



A Hmong ethnic girl using a household water source in Ban Sopphouan, Lao PDR. SDG 6 pays special attention to the needs of women and girls and those in vulnerable situations.

Photo: Jim Holmes/ IWMI

Water for all – making SDG 6 a reality

"Water for all" is an important concept embedded in Sustainable Development Goal 6 on Water and Sanitation. However, implementation does not currently target differential access for women and marginalised people. Our authors show what actions are needed to resolve growing tensions around water scarcity and degradation, thus meeting the needs of the poor and vulnerable.

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Inequity in availability, access, use and stability of water resources adversely affects the livelihoods and food security of the poor. Increased water variability, growing water shortages and rapidly increasing pollution are costly, particularly for those who lose access first – and for those who have never had the possibility to access safe water for WASH (Water Supply, Sanitation and Hygiene) or productive uses. The reasons for these inequities lie in exclusions due to gender, caste, ethnicity as well as power imbalances and policy biases and failures.

The World Health Organization (WHO) estimates economic losses associated with inadequate water supply and sanitation at 260 billion US dollars annually, or 1.5 per cent of Gross Domestic Product from reduced health costs and time savings for the countries studied. Other benefits from WASH, such as the potential of nutrient reuse, an overall cleaner environment and enhanced dignity were not valued in this analysis. More than one third of total investment needs are in sub-Saharan Africa.

But water is needed for more than drinking and washing. The 2015/16 ENSO (El Niño/Southern Oscillation) drought of East Africa showed the importance of stability of access to water for productive uses. The event led to a drop in cereal production in Ethiopia's highly vulnerable lowlands by 10 per cent while livestock herds shrank by 23 per cent. Agricultural gross domestic product across the country fell by 3.6 per cent, while gross domestic product across all sectors in the drought-prone lowlands fell dramatically, by over 11 per cent.

Sustainable Development Goal (SDG) 6, on Water and Sanitation ("Ensure availability and sustainable management of water and sanitation for all"), seeks to achieve universal and equitable access to safe and affordable drinking water and adequate and equitable sanitation and hygiene for all and end open defecation, paying special attention to the needs of women and girls and those in vulnerable situations (see Box on page 12). SDG 6 also includes a focus on improving water quality and on protecting water-related ecosystems. This should

help address inequality in access to clean water and the degradation of ecosystems on which some marginalised populations rely for their livelihoods – and which are also the foundation of our food and agricultural system. The SDGs attempt to address inequality by focusing on universality.

Measuring and monitoring progress in water targets for the marginalised

However, the indicators used to measure progress in the SDG 6 targets miss accounting for improvements amongst the most marginalised and poorest populations. Without proper accounting and accountability, progress has remained mixed. According to Unicef and WHO, in 2017, 2.2 billion people lacked access to safely managed drinking-water, and access to safely managed sanitation services was not available to 4.2 billion people. At the same time, water pollution levels continue to worsen in much of the Global South as investments in treatment and management fall far short of

needs while water-related ecosystems continue to degrade. Additional pressure on water resources is exerted from climate variability and change, which dries up the rivers and shallow groundwater resources of the poor and most marginalised, who are thus deprived of water sources for their daily productive and reproductive needs.



National law is one source of rights, but customary, religious, and international law can also be important, especially for water rights.

Today, more than 200 million people still depend on drinking water obtained from sources with collection time in excess of 30 minutes, mostly in sub-Saharan Africa. The burden of water collection falls disproportionately on women and, in some cases, also on children, preventing them from caring for children, obtaining an education or generating income. Adequate support is needed for all countries to be able to monitor changes for women and other marginalised groups in key water targets, including those described in SDG 6. Without proper accounting and accountability, governments will likely prioritise access for those reached more easily, such as urban dwellers and the rich, while rural populations and the poor will continue to be left behind.

Acknowledging the linkage of the right to water with the right to food

In 2010, the United Nations General Assembly and the UN Human Rights Council recognised access to safe drinking-water and sanitation as a human right, while the human right to food had already been recognised as part of the Universal Declaration of Human Rights in 1948. While much progress has been made over the past ten years, globally many vulnerable women and men routinely face violations to their basic rights to water and sanitation.

At the local level, water, land and food are of particular relevance to local people's livelihoods and survival strategies and are tightly linked – an aspect that the human rights framework has failed to reflect, so that important action areas for poor and marginalised people are missing. When water and food shortages hit, families often have to make difficult choices. Should time be spent on water collection or food production, and should scarce financial

resources be used on clean water for children or on meeting their food requirements? In these instances, either one or both human rights are violated.

A broader conceptualisation of the right to water would reflect how water is understood and embedded in the daily lives of local women and men around the world. Incorporating water for meeting individual and household food and nutrition requirements would increase the obligations of states to meeting the rights of the poor and marginalised as a priority for both water and food.

Recognising water rights, especially for the poorest

In many parts of the Global South, there are plural, overlapping and sometimes competing formal and informal legal and customary water rights systems, and most countries in sub-Saharan Africa are characterised by primarily informal water users' practices. Pastoralists and those engaged in freshwater fisheries or in traditional agricultural practices are generally engaged in a mix of informal and formal arrangements of accessing and using water, with many sources serving multiple functions. Processes that formalise water rights often fail to recognise customary rights, leaving small users without legal protection of their water rights in many instances, particularly in sub-Saharan Africa. Moreover, water use rights often depend on having access to land, making land tenure systems a key determinant of access to water.

A **human rights approach** focuses on 'substantive' equality, meaning that all people, regardless of race, class, gender, or other differences, should be allowed to enjoy their fundamental human rights. A human rights approach thus allows for positive discrimination to favour the most vulnerable. States are obliged to take targeted steps to realise their human rights commitments.

Statutory water laws with nation-wide permit systems were introduced in several African countries in the 1990s. However, the permit systems, which can be traced back to colonial roots, have widened inequalities in access to productive water use for millions of small-scale water users and irrigators on the continent. A hybrid system that recognises customary law while reserving permits for high-impact, large-scale commercial water users is called for to increase equity in access to water for everyone.

However, establishing water rights is far from straightforward, and the process itself can create conflict, particularly when statutory rights are inconsistent with customary or religious rights. Water rights shape people's incentives and authority to manage natural resources. For example, a group of irrigators with secure rights to a water source are more likely to be able to create and enforce rules for equitable sharing of the water than a group that does not have recognised water rights. The unique aspects of water, such as its mobility and the vital nature of water for all life, can complicate



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Photo: Jörg Böthling

excluding others from accessing and using water. These features make water rights different from land rights, and difficult to enforce.

Establishing clear water rights may reduce conflicts and uncertainty, increase economic efficiency, and avoid situations of otherwise assumed environmental degradation and wastage. Recognising such rights can, in turn, support effective water governance that ensures equitable and gender-just decision-making and allocation processes around water.

Realising investments in water security

Creating access to water for WASH and productive uses for the poorest and most marginalised farmers requires pro-poor investments that are linked to conducive enabling conditions, such as strong water rights systems that allow smallholder farmers and other marginal water users access to increasingly contested water resources.

Where rainfall can be stored for agricultural purposes, rainwater harvesting, which alters the runoff of rain, allowing for rainfall to infiltrate the soil and be stored for plant use, is a key intervention that not only supports food production but can also control soil erosion. In other areas, low-cost irrigation technologies, such as manual and, increasingly motorised pumps, including solar irrigation pumps as well as low-cost irrigation scheduling tools such as wetting-front detectors, can help farmers access and manage water resources. The Innovation Laboratory for Small-Scale Irrigation – an Initiative of the U.S. Government’s ‘Feed the Future’ Programme – has developed a series of tools and practices to support small-scale farmers. Supporting low-cost agricultural water management approaches also requires increased investment in agricultural research and development for technical and institutional innovations that counter adverse impacts from climate-change induced, larger crop water requirements, increased heat and drought stress and more concentrated, shorter-duration precipitation events that are linked to flash floods, soil erosion and reduced soil water storage. For any of these measures to meet the needs of vulnerable and marginalised farmers, community involvement will be essential, and particularly the involvement of both rural women and men. Continued investment, recognising locally embedded cultural factors and needs as well as behavioural change are similarly important for increased WASH access for the poor and vulnerable. Technologies that are co-devel-

SDG 6 targets and indicators on water and sanitation

SDG 6 targets

- 6.1** By 2030, achieve universal and equitable access to safe and affordable drinking water for all.
- 6.2** By 2030, achieve access to adequate and equitable sanitation and hygiene for all and end open defecation, paying special attention to the needs of women and girls and those in vulnerable situations.
- 6.3** By 2030, improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally.
- 6.4** By 2030, substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity and substantially reduce the number of people suffering from water scarcity.
- 6.5** By 2030, implement integrated water resources management at all levels, including through transboundary cooperation as appropriate.
- 6.6** By 2020, protect and restore water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers and lakes.

SDG 6 indicators

- 6.1.1** Proportion of population using safely managed drinking water services
- 6.2.1** Proportion of population using safely managed sanitation services, including a hand-washing facility with soap and water
- 6.3.1** Proportion of wastewater safely treated
- 6.3.2** Proportion of bodies of water with good ambient water quality
- 6.4.1** Change in water-use efficiency over time
- 6.4.2** Level of water stress: freshwater withdrawal as a proportion of available freshwater resources
- 6.5.1** Degree of integrated water resources management implementation (0-100)
- 6.5.2** Proportion of transboundary basin area with an operational arrangement for water cooperation
- 6.6.1** Change in the extent of water-related ecosystems over time

Implementing mechanisms

- 6.A** By 2030, expand international cooperation and capacity-building support to developing countries in water- and sanitation-related activities and programmes, including water harvesting, desalination, water efficiency, wastewater treatment, recycling and reuse technologies.
- 6.B** Support and strengthen the participation of local communities in improving water and sanitation management.

- 6.A.1** Amount of water- and sanitation-related official development assistance that is part of a government-coordinated spending plan
- 6.B.1** Proportion of local administrative units with established and operational policies and procedures for participation of local communities in water and sanitation management

oped by those in charge of supplying water for domestic uses and that are low-cost, accessible throughout the year and provide safe water are those most likely to lead to sustainable change. For sanitation and hygiene, social learning interventions that help change mental models of the costs and benefits of improved sanitation and hygiene have shown great promise.

Can SDG 6 become a reality?

Many countries in the Global South lack data to adequately monitor changes in drinking water and sanitation for assessing progress in SDG 6; according to UN-Water, only 20 per cent of the UN member states have reported on the water quality indicator over the last five years, and information collected on water-related ecosystems is currently insufficient to understand regional changes in ecosystem quality.

We believe that universality in access can only be achieved through a pro-poor focus of interventions. To drive this, measuring and monitoring progress for the marginalised, acknowl-

edging a broader conceptualisation of the right to water as a conduit to the right to food, recognising water rights for the poor and marginalised and realising investments for water security for the underserved can resolve growing tensions around water scarcity and degradation.

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