

SWITCH method for visioning, scenario-building & strategy development

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**Strategic Planning for Integrated Water
Management**

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SWITCH approach

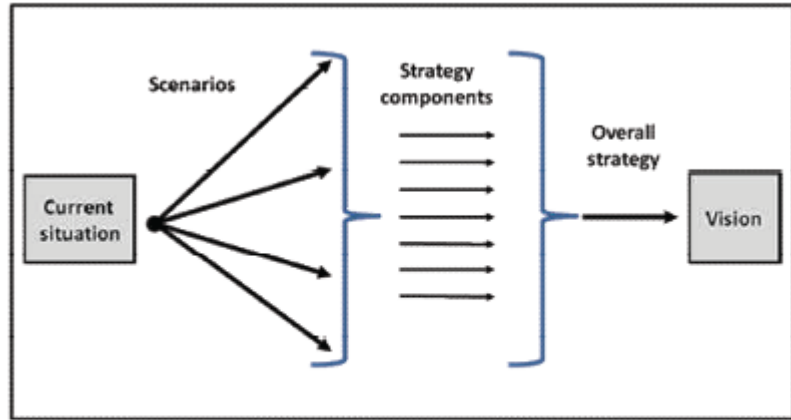


Figure 1. Strategy development based on visioning and scenario building



Figure 2. An example of an IUWM project management cycle

Visioning

“If you don’t know where you are going, any road will get you there” Lewis Carroll

Visioning

- Picture of desired future
- Shared by most/all stakeholders
- Gives direction to overall planning and management
- 10-30 years ahead
- Facilitation needed

Visioning

- encourage constructive discussion and understanding amongst a diverse group
- promote active stakeholder involvement in developing and implementing water management strategies and plans
- provide a target or benchmark against which the success or failure of the strategies and plans can be monitored
- look forward rather than to remain bogged down in current problems
- a statement of intent that can attract the attention and enthusiastic support of the media and the general public.

Vision examples

Alexandria vision 2037

'A proud water city where available water resources are managed in an integrated manner, with the participation of all citizens, and are used effectively for development within a framework of environmental sustainability. All citizens have access to high quality (meeting national norms), reliable, sustainable, and affordable water and sanitation services and benefit from a clean and healthy environment'.

Developed by the Alexandria Learning Alliance in July 2007

Accra vision 2030

- 100% access to uninterrupted water supply
- 10-15% physical losses and 10% commercial losses in Ghana Water Co. Ltd operations.
- Quality of the water at point of use meets approved standards (Ghana Standards Board)
- Efficient use of water by consumers
- Quality of Surface water meets Ghanaian Standards
- Improved productive uses of water for livelihood
- Accra should have 50-80% of waste recycled
- Accra is a clean city with drainage canals and street free of garbage
- 80% of citizens follow good sanitation practices (including paying for collection)
- Integrated and sustainable waste management system
- 70% reduction in the incidence of diseases associated with water and sanitation
- 100% acceptable level of sanitation facilities (healthy, clean, dignified and safe).

Developed by the Accra Learning Alliance in August 2007

Scenario building

“Nothing is more obvious than the unpredictability of the future”

- all our reliable knowledge is about the past, whilst all our decisions are about the future.
- uncertainty in the water sector has become so pronounced that planning processes should not rely on extrapolation of current trends and probabilities

Controllable and Uncontrollable Factors

Controllable are factors like lack of skills, funding, etc.

Uncontrollable are factors like climate change, technology advances, cost of diesel, migration patterns, etc

Scenario building

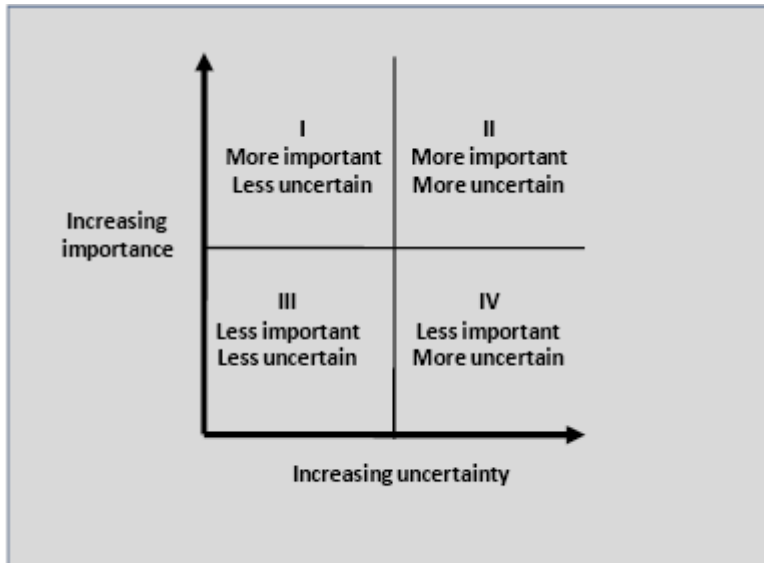


Table 1. Lodz scenario external factors for 2038⁸

More important, more uncertain external factors	Lower and upper States
Macro-economic status	A. Current GDP (Euro 4,800)
	B. GDP that is the same or above the EU average (Euro 22,860)
Macro water governance framework	C. Current fragmented approach. Low-level political support for IUW governance
	D. IUW governance that has political support at all levels and leads to effective implementation of the WFD

scenario building is not about 'knowing the future', or always being right; it is about trying to minimize the chances of being seriously wrong.

Example scenarios

Lodz Scenarios for 2038

Scenario I: The economy remains stagnant owing to a series of worldwide economic recessions and poor performance of the Polish economy owing to political instability, a shortage of labour, and poor infrastructure. Incomes/output remain similar to 2008 (GDP of Euro 4,800 at current prices) and the country is one of the poorest within a highly unequal Europe. There are low tax revenues and little external funding (richer countries with the EC have stopped supporting major investments in the Centre and East) for investment in improving infrastructure. Institutions dealing with water management at a city level remain highly fragmented with different agencies dealing with various issues and poor coordination between agencies and departments, partly as a result of politicisation of local government. Nobody is looking and planning to improve overall performance of the water management systems, but only at their individual areas of responsibility. As a consequence, the city's water governance system have been slow to adapt and respond to the challenges posed by climate change (increasing frequency of droughts and floods) and the rising costs and absolute shortages of fossil fuels. Despite the efforts of individuals and localized success stories, the state of the city's urban environment has deteriorated. WASH service levels have are unacceptable in many areas of the city.

Scenario IV: The Polish economy develops steadily to become the largest in eastern and central Europe and average in terms of performance across the whole of the EC, closing the gap with western European countries (with a GDP equivalent to the EU average: Euro 22,860 at current prices). Many young people who migrated to the UK, Ireland and other EC countries in the first decade of the century return owing to the better wages and prospects available at home, leading to a sharp recovery in the population. Much higher tax revenues can be invested in infrastructure improvements, and people are also able to pay much higher fees for services. Strong leadership and professionalism within the various organizations dealing with aspects of water management in the city and its catchment leads to improved sharing of information and coordination. An integrated plan is developed (largely based on the water framework directive) and implemented to use water wisely and improve the environment. The city has responded and adapted famously to the challenges posed by climate change and the rising costs and absolute shortages of fossil fuels. Environmental plans are well aligned across all the sectors and the city's environment has never been better for all the city's inhabitants (and for its flora and fauna). WASH service levels are also outstanding across the whole city. A combination of local action and innovative city governance has resulted in Lodz being a leading proponent in integrated urban water management (IUWM) and a source of IUWM expertise that is in high demand across Europe and worldwide. The city has achieved all aspects of a vision that was formulated by a "turning point" project (we think it was called SWITCH?) in the first decade of the century.

Examples developed with members of the Lodz Learning Alliance in April 2008

Strategy development

- a robust adaptable strategy that has the potential to achieve a shared vision under a whole range of different scenarios (i.e. different futures)

Strategy development requirements

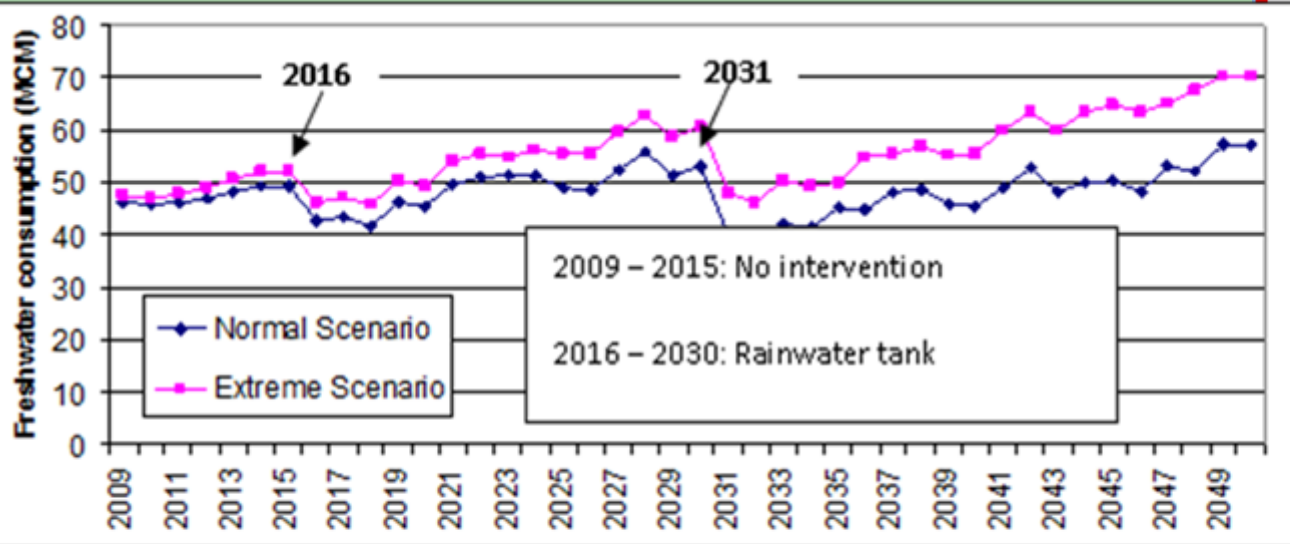
- Vision, scenario building and a water resources assessment
- Facilitation and engagement of stakeholders, including marginalised groups
- Specialist support to stakeholder dialogue to help understand potential implications and tradeoffs
- High-level support for process

Strategy development examples

Table 2. Provisional assessment of Lodz strategy components (April 2008)

Vision elements	Strategy components	Scenarios			
		I	II	III	IV
The city's water resources management is based on an efficient and integrated planning system.....	<ul style="list-style-type: none"> - Alignment of plans across different sectors (within context of an overall spatial development plan) - Institutional collaboration strengthened - IUWM planning processes and management systems adopted - Emphasis on managing demand (and thereby improving efficiency) 	x	√	X	√
.....ensuring access to information for all.	<ul style="list-style-type: none"> - Policy of free and open access to information adopted - Common information is set and a team to manage, update and quality control is established with a secure line of funding - Information made available in a form that can be understood by non-specialists 	x	√	?	√
Investors and authorities respect ecological properties of	<ul style="list-style-type: none"> - Environment impact assessments included in the IUWM planning process 				

Effect of scenarios and strategies on water balance



Water Balance

Mass flow analysis

Energy footprint

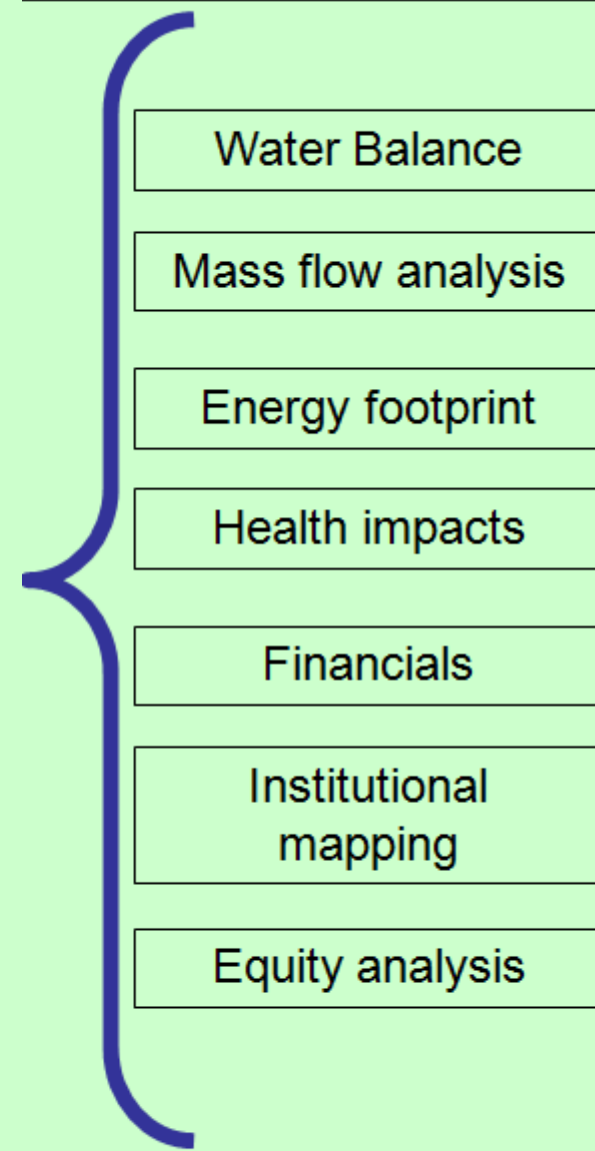
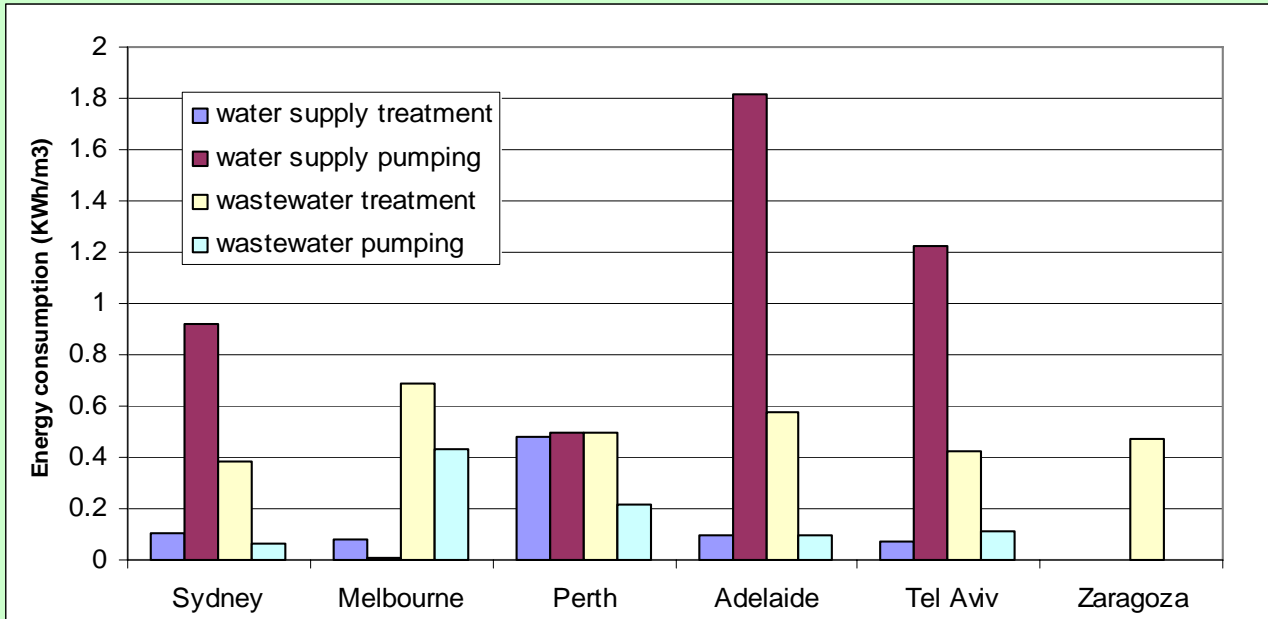
Health impacts

Financials

Institutional mapping

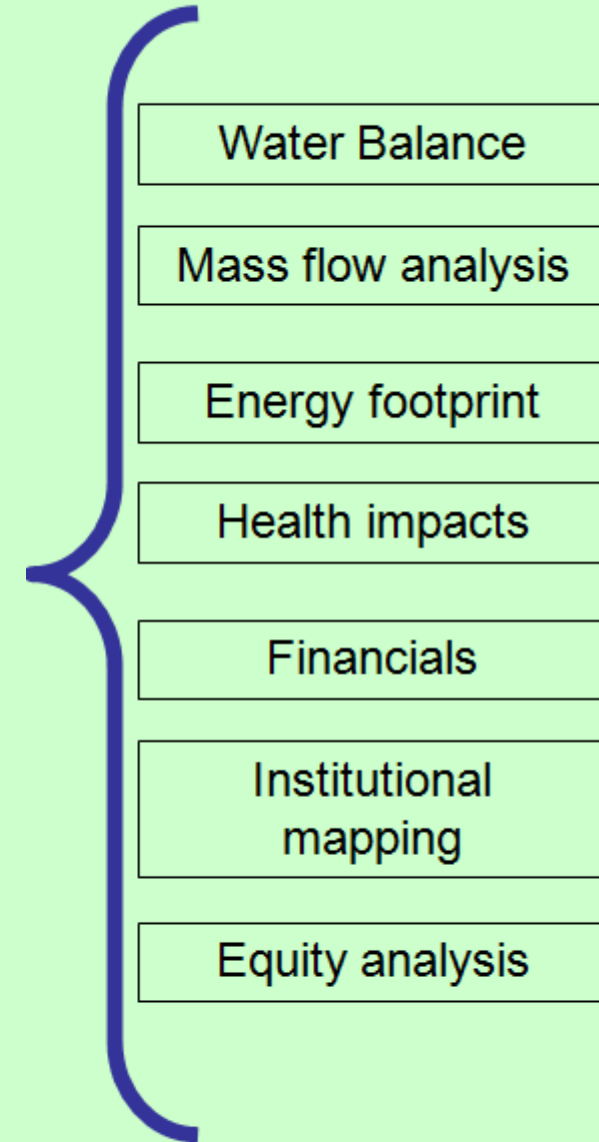
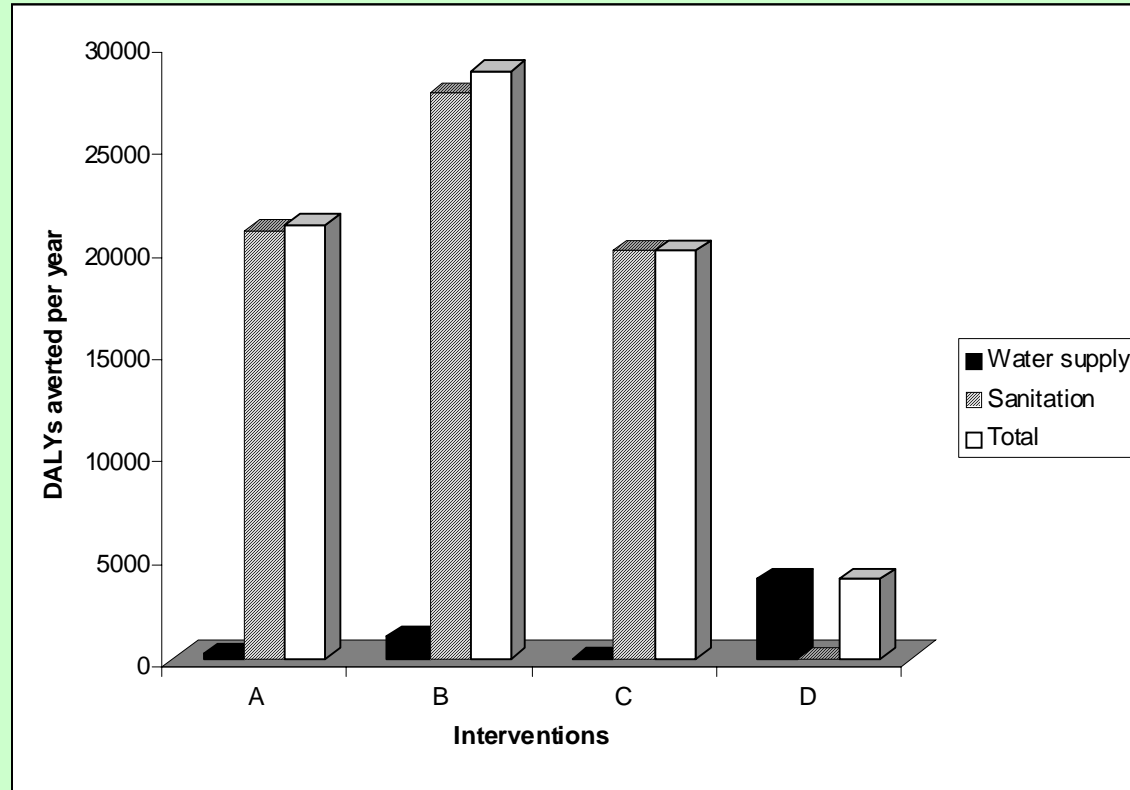
Equity analysis

Energy consumption



Accra

Quantitative Microbial Risk Assessment



More health benefit per unit investment

	Scenario	A energy scarcity and very costly	B energy available but costly	C energy available and cheap	
	Likelihood	0.5	0.3	0.2	Total
Strategy					
1 Very effective but high energy input required		$4 * 0.5 = 2$	$6 * 0.3 = 1.8$	$10 * 0.2 = 2$	5.8
2 Effective and medium energy input required		$6 * 0.5 = 3$	$8 * 0.3 = 2.4$	$8 * 0.2 = 1.6$	7
3 Relatively effective and low energy input required		$4 * 0.5 = 2$	$6 * 0.3 = 1.8$	$6 * 0.2 = 1.2$	5.0

Definitions

A **vision** is a desired future state

A **scenario** is a coherent pathway or trajectory into the future

A **strategy** is a combination of activities (both hardware and software) aimed at achieving a vision.

Further information

Briefing notes about these methods are available at:

www.switchurbanwater.eu/la_guidance.php