Editorial

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Peace with nature

Water can be a tool for peace and prosperity. But water can also create tensions if usage is unfairly shared. World Water Day 2024 focused on the importance of working together to make water a catalyst for a more peaceful society.

Freshwater is one of our most critical natural resources, being both indispensable and irreplaceable. However, the natural distribution of freshwater is highly uneven across the globe. And while the amount of renewable water resources per capita has declined by about 20% globally over the past two decades, the largest declines have occurred in countries already experiencing the lowest per capita availability, such as in sub-Saharan Africa, Central Asia, Western Asia and Northern Africa[1].

According to the World Resources Institute, one quarter of the global population live in countries experiencing 'extremely high' levels of water stress each year, meaning they withdraw over 80% of their annual renewable freshwater supply. The currently most water-stressed region is the Middle East and North Africa, with 83% of the population being exposed to extreme water stress. By 2050, this number is expected to increase to 100%. Globally, an additional one billion people are expected to live with extremely high water stress by 2050[2].

This increase in water stress is problematic not only for water users, be it domestic consumers, agriculture or industry, but it can also be counterproductive to social and political stability. Living with high levels of water stress puts people's lives and jobs at risk; ten percent of the increase in global migration has been linked to water deficits[3]. Additionally, the vital nature of water, together with the growing demand, unequal distribution, and climate change impacts on available resources can lead to disputes and competition over local water sources. With increasing water stress we see the emergence of tensions between sectors, upstream and downstream users, and riparian countries.

Despite the problems, and as indicated by the 2024 World Water Day theme 'Leveraging Water for Peace', water is also a tool for cooperation and conflict prevention. Water resources can bring countries and stakeholders together to collaboratively promote sustainable development. Shared water resources can be an important basis for cooperation in areas such as water, energy and food security, flood protection, poverty alleviation, climate action, and peace and security. Shared costs and investments can lead to shared benefits beyond the water resource. Transboundary water cooperation play an important role for water resources governance, providing a platform for information sharing, dialogue and participatory decision-making[3].

Africa is home to around 20% of the world's transboundary river basins. The Nile Basin countries of northeast Africa not only suffer from high water stress levels, but also some of world's highest levels of energy poverty. In their Article, Mikiyas Etichia and colleagues explore large-scale benefit-sharing cooperation in the Nile Basin. By the use of an integrated energy-river basin system simulator of 13 East African countries they show how electricity trade from the Grand Ethiopian Renaissance Dam between Ethiopia and neighbouring countries could help provide wide-ranging multi-sector benefits in the region. The research and its potential implications are further discussed in the News & Views article by Kevin Wheeler.

Agriculture is among the most vulnerable sectors with regards to climate-related water risks, using approximately 70% of the freshwater withdrawals globally. In lower-income countries, this number can exceed 90%[3]. This may pose significant challenges as food production will need to double by 2050 to meet rising demand, requiring significant additional water use. Since the distribution of water resources does not automatically coincide with the countries with the highest expected increase in food demand, regions facing increased water scarcity are likely to increase their reliance on trade to secure food supplies[4]. In their Article, Weiyi Gu and colleagues explore the impacts of international agricultural trade on water scarcity, inequity and inequality and how agricultural trade relocates water uses between the poor and the rich. They find that although agricultural trade generally relieves water scarcity globally, it disproportionately benefits the rich and widens both the water scarcity and inequity gap.

Water scarcity may also lead to water theft, further jeopardizing the reliability and security of the water supply. In Australia, the world's driest inhabited content, federal water regulators have called for consistency across state jurisdictions in addressing water theft issues to help protect water market confidence and resource reallocation outcomes. In their Analysis, Adam Loch and colleagues explore the legal processes for penalty setting in water theft cases in Australia with the aim to identify applied certainty and severity deterrence principles and help promote consistency across jurisdictions. On a related topic, in their Comment Paolo D'Odorico and colleagues examine the vulnerability of water commons (that is, collectively owned, managed, and utilized water resources) to water grabbing and discuss its associated water justice and environmental implications.

It is clear that the global water crisis is a problem that requires more attention and increased collaboration between sectors, communities and countries. In his World View, Jan Eliasson, Global Ambassador for WaterAid and former Deputy Secretary-General of the United Nations, writes about the relationship between water scarcity and conflict and how transforming potential competition and conflict into cooperation should be a political objective both nationally and internationally.

See our Collection of articles under the theme Water, peace and prosperity.

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