



THE WORLD WATER QUALITY ALLIANCE NEWSLETTER

May 2024

The World Water Quality Alliance is convened by the United Nations Environment Programme and supported by the Swiss Confederation. It proudly presents its monthly newsletter, YEMAYA, named after the ancient African goddess of the ocean and motherhood. She is associated with fertility, femininity, protection, healing, and childbirth. Her domains are symbolized as water creatures: the seas, rivers, and lakes. She is honoured and revered in the African diaspora, particularly in Cuba, Haiti, Brazil, and the United States.

We, the World Water Quality Alliance Coordination Team, welcome articles about water quality. Tell us about your experiences. Describe the challenges you and your people face. Talk to our global community; talk to people from around the World. Send your articles to wwqa-coordination@un.org.

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Dr. Musonda Mumba - Secretary General, Ramsar Convention on Wetlands

Your journey to becoming the Secretary General of the Ramsar Convention on Wetlands is undoubtedly fascinating. Could you walk us through what inspired your passion for the wise use and management of wetland ecosystems and share some pivotal moments that led you to this amazing role? Additionally, in your capacity, what have been some of the most rewarding experiences you've encountered so far?

In many ways, I feel very fortunate and blessed to work in a field I love. I started my career as an intern at the Convention on Wetlands in 1998 and returned in 2022 as its Secretary General. This was totally unplanned, and I am happy that it happened because I also happened to be a wetland ecologist by training. I have been fortunate to have had a career where I worked for civil society and the United Nations, giving such diverse insight into experiences and global outlook, especially in the work on multilateralism. I feel that these experiences prepared me for this role on many levels.

My most rewarding experiences included visiting sites I never imagined I could, inspiring young people to be involved in the conservation of wetlands, and meeting and speaking at events in non-traditional or non-conservation spaces to speak about why wetlands matter for all elements of sustainability. This has given me much joy. My favourite time of our wetlands calendar is World Wetlands Day because everyone on this planet celebrates that day, and it's just super SPECIAL.



1 - photo provided by [Dr Musanda Mumba](#) -Secretary General, Ramsar Convention on Wetlands

Beyond conservation efforts, equitable access to clean water is also needed, especially for communities living near wetlands. How does the Ramsar Convention balance conservation goals with ensuring sustainable water management practices that benefit both ecosystems and human well-being?

The core principles of our convention are around wise use, which is why wetlands worldwide are there not just to support species but also to provide ecosystem services for communities and cities. I have visited many parts of the world where wetland systems are also the water supply for cities and for agricultural activities as well as tourism. Many wetlands in cities provide spaces for local citizens to enjoy them and spaces for human well-being. This is why the theme for World Wetlands Day 2024 was “Wetlands and Human Well-being”. Healthy wetlands also mean healthy people and healthy economies. The convention, through diverse partners, works on addressing issues of pollution, for example. Polluted wetlands are terrible for human health, and as such, my ambition is to raise the visibility of the fact that wetlands are intersectional on many accounts.

As we celebrate biological diversity this month, what role do you see wetlands playing in safeguarding and enhancing the richness of life on our planet, particularly in terms of preserving aquatic species and maintaining healthy ecosystems?

I wanted to start by saying that for many species on this planet, their life (meaning birth) starts in wetlands. Many species, plant, and animal species, are supported globally by thriving and resilient wetland ecosystems. The diversity of wetland ecosystems is essential to maintaining healthy ecosystems and supporting livelihoods. Wetlands around the world also serve as connectors for migratory species, especially bird species that migrate thousands of kilometres across continents to either feed or breed or both.

Looking to the future, what are your hopes and aspirations for the conservation of wetlands and the preservation of water quality on a global scale? How can individuals and organizations contribute to these shared goals?

My biggest aspiration is the role of local communities and citizens in conserving and preserving wetland ecosystems. Many people live close to or even near wetland systems and depend on them every day. Our convention always refers to “Wise use” of wetland ecosystems. As we are part of the UN Decade on Ecosystem Restoration – I see a pivotal role played by both individuals and organizations in the conservation and, where necessary, the restoration of wetland ecosystems.

Addressing Challenges in Monitoring Freshwater Biodiversity: Towards Harmonized Standards and Effective Management



Freshwater ecosystems play a vital role in sustaining biodiversity and supporting human livelihoods. They are also under immense pressure: the rate of species loss in freshwater ecosystems is greater than that observed in terrestrial and marine systems! Critically, several major international agreements are concerned with stemming the loss of biodiversity and the loss and degradation of habitats and species dependent on them, including freshwater. For example, the Global Biodiversity Framework specifically contains seven targets that are relevant to freshwater ecosystems, and we need to be able to monitor progress towards these targets. However, effectively monitoring and assessing the health of freshwater ecosystems at large spatial scales presents significant challenges.

A central message of the WWQA's Biodiversity Monitoring and Biological Assessment workstream is that we cannot manage what we do not know, nor can we measure it. Simaika et al. (2024) have identified 20 distinct gaps and challenges affecting the harmonization of biodiversity monitoring and bioassessment protocols. These can be grouped into five key categories: field sampling, sample processing and identification, metrics and indices, assessment methodologies, and miscellaneous hurdles. Field sampling for biodiversity monitoring requires sampling across different water bodies, habitats, and seasons, while for bioassessments, similar water bodies, habitats and seasons are sampled for meaningful results. In terms of sample processing and identification, biodiversity monitoring and bioassessment inherently operate at different taxonomic resolutions. Some challenges equally apply to both biodiversity monitoring and bioassessment; for example, data may often not be made publicly available or may not be accessible. In addition, the lack of harmonization is a significant barrier, impeding collaboration and hindering the comparability of data across regions.

Suppose we are serious about stemming biodiversity's quick decline and putting biodiversity on the path of recovery. In that case, we need to report on the state of biodiversity and biodiversity recovery in a straightforward, scientifically defensible way. This will help us better manage life on the planet on which our lives, society, and the economy depend.

Reference

Simaika, J.P., Stribling, J., Lento, J., Bruder, A., Poikane, S., Moretti, M.S., Rivers-Moore, N., Meissner, K. and Macadam, C.R., 2024. Towards harmonized standards for freshwater biodiversity monitoring and biological assessment using benthic macroinvertebrates. Science of the Total Environment, 918, p.170360.

Article Contribution by John Simaika



Your expertise is needed!

Please complete this online survey on the role of bioassessment in policy delivery and decision-making for inland waters

Results will inform a White Paper to build capacity in bioassessment, with a particular focus on UN Sustainable Development Goal 6 “**Ensure availability and sustainable management of clean water for all**”.

IUCN Taskforce on Bioassessment and the World Water Quality Alliance

English



French



Spanish



Portuguese



WWQA and UNEP at the 10th World Water Forum in Bali



The [World Water Forum](#) is the largest international gathering in the water sector involving various stakeholders, which has been co-hosted by the World Water Council and a host city. The Forum is held every three years and has been taking place since 1997. The World Water Forum is not just a conference: it includes a three-year preparation phase (preparatory phase), a one-week event (event phase), and a presentation of the results (synthesis phase) with ongoing support for collective action.

The Forum brings together participants from all levels and areas, including politics, multilateral institutions, academia, civil society and the private sector, among others. Over the years, the number of people participating in the Forum has grown from a few hundred to tens of thousands, from both the international community and host countries.

This year the 10th World Water Forum is taking place in Bali, Indonesia, organized jointly by the World Water Council and the Republic of Indonesia scheduled to take place from 18th to 24th May 2024, with an expected attendance of 30,000 participants from 172 countries.

The World Water Quality Alliance (WWQA) will participate in the upcoming Forum in Bali taking place 18th-24th May. The WWQA's participation in the Forum highlights its commitment to improving water quality initiatives globally and to make more visible the achievements from across its diverse workstreams. Please let us know if you are at the Forum, we would love to get the chance to meet you.

The WWQA will be participating in the following sessions:

T4C1 - Together Apart: Linking Ocean and Freshwater Policies for a Thriving Blue Economy

Date & Time: Tuesday, 21 May, 10:20 - 11:50

Room: Nusantara 1

The session will discuss the link between ocean and freshwater policies, through a city-basin approach.

T6A3 - Methods and Tools for Measuring and Improving Smart Water Management Capabilities (Water4All)

Date & Time: Tuesday, 21 May, 16:40-18:10

Room: Kintamani 6

This session will explore methodologies and technological advancements essential for enhancing smart water management capabilities.

Africa Pavilion - Citizen Science Data for tracking ambient water quality through SDG indicator 6.3.2 - Africa Leading the Way (AMCOW, UNEP)

Date & Time: Wednesday, 22 May, 15:00-16:00

Room: Africa Pavilion

This session will discuss and showcase how Africa is leading the way in Citizen Science Data for tracking ambient water quality through SDG indicator 6.3.2

T6C1 - Successful Water and Ecosystem Management through Indigenous and Local Knowledge (ILK)

Date & Time: Thursday, 23 May, 08:30-10:00

Room: Nusantara 2

This session aims to learn about different practical examples of Indigenous and local water management and governance, and to consider how this can be supported by science and policy making.

SS11 - Sharing the spirit and action on sustainable lake management: raising momentum for World Lake Day

Date & Time: Thursday, 23 May, 10:20-11:50

Room: Pecatu 3

This session aims to unite stakeholders and organizations committed to sustainable lake management and inspire them to take concerted action to protect our precious lake ecosystems.

SE038 - Global Processes and Initiatives for a Water-Secure World

Date & Time: Thursday, 23 May, 13:00-14:30

Room: Singaraja 2

This session will delve into worldwide efforts and strategies to ensure water security for all. Discussions will revolve around innovative approaches and collaborative initiatives driving progress toward this critical goal.

Side event: Global Processes and Initiatives for a Water-Secure World

UN environment programme

Learn about inclusive solutions to strengthen, restore, and monitor the health and quality of freshwater ecosystems to address the triple planetary crisis.

23 May 2024
13:00 - 14:30 (CIT)
 Singaraja 2, BNDCC 1, 1st Floor,
 Bali Nusa Dua Convention Centre

Scan the QR code and register to receive updates and reminders

10th World Water Forum

10th WORLD WATER FORUM 2024

SHARING OF KNOWLEDGE, SPIRIT AND ACTION ON SUSTAINABLE LAKE MANAGEMENT

Opening Remarks
Dyah Murtiningsih, M.Hum
 Director General of Watershed Management and Forest Rehabilitation, MoEF RI

Keynote Speaker
Dr. Masahisa Nakamura
 Vice President, International Lake Environment Committee (ILEC)

Speakers

- Naoya Yamamoto**
 Director of the Lake Biwa Conservation and Restoration Division, Shiga Prefecture, Japan
- Dr. Titiek Setyawati**
 Indonesian National Research and Innovation Agency
- Arianito Budi Santoso, Ph.D**
 Indonesian National Research and Innovation Agency
- Dr. Neli Lazarow**
 Research Program Manager for Water, ACIAR
- Dr. Carmel Pollino**
 Research Director for the Water Security Program, CSIRO
- Fiore Lafaye**
 Senior Adviser, Secretariat of the Convention on Wetlands
- Nina Raasakka**
 Coordinator, World Water Quality Alliance, UNEP

Moderator
Dr. Ida Bagus Putera Parthama
 Executive Chair of the National Watershed Forum, Indonesia

SIDE EVENT CODE
SS 11

23rd May 2024
 10.20 - 11.50 WITA

Pecatu 3 Room
 BNDCC 2
 Nusa Dua, Bali

These engagements highlight the World Water Quality Alliance's diverse approach to solving water quality issues. They aim to address such challenges through innovative solutions and the involvement of various perspectives. By actively engaging in the World Water Forum, the WWQA aims to promote

meaningful discussion, collaboration, and action towards achieving global water security and sustainability.

Other events that UNEP will be participating in:

Tuesday 21 May, 14:50-16:20, World Lake Day: urgent call to save our lakes - implementation of sustainable lake management

Tuesday 21 May, 14:50-16:20, One Health: Linking water for humans and nature through water quality at a basin scale: new approaches and new technologies

Wednesday 22 May, 8:30-10:00, Navigating the Source to-Sea Journey: Advancing Prosperity Across the Entire Water Cycle

Wednesday 22 May, 8:30-10:00, Towards a Global One- Health Approach in Public and Environmental Monitoring

Thursday 23 May, 13:00-14:30, Transformative change for the future Water-Smart Society: Linking science, policy and action

Thursday 23 May, 14:50- 16:20, The governance and building blocks for circular water and resource management for food security and resilient cities

Intergovernmental Negotiating Committee (INC) Summary Report



The Intergovernmental Negotiating Committee (INC) on Plastic Pollution was created as a response to the request in the United Nations Environment Assembly (UNEA) resolution 5/14 on "End plastic pollution: Towards an international legally binding instrument" to be delivered by the end of 2024 to address the full life cycle of plastic, including its production, design, and disposal via an international legally binding instrument on plastic pollution, including in the marine environment.

The WWQA Plastics workstream has investigated the plastics pollution in freshwater bodies by piloting the UNEP guidelines "Monitoring Plastics in Rivers and Lakes: Guidelines for the Harmonization of Methodologies" which initiated the workstream. According to these guidelines - "when investigating the origin of plastic debris in the oceans it is widely assumed that 80 percent of this debris comes from land-based sources although this is currently poorly supported by data (Andrady 2011, Jambeck et al. 2015) hence the importance of monitoring plastics in freshwater bodies and to harmonize these monitoring methods globally.

It is imperative to make sure that land based plastics and source-to-sea are considered, and the WWQA plastics workstream have been working on using the UNEP guidelines to monitor plastics across various locations in the world (Rhine basin, Volta, Mekong basin in Tonle Sap Lake in Cambodia). These will be expanded to cover estuarine and mangrove areas to close the loop and work towards a better identification of plastics in the source-to-sea cycle. Given the prevalence of plastics as a source of pollution affecting the ecosystem and human health.

The Fourth Session of the Intergovernmental Negotiating Committee (INC-4) focused on developing an International Legally Binding Instrument (ILBI) to tackle plastic pollution, including marine environments. Delegates emphasized the distinction between plastic as a material and plastic pollution as waste, acknowledging the need to combat pollution rather than plastic itself. Throughout the seven days, delegates grappled with defining "good" and "bad" plastic and delineating between plastic materials, products, and pollution.

The session saw the emergence of distinct positions among delegations regarding their expectations for the future agreement. Five subgroups worked on negotiations based on a Revised Draft Text from the previous session (INC-3). While some areas of convergence, such as provisions on plastic waste management and just transition, were identified as "low hanging fruit," sharp differences arose on issues like the inclusion of provisions on primary plastic polymers, addressing chemicals and polymers, and determining the agreement's scope, financing, and extended producer responsibility.

Delegates concluded the session by agreeing to use their compiled work as a foundation for negotiations at the next meeting (INC-5). Additionally, they established a legal drafting group to ensure the legal clarity of the new instrument. The closing plenary was briefly suspended twice to allow for the agreement on intersessional work. Eventually, two ad hoc intersessional open-ended expert groups were established to analyze potential sources and means for implementing the instrument's objectives and to assess criteria and approaches for plastic products and chemicals of concern.

Despite some proposals for an additional session before INC-5 due to the remaining workload, delegates failed to reach an agreement, this left some uncertainty among certain participants about the negotiations' ability to produce a robust deal by the end of 2024. The session, held in Ottawa, Canada, from April 23-29, 2024, attracted over 2500 participants from various sectors, including governments,

academia, civil society organizations, private sector entities, UN entities, and international organizations, with many others following through webcast.

For more, click [Here](#).

The WWQA BULLETIN BOARD

10th EbA Knowledge Day

The 10th EbA Knowledge Day will spotlight EbA action and illustrate its distinctive benefits in achieving climate, biodiversity, and land-related goals under the Rio Conventions. There will be panel discussions, breakout groups, and a Marketplace and Networking Reception. The sessions will explore collaborative actions, identify gaps, and facilitate an open forum to identify areas for improvement. Crucially, the event will convene representatives from across the conventions, policymakers, and practitioners to foster and spur collective discourse, which, in turn, supports the development of future work on this topic.

[Register here!](#)

Attendance is via registration only. If you plan to attend in person, we advise you to register soon, as spaces are limited. If you have any further questions, please get in touch with marcus.nield@un.org. To learn more about Ecosystem-based Adaptation, [visit us here](#).



The poster features logos for FEBA, IUCN, UN environment programme, Global EbA Fund, GLOBAL ADAPTATION NETWORK, and IKI. It includes a circular image of a person in a field and a QR code. Text on the poster reads: "10th EbA Knowledge Day Save the Date! Event Features: Panel Discussions, Breakout Sessions, Marketplace, Networking Reception. 6 June, 2024 09:30-19:00 CEST Bonn Marriott Hotel Walking distance from World Conference Center Bonn. Register for in-person* and virtual with the QR code *Registration required as there is limited capacity".

Publications from the Innovative Solutions Hackathon Event (Petten, September 2023)

We are excited to share some developments in water quality research from the Innovation Workshop that took place in Petten in September 2023 and which was hosted by European Commission Joint Research Centre, WMO, UNESCO, IAEA, GEMS/Water and the WWQA. Below are highlighted recent publications and achievements that underscore ongoing collaborative work to address global water challenges.

1. Innovative Solutions from Collaborative Hackathon Event

One recent article that caught our attention is titled "Innovative solutions for global water quality challenges: insights from a collaborative hackathon event." This publication sheds light on creative approaches and novel solutions generated through collaborative efforts. [Read more](#).

2. Special Issue in Frontiers in Water

We are delighted to announce the publication of three manuscripts by workshop participants in a special issue of *Frontiers in Water*. These manuscripts showcase achievements and insights from the workshop:

- "Towards monitoring the invisible threat: a global approach for tackling AMR in water resources and environment." [Read more](#).
- "The contributions of Indigenous People's Earth observations to water quality monitoring." [Read more](#).
- "Empowering citizen scientists to improve water quality: from monitoring to action." [Read more](#).

These publications represent significant strides in our collective efforts to understand and manage water quality challenges. We extend our heartfelt congratulations to all contributors for their invaluable contributions and dedication to advancing water quality research.

Developing Meaningful water-energy-food-environment (WEFE) Nexus Indicators with Stakeholders: An Upper White Nile Case Study

The Upper White Nile (UWN) basin plays a critical role in supporting essential ecosystem services and the livelihoods of millions of people in East Africa. The basin has been exposed to tremendous environmental pressures following high population growth, urbanisation, and land use change, all of which are compounded by the threats posed by climate change and insufficient financial and human resources. The water-energy-food-environment (WEFE) nexus provides a framework to assess solution options towards sustainable development by minimising the trade-offs between water, energy, and food resources. However, the majority of existing WEFE nexus indicators and tools tend to be developed without consideration of practitioners at the local level, thus constraining the practical application within real-world contexts. To try to address this gap and operationalise the WEFE nexus, we examined how local stakeholders frame the most pressing WEFE nexus challenges within the UWN basin, how these can be represented as indicators, and how existing WEFE nexus modelling tools could address this.

The findings highlight the importance of declining water quality and aquatic ecosystem health as a result of deforestation and increasing agricultural intensity, with stakeholders expressing concerns about the uncertain impacts of climate change. Furthermore, a review of current WEFE nexus modelling tools reveals how they tend to be insufficient in addressing the most pressing environmental challenges within the basin, with a significant gap regarding the inclusion of water quality and aquatic ecosystem indicators.

Subsequently, these findings are combined to guide the development of WEFE nexus indicators that have the potential to spatially model the trade-offs within the WEFE nexus in the UWN basin under climate change scenarios. This work provides an example of how incorporating local stakeholders' values and concerns can contribute to the development of meaningful indicators that are fit for purpose and respond to the actual local needs.

For more about the article, click [Here](#).



Developing meaningful water-energy-food-environment (WEFE) nexus indicators with stakeholders: An Upper White Nile case study

Annika Schlemm^a,  Mark Mulligan^b, Ting Tang^c, Afnan Agramont^{a, g}, Jean Namugize^d, Enos Malambala^e, Ann van Griensven^{a, f}

Job Openings

Groundwater Correspondents Network Application

Do you also have inspiring stories to tell? Would you like to learn some interesting storytelling techniques? International Groundwater Resource Assessment Centre is now accepting new applications for the Groundwater Correspondents Network! Apply by the 1st of June!

[Link to Apply](#)

Call for Submissions: Water Talks 2024 Series

The Group on Earth Observations (GEO) AquaWatch Early Career Society (ECS) is inviting early career scientists to submit abstracts focusing on aquatic remote sensing for consideration in the Water Talks 2024 Series. This series, showcased in a virtual webinar format from September 2024 to April 2025, offers a platform for researchers to present their work, expand their professional connections, and reach a broader audience.

To enrich the field of aquatic remote sensing, the Water Talks 2024 Series emphasizes the inclusion of **research and researchers from the Global South, Oceania, South Asia, and Southeast Asia.**

Applications are open until **June 15, 2024, 23:59 UTC**. Early career is a self-identified term that can include current graduate students, postdoctoral scientists, or those who have relatively recently completed their degree. Additional information and **registration can be found [here](#).**

For questions, contact ecsleadership@geoaquawatch.org.

An activity presented by the
GEO AquaWatch Early Career Society



WATER TALKS

Sep 2024 - Apr 2025

NASA Earth Observatory image by Joshua Stevens, using Landsat data from the U.S. 2019.

Open Call For Abstracts

You're invited to join our 2024 Water Talks webinar series, where you can work with aquatic Earth Observation experts from around the world to deliver a presentation of your work.



Who can apply?

Selection is focused on students and researchers located in under-represented geographic regions or those who conduct research in those regions.



- Early career scientists, professionals or students
- Focused on aquatic Earth Observation
- Located in Global South, Oceania, South or Southeast Asia

How does it work?

Each speaker will partner with a scientist from GEO AquaWatch. Together, they will co-develop a peer mentoring programme and presentation, which will be shared through a series of webinars to the wider GEO AquaWatch network beginning in September 2024, to be hosted by a renowned Earth Observation academic. See last year's talks on our [Youtube channel](#).

How to apply?

Submission requires a 1 page (minimum 300 words) description of your research, which can be submitted [here](#). Abstract submissions are due 15 June 2024.

APPLY HERE BY 15 JUNE 2024

Questions: ecsleadership@geoaquawatch.org

More info: www.geoaquawatch.org/early-career-engagement-activities

X @geoaquawatch

WWQA Membership Application Form

The WWQA coordination team has set up a WWQA Membership Application Form to keep our growing membership organized.

We kindly request all members to fill out the form :)

<https://forms.office.com/e/BeF5iRuaP3>

In the June Issue of YEMAYA

- *World Environmental Day*
- *World Food Safety Day*

- *International Day of Women in Diplomacy*
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Please follow our social media handles at:

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LinkedIn: <https://www.linkedin.com/company/wwqa>

Visit our website at: www.wwqa.info



*Unless otherwise indicated, all contributions are by the WWQA coordination team.

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YEMAYA welcomes articles, opinions and audio-visual material related to the issue of water quality. Please send any contribution to wwqa-coordination@un.org with a short 100-word biography, the name of your organisation and a phone number where you can be contacted.