

The Environment: Central to the Water Cycle and Water Management

Water is the lifeblood of our planet, essential for all forms of life and critical to the health of our ecosystems. However, the growing pressures of climate change, population growth, and industrial demands threaten this precious resource. To secure a sustainable future for water, we must adopt innovative solutions and responsible practices that ensure its availability for generations to come. Central to this mission is the integration of technology and **nature-based** solutions

The environment is the foundation of the water cycle, shaping every aspect of how water moves, is stored, and is utilized on our planet. Healthy ecosystems, such as forests, wetlands, and rivers, play a critical role in maintaining the balance of the water cycle, regulating the flow and quality of water that sustains life.

Effective water management depends on understanding and preserving these natural systems. Protecting watersheds, conserving wetlands, and maintaining biodiversity are essential strategies that support the natural processes of filtration, storage, and distribution of water. These practices not only ensure clean and abundant water supplies but also enhance resilience against the impacts of climate change and human activities.

Integrating environmental stewardship into water management is key to a sustainable future. By recognizing the environment as an integral part of water systems, we can develop strategies that protect both the planet and the vital resources it provides.



Working within the entire water cycle, we innovate new ways to use, manage and live with water and protect water-related ecosystems.

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Countries need to co-operate on migration as climate crisis worsens



July 29, 2024

Humanity must rethink migration as the climate crisis drives rapid global changes, researchers say. With significant migration expected -- and border policies hardening -- the researchers say the "time is ripe to highlight the benefits of collaboration between nations and regions." By promoting the benefits of migration, especially in an era of ageing populations, global leaders could ensure a better future for people and societies.

The paper, published in the journal *One Earth*, comes from an international team of climate and social scientists including the universities of Wageningen, Exeter and Nanjing. "Millions of people are projected to be displaced by sea-level rise in the next decades, and two billion could be exposed to extreme heat beyond their experience by the end of the century," said Professor Marten Scheffer, of Wageningen University.

"Ignoring or downplaying the inevitable global redistribution of people would lead to geopolitical instability, and a polarised and fractured world. "Instead, the international community must come together to rethink mobility and cultural integration to ensure a benign transition to this new world." So far, most migration with significant climate dimensions has happened within countries, with people leaving areas affected by long-term decline in agricultural productivity

or escaping conditions such as coastal erosion or extreme events. While some large nations have different climate zones that can accommodate this, small countries do not. The paper also warns that a "skewed distribution of wealth and associated power" makes it difficult for people to move, both within and between states.

Professor Tim Lenton, from Exeter's Global Systems Institute, said: "While many animal species are already changing their geographical distribution in response to climate change, and humans have done so for thousands of years, humanity now faces increasing barriers to this.

"Global warming exacerbates existing inequalities, making habitability a major political challenge of this century. "Concrete cooperation is now needed to match migrant flows with demand for labour, to the benefit of the Global South and the developed world alike."

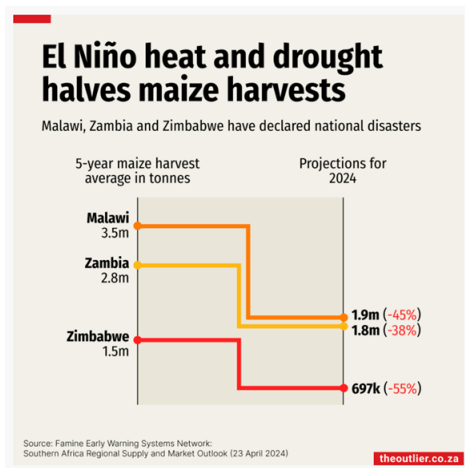
The paper says major reform of the food system, supported by movement of workers, could increase production while conserving nature -- especially if meat consumption is reduced in favour of plant-based diets. Migration can therefore be a win-win for people and the climate, but leaders must make a positive case for economic benefits and effective integration.

"Playing up the social costs of migration appeals to national identity motivations, but fails to overcome problems from ageing populations," said Professor Neil Adger. "Instead, leaders should focus on the economic and social benefits of new populations and effective integration, which benefits newcomers and original inhabitants alike. "Every corner of the world needs to anticipate the coming climate crisis and promote the safe and beneficial movement of people as conditions change."

Journal Reference:

Marten Scheffer, W. Neil Adger, Stephen R. Carpenter, Carl Folke, Tim Lenton, Gaia Vince, Frances Westley, Chi Xu. **Anticipating the global redistribution of people and property.** *One Earth*, 2024; 7 (7): 1151 DOI: [10.1016/j.oneear.2024.06.008](https://doi.org/10.1016/j.oneear.2024.06.008)

Famine looms in Southern Africa: El Niño-driven drought has caused maize shortages



In southern Africa, maize is a staple food for millions of people, eaten as pap, sadza and nshima. But dry and hot weather caused by El Niño has led to a devastating decline in production across the region.



El Niño is a weather phenomenon that is the result of the ocean's surface temperature increasing, leading to a warmer atmosphere. From November to April it typically brings heatwaves, below-average rainfall and drought to southern Africa. Three countries declared a state of disaster this year: Malawi, Zambia and Zimbabwe.

Zambia is experiencing its driest agricultural season in more than 40 years, according to the UN. The country lost almost half of the maize it planted, close to one million tonnes, describing it as “total crop failure”.

Malawi is likely to produce 45% less maize than usual in 2024, while Zimbabwe is projecting 55% less. Millions of people across the region are expected to go hungry as a result.

Valuing water for the Environment

The environment is central to the water cycle and an integral part of all aspects of water management. All water originates in the environment and returns there with the impurities made by humans.

21 September 2023

The environment's value can be expressed in terms of the role it plays in delivering benefits to people water, such as for drinking, irrigation or industrial use, dealing with extremes such as flooding, or helping to deal with pollution.



The environment–water interface can be proactively managed to address water-related challenges through ‘**nature-based solutions**’.

This approach centres on the concept that natural infrastructure can function in the same way as built infrastructure, delivering important benefits to people such as the biodiversity conservation, fisheries, recreation and tourism and reducing water-related operational cost.

The environment should be recognized as an asset that must be maintained and managed, thinking to the multiple services it delivers; defining environmental values by monetary-based approaches would undervalue and commodify nature.

Therefore, it is crucial that **environmental values include different perspectives** of economic valuation, as well as other cultural and societal beliefs.

Transboundary waters: Zimbabwe joins two UN global conventions

By [AFRIK 21](#) - July 25 2024



As Africa promotes the sustainable growth of its seas and oceans on 25 July 2024, Zimbabwe is also determined to protect its shared water resources. This is the rationale behind its recent accession to the two global United Nations conventions on water, namely the Water Convention and the Convention on the Law of the Non-Navigational Uses of International Watercourses.

It's now official. Zimbabwe becomes the 11th African country to accede to the 1992 Convention on the Protection and Use of Transboundary Watercourses and International Lakes (the Water Convention) after Ivory Coast, and the 15th African State, after Tunisia in 2009, to ratify the 1997 Convention on the Law of the Non-Navigational Uses of International Watercourses.

Adopted on 19 July 2024, the Water Convention, or Helsinki Convention, will enter into force for Zimbabwe on 17 October 2024 in accordance with Article 26(3), which stipulates: *“For each State or organization referred to in Article 23 which ratifies, accepts or approves this Convention or accedes thereto after the deposit of the sixteenth instrument of ratification, acceptance, approval or accession, the Convention shall enter into force on the ninetieth day after the date of deposit by such State or organization of its instrument of ratification, acceptance, approval or accession”*, says the United Nations Economic Commission for Europe (UNECE),

“Zimbabwe’s rapid accession to the United Nations Water Convention is testimony to the country’s desire to strengthen its cooperation in the field of transboundary waters, in addition to the already significant progress it has made in this area”, said Sonja Koeppel, Secretary of the Water Convention. Indeed, the shared basins of the East African country covered by cooperation agreements have risen from 69.90% in 2020 to 90.4% in 2023. Despite this considerable progress, challenges remain, particularly with regard to the collection and management of data and the management of groundwater, which is currently over-exploited due to drought.

The country’s accession to the Helsinki Convention could help in these areas, particularly through the UN Water Convention’s work programme and associated tools and guidance documents.

At least five rivers shared with its neighbours

Zimbabwe shares a total of five rivers and one international lake with neighbouring countries. These are the Buzi, Limpopo, Pungwe, Save and Zambezi rivers and the Kariba dam, shared with Mozambique to the east, South Africa to the south, Botswana to the west and Zambia to the north.

Also ratified by Zimbabwe on 19 July 2024, the 1997 Convention on the Law of the Non-Navigational Uses of International Watercourses should provide Emmerson Mnangagwa’s country with a normative framework to guide the development of regional or sub-regional agreements, taking into account the specific characteristics of each basin or sub-basin. This approach is based on five pillars: the principles of water sharing, the duty of riparian states to cooperate, environmental protection, the principle of public participation, and dispute prevention and settlement mechanisms.

Inès Magoum

TÜRKİYE –IRAQ WATER FRAMEWORK AGREEMENT

Water projects and water management support will be provided to Iraq in exchange for oil

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Hidropolitik Akademi



Türkiye; It will provide project support to the Iraqi administration on the good management and economical use of the waters of the Tigris and Euphrates rivers. Türkiye will finance the projects with the oil it will purchase from Iraq.

Ankara - The "Framework Agreement on Cooperation in the Water Field between the Government of the Republic of Turkey and the Government of the Republic of Iraq", approved by President Recep Tayyip Erdoğan, was published in the Official Gazette yesterday.

The issues agreed upon by Turkey and Iraq in the Decision Concerning the Approval of the Framework Agreement on Cooperation in the Water Field between the Government of the Republic of Turkey and the Government of the Republic of Iraq (Decision Number: 8836) are as follows:



■ Turkish companies specialized in infrastructure, environment and water protection, sustainable and effective use of water resources, water desalination projects, flood and drought protection, irrigation and sewage networks, wastewater treatment and collection, purification and reuse of industrial wastewater, by the Republic of Iraq Participation in the tender processes to be announced upon invitation.

■ There will be cooperation in the field of implementation of joint projects on the development of sustainable water management in the Tigris and Euphrates rivers and their best use in various fields such as agriculture, industry, municipal and drinking water in Iraq.

■ Expertise projects will be implemented in Iraq on the construction of water infrastructure and collection systems, dam safety and improvement of existing dams.

Projects will be financed in the most appropriate way to be agreed upon. The financing of each project will be met through a system based on Turkey's oil purchases from Iraq, unless otherwise agreed by the parties.

Source: <https://www.milliyet.com.tr/gundem/iraka-petrol-karsiliginda-su-destegi-verilecek-7173051>





Water Crisis in Gaza



Water for Peace Lost: Israel's War on Gaza Exacerbating Water Scarcity

96%

Drop in Average Water consumption
per capita due to War on Gaza



81% of households in Gaza
lack access to sufficient **clean water**



2 liters/person/day is the average water
consumption for all domestic needs

341 person share 1 toilet

1292 person share 1 shower



57%

of assessed WASH
facilities are damaged



40%

of the water networks in
Gaza Strip were destroyed



83%

of groundwater wells
are not operating

Statistics as of 20 March 2024

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We need to build a future,
Where people live in harmony with nature

HPA

Think Forward .Lead Forward