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# Managing water for a secure future

*Fresh water is at the core of the global development agenda. We need to understand and accept the true value of water if we are to achieve long-term security and human wellbeing*

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**T**he ability to cope with current and future stresses on freshwater resources is a core challenge to achieving sustainable development.

The stresses are many and varied: accelerating urbanisation; growing demand from industry, energy and agriculture; climate change; and current and emerging

pollutants, to name just some. Our continuing inefficient use of fresh water, degradation of aquatic ecosystems and disruption of critical freshwater services intensify this challenge.

Fresh water connects economies, ecosystems and social systems at local, national, regional and global levels. Hydrological resources and risks determine the feasibility of environmental, social and economic goals at these different scales.

Having a clear strategy and commitment on water is essential to deliver not only the 2030 Agenda for Sustainable Development, but also the Paris Agreement, the Addis Ababa Action Agenda, the Sendai Framework for Disaster Risk Reduction and the New Urban Agenda. Water connects these agendas by interlinking targets and enabling an integrated and efficient approach to implementation.

◀ Children carrying clean water from a source built by UNICEF in the Democratic Republic of the Congo

Water underpins success on arguably all the Sustainable Development Goals (SDGs). Achieving SDG 6, and the other water-related targets in the 2030 Agenda, would provide enormous co-benefits across the human development endeavour: transportation, industry, agriculture, health, education, energy, terrestrial and marine ecosystems, and gender equality.

For the Paris Agreement, most of the countries that submitted their national plans, known as nationally determined contributions, highlighted the importance of water as their foremost adaptation priority. Ninety per cent of disasters or manifestations of climate change are related to water, such as floods, storms and droughts. Water is an imperative for disaster risk reduction, resilience-building and risk management, and has been recognised as such in the World Economic Forum's annual *Global Risk Report* for several years.

### Water security

Many human activities put stress on water security. These include: imbalances in urban planning; the use of watershed and catchment areas; the non-recognition of ecosystems' values; and inefficient supply of water-related services, compounded by increasing populations and demand in cities with high rates of growth and informal settlements. How cities are able to cope with these stresses depends on the resilience of their approach to water management.

This is illustrated in the present water crisis in Cape Town, and the city's coordinated response (see box overleaf). The New Urban Agenda recognises that sustainable, resilient cities depend upon resilient freshwater systems. It also acknowledges that the interdependencies between rural, urban and coastal areas require an integrated, basin-scale approach to freshwater management.

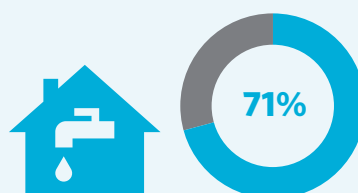
The measures put in place today to manage current and future stresses will determine the level of resilience and wellbeing of the citizens of every single country in the medium and long term.

## 6 CLEAN WATER AND SANITATION



### Ensure availability and sustainable management of water and sanitation for all

**5.2 billion** people used a "safely managed" drinking water service in 2015



**2.9 billion** people used a "safely managed" sanitation service in 2015



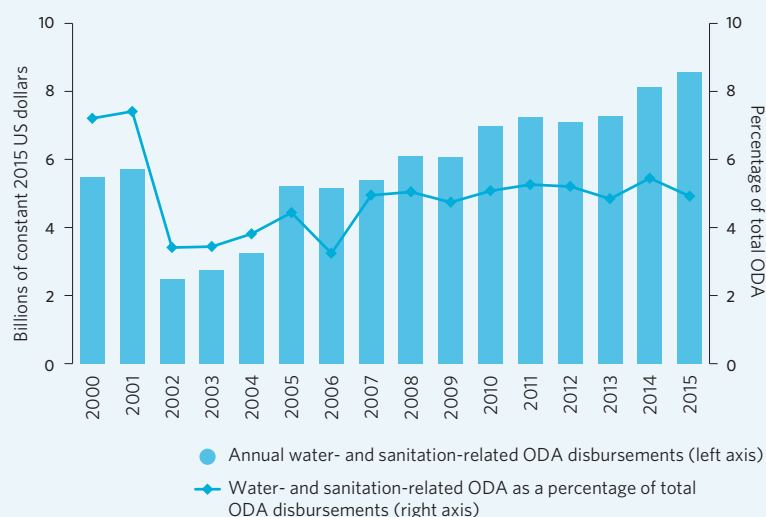
More than **2 billion** people are affected by water stress



**892 million** people still practised open defecation in 2015



Annual water sector ODA disbursements, 2000-2015 (billions of constant 2015 US dollars) and water sector ODA as a percentage of total ODA disbursements, 2000-2015 (percentage)



**Obtaining financial resources** will be critical to achieving progress in the water sector. Sub-Saharan Africa accounted for 31 per cent of global water- and sanitation-related ODA disbursements in 2015, more than doubling in the past 10 years

Source: The Sustainable Development Goals Report 2017, United Nations

To implement these measures, decision-makers need to:

- develop strategies, knowledge and capabilities to better manage existing challenges (overconsumption, scarcity and flood risks) while incorporating future or emerging stresses from changes in the global hydrological cycle and rainfall patterns;
- address governance and market failures to adequately value water, incentivise efficient and prudent use, stimulate innovation to resolve stresses and scarcity, and provide for socially optimal water allocation and use;
- establish inter-sectorial, multi-stakeholder decision-making platforms to address interdependencies, and design integrated policies and plans, data disclosure and monitoring while ensuring full inclusion of women, youth and disadvantaged communities.

### Valuing water

Effective delivery of the targets set for Agenda 2030 depends on effective and responsible management of fresh water. A value-driven, resilient approach will help to build resilient societies and ecosystems.

Responsible, sustainable management of freshwater resources is hindered by complex webs of interdependency and substitutability where value and price are often confused. The absence of adequate pricing for energy generation, industrial and agricultural activities (abstraction and discharge) has led to inefficient water use and high discharges of pollutants. Similarly, users often underpay for subsidised piped water services. Undervaluing fresh water means that disadvantaged communities pay disproportionately more for vendor-supplied water.

A deeper understanding and acceptance of the value of water would enable us to use water more responsibly and to balance different needs. It can also provide mechanisms to design and institutionalise values relative to social and environmental costs and benefits that are commonly external to pricing and decision-making.

Countries and cities preparing for the

### Focus on Cape Town

■ Cape Town has shown that it is possible to decouple economic growth and water consumption. For cities in water-insecure situations, this must become the answer to the new normal: a mentality where water is seen as a precious and scarce resource. That doesn't mean that cities can't grow, but the growth must happen in water-conserving ways. The new normal can become an opportunity for developing sustainable, resilient cities.

Cape Town has, for the past decade, been implementing an intensive water conservation plan. In 2015 its Water Conservation and Water Demand Management Programme was awarded first prize in the 'adaptation implementation' category of the C40 Cities Awards.

"Cities can learn from each other, so we can act faster and draw on technical expertise from around the world," explains Cape Town's Mayor, Patricia de Lille. "For water management, we've learnt from cities such as Melbourne and Perth, Copenhagen and Oslo.

"What the Cape Town experience shows is that while our water supplies were secure only three years ago, the realities of climate change can alter all that in a short space of time. We cannot see drought as something that may or may not happen. It has to be seen as the new normal so that we are prepared and more resilient in the future.

"Our water conservation programme has been working well, limiting water consumption growth to less than two per cent per annum and achieving water savings at approximately 30 per cent, despite rapid economic and population growth. But we are simply not getting enough rain, so we need to improve our water resilience plan."

This means diversifying the water mix and finding alternative sources of water, such as: drawing water from the Table Mountain group aquifer and the Cape Flats aquifer; establishing a small-scale desalination plant for an emergency supply scheme; increasing the use of reused waste; and reducing the city's water waste by reducing water leaks.

There is also an ongoing door-to-door awareness campaign. A thousand community plumbers have been trained and employed by the city, while a 24-hour call centre gets some 500 water-related and 300 sewerage-related complaints a day. A water inspection team advises property owners on how to detect leaks at an early stage, and free plumbing is offered to poorer households that can't afford to repair leaks.

necessary transition to a water-secure world for all must:

- reduce, reuse and recycle water within a circular economy and build innovative business and governance models;
- explore mechanisms to better balance water needs between competing uses. Such mechanisms may include capping and pricing freshwater abstraction, discharges and pollutants, especially when it comes to industrial, agricultural and energy needs, to incentivise efficient use and promote innovation;
- include marginalised communities in decision-making, ensuring they are not disadvantaged and receive quality services at an appropriate price;
- analyse the demand and supply chain,

trade and the consumption of resources and goods to reveal and better manage critical interdependencies and effects of globalisation and global change.

To avoid water stresses and security issues there needs to be a greater recognition of the central role of water in achieving our shared global ambitions. Understanding fresh water's multiple uses, values, risks and interconnectivity is one way to fulfil these aims.

Water is a connector across sectors and stakeholders. It is both a means and a solution. Wise water management must extend beyond political and geographical boundaries for any hope of success and sustainability of human development efforts. ●