the national management of water resources across water use sectors



Functional decentralization

- Transfer of functions to lowest appropriate level
 - Water management on hydrological boundaries
 - River basin as logical unit
 - Processes of delegation, de-concentration and devolution
 - Specific water management organizations
 - TRBO, RBO, SBO, WUA, IC
 - Functions and working rules
- 

Institutional arrangements

**CENTRAL
GOVERNMENT**

Ministry of
Water

Other
ministries

**DECENTRALISED
ORGANISATION**

River basin
organisation

Other
regional
authorities

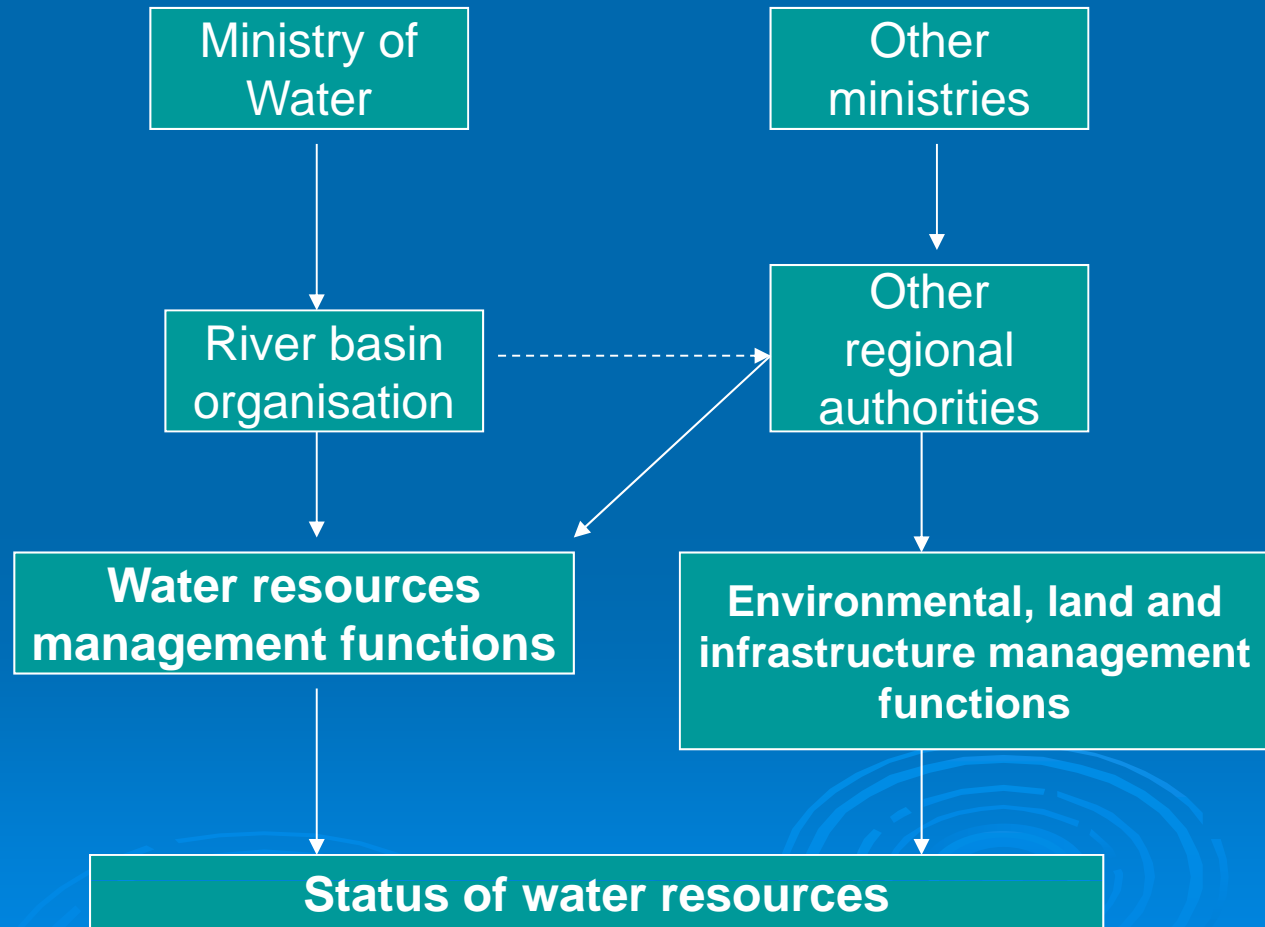
FUNCTIONS

Water resources
management functions

Environmental, land and
infrastructure management
functions

OUTPUT

Status of water resources



Institutional arrangements: RBO

River Basin Organisations (RBO)

- River basin is a logical geographical unit for IWRM implementation

Ideally an RBO should

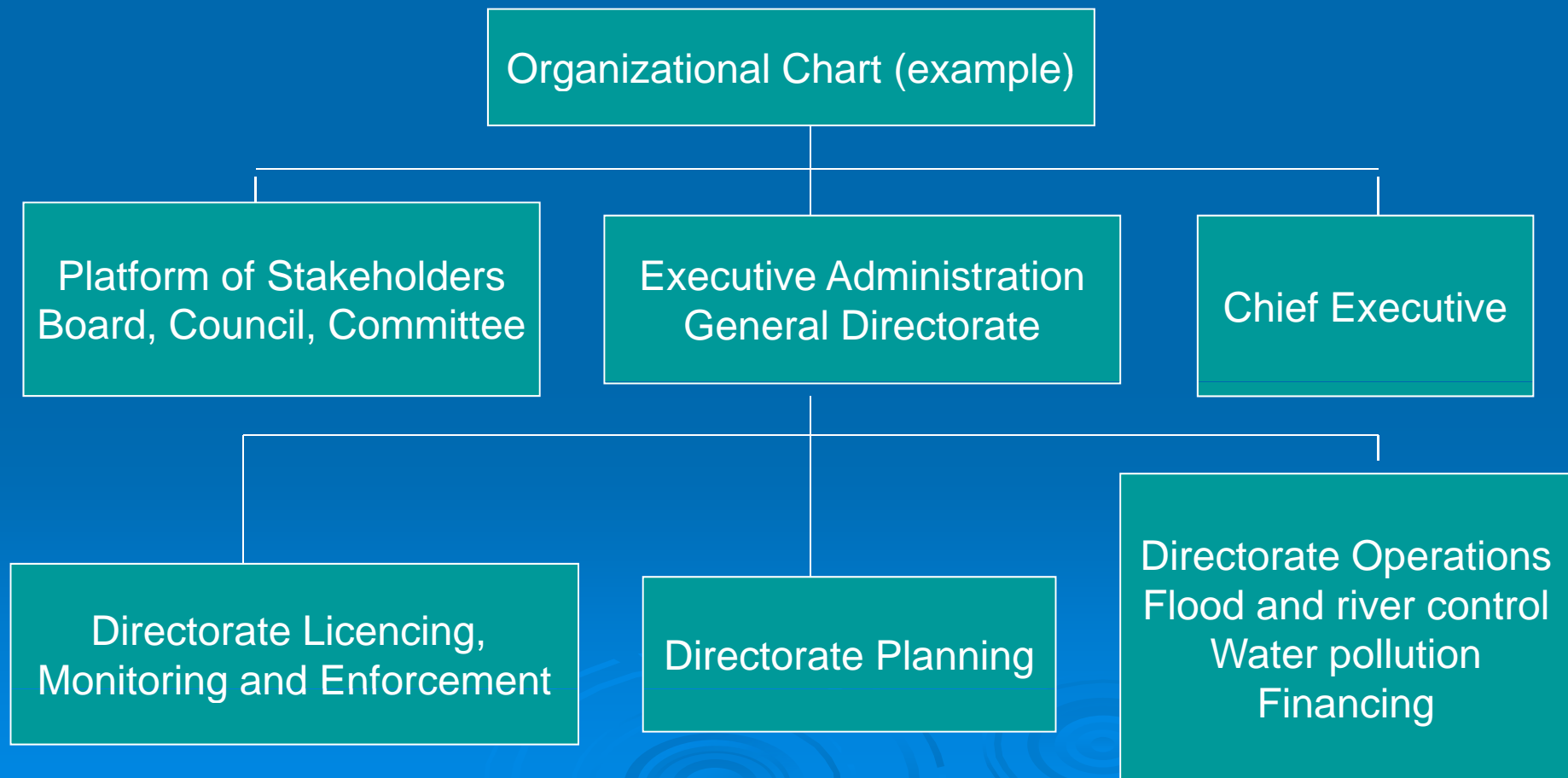
- act as a *regulatory body* for the functions it has been given responsibility for
- act as a *strong stakeholder* for the other functions

Types of RBOs

- Advisory Committee, e.g. Dawson Catchment Coordinating Association (DCCA), Eastern Australia
- Authority, e.g. Niger Basin Authority, West Africa
- Association, e.g. Missouri River Basin Association, USA
- Commission, e.g. Mekong River Commission, Southeast Asia
- Federations, e.g. International Network of Basin
- Organizations; Global, based in France
- Council, Corporation, Tribunal

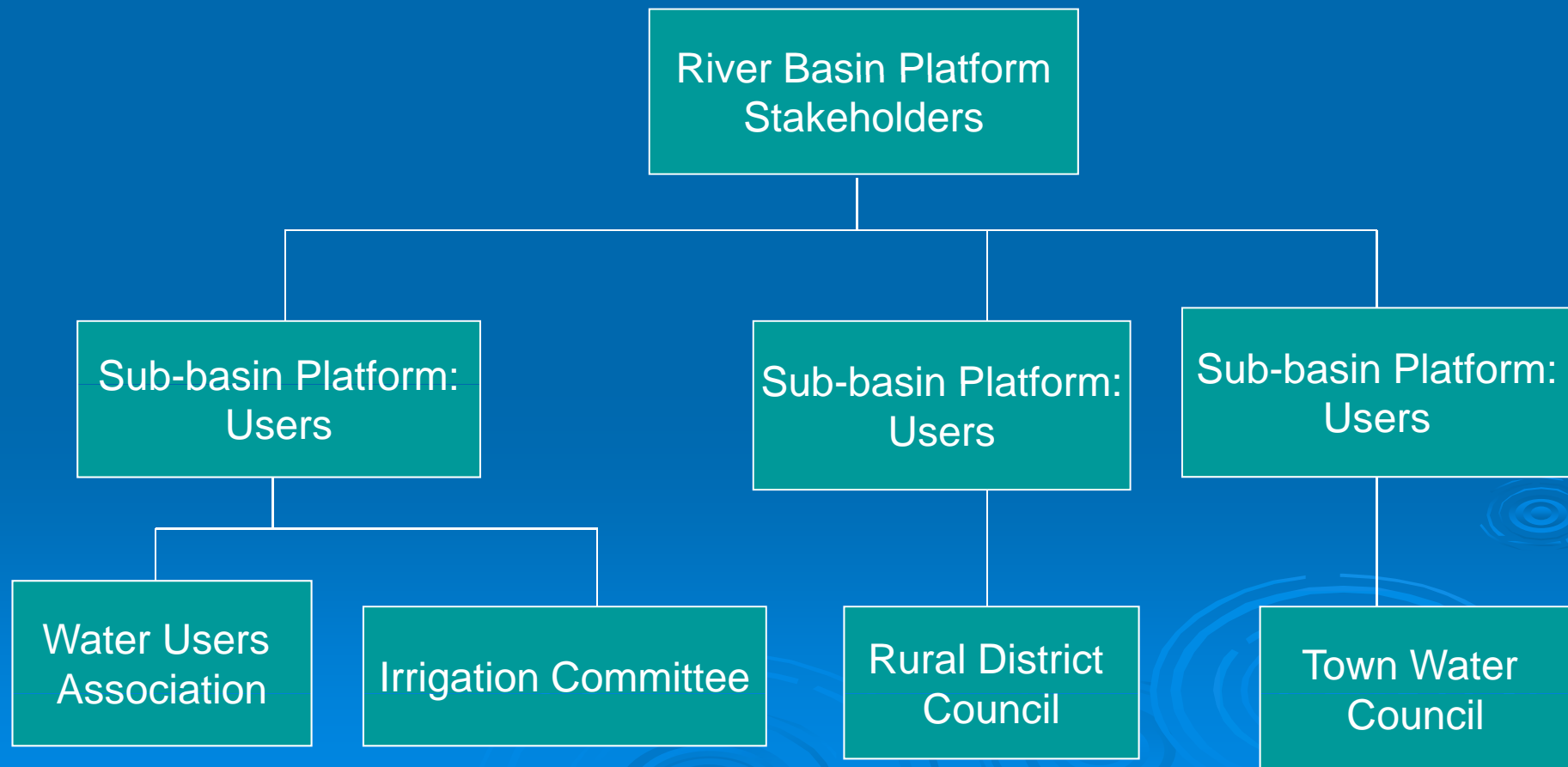
Sample River Basin Organization

Organizational Chart (example)




Sample River Basin Organization (Zimbabwe)


Platform Organization




RBO functions at river basin level

- Development of strategic river basin plan
 - Development of operational river basin plan
 - Contributing to river basin protection plan/measures
 - Water right or water permit allocation
 - Effluent discharge permit allocation
 - Allocation of drainage permits or drainage responsibilities
 - Co-ordination between sub-basins
 - Collection of water charges
 - Fund administration and development
 - Appeal function (first layer)
 - Awareness creation and capacity building
- 

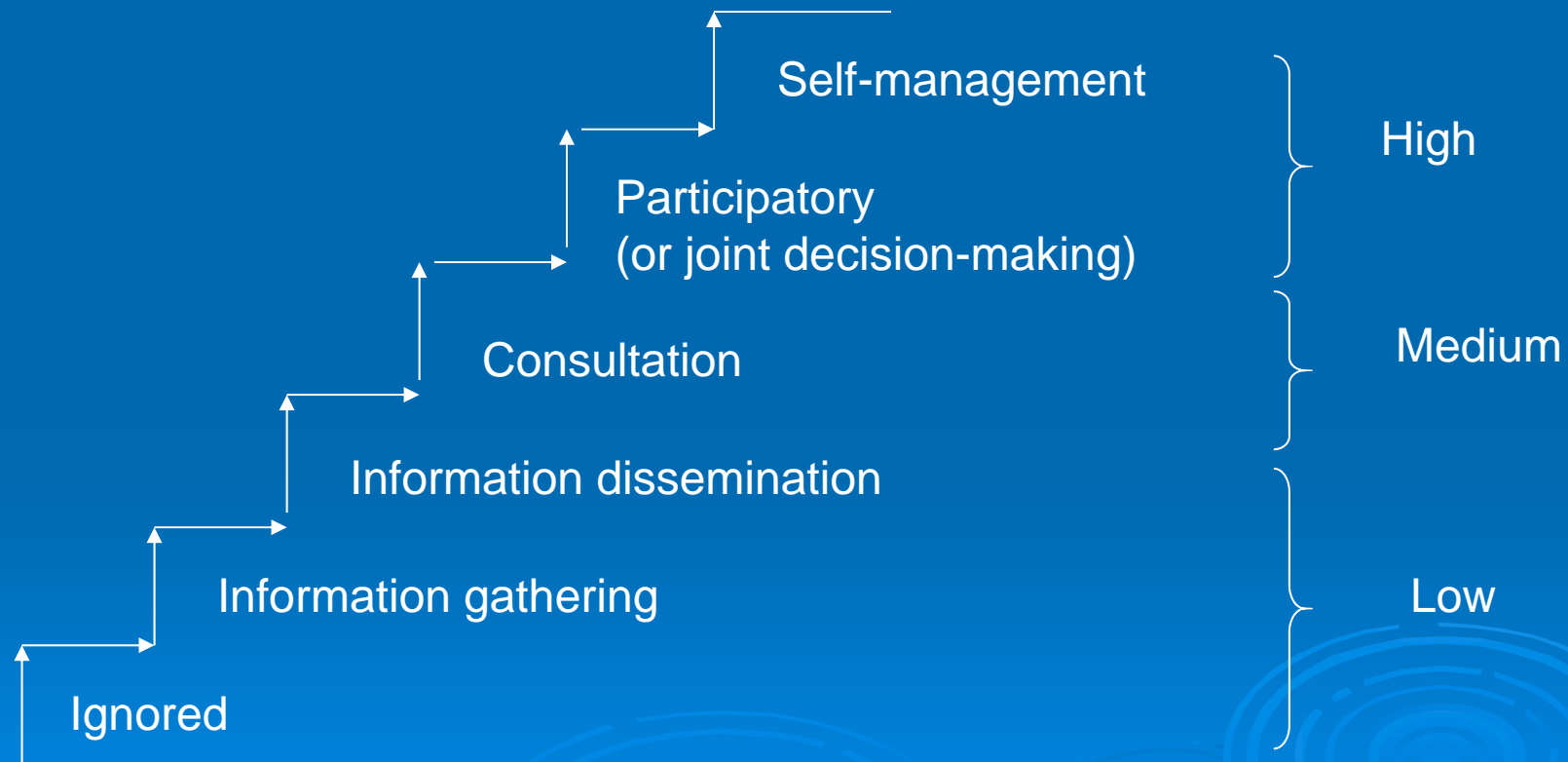
RBO functions at river sub-basin level

- Co-development strategic sub-basin plan
 - Co-development operational sub-basin plan
 - Contributing to sub-basin protection plan/measures
 - Advising on water/discharge permits
 - Monitoring and enforcement of drainage responsibilities
 - Monitoring of water abstractions, water pollution
 - Monitoring of drainage processes
 - Enforcement of water rights, discharge permits
 - Enforcement of drainage responsibilities
 - Legal action against offenders
 - First layer of conflict resolution
 - Collection of charges and levies
- 


Stakeholder involvement in RBO

- Direct users/polluters
 - Potential users
 - Government as water user
 - Government as water manager
 - Interested parties e.g. NGOs
 - Society at large: experts, scientists
 - Other stakeholders
- 

Level of stakeholder involvement



Financial (economic) sustainability

- “Water is an economic good in all its competing uses”
(Dublin Principle 4)
 - “User or polluter pays” for costs
 - Costs for management, direct negative consequences, externalities, new development, cross-subsidies??
 - Through pricing of services, taxes, charges, levies
 - Various institutional arrangements for commercialisation: from contracting out single services to full privatisation, and all the modalities in between
- 

Instruments of cost recovery

Character/ Instrument	Service relation	Cost recovery mechanism	Ratio of willingness
Service pricing	Strong	Direct	High
Tax	Weak	Indirect	Low
Charge	Strong	Direct	Intermediate
Levy	Intermediate	Direct	Low

Capacity development for IWRM

- Institutional development
 - Development of organizations
 - Community participation
 - Participation of stakeholders in decision making
 - Participation of women in decision making
 - Institutional capacities and strengths
 - Institutional environment creation
 - Legal and institutional frameworks
 - Procedures and working rules etc.
 - Human resources development
 - Development of networks for information and knowledge exchange
- 

Conclusion: Key ingredients for successful IWRM/IRBM

- Political will
 - Knowledge/capacity
 - Sustainable technologies
 - Institutional arrangements
 - Building on existing expertise
 - Community involvement
 - Economic prosperity
 - Right timing
- 

Policy making: Policy cycle, policy analysis




Water and Politics

Netherlands

Water management is not is a hot political item

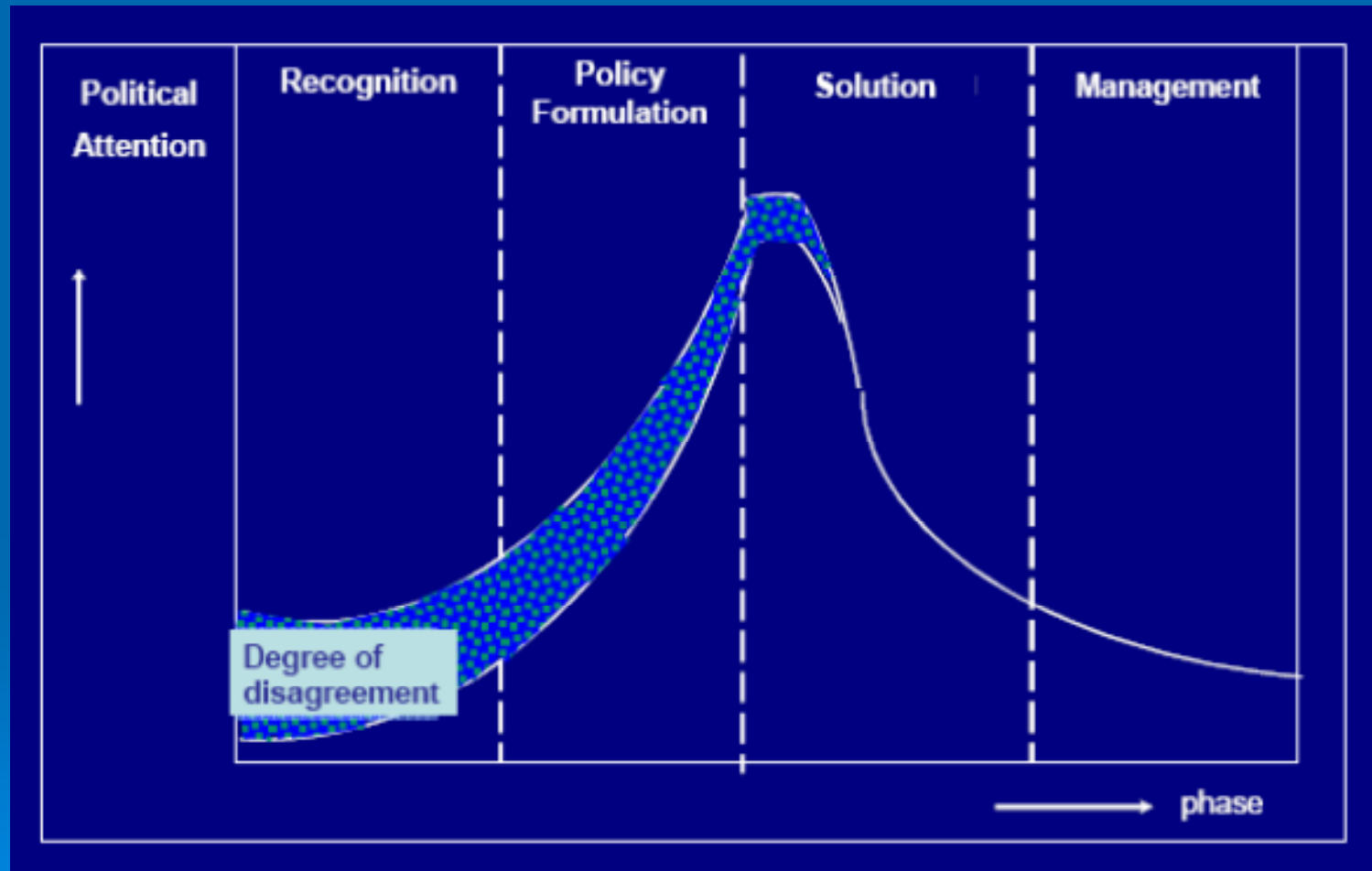
Motivation

- Last item at distribution of ministerial posts
 - No essential differences between political parties
 - Dependent only on budget
- 

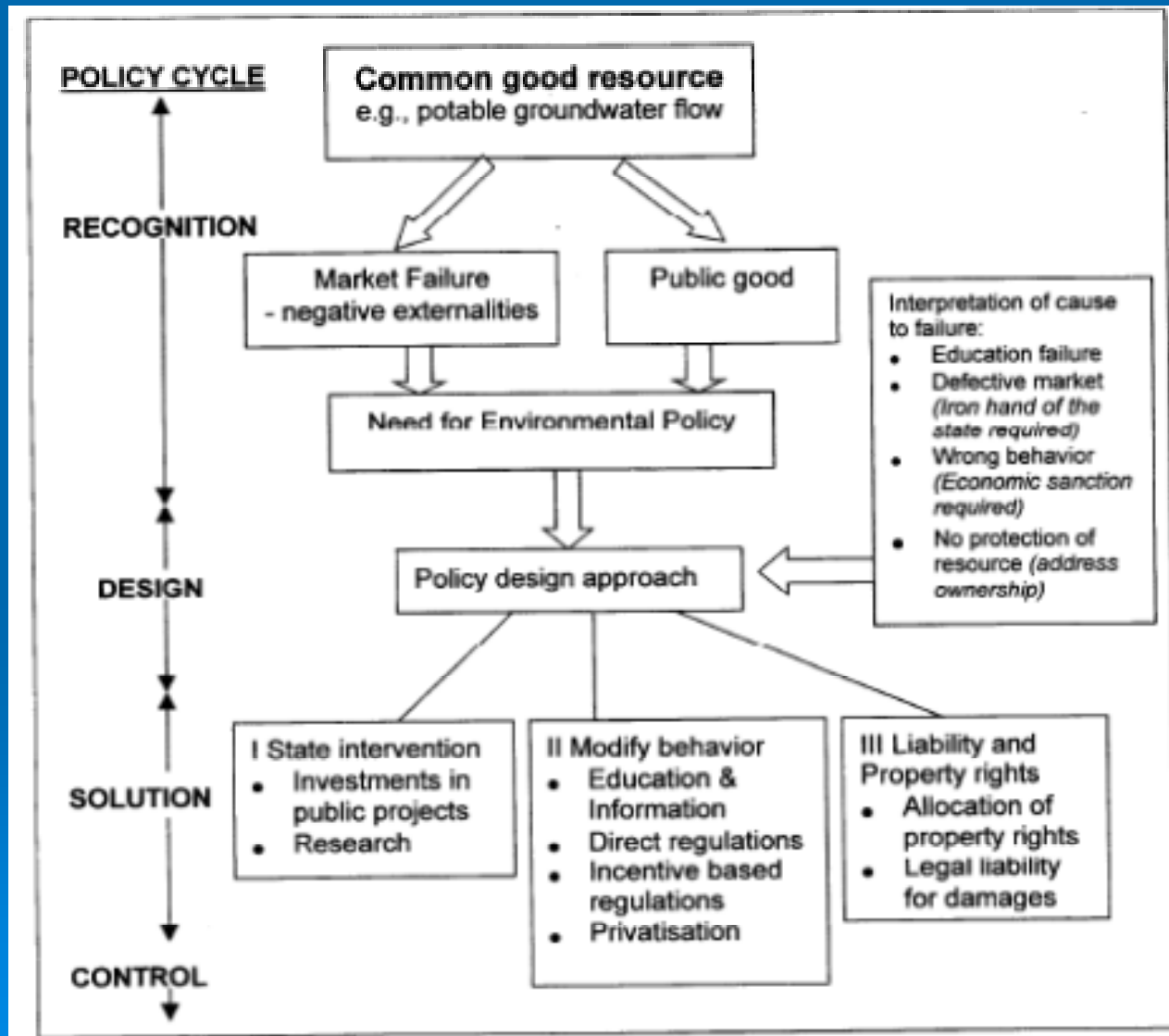
Policy and Politics

- Egypt
 - Career Ministers
- Communist System
 - Governmental employee = politician
- Hungary
 - No translation for the word “policy”

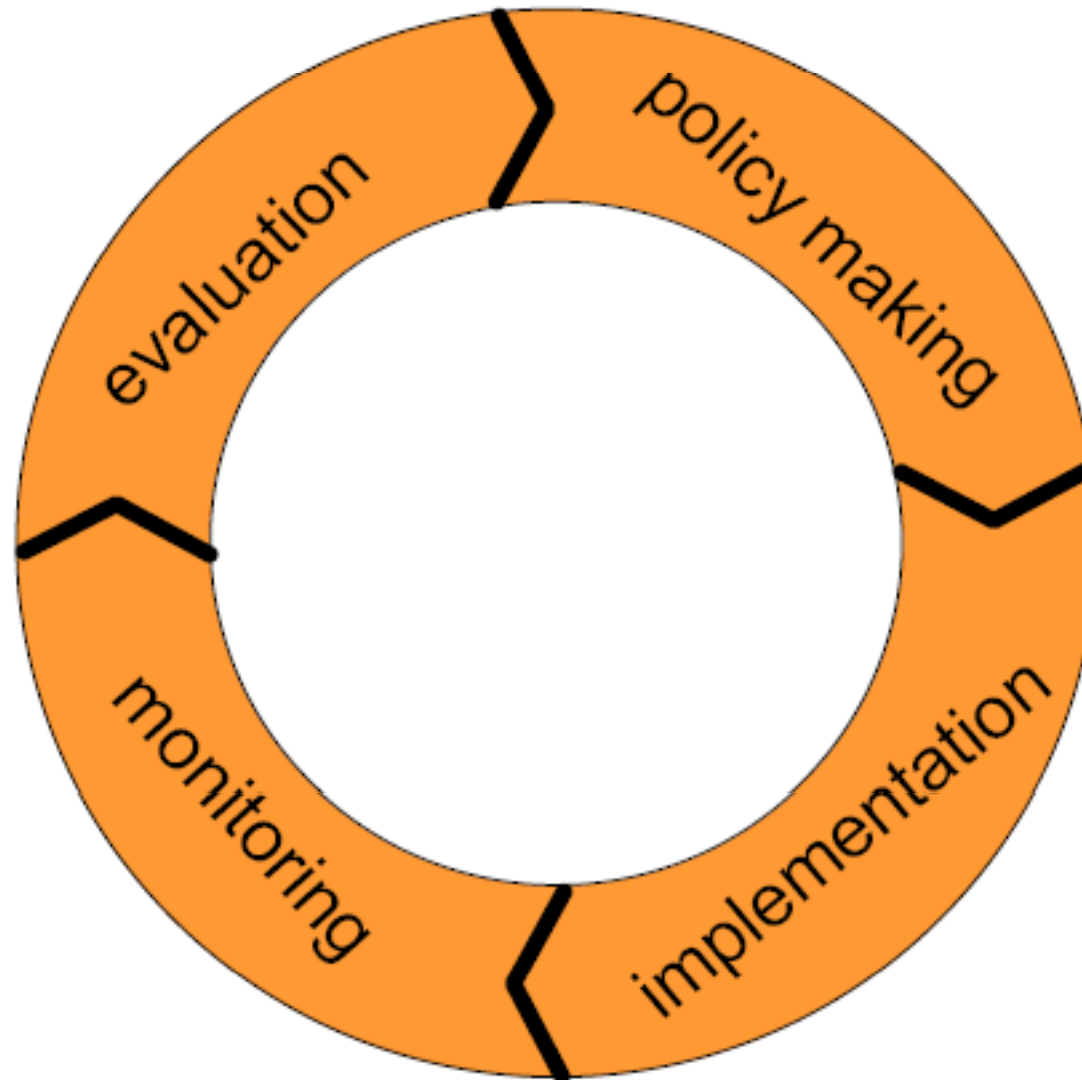
Political attention

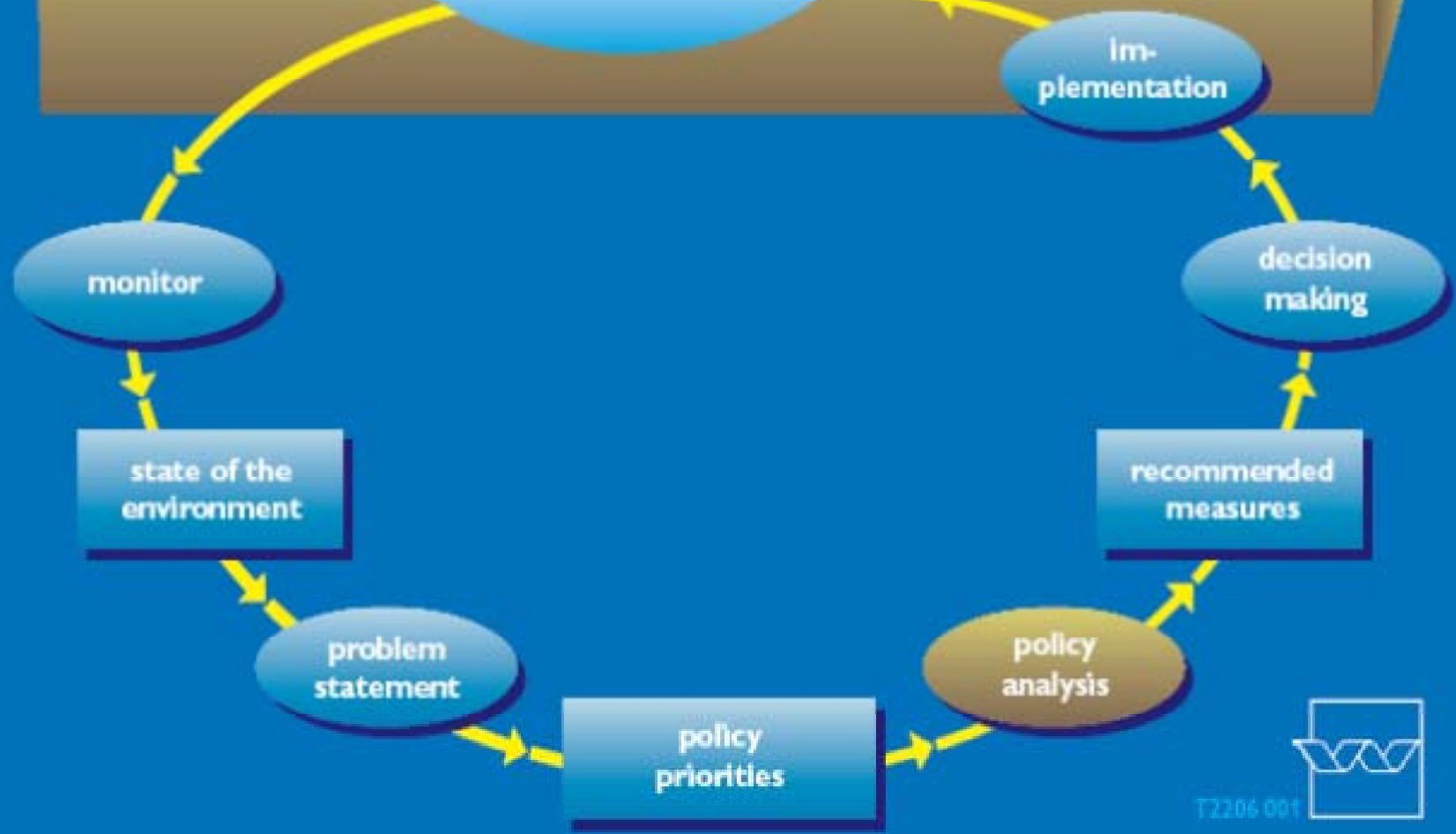
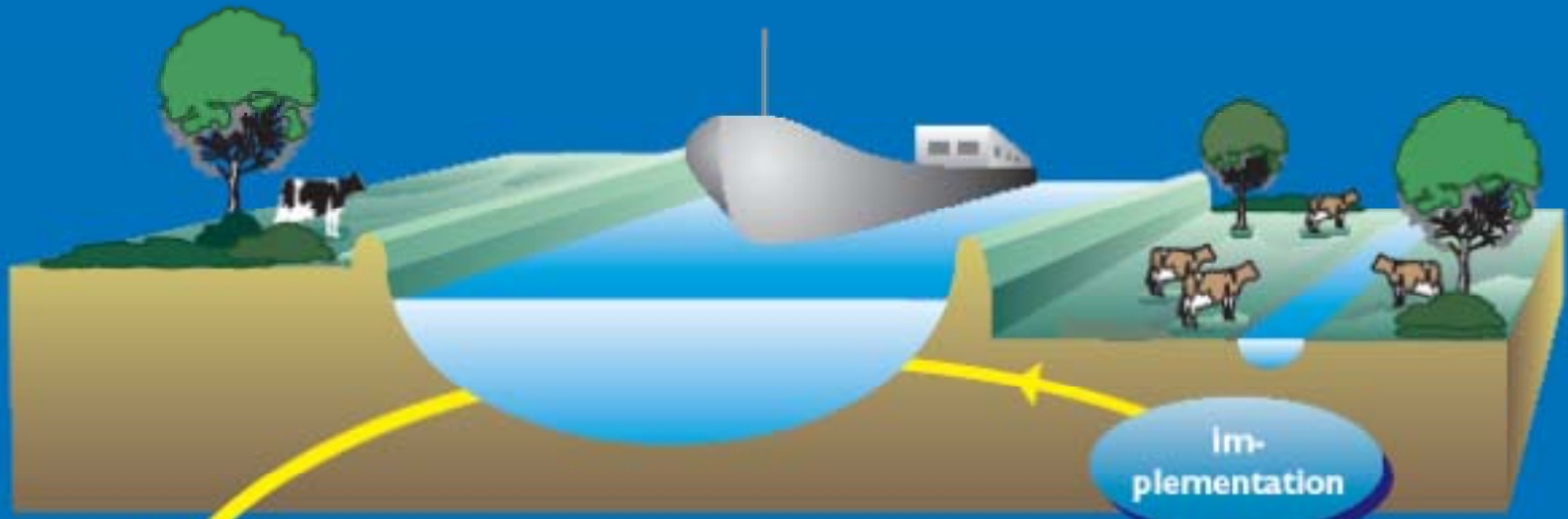


Policy design approach

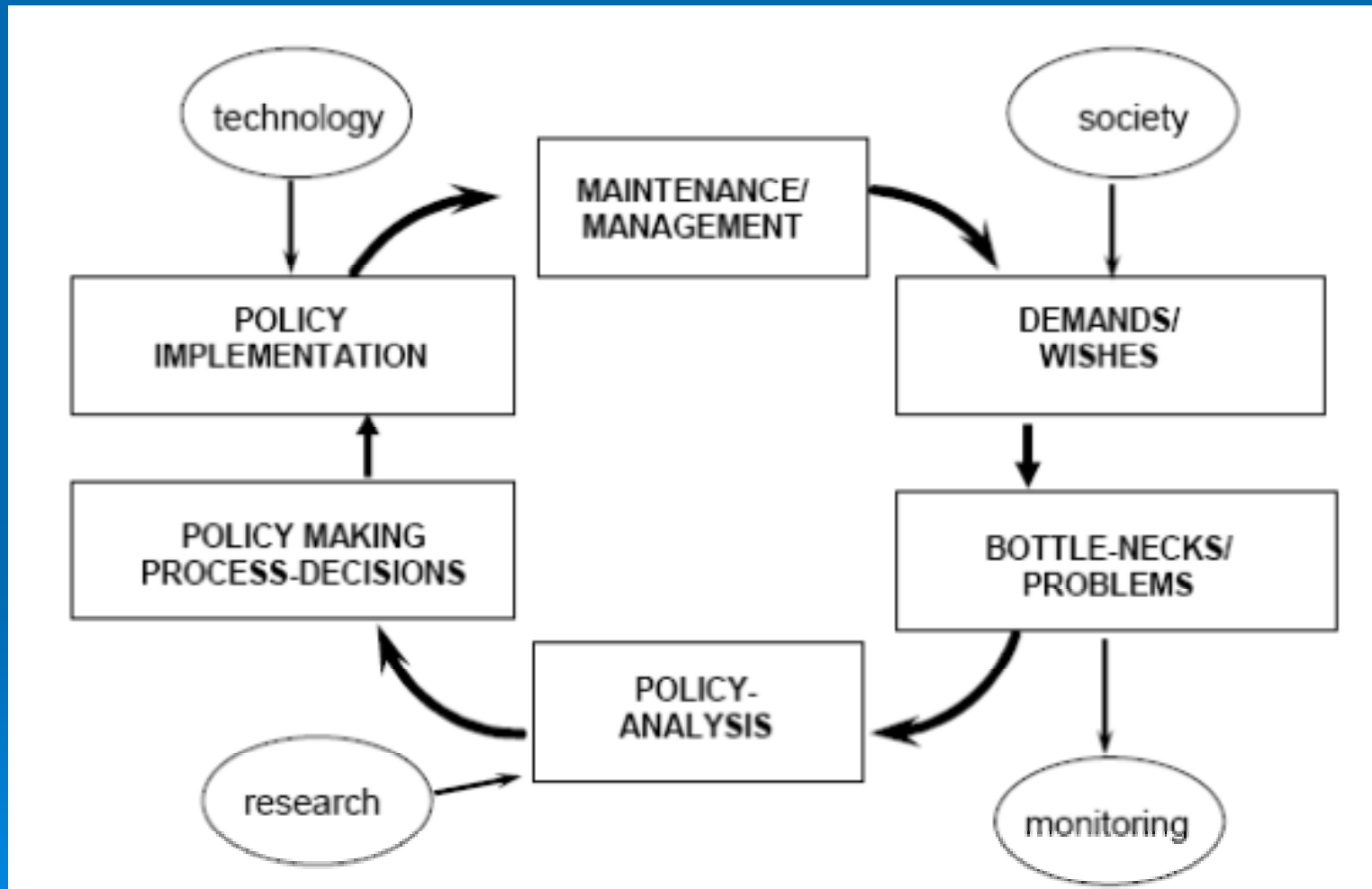


Continuous policy making





Policy cycle



Policy analysis

- The aim
 - generate and present useful information for decision makers
- The art
 - Common sense, experience and ingenuity
 - Knowledge and understanding
 - Lots of listening, coordination, translation
 - Systematic, methodical
 - Look for “good solutions”, “optimal” solutions do not exist
 - Account for uncertainties, avoid high risk strategies

Policy analysis


- It can be defined as;
 - a systematic investigation of complex policy alternatives as to assist decision-makers in choosing a preferred course of action in the public sector under uncertain conditions.

Policy analysis

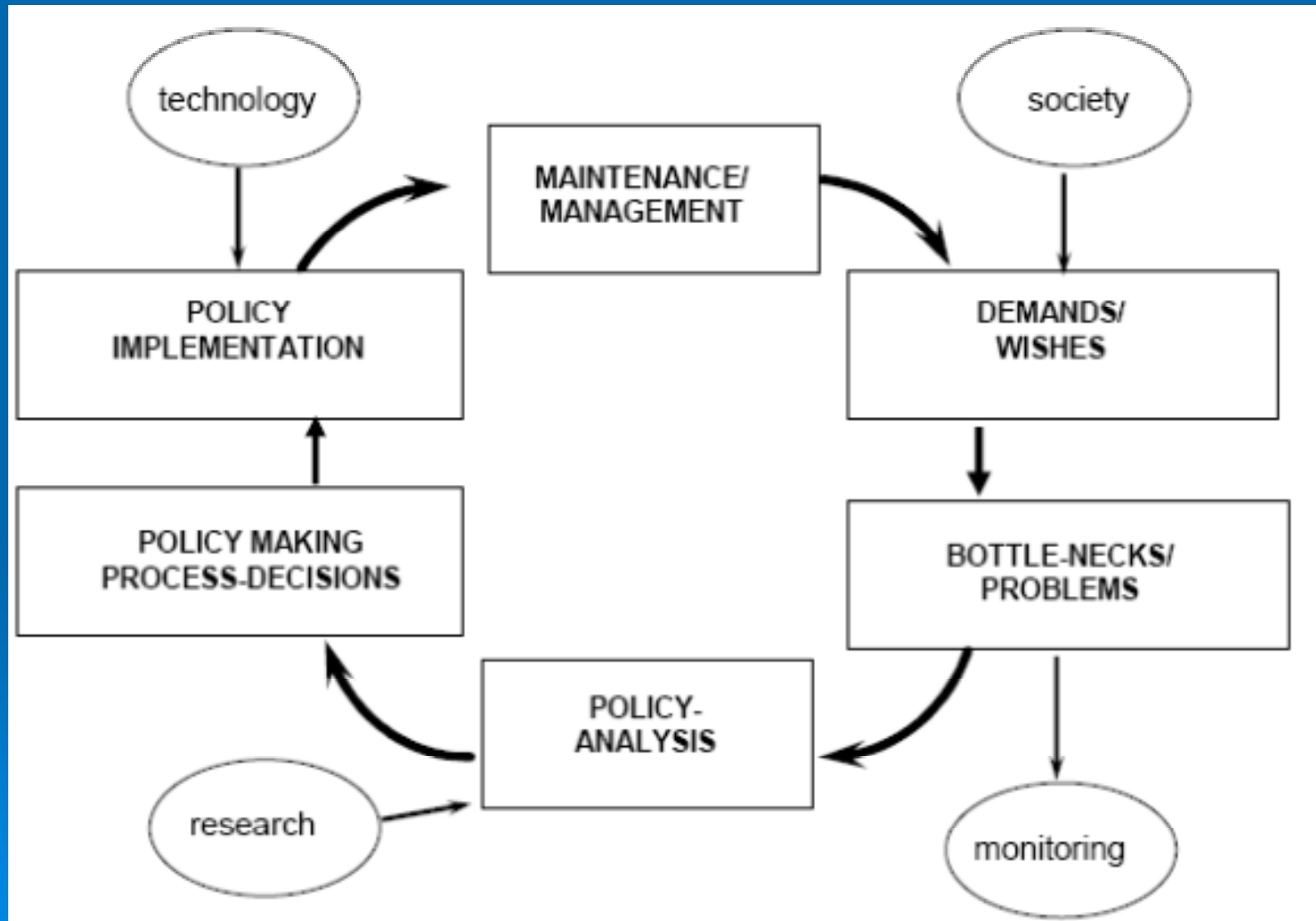
- Analysis IS NOT decision making
- But in the process of policy analysis choices have to be made, preferably by the decision maker, NOT by the analyst
- Otherwise: well documented choices by analyst

Phases in policy analysis


SIMPLE

1. Problem analysis
 2. Establishing criteria
 3. Identifying alternatives
 4. Evaluating alternatives
 5. (Ranking alternatives)
- 


Policy cycle



Nature of public problems

- Fuzzy and ill-defined
 - Political as well as technical aspects
 - Lack a cause-effect knowledge base
 - May be solved only by producing new problems
 - Involve tradeoffs between cost and effectiveness
 - Hard to measure adequacy of results
 - Hard to measure fairness of results
- 


Problem orientation

- Causes of the problem
 - Historic and geographical background
 - Who put problem on agenda
 - What interests are at stake
 - Who are involved in decision-making
 - Which relevant aspects
 - Possible (directions of) solutions
- 
- The bottom of the slide features a decorative graphic of several concentric circles, resembling ripples on water, rendered in a lighter shade of blue against the dark blue background.


Criteria and Alternatives

- Goals are translated into alternatives
- Alternatives are more concrete statements about desired end states, with time tables
- Criteria are the measurable dimensions of alternatives
- The criteria and their measures must be unambiguous
- Sample criteria
 - *Effectiveness*
 - *Cost*
 - *Technical*
 - *Political*

Examples of criteria

- Technical feasibility
 - Political/social feasibility
 - Robustness
 - Reliability
 - Flexibility
 - Duration of decision-making
 - Duration of implementation
 - Costs
- 

Generation of alternatives

- By the initiator
 - By individuals or groups
 - Include or exclude alternatives in a clear way!
 - Pre-selection of alternatives
- 


Generation of alternatives

- The “Zero-alternative”
 - “business as usual” or present situation
 - Serves as reference
- Refer to similar policy problems versus unique problems
- Generation of **variants** of alternatives
- **Scenarios** for external developments
- Phasing in time

Score card as a first step


Criteria	Alternative1	Alternative2	Alternative 3/4/..
Navigation	0	-
Flooding	0	0
Water quality	+	-
Groundwater	-	0
Vegetation	0	+	
Forestry	+	+	
Hunting	-	0	
Investments (\$)	100,000	20,000	

Policy analysis - Summary

- Clarifies and rationalizes options for management actions
 - Presents information
 - Does not make the final decision
 - Considers implementation aspects
 - Does not implement
- 

Policy analysis

Policy analysis as a part of decision making process:

- Clarifies and rationalizes alternative policy and management solutions in objective terms
 - Gathers and presents information to all interest groups involved and those affected by the consequences
 - Prepares for but does *not* make the final decision
 - Considers implementation aspects, but does not implement
- 

THANK YOU FOR
YOUR ATTENTION...

