

YEMAYA



1 - (Source: K.Raasakka)



WWQA
World Water Quality Alliance

THE WORLD WATER QUALITY ALLIANCE NEWSLETTER

March 2023

The World Water Quality Alliance is convened by the United Nations Environment Programme and supported by the Swiss Confederation. It is proud to present a new monthly newsletter entitled YEMAYA named after the ancient African goddess of the ocean and motherhood. She is associated with fertility, femininity, protection, healing, and childbirth. Symbolized as a water creature her domains are 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 anything related to water quality. Tell us 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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COSTA RICA: A Local Water Forum looking out to sea



Banana monocultures in Costa Rica have become a major cause for concern in recent years. Monocultures are agricultural systems that grow only one type of crop, in this case, banana plants. With monocultures come a variety of environmental, economic, and social ills that have the potential to disrupt the lives and cultures of the Costa Rican people. Banana monocultures were not always a problem in Costa Rica, but as the demand for a particular type of banana increased and certain agricultural practices were adopted, the monocultures became larger and more problematic. Monocultures require small areas of land to be devoted to growing the sole crop, which can cause a decrease in biodiversity and soil erosion. These problems can then lead to decreased water quality, soil fertility, and wildlife habitat. The economic system of banana monocultures in Costa Rica is also one of great disparity. Corporations come into the country and purchase large amounts of land for their monocultures and often drive out local farmers and small-scale agriculture ventures. This results in landlessness and poverty for many in the country, as well as increased food insecurity. Workers in banana monocultures are often subjected to unsafe working conditions, with little to no power to negotiate due to their reliance on corporate employers. The few corporate owners reap the much of the rewards, while the majority of people suffer the consequences of the negative economic impacts of monocultures.

In terms of social issues, the impacts of banana monocultures can be far-reaching. Indigenous peoples in Costa Rica are often displaced by the monoculture projects, and the cultural knowledge that characterized their pre-monocultural ways of life is quickly lost. Communities that have historically lived off the land are now faced with limited resources and few opportunities to continue their traditional ways of living. Moreover, the pesticide used to grow bananas can contaminate drinking water sources

and cause health problems for local communities. Ultimately, the effects of banana monocultures in Costa Rica are not just environmental, but economic and social as well. It is a complex problem and requires various approaches to mitigate the negative impacts of monocultures in the country. This includes promoting organic alternatives, enacting policies to halt conversion to monocultures, and integrating small-scale agriculture into the larger economy. Only by addressing these issues can the future of Costa Rica be secure.

The Agrochemical Monitoring project of the rivers of the Caribbean, which is being undertaken by the NGO 'Coral Conservation', one of the WWQA's Local Water Forums in the Caribbean region of the World, is addressing the question whether there exists a drift of agrochemicals from banana monocultures to the rivers of Costa Rica, and therefore to the sea? Working in collaboration with the "The Gems of Water" project of the Joint Research Centre of the European Commission and with the support of the World Water Quality Alliance, the Coral Conservation is an organization formed two years ago by a group of local youth from the southern Caribbean and other parts of Costa Rica, interdisciplinary, with different nationalities and cultures.



2 - (Source: Coral Conservation)

All contribute to the association on a voluntary basis. In recent years they have focused on a line of action of preventive measures with regards to the degradation of corals and they have developed several projects, ranging from raising awareness with games for children, reforestation in the coastal and riverside zone, monthly beach clean-ups and sea research projects, such as the monitoring of agrochemicals.



3 - (Source: Coral Conservation)

This last project consists of the chemical identification (by means of gas chromatography) of traces of agrochemicals present in the path of the rivers of the southern Caribbean, from the upper basin to the mouth towards the sea. In March, they are going to take the first water samples in the Carbón River, the Estrella River and the Sixaola River (which is on the border with Panama). On the edges of these rivers, there are large extensions of banana monocultures, mainly for export. Two drinking water samples will also be analysed, one provided by the government's drinking water system and the other will be taken from an artisanal well of a house near the plantations, to verify if there is contamination of these water sources.

The project has a social element that will be developed in the coming months, in which it seeks to make contact with the key actors related to this problem (government institutions, universities, private companies and community residents) and establish dialogues and meetings in regards to how aware and engaged they are with this issue whilst identifying possible solutions together.

Contributed By: Coral Conservation

THE GLOBAL ENVIRONMENTAL MONITORING OF WATER: Sierra Leone



2020 was a landmark year for Sierra Leone's rivers. For the first time, the West African country of 7 million submitted a report to the United Nations on the quality of the water in one of its river basins. The assessment of the Rokel catchment, which was supported by the United Nations Environment Programme (UNEP), found that more than half of the stretches of river tested failed to meet national quality standards. Still, it was an important step in Sierra Leone's efforts to determine which rivers are under pressure from pollution.

And it was one of the latest examples in a global push to head off what experts call a mushrooming water pollution crisis. "Water pollution is a root cause of the decline of human and ecosystem health," says UNEP water quality expert, Kilian Christ. "Maintaining a healthy relationship between water, nature and people is more important than ever". Around one-third of all rivers in Latin America, Africa and Asia are routinely exposed to untreated wastewater and agricultural run-off. Across the developing world, water quality monitoring is sporadic, especially in Africa. That's one reason United Nations Secretary-General António Guterres said that the World is "tremendously off track" to achieve the 17 Sustainable Development Goals (SDGs) by 2030, including SDG 6, which covers clean water and sanitation. To develop global capacity to monitor the quality of freshwaters, UNEP and its Global Environment

Monitoring System for Water (GEMS/Water) has been working with countries to build capacity on all aspects of water quality monitoring, from the design of monitoring programmes to the analysis and assessment of data, for over 30 years now. GEMS/Water partners with University College Cork (UCC) in Ireland and has set up the GEMS/Water Capacity Development Centre. It encourages a standardised approach to monitoring and data generation through providing guidance and training in the form of workshops, online courses and training materials, tailored to specific capacity needs at national and regional levels and delivered globally. Working with a renowned partner such as UCC allows GEMS/Water to award university accredited certificates and diplomas on water quality monitoring ([Capacity Development Centre](#)).

Together with capacity building, another goal of GEMS/Water is to collect and make available world-wide water quality data for assessments of status and trend in global inland water quality. Data from participating countries is made available within the GEMS/Water online database [GEMStat](#). Data for GEMStat is received from GEMS/Water's global network of National Focal Points. These are government institutions and agencies with the official mandate to monitor freshwater quality data in their countries.

One of these focal points was Sierra Leone's Head of hydrological services, who received graduate training at University College Cork, Ireland with financial support from the UNEP GEMS/Water Capacity Development Centre and Irish Aid. The support helped Sierra Leone officials develop a water monitoring system and begin testing sections of the Rokel River, which forms the country's most important catchment. Of the 12 sections of the river classified, seven failed to meet good quality criteria. That showed that water quality in most of the basin is under pressure and provides the evidence officials need to begin tackling pollution. Sierra Leone now plans to expand monitoring to neighbouring basins and develop laboratory capacity. It has already trained additional staff and created a data management framework.

Why water quality monitoring matters:

<https://youtu.be/wSSqKVXd8SE>

THE MARCH INTERVIEW: Kilian Christ, Coordinator of GEMS/Water

How did you become involved in GEMS/Water?

Before joining UNEP, I was doing my Ph.D. in India as part of a research project. During that period, I realised that I had had enough of academic life and wanted to participate in actions that would have a more immediate effect on real world situations. Instead of just concentrating on technical issues, I had a desire to be involved with the broader implementation of solutions. I joined the United Nations Environment Programme (UNEP) in 2016 and spent the first four years working in the Global Environmental Monitoring Service (GEMS) before serving for a short period with the Freshwater Ecosystems Unit. I re-joined the GEMS/Water team at the end of 2021.



What are the principal challenges that your team face?

We are a small team working at a global scale. This in itself is a challenge. We encounter different obstacles according to the specific locations in which we are working and depending on the issues which we tackle. However, in general terms, one of the difficulties is to make administrations understand the importance of a 'boring' sounding topic like water quality monitoring (at least it seems that to some people this sounds like a boring topic...) and putting across the point that the cost of monitoring now and setting in place mechanisms for the early warning of water quality threats, comes much cheaper than dealing with a water quality crisis when it is too late. And whereas some subjects like macro- and micro-plastics receive a lot of attention, there are other topics like nutrients for example, that are at least as important. Another major challenge is the fact that many countries are reticent to openly share their water quality data given that it is often considered to be a politically and socially sensitive issue. Finally, one of the principal objectives is and must always be, to create awareness amongst decision makers of the importance of all water-quality-based issues instead of what they normally address which is only related to water supply and water and sanitation.

With regards to water quality at a global scale, are you optimistic or not about the future capacity to create solutions to water quality?

One has to be optimistic. There exists the knowledge to protect and restore the water ecosystem but political implementation and financing is vital if society is to successfully address this challenge. There does have to be balance between the protection of ecosystems on the one hand and the socio-economic needs of communities in the vicinity. If such a balance, based on true socio-political engagement and realistic objectives, is achieved then I believe that we can make significant progress.

What is your relationship with the WWQA?

GEMS/Water is very much concerned with in situ monitoring, the collection and dissemination of data and capacity development, all of which are elements that are central to the strategy of the WWQA. Our data mechanism, GEMStat is an important component of the "Pathway to the WWQ-Assessment".

GEMS/Water has a great amount of experience in capacity development and working in close collaboration with the University College Cork (UCC) has produced a strong mechanism to increase effective monitoring and analysis around the globe. GEMS/Water leads the WWQA IN SITU Global Environment Programme Workstream which provides a tangible impulse to what should be an important step, the use of in situ monitoring in all countries.

What do you expect of the UN 2023 Water Conference?

I would like to think that as a result of the conference, high-level policy makers regard water and the achievement of SDG 6 from a holistic perspective. All the targets of Sustainable Development Goal 6 should be treated as being equally important. Furthermore, I hope that the issue of water in all its aspects (which has traditionally never attracted the same amount of attention from either the general public or the World's press as compared, for example, to energy issues or air emissions) receives a strong commitment from member states which will lead to the implementation of truly effective solutions.

THE ROLE OF THE WWQA



UN
2023 WATER
CONFERENCE

NEW YORK
22-24
MARCH
2023

The UN 2023 Water Conference will take place at UN Headquarters in New York, 22-24 March 2023, co-hosted by Tajikistan and the Netherlands. It will include an opening and closing session, six plenary sessions, and five interactive dialogues, as well as numerous side events on various water-related themes organized by governments, UN agencies and other international institutions and civil society. The UN 2023 Conference will result in a summary of proceedings from the UNGA President that will feed into the 2023 session of the UN High-level Political Forum on Sustainable Development (HLPF).

WWQA will be attending the UN 2023 Water Conference and participating in the following events to name but a few. We hope to see you there!

- "From UNEA to General Assembly: Taking action for Sustainable Lake Management - as a catalyst to accelerate global commitment in the Water Action Agenda", Wednesday 22nd March 5pm at UN Headquarters Conference Room 8.*
 - Walk of Water, an exhibition at the entrance to the UN 2023 Water Conference, presented by the European Commission JRC and UNESCO-led Arts Coalition for Water – launch on Wednesday 22nd March at 6pm*
 - "Global Network of Isotope-Enabled Water Analysis Laboratories" at UN Headquarters in Side Event Room 8, Wednesday 22 March from 12:15-13:45*
 - "Groundwater: An Invisible Cross-Sectoral Fundament for Implementation of the Water Action Agenda" at UN Headquarters, Friday 24 March from 8:00-9:15*
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More information about the UN 2023 Water Conference is found [here](#).

THE WWQA BULLETIN BOARD

Announcement: Continuous Professional Development Courses on monitoring water quality available through University College Cork – deadline 17th March 2023

UCC are currently **accepting applications** for their online, part-time **professional development courses** in Freshwater Quality Monitoring and Assessment, offered by the UN Environment Programme GEMS/Water Capacity Development Centre based in University College Cork.

Who are these courses for?

*These courses are specifically designed for online delivery to facilitate study while working full or part-time. They provide existing or future professionals in the water sector with the necessary knowledge to design and implement freshwater quality monitoring programmes and to assess water quality. All courses on offer are **accredited by University College Cork** (Ireland) and as such, you will enjoy all the advantages of being a fully registered student at UCC (i.e. access to online versions of books and articles through the UCC library, IT support, certain software, online learning support platform and virtual learning environment, UCC email account, etc.). Each course is worth 5 ECTS credits, and to complete a course successfully you will need to achieve a minimum grade of 40 % in total in that course. Progress through each course is assessed by means of online tests in the form of Multiple-Choice Questions (MCQs).*

Additional information is provided on the website at: <https://www.ucc.ie/en/gemscdc/onlinecourses/>

Announcement: Open Call for Innovation Challenges on Water Quality Monitoring & Assessment, Submission deadline 31st March 2023

WMO, UNEP, UNESCO, WWQA, European Commission's Joint Research Centre and IAEA are soliciting proposals for challenges to accelerate innovation in water quality monitoring and assessment. The selected challenges will be put forward at the upcoming Innovation Workshop on Water Quality Monitoring & Assessment, taking place on 14 - 16 June 2023.

Additional information is provided on the website at: <https://hydrohub.wmo.int/en/news-events/open-call-innovation-challenges-water-quality-monitoring-assessment>

In the April Issue of YEMAYA

- *THE UN 2023 WATER CONFERENCE – The results of the event from the WWQA perspective*
 - *KOROGOCHO – An example for inner cities*
 - *THE PATHWAY TO A WORLD WATER QUALITY ASSESSMENT*
 - *THE APRIL INTERVIEW – Nina Raasakka, WWQA Coordinator*
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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.