

# Mobilizing action to secure water FOR CITIES OF TODAY AND THE FUTURE

**Working** through the joint IWA-IUCN Basins of the Future Programme, the IWA network is addressing how to provide holistic solutions to management of water beyond city boundaries from source to tap and effectively engage in basin wide management.

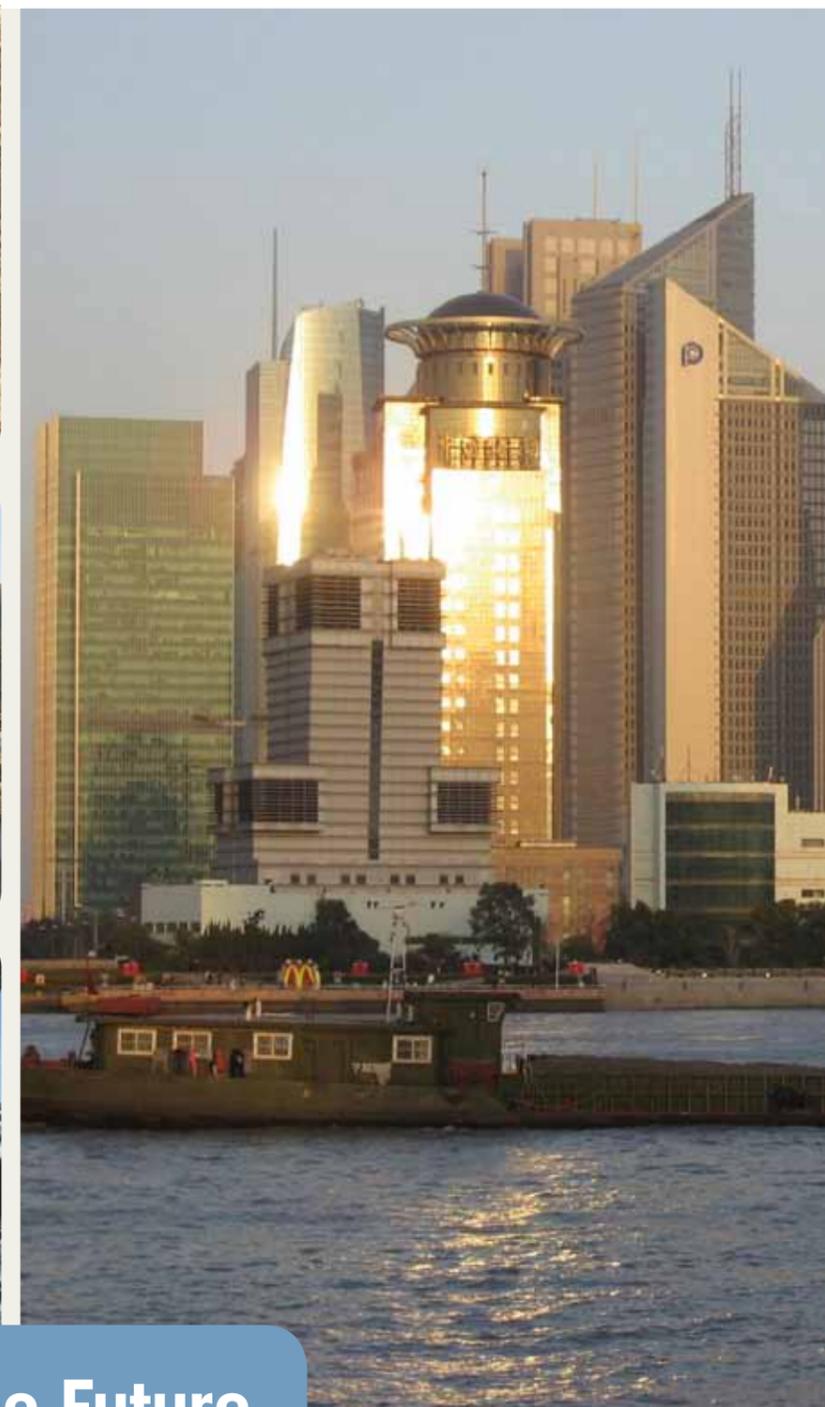
**Join** the IWA Specialist groups to support the Basins of the Future programme including the River Basin Management, Lake and reservoir management, Sustainability, Diffuse Pollution and Efficient Urban Water Systems Specialist Groups among other.

**Connect, learn and catalyse** innovative watershed-city linkages with peers at events, workshops and sessions including the IWA Development Congress in Nairobi, Kenya (14-17 October 2013), and the IWA World Water Congress (2012 Busan, Korea) (2014 Lisbon, Portugal).

**Access and contribute** to publication and journals including the Journal of Hydro informatics, Journal of Hydrology, as well as interactive discussion forums on the IWA Waterwiki and the Environmental Flows Network

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## Basins of the Future

*Managing cities' interactions  
with competing water demands*



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The Global Network for Water Professionals

# Basins of the Future

## Connecting watersheds with the urban landscape

Increasing urbanisation and economic growth provides significant benefits, but it also poses a range of challenges especially in securing water quality and quantity. Water supplies to cities are becoming more and more stressed. For example, water withdrawals are predicted to increase by 50 percent by 2025 in developing countries, and 18 per cent in developed countries. Furthermore, the wastewater generated by growing urban population is impacting downstream communities and the environment.

With a continued increase in water abstractions and use, and more irregular patterns of water availability due to climate change, the pressure on city water supplies is rising. To address this major challenge, cities and utilities need to diversify water supply options from a single source to a portfolio of supplies, include sources such as surface water, groundwater, re-used water, desalinated water and harvested rainwater. Combining these sources in different ways throughout the year will be a corner stone of water sensitive cities of the future.

At the same time, cities are increasingly competing for water resources with other water users across the water, food, and energy nexus. To address competing water needs includes optimizing water infrastructure for multiple purposes, including investing in watersheds as natural infrastructure to work in concert with built infrastructure which supplies water to cities and industry. This requires cities and industries to engage effectively and efficiently in river basin management and support the equitable negotiation of water allocations across users.



## Mobilisation of the Water Network



To address these challenges, IWA is working with IUCN (the International Union for Conservation of Nature) on the Basins of the Future (BoF) programme. The joint initiative focuses on cities and the competing water demands in their river basins centred on the practical reality of managing the nexus of water, food and energy. The programme is designed to build on the work of various IWA Specialist Groups and Clusters including the IWA River Basin Management SG and the Smart Water Cluster. The vision of the Basins of the Future Programme is to work with IWA members and partners to ensure improved water quantity and quality supplies to and from cities through effective basin management. The following priorities will be addressed:

### Demonstration areas

Working with members and partners, the programme focuses on highlighting city - river basin cooperation and investments that have resulted in increased water security across the water, food and energy nexus. A number of case studies will be documented that would constitute 'best practices'. At the same time, a number of cities and basins will be selected where opportunities exist to improve city-basin cooperation with the support of the IWA and IUCN networks.

### Innovation and Technology

New technologies, modelling and decision support systems are used to balance the water needs of agriculture, industry, cities and the environment. IWA and IUCN with members and partners, such as UNEP, GEF and DHI are bringing together the wide variety of technical support tools available for optimizing water use across basins.

### Water Quality

Poor water quality often results in water scarcity within urban areas, as polluted water that cannot be used for drinking, bathing, industry or agriculture effectively reduces the amount of useable water. Water quality also impacts human health, livelihoods and economic activity. To optimize water use across river basins, 'water cascades' need to be developed ensuring water can be used an re-used for different purposes. IWA will develop an integrated framework of water qualities 'fit for purpose' drawing from the wide range of water quality standards currently available.

### Finance, policy, institutions and regulation

Mobilizing new financial resources for investments to address the increasing competition between cities and rural areas is critical. Furthermore, new arrangements and policies are often needed to move towards optimizing water use in basins. Working with a range of members and partners, IWA and IUCN will develop a series of city-basin dialogues to develop new mechanisms and opportunities for investments in portfolios of water infrastructure and technology to optimize water use across sectors.

### Professionals and leadership

IWA works with water professionals that are leaders in the area of river basin management and connecting cities and industries to river basin management. Over the coming years, a dedicated stream of conference, books, papers and workshops will support the strengthening of urban water professionals in their engagement with complex water, food and energy nexus issues within basins.