



International
Water Association

World Water Congress
and Exhibition

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Organisers:



International
Water Association



International Association
of Water Supply Companies
in the Danube River
Catchment Area

A framework for planning of sustainable water and sanitation systems in peri-urban areas

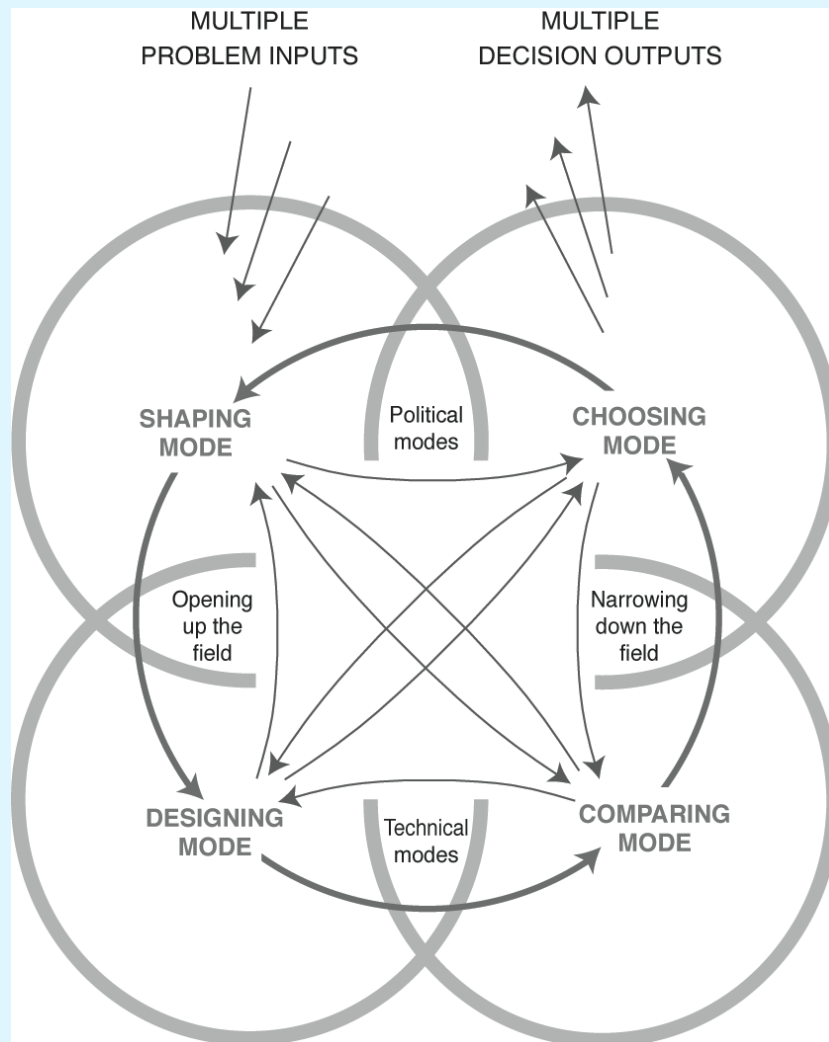
R. Törnqvist, A. Norström, E. Kärrman, P.-A. Malmqvist
9 September 2008



Aim of the framework

- To provide planners with a setup of important steps in the planning process, and tools to be used in each step
- Target group: planners
- Focus: the planning process

Strategic Choice Approach (SCA)



Source: Friend & Hickling (2005)

- Four modes:
 - Shaping
 - Designing
 - Comparing
 - Choosing

Identified models and tools

■ Evaluation

5 sustainability criteria (environment, health, economy, technical function, socio-cultural aspects)

31 indicators

■ Categorizing

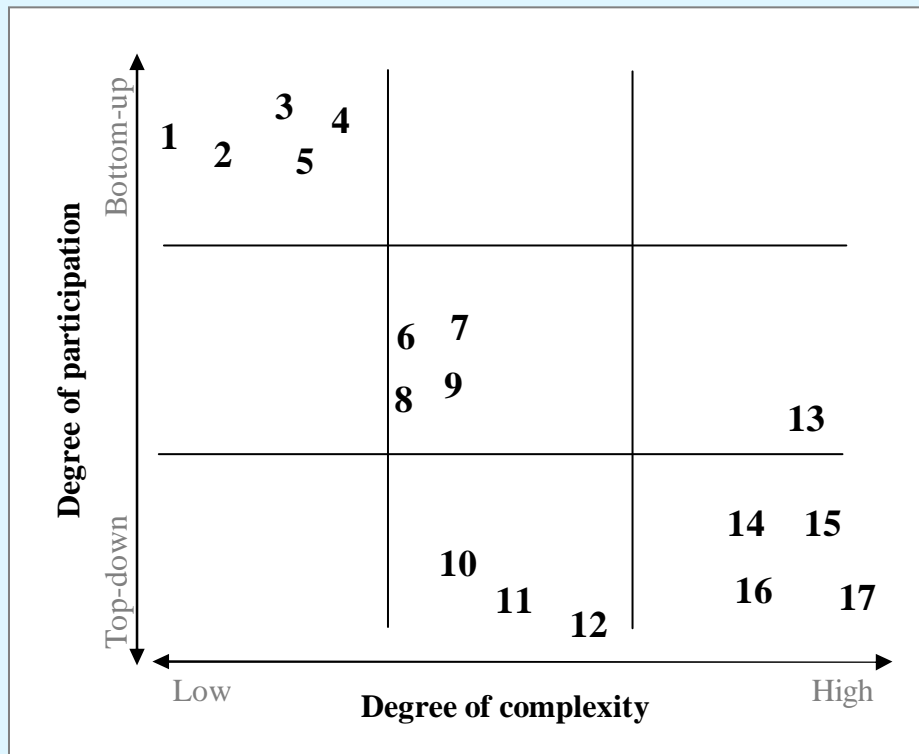
Target group

Degree of focus on the planning process

Applicability to the peri-urban context

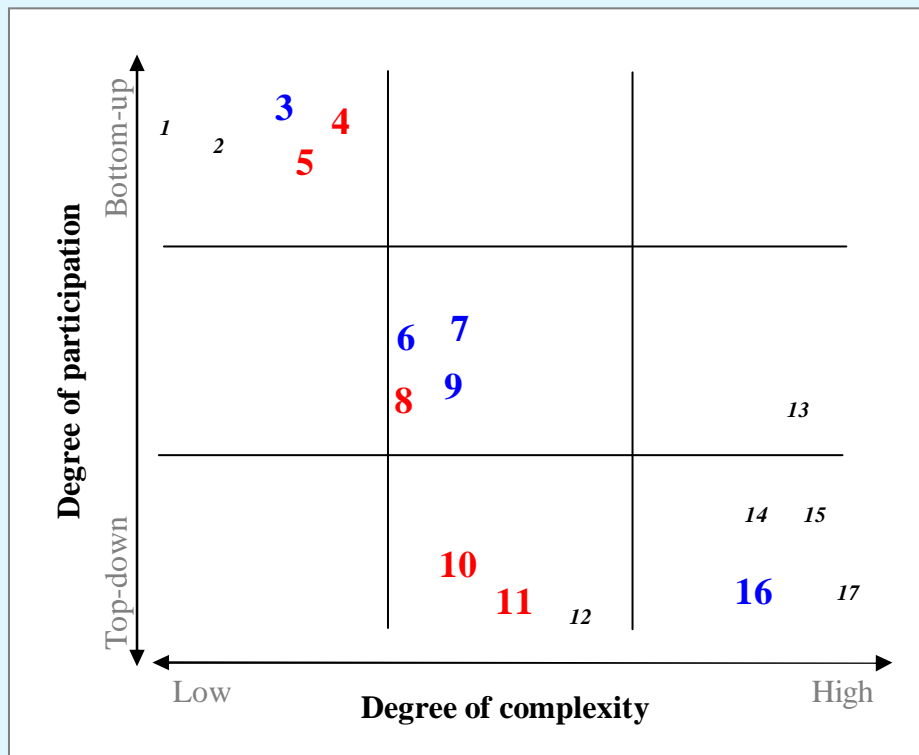
1. Wright approach
2. Choguill model
3. Sanitation 21 by IWA
4. HCES by Eawag
5. Open Wastewater Planning by WRS
6. ADB Terms of Reference
7. Gender toolkit
8. WUP toolkit
9. ADB toolkit
10. Schiller and Droste model
11. Mugabi et al. methodology
12. Sahely et al. framework
13. Urban Water toolbox
14. DEPA toolkit
15. GWP toolbox
16. AISUWRS toolkit
17. SWARD framework

Evaluated models and tools



1. Wright approach
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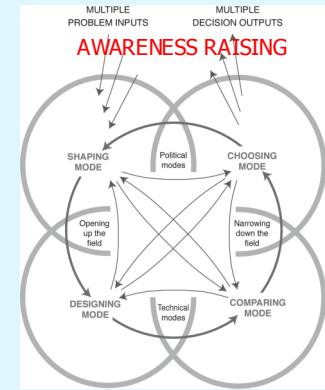
Models and tools used for modification of SCA



1. Wright approach
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3. Sanitation 21 by IWA
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- i) To identify important steps and essential aspects to consider in the planning process
- ii) As supporting tools for reaching the aim of the different steps

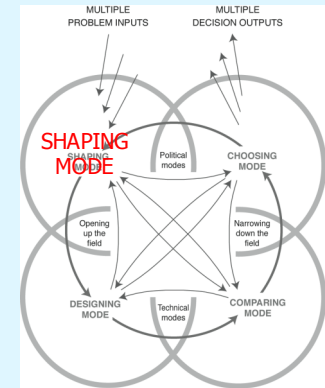
Awareness raising mode



- Creating demand for an improvement of the present situation
- Increasing the motivation for an improvement among the future users
 - CLTS (community-led total sanitation)
 - PHAST (participatory hygiene and sanitation transformation)

Shaping mode

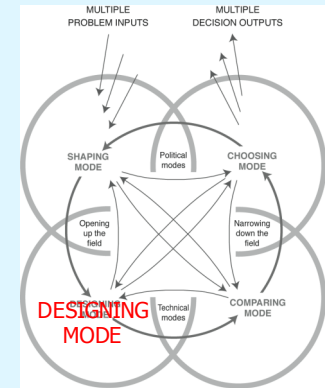
- Situation analysis
 - Checklists, Gender toolkit
 - Logical Framework Approach (LFA)
- Identification of the challenges
- Consensus for common visions
- Identification of key objectives



Policy building

User participation

Designing mode



■ Identification of options

- Checklists
- Terms of Requirements
- Household-Centred Environmental Sanitation (HCES)

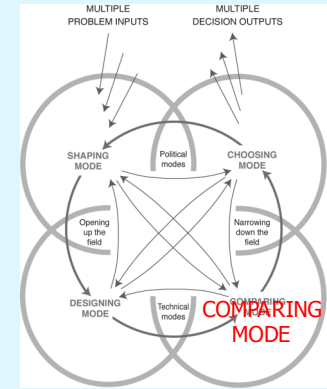
← User participation

■ Feasibility analysis

- Sanitation 21
- 'Screening' in Sanex™
- Pros and cons from WUP and ADB

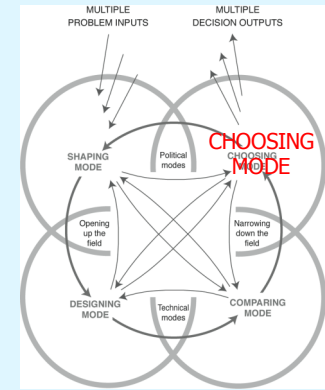
← Investigation of all decision areas

Comparing mode



- Comparison between options
 - **Economical aspects:** Cost estimation in SANEX™
 - **Environmental aspects:** Life Cycle Analysis (LCA), Environmental Impact Assessment (EIA) and Material Flow Analysis (MFA)
 - **Health aspects:** Microbial Risk Assessment (MRA)
 - **Decision-making:** Sustainability Criteria matrix, 'Composing and rating'/Compare in SANEX™, STRAD and SEESAW/AISUWRS Deliberator

Choosing mode

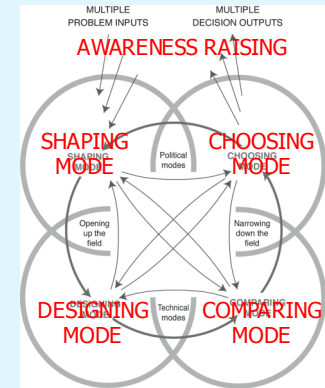


- Reaching a consensus for an option

User participation

- Deciding when to take action
 - Action now
 - Further investigation
 - Postpone to the future
 - Consider future events

Conclusions



- Enabling planning for a specific context by:
 - Encouraging user participation
 - Emphasizing comprehensive situation analysis
 - Looking at possible technologies in a wide way
 - Comparing options using sustainability criteria
- There are lots of available support - use them.
- Planning takes time - therefore, plan for planning!

Thank you!



Plan your dive. Dive your plan.