Water and urbanisation

Media brief

- Half of humanity lives in cities
- Every second, the urban population grows by 2 people
- 828 million people live in slums

Main challenges

Half of humanity now lives in cities and, within two decades, nearly 60% of the world's population will be urban dwellers. Urban growth is most rapid in the developing world, where cities gain an average of 5 million residents every month. In Africa and Asia, the urban population will double between 2000 and 2030. Cities are growing because of: natural increase in urban population (50%), reclassification of rural areas as urban areas (25%) and rural-to-urban migration. The exploding urban population growth creates unprecedented challenges, among which provision for water and sanitation have been the most pressing and painfully felt when lacking. A lack of safe drinking water and sanitation results in fecal-oral diseases such as diarrhoea and outbreaks of malaria and cholera.

- *141 million urban dwellers worldwide do not have access to improved drinking-water.*
- *One out of four city residents, 794 million in total, lives without access to improved sanitation facilities.*

The urban dwellers suffering the most from these problems are the urban poor. They often live in slums or informal settlements following rapid urban growth, lacking many basic services such safe drinking water, adequate sanitation and durable housing. Ironically, the poor often pay far more for a litre of water than their richer neighbours, since they often lack access to the water supply system and rely on water provision from private vendors.

- *62% of the sub-Saharan Africa urban population and 43% of the urban population of South-Central Asia lives in slums.*
- *In Accra, Ghana, the urban poor pay up to 12 times more for a litre of water than their richer neighbours, since they often rely on private vendors.*

Cities' approaches

- Improve access to water supply systems (Accra, Alexandria, Granada)
- Improve access to adequate sanitation facilities (Accra, Alexandria, Granada)
- Pro-poor water proposals (Accra)
- Social inclusion, participatory approach (Accra, Alexandria, Belo Horizonte)
- Demand management (Alexandria, Belo Horizonte, Lima, Zaragoza)
- Minimise leakage (Alexandria)
- Awareness-raising, education (Belo Horizonte, Granada, Zaragoza)

Cities

Accra, Ghana (2.1 million inhabitants)

- **Main challenges**
  - **Rapid urbanization** -3.4% population growth- and development of **slum** areas.
  - More than 50% of the population does not have household or yard water **connections**.
  - Most poor areas are not connected to the piped water supply system and depend on relatively expensive **private water vendors**.

- 5% of the households are connected to pipe sewerage systems. **Shared latrines and open defecation** are often the only sanitation systems available to the poor. Inadequate sanitation contributes to **70% of diseases** in Accra.
- **Leakage** in water supply system due to the poor condition of the pipes and illegal connections.

• **Focus and objectives**

Focus lies on improving the water services to the poor and on the use of the low quality (waste) water in income generating activities. The Learning Alliance vision for Accra is:

1) All residents uninterrupted water supply of good quality which would be used efficiently.
2) Clean city with a sustainable waste management system where all residents have access to acceptable level of sanitation and drainage.

• **Activities**

- Ensure greater accessibility to the poor by addressing existing limitations through improved identification and targeting of the poor.
- Innovative water supply approaches while recognising the crucial role of small scale suppliers.
- Community-management of public selling points such as standpipes and water kiosks.
- Involvement of marginalized groups.
- Research is being carried out in the area of social inclusion.

Alexandria, Egypt (4 million inhabitants, population increases to 6 million in the summer)

• **Main challenges**

- Increase in **water demand**.
- Totally exploited-renewable water resources.
- **Peri-urban areas** that remain un- or under-served with water and sanitation services.
- **Leakage** of 36% or 318.4 million m^3 per year, mainly due to water theft.

• **Focus and objectives**

Water resources should be managed in an integrated manner, with the participation of all citizens and sectors to use water effectively for development within a framework of environmental sustainability. All citizens should have access to high quality (according to national norms), reliable, sustainable, and affordable water and sanitation services.

• **Activities**

- Develop a 2030 Integrated Urban Water Management (UWM) Strategic Plan for the City of Alexandria
- **Maawa Alsayadaan** demonstration project. Maawa Alsayadaan is a slum area that is currently without adequate sewage systems. The project focuses on upgrading basic infrastructure (water, and sewerage) and presenting a model of how to implement Integrated Urban Water Management (IUWM) in informal settlements in a city of the future. Activities are, among others:
  - Water demand management measures, use of water saving devices.
  - Use of alternative water resources to save drinking-water quality water by switching to groundwater for irrigating green areas and playgrounds.
  - Increase sewerage network connections in households in narrow streets in informal settlements.
  - Social inclusion: consultative and inclusive planning between the community and city authorities with regard to water and sanitation needs and provision. Social inclusion researchers in SWITCH are working with the community to identify sanitation and demand management options that would be appropriate for conditions in the slum area.
- Minimise physical and commercial losses from pipe networks by pipe repairs and installation of new water meters
- Regular detailed monitoring of production, transfers to other areas, demands and losses.

Belo Horizonte, Brazil (2.4 million inhabitants)

• **Main challenges**

- **Population growth** in Belo Horizonte is virtually reaching a saturation level.
- The **slums** are often “inside” the creeks.
- The **Metropolitan area** needs to be considered for planning

- **Focus and objectives**
  - Water resources management should be in an integrated manner, with popular participation.
  - Creeks pollution decrease.
  - Urbanisation respecting water ways.
  - Water sensitive city.
- **Activities**
  - Rainwater harvesting in Anne Frank and Pedro Guerra schools. This demonstration project focuses on the storage and use of rainwater for irrigation of gardens, agriculture plots and cleaning of impervious surfaces in two high schools in Belo Horizonte. The demo has a high potential for education on water issues (e.g.: water consumption, water uses, saving water, water quality).
  - Rainwater harvesting in a Productive Garden. This demonstration works with low income adults.
  - Infiltration trend at Lagoa do Nado Park. This demo also has a high potential for education because the public that visit the park is huge.
  - Participatory budgeting processes.

Granada, Nicaragua (110,000 inhabitants)

- **Challenges**
  - The population growth, tourism and investments have resulted in a **deficit of water supply** for the population.
  - Water supply is **often interrupted** in the higher located neighbourhoods.
- **Focus and objectives**
  - Improve the city water supply system.
  - Involve and make the population aware of the need to protect the environment and to care for water when using it.
- **Activities**
  - The Project “Improvement and Expansion of the Drinking water and Sanitation System of Granada” is supported by the Municipality of Granada; the Nicaragua Company for Aqueducts and Sewerage Sanitation of the Government of Nicaragua; the German government through KFW, and the Japanese government. This project aims to expand the supply systems to cover 80% of the population and to raise awareness among the population on environmental protection, water use and solid waste.

Lima, Peru (8.5 million inhabitants)

- **Main challenges**
  - Accelerated and non-planned urbanisation.
  - Water supply coverage 80.6%. Sanitation service coverage: 76.6%.
  - Water resources sources are not guaranteed permanently.
  - Rain is almost non-existing. The annual precipitation average is 7mm
  - Use of potable water for non-potable purposes such as irrigation of urban green areas.
- **Focus and objectives**
  - Replace the use of potable-water for the irrigation of green urban areas with treated wastewater.
- **Activities**
  - Formulation of policy guidelines to promote the use of treated wastewater for the irrigation of green urban areas.
  - Demonstration project to show the feasibility of using treated wastewater for the irrigation of productive green areas.

Zaragoza, Spain (650,000 inhabitants)

- **Main challenges**
  - Reduce water consumption.

- **Focus and objectives**
  - Reduce the total water consumption of the city from 80 hm³/year to 65 hm3/year in 2010.
- **Activities**
  - Water reduction plan. The objective for water consumption is already realised: in December 2009 the total water consumption of the city was 59 hm³/year.

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