

»» Perspectives on Development Finance



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Water – the overlooked crisis Climate change and urbanisation require new responses

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Sustainable Development Goal (SDG) 6 aims to ensure safe access to sanitation and clean water for all by 2030, to use water more efficiently and to protect ecosystems. According to a current report by UN Water, we will NOT reach this goal.

The supply of clean drinking water and adapted sanitation systems is still alarmingly inadequate: 2.1 billion people still lack access to safe drinking water, and 4.5 billion people do not have their own toilets on their property. 80 per cent of wastewater flows untreated into rivers, lakes and oceans. Refugee flows pose additional challenges for host regions. Supply systems are overloaded and scarce resources stretched to the limit. This can cause conflicts between new arrivals and local residents.

Global trends driven by climate change, urbanisation and migration

For the first time in history, the majority of the world's population lives in

cities. By 2050, this percentage is set to increase to as much as two thirds. In less than four decades, cities will grow by 2.5 billion people, which is equivalent to more than the total population growth expected for this period.

The OECD predicts that this population growth (combined with other factors such as economic development and changing consumption patterns) will increase demand for water by 55 per cent by the middle of the century.

Currently, 1.9 billion people live in

countries where water is scarce and the demand for water exceeds long-term supply. The extent to which climate change, coupled with population growth and urbanisation, is further exacerbating this situation varies from region to region. Considerable impacts can be assumed in many developing and emerging countries.

Demand is mainly driven by (irrigation-intensive) agriculture, which on average accounts for about 70 per cent of annual water consumption globally, and up to 90 per cent in densely populated, arid climate zones



Climate change: when rain is long in coming



The growth of cities: infrastructure often fails to keep pace with population growth

like the Mediterranean. This negatively affects the availability of water as a resource for the supply of clean drinking water.

However, it is not just the permanent overuse of water resources that threatens people; extreme weather events also cause enormous damage. Over the past 25 years, four billion people have been affected by floods, droughts and similarly serious incidents – and the number is set to rise.

The growing rate of urbanisation is significantly increasing the area of sealed surfaces and the construction on natural retention areas and drainage systems, so that heavy rainfall is less and less able to run off unimpeded. Rainwater is a resource that has rarely been used in the past and should be made available as drinking water, for irrigation or to enrich natural groundwater resources instead of being diverted.

There are currently some 68 million people around the world who have been forced to flee their homes — the highest figure since the Second World War. The majority of refugees stay close to their home regions. In light of this, developing countries tend to bear the brunt, taking in 86 per cent of refugees worldwide. Around two thirds of those who have left their homes are internally displaced within their home country. Host communities face the challenge of having to adapt their supply capacities rapidly. This does not just overstrain developing coun-

tries and emerging economies financially and in terms of capacity, but also Europe, at least in some cases.

Focus on strategic areas of activity

In the light of these global challenges, KfW's commitment on behalf of the German Federal Government has increased significantly since the beginning of the millennium – and thus supports the international water target (SDG 6).

In view of the rising demand for financing from developing countries and emerging economies and, at the same time, reallocation of funds of the Federal Ministry for Economic Cooperation and Development (BMZ) to

other political priorities, KfW is particularly sought-after to provide funds from the capital market for investments in urban water management.

But this limits the possibilities for action such as regional focus and partner selection, for example. The less heavily subsidised loans can only be used in countries where debt sustainability makes this possible, as in India, Brazil or Morocco.

In response, KfW's involvement in the residential water management sector aims to continue maximising impacts and will primarily focus on further developing the following four areas of activity in the future.

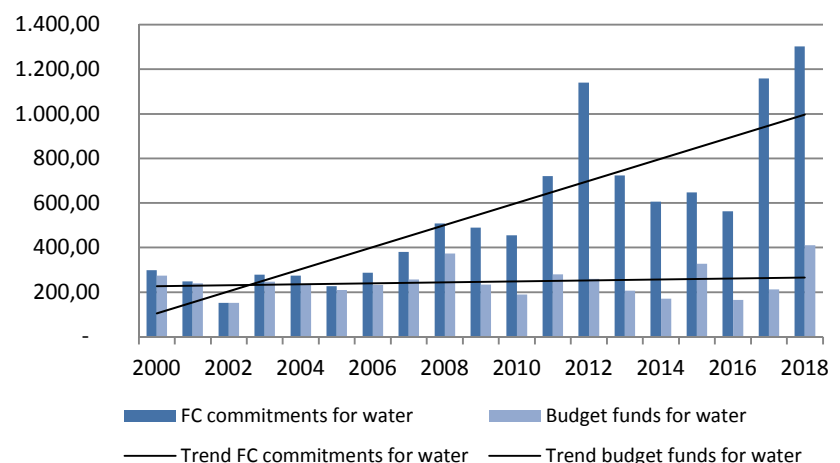
Focal area 1: rehabilitate and expand supply networks in growing cities

The World Bank estimates that over USD 100 billion per year will need to be invested to meet the SDG 6 targets by 2030. At this stage neither the developing countries themselves nor the international donor community can fully meet this immense need for capital.

The involvement of the private sector is often considered as a possible solution to this financing shortfall. However, the possibilities for using private capital are relatively limited due to inadequate legal and regulatory frameworks and low commercial ap-

Increasing FC commitment for the water and wastewater sector Shrinking budget funds compensated via the capital market

Commitments in million EUR



Source: KfW, own illustration

peal.

KfW has long played a major role in this area of activity and will continue to do so with its implementation expertise, technical expertise and high standards, which are highly valued internationally.

The poorest also benefit from the integration of suburban areas into the supply networks of core cities because they usually live in the chaotic but rapidly growing outskirts of the cities of Asia and Africa.

These often high-volume investments in network-based supply and disposal projects are highly effective on a broad scale and increase reliable and high-quality access to water and sanitation. They also have the potential to make cities more resilient to extreme weather events brought about by climate change, e.g. by including climate models in their planning.



Bangladesh: adaptation

Bangladesh, a country with 580km of coastline, is particularly hard hit by the effects of climate change. Economic Climate Adaptation (ECA) provides a means of analysing climate-related risks and making sustainable economic investment decisions

This method served as a practical basis for the development of a climate adaptation strategy for the low-lying coastal town of Barisal. The resulting investments in infrastructure in particularly vulnerable urban areas make the city as a whole more resilient to extreme weather events.

For example, the city's drainage system is being expanded and critical main roads are being elevated in order to provide access points and escape routes in the event of a disaster.

Focal area 2: optimise existing systems to conserve resources

In Germany, a sewer network lasts about 80 years, often longer. These networks not only have to be created with the appropriate technical expertise, they also require regular investments in maintenance. This is a key prerequisite for sustainable operation, which is too often not met in many partner countries. This results in ailing

systems, high water losses, pumps with high electricity consumption, etc.

Targeted system improvements increase the availability and quality of resources and enable positive impacts, especially with regard to climate change adaptation. Appropriate measures include, for example, loss reduction (drinking water) or optimised demand management, the improvement of energy efficiency or energy production (sewage sludge).

New information and communication technologies offer considerable potential for boosting efficiency by improving system and plant control or more effective management.

Focal area 3: increase resilience and use rainfall as a resource

Increasing resilience to the consequences of climate change (droughts and floods) is high on the agenda, especially in cities.

The increase in areas covered by sealed surfaces prevents natural runoff of rainwater and can increasingly overheat heavily populated urban areas.

The core goals of investments in rainwater management are to prevent flood damage and, at the same time, to protect or improve the use of water resources, e.g. through rainwater retention or storage.

Intelligent storm water management can help create water retention areas that improve the quality of life in cities during dry times, for instance by temporarily using public parks and playgrounds and deliberately flooding them as part of modern, climate-adapted urban planning.



Peru: reducing water loss

Many parts of Peru are suffering from water shortages. Global climate change will further exacerbate this situation in the future. Committed and swift action is needed to ensure an adequate and sustainable water supply, especially for people living in arid coastal towns.

On behalf of the German Federal Government, KfW is supporting the cities of Tacna and Chimbote, for example, with smart detection systems for water loss and its elimination as well as register data to keep better records of water users. At the same time, large-scale and household water meters are being systematically installed so that consumers become more aware of responsible water use and receive correct water bills that can be verified for payment.

Important success factors beyond the technical measures are functioning urban planning by involving those affected and extensive information for residents. Visitors to the playground must be aware, for example, that the area also serves as a retention basin during heavy rainfall.

Focal area 4: open up new possibilities with innovative technologies

Technological innovations ensure that we now have access again to resources that were lost to water use ten years ago. The special strength of FC, namely its technical expertise in relation to technologically advanced systems in particular, combined with adapted financing instruments and the sustainability requirement, is a good prerequisite for this.



Extreme weather events cause tremendous damage worldwide



Jordan: reuse

Jordan ranks among the top ten countries in the world with the highest water stress. The existing water resources are constantly overused resulting in falling groundwater levels.

To address this problem, domestic wastewater is treated by three FC-financed sewage treatment plants in the Irbid metropolitan area to the degree that the wastewater can be used for irrigation in the Jordan Valley. These measures relieve pressure on groundwater resources, and an additional 500,000 people can be supplied with clean water.

In keeping with SDG 6, particular focus is placed on the use of e.g. salt-water resources (desalination technologies), the use of advanced wastewater treatment processes (water reuse) and the recovery of energy or nutrients from the water cycle.

Innovations in digital applications also make it possible to tap previously unused resources at a reasonable cost.

Conclusion

Water management plays a central role in integrated approaches coping with the challenges of climate adaptation, environmental and resource protection, demographic development and urbanisation, as well as employment, crisis and refugee flows, and thus also deals with important policy areas.

The water sector is an essential pillar for achieving the sustainable development goals set out in Agenda 2030. From KfW's point of view, it calls for our unwavering commitment, contrary to the current tendencies of policy-makers to focus on other fields.

The partner countries continue to face considerable financial and capacity challenges with these public service tasks. Global trends such as climate change, urbanisation and migration intensify this situation.

With all its experience and expertise in the sector and the further development of project approaches in key areas of activity in view of global trends, KfW therefore remains com-

mitted to the human right to water adopted by the United Nations. It focuses on making a broad-based contribution to ensuring access to clean drinking water and hygienic sanitation for all (SDG 6).



Access to water and sanitation is a human right



Photos

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- p. 4: KfW Photo Archive / photothek.net

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