

Decade of Action on SDG 6

Earlier this year, the UN launched a Decade of Action to deliver the Sustainable Development Goals by 2030. SDG 6—to ensure the availability and sustainable management of water and sanitation for all—is vitally important for human health and well-being, yet it is still far off target. How can we accelerate progress toward achieving SDG 6 by 2030?

Test Premises, Boost Services



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Policy-makers should temper their expectations about the roles that water prices and improved water-use efficiency can play in managing water. Economic theory suggests that although prices, including block tariffs, could improve the allocative efficiency of water, they might not be sufficient for rationing withdrawals—and could very well compromise access for the poor given preexisting socioeconomic inequalities. Similarly, it is not clear whether more efficient water use will make more water available for other users and uses or whether it will simply increase current economic activities and thus returns for existing users.

To better support evidence-based policy-making that accelerates progress on SDG 6, research needs to focus on managing tradeoffs between efficiency and equity goals in water and sanitation and on actionable conceptualizations and measures of water use.

We also need to think beyond providing infrastructure to providing services. Greater public efforts need to be directed to the design of service delivery systems that ensure water quality, equitable access, and the treatment and safe disposal of wastewater. Research shows that even the poor are willing to pay for reliable and contextually relevant water and sanitation services, which could ease the burden on public funds.

Finally, we need to bridge the policy divide between water for drinking and sanitation and agricultural water management. For example, better-managed water in agriculture can improve water quality, and treated gray water can be used in agriculture, thus allowing fresh water to be redirected to other uses.

Moving from Data to Action



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Achieving SDG 6 is a particularly complex endeavor shaped by many interconnected factors, conflicts, and uncertainties. Such complexity hampers decision making tremendously, not least because of the high probability of unintended negative consequences from our actions. In some way, the international expert community seems to have chosen here a sensing approach and has sought to better understand the system through in-depth research and stakeholder discussions. Although this is a reasonable approach, achieving SDG 6 requires us to go one step further—to move from data to action. Making this step is easier said than done and requires mostly one thing: courage. First, it takes courage to use data to make decisions that are “good enough”—decisions that might not lead to the most perfect solution but will lead to small wins. Although optimal solutions are most appealing to us, they most likely do not exist in complex systems. Second, it takes courage to experiment with management and governance instruments aimed at implementing decisions. How about, for instance, economic incentives in addition to the more conventional instruments, such as hierarchical instructions? Third, it takes courage to reflect on the actions taken. Did the strategy fulfill its intended objectives, or will achieving SDG 6 require an adjustment? Only if we forge this new path can the international community be able to achieve its most important task: addressing the complex problems around clean water and sanitation for all as a means to a socially, ecologically, and economically sustainable future.

Honesty Is the Best Policy



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Nobody likes admitting that they’re wrong ... but water, sanitation, and hygiene (WASH) endeavors regularly fail. In the worst cases, the purported “beneficiaries” are harmed through the unintended consequences of admirable intentions. Inappropriate designs or mismatched institutional strategies mean that pipes break, toilets are used to store goats, and menstrual pads are used as fire starters. These failures slow our progress toward SDG 6.

A group of WASH professionals has developed the Nakuru Accord: Failing Better in the WASH Sector. The accord has nine principles that we agree to live and work by. The first principle is to “promote a culture of sharing and learning that allows people to talk openly when things go wrong.”

If every time we’re “wrong” we sweep it under the rug to save face, we run the risk that our colleagues—unaware of what we’ve just learned—will repeat our mistake. So the cycle continues. To achieve SDG 6, we have to start being open when things aren’t working. We need to learn from one another, build on our mistakes, and stop wasting time and money.

We know that “business as usual” isn’t going to get us to universal water and sanitation in a decade. We do need to take risks and try new approaches and expect that things will go wrong; let’s accept and embrace that. We will learn more about how to improve human well-being if we practice a little more humility, with a little less ego, when things don’t go our way.

Integrated Water Productivity

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Irrigation contributes to 40% of food produced worldwide. As rainfall variability and demand for food both increase, agricultural water productivity will be key to achieving SDG 6. But there is no way to realize this goal without better irrigation decision making. Integration of affordable farm sensing technology with accounting and finance is one promising way to support improved irrigation decision making—and even help elevate farmers out of poverty.

Soil moisture and climate monitoring are increasingly used in efforts to improve water efficiency in irrigated agriculture around the world. However, this information is not linked to financial data, limiting the accuracy and utility of water-use accounting, especially for small farms. Farms smaller than two hectares play a crucial role in global food security and are common in many regions of Asia and Africa with poor access to water. Without economic access to advanced soil water monitoring technology, farmers in these regions are prone to over-watering. Integrating affordable mobile soil-moisture data collection with financial data, such as mobile payment history, can create a simple “water-use account” that can support improved productivity, reduce over-watering, and at the same time build farmer qualifications for credit.

Farmers with access to credit have proven to be able to increase their yields and incomes by over 25%. Despite this, only about 25% of loans in developing countries go to smallholders, mainly because of the limited ability to reach them and assess financial history. Financially integrating cell-phone data with affordable soil moisture sensing would demonstrate site- and crop-specific watering productivity. A smallholder’s phone could then become the key to building a track record of productive crop water use, which could then enable her to apply for a loan to buy fertilizer, increase yield, realize a profit, and open an account with the local bank.

Improving Water Governance

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Accelerating toward SDG 6 requires not only that we do more but also that we do better. Slow progress toward SDG 6 is largely attributable to poor water governance, i.e., the political, social, economic, and administrative systems and processes that influence water use and management. The allocation of water resources is often too focused on economic development, hampering environmental sustainability and putting significant pressure on water services. Climate change will only exacerbate these pressures. At the same time, the water services that are provided are often of low quality. This limits consumers’ willingness to pay for services and leads users to resort to alternative water service providers, unregulated self-supply, and open defecation, which further contribute to poverty and water-resource degradation. These inefficient and unsustainable practices discourage both public and private investment in the water sector. In this context, we need improved water governance to increase trust and develop resilience and sustainability. Governance should focus on strengthening the coordination between water services and resource management to connect upstream and downstream flows from source to sea. The clear allocation of responsibilities, access to information, public participation opportunities, and enforcement measures are all critical for improving government accountability toward citizens and stakeholders. The fight against corruption must also be pursued at all levels. Only with effective governance will investments deliver on the expected outcomes and support a cycle of improvement in water services.

What Can Cities Do?

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As cities and urban populations grow, it is imperative that governments expand and maintain public water systems. Despite the benefits of piped municipal water, there remain serious challenges to these systems. For many urban households in the Global South, establishing a piped water connection and paying for service are still unaffordable. And households that are connected to piped water systems often receive water only intermittently, which compromises quality and increases exposure to contamination.

What can cities do to accelerate progress toward achieving SDG 6 by 2030? Cities must look beyond their borders to secure their water sources. This includes protecting forested and undeveloped areas, controlling development in recharge zones, and supporting improved agricultural practices. These strategies are often overlooked by urban decision makers because they require interventions beyond a city’s jurisdiction and coordination with actors and agencies at multiple scales.

To ensure water access within their borders, cities will require capital investments to expand the piped water network and address intermittent service. The level of resources needed to support public water systems is beyond the financial capacity of most cities and utilities in the Global South and will require investment from national governments. Cities and utilities have an important role in ensuring that water is affordable for low-income households. This includes the use of financial strategies such as incremental block tariffs, free basic water, and flexible payment schemes. Urban policy-makers must also consider participatory upgrading of informal settlements as a means of improving water access for low-income households because this is one of the most effective strategies available.