

Sustainable Water and Wastewater Management in Urban Growth Centres Coping with Climate Change - Concepts for Lima Metropolitana (Perú) -

Integrated scenarios “Lima 2040”

Situation

- The water sector represents a system with a high range of variability, complexity and susceptibility to interference or dependence on political and human decisions
- Predicting the future development of the water sector, especially in the long term, will not lead to meaningful results
- Scenarios have proven to be a particular beneficial instrument in those areas where developments cannot be forecast, owing either to their high range of uncertainty or their complexity
- Scenario building is also used to promote participation and communication between stakeholders, e.g. representatives of the local water utility, public authorities, civil society and scientists

Methodology

In several participative workshops, the following steps were used to build scenarios:

1. Problem framing and definition of boundary conditions
2. Identification of driving forces (descriptors)
3. Formulation of possible developments of the descriptors (sub-scenarios)
4. Evaluation of descriptor interdependence
5. Construction of consistent scenarios
6. Analysis of consequences and discussion of alternative interventions

As a means to support the interdependences analysis, the “ScenarioWizard” was used (www.cross-impact.de).



Results

- 4 Scenarios “Lima 2040” describing the situation of the city of Lima and Callao and the possible water supply in the future:
 - Scenario A: “Climate stress meets governance disaster”
 - Scenario B: “The tragedy of isolated measures”
 - Scenario C: “The opportunities of meso-scale actors”
 - Scenario D: “Climate resilience by governance”



Each scenario is described by the development of 13 factors (descriptors):

Form of government, Watershed management, Management of the water company, Water tariffs, Demography, Form of urban development, Urban poverty, Water coverage, Water consume, Network losses, Wastewater treatment and reuse, Water infrastructure, Climate change.

Contact: Ing. Christian D. León, ZIRIUS – Stuttgart Centre for Interdisciplinary Risk and Innovation Studies, christian.leon@zirius.uni-stuttgart.de

Project co-ordination:

Dr. Manfred Schütze, ifak e. V. Magdeburg, Werner-Heisenberg-Str. 1, 39106 Magdeburg, Germany, manfred.schuetze@ifak.eu, Phone: +49-391-9901470

Ing. Christian D. León, ZIRIUS, University of Stuttgart, Project office, Calle Elias Aguirre 126, Of. 504; Lima 18, Perú leon@lima-water.de, Phone: +51-1-4440149

<http://www.lima-water.de>