THE WORLD WATER QUALITY ALLIANCE NEWSLETTER

February 2025

The World Water Quality Alliance is convened by the United Nations Environment Programme. 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.

World Wetlands Day & International Day of Women and Girls in Science

Wetlands are among the most productive ecosystems on Earth, providing essential services such as water filtration, biodiversity support, and climate resilience. Celebrated on 2 February,

World Wetlands Day raises awareness of the urgent need to protect these vital ecosystems for people and nature.

Science and innovation are key to safeguarding our environment, and ensuring diverse voices in research leads to stronger solutions. The International Day of Women and Girls in Science, observed on 11 February, highlights the crucial role of women in scientific advancements, including water quality monitoring and ecosystem conservation. By fostering inclusivity in science, we strengthen our collective ability to protect wetlands and freshwater resources for future generations.

IN THIS ISSUE

- ***WWQA Membership Application Form***

WWQA: A new phase of development and progress

The World Water Quality Alliance (WWQA) is entering an exciting phase, strengthening its impact and enhancing collaboration across its global network. The WWQA coordination team will be supporting this dynamic alliance with the guidance from our dedicated Advisory Committee Members, whose expertise and commitment shape our strategic direction. From long-standing contributors to new champions, our advisory members bring unique perspectives, fostering innovation and action as well as aligning the freshwater agenda across the UN.

The progress of the WWQA will be further strengthened through closer alignment with the GEMS/Water team which provides the focus for water quality policy and integration within UNEP, oversees the management of the global water quality data base (GEMStat); and also, the implementation of SDG Indicator 6.3.2. This closer collaboration ensures that the efforts of the WWQA are more closely connected to global water quality monitoring and reporting. Additionally, volunteers such as Online UNVs and interns play a key role in supporting WWQA's communications.

1 - 2023 WWQA Annual Conference

Key Goals for the Year Ahead

Showcasing the Contributions of WWQA Members

The voluntary and in-kind contributions of WWQA's diverse workstreams and it's members are invalu

clearer workstream information, enhanced access to resources, and a stronger sense of community.

Strengthening Alignment with SDG Indicator 6.3.2

WWQA workstreams will receive greater guidance and co-creation opportunities to better integrate into global water quality reporting efforts. By aligning our data collection and reporting mechanisms with SDG 6.3.2, we can directly support policy action, decision-making, and implementation, strengthening global progress on water quality improvement.

2 - Understanding data collected

Advancing the Pathway to a World Water Quality Assessment

WWQA continues refining methodologies, data sources, and analytical tools for a more comprehensive understanding of global water quality. Strengthening the integration of diverse monitoring approaches—including Earth observation, modeling, in-situ data collection, and citizen science—remains a priority. Improving data accessibility and usability ensures decision-makers, researchers, and local communities have the insights needed for informed action.

Enhancing Inclusivity Through the Quintuple Helix Approach

WWQA embraces the Quintuple Helix model, ensuring water quality solutions are scientifically sound, socially inclusive, and environmentally sustainable by engaging five key sectors:

✅ Public Sector – Governments drive policies and regulations for sustainable water management.

✅ Private Sector – Businesses innovate, fund, and implement responsible water practices.

✅ Research & Academia – Scientists provide data, methodologies, and cutting-edge insights.

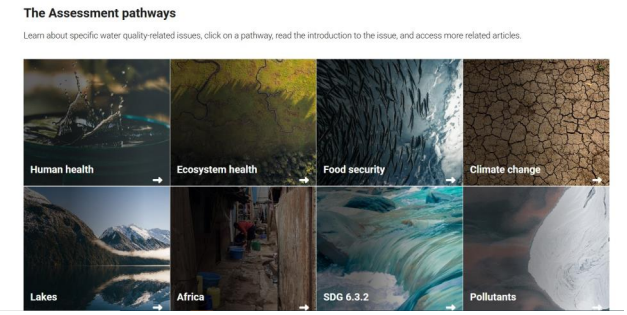
✅ Civil Society – NGOs, communities, and citizen scientists advocate and apply local knowledge.

✅ Cultural Sector – Media, artists, and Indigenous knowledge holders bridge science and society.

This approach fosters innovation, breaks silos, and ensures diverse, impactful solutions for water quality challenges.

Securing Sustainable Funding

To drive lasting change in global water quality, securing sustainable resources is essential. We are actively exploring funding opportunities to expand initiatives, enhance collaboration, and support our dedicated network. By diversifying funding streams and fostering strategic partnerships, WWQA will remain a dynamic and impactful alliance, advancing science-policy engagement and amplifying voices working on the ground.



3 - Pathway to a World Water Quality Assessment

Boosting WWQA's Visibility and Partnerships

Expanding engagement across sectors is crucial to amplifying WWQA's impact. Strengthening partnerships with research institutions, civil society, the private sector, and policymakers will drive innovation and shared action. Increasing WWQA's visibility through strategic communications—leveraging digital platforms, high-profile events, and stakeholder engagement—will elevate water quality issues in global discussions.

Evolving YEMAYA: A More Focused and Interactive Newsletter

YEMAYA is evolving into a more dynamic and targeted platform. While key updates, opportunities, and partner contributions will remain central, in-depth interviews will now be featured on LinkedIn to reach a broader audience and encourage greater engagement. This shift ensures wider visibility for discussions on water quality, research, and community initiatives while keeping the newsletter concise and impactful.

4 - Engaging local communities

5 - Citizen science training

Empowering Local Water Forums

WWQA remains committed to acknowledging and supporting local communities in water quality efforts. Providing access to capacity-building opportunities—through training, knowledge exchange, and technical support—will remain a focus. By offering opportunities for communities to share challenges, achievements, and innovations, WWQA fosters a more inclusive and equitable dialogue on water quality.

Strengthening Collaboration and Community

Collaboration is at the heart of WWQA's mission. Encouraging open dialogue, co-creation of solutions, and interdisciplinary exchange will help WWQA serve as a hub for collective action. With the aim of creating both digital and in-person spaces for members to engage, learn, and contribute will reinforce a sense of community and enable more effective responses to water quality challenges.

6 - 2022 Annual WWQA Conference and Social Engagement Workstream Conference

Looking Ahead

This time is a pivotal moment for WWQA. By building on our strengths, forging partnerships, and broadening our impact, we can keep water quality at the forefront of global sustainability efforts. Our success relies on the dedication of our members, partners, and supporters.

Together, we have the power to drive meaningful change and advance our shared mission. Let's stay connected, stay inspired, and work together to shape the future of water quality action!

Written by: Anham Salyani, WWQA Coordinator

Fostering gender-inclusive approaches to lake restoration

Bengaluru, also called the Silicon Valley of India, is facing extreme weather events that make residents vulnerable to water security issues. Once known as the city of lakes, Bengaluru now faces challenges in managing and restoring its water bodies. In the last two decades the number of lakes has reportedly decreased from 262 to 81. Citizens and the government are attempting to restore these lakes; however, due to a lack of scientific approaches involving evidence-based interventions, integration of community visions, and gender-inclusive participation, many restored lakes experience hyper-eutrophication and fish kills during rainy seasons.

The Water and Society programme at ATREE aims to develop an innovative approach to lake restoration that includes short, medium, and long-term solutions co-created with communities, especially women, who often depend on these water bodies for household and livelihood purposes. This approach positions community members at the centre, as they draw both direct and indirect services from the lake—such as potable water through groundwater recharge, local climate regulation, and water for livestock and other livelihoods.

7 - Creating a sense of ownership and engagement towards the lake among women - Baiyappanahalli Lake, Srinivasa Nagar, Sathnur Village, Bengaluru. Image Credit: ATREE

However, developmental pressures such as wastewater inflows and land-use changes have significantly reduced the multiple benefits once provided by the lake. This decline has led to a sense of alienation within the community, particularly among women, who have historically played crucial roles in collecting water and maintaining household health. To address this, ATREE is working with the community to rebuild a sense of stewardship and ownership of the lake. First, we document and quantify the services the lake provides, with special emphasis on their importance for women and marginalized groups. Second, we use social science tools, like the nominal group technique, to understand and prioritize community needs for lake restoration. We also employ the Analytical Hierarchy Method to prioritize interventions that communities, including women's collectives, expect from the project. Based on available funds and catchment conditions, realistic restoration goals are set collaboratively. We have also organized focus group discussions to understand the history of lake, degradation drivers, and the distinct perspectives of women groups.

8 - Encouraging women to identify the key concerns around the lake and prioritise the problems that needed immediate attention. Image Credit: ATREE

9 - Active participation by women exhibited a true sense of community stewardship towards the lake and in voicing their concerns about water security and sanitation. Image Credit: ATREE

Additionally, we plan to conduct workshops and training sessions with local schools to foster stewardship among young people, ensuring that both girls and boys are equally engaged. We propose building a living lab setup at the lake and training community members and teachers to monitor water quality with simple parameters such as Secchi depth. Ongoing monitoring will assess the impact of interventions on the health of the lake and help detect incoming pollution, thus supporting inclusive and sustainable lake restoration.

Article contribution:

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Tackling Plastic Pollution in the Nile Basin: Advancing Monitoring and Citizen Science

Plastic Pollution: A Growing Challenge

Plastic pollution in both marine and freshwater environments is now widely acknowledged as a major global environmental challenge. However, systematic monitoring data, particularly for rivers and lakes, remains scarce on a global scale. The World Water Quality Alliance (WWQA) workstream on plastic pollution has been working towards increasing harmonized data collection, though more comprehensive and consistent data is still needed. Such data is essential for identifying pollution hotspots, tracking trends over time, and informing targeted strategies for reducing plastic pollution in river basins.

Strengthening Knowledge on Plastic Pollution in the Nile Basin

This initiative supports the international ambitions of the Nile Basin Initiative and its German partners to improve the current state of knowledge on plastic pollution in the Nile Basin. The activity is supported by Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) on behalf of the German Federal Ministry for the Environment, Nature Conservation, Nuclear Safety and Consumer Protection (BMUV).

10 - Participants at the workshop. Image Credit: Andrew Kartende, NBI, GIZ

Why Focus on Macroplastics?

The project focuses on macroplastics, such as plastic bags and bottles. Monitoring macroplastics is a crucial starting point for plastic pollution assessment because they are easier to detect, quantify, and track over time compared to microplastics. Simple visual counting methods allow for standardized, cost-effective data collection, making it feasible for both experts and citizen scientists to participate.

Hands-On Training Workshop in Kisumu

From February 10th to 13th, a hands-on training workshop was held in Kisumu, Kenya, bringing together 30 participants from nine Nile Basin countries. The training introduced macroplastic monitoring methods in both theoretical and practical settings, emphasizing their integration into existing water quality and hydrometry monitoring programs.The workshop focused on two widely used macroplastic monitoring methods:

- Visual Counting: Observers count and classify floating macroplastics (e.g., bottles, bags) from a fixed point, such as a bridge, within a set time interval (e.g., 10 minutes).
- Bank Surveys: Observers walk along predefined transects on riverbanks or lake shorelines, recording the number, type, and size of macroplastics within a designated area.

By systematically collecting long-term macroplastic monitoring data, pollution hotspots can be identified, trends can be detected, and the effectiveness of interventions can be documented. This data is essential for shaping strategies to reduce plastic pollution in freshwater environments.

11 - Participants at the beginning of their field day. Image Credit: Andrew Kartende, NBI, GIZ

12 - Groups of participants of the workshop conduct a bank survey of macroplastic (foreground) and visual counting (background from bridge) at Nyamaria River, Kisumu Kenya. Image Credit: Andrew Kartende, NBI, GIZ

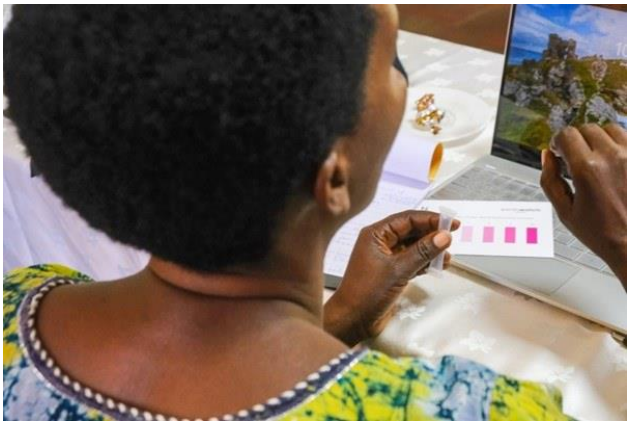
Linking to SDG 6.3.2 and Citizen Science

The final day of the workshop introduced SDG Indicator 6.3.2 (ambient water quality) and the WWQA's work on citizen science, with presentations by UNEP GEMS/Water and Earthwatch. The session covered the methodology and global results of SDG Indicator 6.3.2, emphasizing the global water quality data gap and how UNEP and WWQA partners are addressing it.The citizen science segment highlighted seven active projects in Africa, including:

Mara Transboundary Monitoring: Rochi Mkole (Ministry of Water, Tanzania) shared insights from two years of leading the project on the Tanzanian side.

Lake Hawassa Monitoring: Yirgalem Esuneh (Ministry of Water and Energy, Ethiopia) introduced the newly launched initiative.

Participants engaged in hands-on water quality testing using the Freshwater Watch method to analyze nitrate and phosphate levels and discussed the potential for adopting the approach in their respective countries.



13 - A participant testing for Nitrate. Image Credit: Andrew Kartende, NBI, GIZ

14 - Stuart Warner of UNEP GEMS/Water describing the SDG indicator 6.3.2 methodology. Image Credit: Andrew Kartende, NBI, GIZ

Advancing Collaborative Efforts

This project and workshop highlight the importance of collaborative efforts in tackling plastic pollution and improving water quality monitoring. By empowering experts and citizen scientists alike, the initiative is taking vital steps toward achieving SDG 6 targets in freshwater environments across the Nile Basin.

Some important links:

Project: *https://www.giz.de/en/worldwide/138385.html*

NBI Plastics: *https://nilebasin.org/en/action-area/plastic-pollution*

UNEP Guidelines for Plastic Monitoring in Freshwater and Lakes: *https://www.unep.org/resources/report/monitoring-plastics-rivers-and-lakes-guidelines-harmonization-methodologies*

Contributions by: Christian Schmidt (UFZ), Stuart Warner (UNEP-GEMS/Water), Tim van Emmerik (WUR), Steven Loiselle (Earthwatch - Freshwaterwatch)

Breaking Barriers: Empowering African Women in Freshwater Science

The African Great Lakes are critical freshwater systems, supporting over 65 million people and a vast array of biodiversity. Yet, women in freshwater science face significant barriers, from systemic challenges to limited leadership opportunities. On International Women and Girls in Science Day, we celebrate African women breaking these barriers and shaping the future of freshwater conservation.

The African Center for Aquatic Research and Education (ACARE) is at the forefront of this transformation through its **African Women in Science (AWIS)** program. Launched in 2021, AWIS provides mentorship, training, and professional development for women in freshwater science. Each year, over 150 applicants compete for 12-18 coveted spots in the program, which supports master's students, PhD candidates, and early-career professionals from the 10 African countries

that border the African Great Lakes. To date, 72 young women scientists have benefited from the program.

AWIS is a life-changing experience, combining a ten-month virtual training program with an immersive travel component to the United States and Canada. Participants gain hands-on experience at institutions like the U.S. Geological Survey, the U.S. Fish and Wildlife Service, and the International Institute for Sustainable Development's Experimental Lakes Area. They refine research skills, present at international conferences, and build lasting global networks.

"The women gain self-confidence, leadership skills, and a strong sense of teamwork," says Diane Umutoni, a Rwandan freshwater scientist and AWIS alumna who now coordinates the program. **"It's an eye-opening program that takes them out of their comfort zones and shows them their true potential."**

Stephanie Smith, ACARE's strategic advisor, highlights AWIS's impact: **"We help them get their foot in the door. Some alumni have secured leadership roles, such as a Center Director at the Kenya Marine and Fisheries Institution, while others are pursuing PhDs at Bowling Green State University, Michigan State University, and Sokoine University of Agriculture, Tanzania."**

Mentorship and peer-to-peer exchange play a crucial role in AWIS's success. The program, coordinated by Dr. Lulu Tunu Kaaya of the University of Dodoma in Tanzania, fosters long-term relationships that lead to research collaborations, scientific publications, and ongoing professional support. **"Our mentorship lasts five months, but the connections last far beyond. AWIS women and their mentors continue working together on papers and projects for further impact,"** says Kaaya.

AWIS alumni have gone on to achieve remarkable success. Venny Mziri from Kenya shares, **"The skills and networks gained through AWIS expanded my horizons. I'm now better equipped for my role, with increased responsibilities."** Neema Maheshe from the Democratic Republic of the Congo credits AWIS for giving her the courage to pursue higher education. **"I'm currently studying and living with a sister I met through the program,"** she says.

Beyond AWIS, ACARE continues to strengthen scientific collaboration among AWIS alumni through research networks and knowledge-sharing initiatives. **"We ensure African freshwater scientists have access to critical research platforms to elevate their work,"** says Angela Nankabirwa, a Ugandan PhD candidate who coordinates the alumni network.

The success of AWIS highlights the importance of **investing in women in science**. When women are empowered with skills, resources, and opportunities, they drive scientific discovery, shape policy, and lead conservation efforts that benefit both people and the planet. On this International Women and Girls in Science Day, we celebrate the resilience and achievements of

African women in freshwater science—and reaffirm our commitment to an inclusive, equitable scientific community.

15 - The current African Women in Science cohort is pictured with the program's alumni network and the Republic of Zambia's Permanent Secretary of the Ministry of Fisheries and Livestock, Himba Cheelo. The group was in Lusaka, Zambia, for the Annual Meeting of the African Great Lakes Stakeholder Network in February 2025. Image credit: ACARE

Article contribution:

By Nayiri Mullinix, University of Michigan and Stephanie Smith, African Center for Aquatic Research and Education

The WWQA BULLETIN BOARD

WEBINAR: Collaborative Feedback: Advancing Bioassessment for Ambient Water Quality

Why is bioassessment not completely integrated in the global sustainability agenda? Find out what 500 people from 109 countries think in this new report!

Online: Zoom

Date: **04 March 2025**

Time: **14:00 CET, 16:00 EAT, 13:00 UTC**

Register here: *https://t.ly/Z_br1*

Embed://<iframe width="560" height="315" src="https://www.youtube.com/embed/35durvmuuEE?si=ZBYE9yH1CAukdeWg" title="YouTube video player" frameborder="0" allow="accelerometer; autoplay; clipboard-write; encrypted-media; gyroscope; picture-in-picture; web-share" referrerpolicy="strict-origin-when-cross-origin" allowfullscreen></iframe>

Reflections on Lakes: A Global Visual Tribute

In the lead-up to **World Lakes Day**, we're launching a **monthly photo story** series to highlight the beauty, challenges, and importance of lakes worldwide! Share a photo of a lake that's meaningful to you—whether it's one nearby or a favorite hang-out spot!

🔷 **How to Participate:**

1️⃣ Snap a photo of a lake near you or close to your heart 📷

2️⃣ Add a short caption about its significance, the name and location of the lake as well as the photo credit

3️⃣ Send it to wwqa-coordination@un.org

We will be sharing the photo stories periodically through YEMAYA & on WWQA's LinkedIn!

Citizen Science for Water Conference!

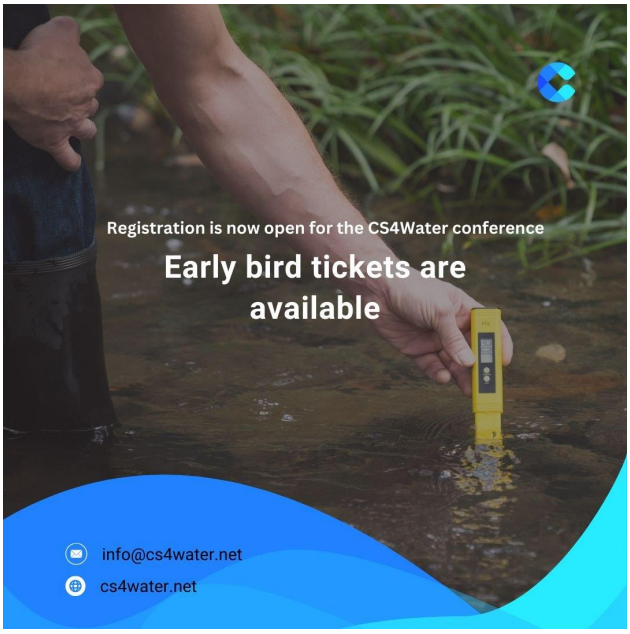
The inaugural CS4Water conference will spotlight freshwater systems, featuring interactive workshops, cutting-edge research, and global networking opportunities with experts in water and citizen science. It will highlight the vital role of citizen science in water resource monitoring, management, governance, and community-led initiatives. Bringing together seasoned practitioners and newcomers from both the Global North and Global South, the conference will explore how citizen science can enhance water management efforts worldwide.

When: 3 – 5 June 2025

Where: Delft, the Netherlands

*There is a registration fee

Explore more here: https://cs4water.net/



Job Openings

UNEP Programme Management Officer, P-3

Deadline: March 16 2025

For more information: https://careers.un.org/jobSearchDescription/250117?language=en

UNEP Programme Management Officer, P-3

Deadline: March 07 2025

For more information: https://careers.un.org/jobSearchDescription/250426?language=en

UNECE Environmental Affairs Officer, P-4

Deadline: March 04 2025

For more information: https://careers.un.org/jobSearchDescription/250911?language=en

Dive Into WWQA's YouTube Channel!

Missed a WWQA webinar? No worries! You can catch up on all our past sessions by visiting the WWQA YouTube channel. Dive into discussions on water quality, sustainability, and more. Check it out here: WWQA YouTube Channel

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 March issue of YEMAYA

World Wildlife Day

International Day of Forests

World Water Day

Please follow our social media handles at:

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

Visit our website at: www.wwqa.info

WWQA
World Water Quality Alliance

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

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.