



United Nations
Educational, Scientific and
Cultural Organization



International
Hydrological
Programme

Water in Cities

Short film

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International Hydrological Programme
Division of Water Sciences

Water in cities

Water has become an increasingly crucial issue facing many cities around the world today. Rapid population growth, urbanization and economic development lead to growing pressure on water resources in urban areas. The demand for water is rising constantly. With water demand exceeding water supplies, water shortage has become more prominent in many cities in both the developed and developing world. Numerous cities, particularly in semi-arid and arid regions, have outgrown their local water supplies. All close at hand surface

water sources are being tapped and groundwater resources are being exploited in an unsustainable way. In future, more cities will need to rely on more distant water sources or inter-basin water transfers in order to cope with rising demands for water.

Urban water problems are different in the developed and developing parts of the world, but all cities share the same goal of managing our precious water resources in a sustainable way.

Urban water management: present and future challenges

With future population growth likely to occur mainly in developing countries, cities in the developing regions are expected to face greater challenges in providing safe drinking water and sanitation to their growing population. Lack of access to safe water and adequate sanitation jeopardizes the lives of the urban poor. Although access to water and sanitation tends to be better in urban areas than in rural areas, a large portion of urban dwellers without access to water and sanitation live in ever-expanding slums. Hence, cities need to put special emphasis on providing water and sanitation services for the urban poor in slums and peri-urban informal settlements. This will play a significant part in achieving the Millennium Development Goal on water and sanitation.

Reducing water pollution in urban areas is a key component of urban water management. Water pollution has become one of the most crucial problems in cities around the world, with its direct impact on human health and on the sustainability of ecosystems. The demographic and land expansion of urban areas and the conglomerations of cities have had a negative impact on surface water and groundwater resources. Severe environmental pollution in urban areas, often caused mainly by a lack of sanitation and wastewater facilities and inappropriate solid waste management,

is posing a serious threat to the sustainability of water resources and their ecosystems.

In many cities, the management of urban water systems is fragmented and inefficient, as a result of poor urban water governance and weak institutional, financial and human capacities. In some cities, urban water systems are poorly maintained, and leakage in water distribution networks can be as much as 40 per cent.

Climate change is adding a new challenge to urban water management. With climate change and climate variability impacts, cities will increasingly experience difficulties in efficiently managing more scarce and less reliable water resources, as well as in coping with floods and droughts. With more frequent and intense extreme climate events caused by climate change, cities need to become more resilient to natural disasters such as floods and droughts.

In order to address these water problems in cities, there is an urgent need to improve water resources management in urban areas and to promote strategies, approaches and scientific solutions that will lead towards more effective and sustainable urban water management.

What UNESCO is doing to address urban water challenges

UNESCO's International Hydrological Programme is at the forefront of promoting science, knowledge and capacity-building for the sustainable management of freshwater resources.

The concept of integrated urban water management lies at the core of UNESCO's work for addressing urban water challenges. It is based on the principle of using the urban water cycle as a unifying framework for effective water management in cities. This approach is also instrumental in searching for more sustainable solutions because urban water problems touch upon all elements of the water cycle.

UNESCO's work in this field includes a number of projects addressing various aspects of urban water management:

- an integrated approach for access to water and sanitation;
- shifting from water supply management to water demand management, with the aims of limiting water demand, improving water use efficiency, and promoting wastewater reclamation and reuse;
- reducing water pollution in urban areas through prevention, control and restoration;

- safeguarding water quality from the source to the tap in order to reduce the health and environmental impacts of water pollution;
- protecting and sustainably managing the urban groundwater resources that provide the main source of drinking water for many cities;
- promoting the adaptability of urban water systems to climate change, and improved flood resiliency and drought management;
- promoting good urban water governance and addressing urban water conflicts;
- protecting urban aquatic ecosystems and habitats, which provide important services and properties, and using these ecosystems as a tool for flood protection, pollution control and improvement of the quality of life.

By promoting scientific knowledge and developing solutions for sustainable urban water management UNESCO's aim is to help countries tackle the present and future water challenges faced by cities.





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The short film 'Water in Cities' aims to illustrate present and future challenges in urban water management, highlighting water problems facing cities around the world.

The film is designed to promote sustainable and innovative approaches that UNESCO is pursuing to help countries address water problems in fast-growing cities, and to assist cities to develop strategies for sustainable urban water management.

The Chinese version of the film was exhibited in the UN Pavilion at the World Exposition Shanghai 2010 'A Better City – A Better Life'.

Water in Cities (short film)

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