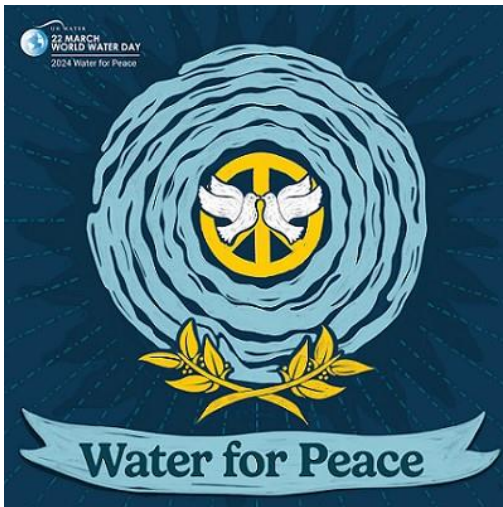


Water Challenges in a Changing World

FEBRUARY NEWSLETTER



Hello everyone and welcome to the February edition of the Water Challenges Newsletter.

We would like to invite you to attend our events for **World Water Day 2024**.

Every year, World Water Day (22nd March) raises awareness and inspires action to tackle the water and sanitation crisis. It is a United Nations observance, coordinated by UN-Water and led by one or more UN-Water Members and Partners with a related mandate.

The theme is proposed in advance by UN-Water and is aligned with the annual publication of the UN World Water Development Report, published by UNESCO on behalf of UN-Water, with its production coordinated by the UNESCO World Water Assessment Programme (WWAP). In 2024, the theme of World Water Day is 'Leveraging water for peace' and the name of the World Water Development Report is 'Leveraging Water for Peace and Prosperity'. The World Water Day campaign is simply called '**Water for Peace.**'

We are pleased to announce that we will be hosting a week of online speakers relating to the theme from the **18th – 21st March** before our exciting Panel Discussion on the **22nd of March**. Please continue reading for the list of speakers. Registration links will be sent around for each talk, but you can register for the Panel Discussion below. We will be hosting the viewing of the Panel Discussion at **Elm House, Room G08** with light refreshments so please join us in person if you can. We encourage you to attend as many talks as possible and share widely with anyone who you think would benefit. Please see the end of this newsletter for a Water for Peace printable colouring sheet. We would love to display your mandalas on World Water Day so please feel free to complete and return to Suman.

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World Water Day Schedule of Events

Date	Name	Talk
18th March 12 – 1pm	Berit Arheimer IAHS	<i>The IAHS Science for Solutions decade, with Hydrology Engaging Local People IN a Global world (HELPING)</i>
19th March 12 – 1pm	Annabelle Houdret IDOS Bonn	<i>Conflict or cooperation? Test the water!</i>
20th March 12 – 1pm	Tahmina Yasmin University of Birmingham	<i>TBC</i>
21st March 12 – 1pm	Wouter Buytaert Imperial College London	<i>Hydrological knowledge co-production and inclusive governance in mountain river basins</i>



World Water Day Panel Discussion 22nd March 1pm – 3pm Click Here to Register	Chairs: Prof Stefan Krause, Iseult Lynch and Prof David Hannah	
	Klement Tockner Senckenberg Society	Elizabeth Saccoccia World Resources Institute
	Rita Floyd University of Birmingham	Ankit Agarwal IIT Roorkee
	Adenike Akinsemolu The Green Institute	Phillip Beetlestone Stockholm International Water Institute



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NEW VISITING SCHOLAR



My name's Alessandra Valentim, and I'm currently working under Professor Stefan Krause on a Post Doc project focusing on suitable analytical methods for detecting microplastics in soil. As you know, these tiny plastic fragments are popping up all over the environment, each compartment presenting its own unique challenges. My passion lies in exploring new methodologies and forging international partnerships to drive research forward in this crucial area. Standardized lab protocols are key to ensuring our results are comparable, reproducible, and reliable, ultimately contributing to meaningful progress. With a solid foundation from my bachelor's at the Federal University of Mato Grosso followed by my master's and doctorate

from the Federal University of Rio de Janeiro, I've spent the past 14 years as an associate professor at the Federal University of Recôncavo da Bahia, specializing in Water Quality and Environmental Toxicology.

FULBRIGHT DISTINGUISHED SCHOLAR

Dr. Changqing Wu is a Professor of Food Toxicology at the University of Delaware in Newark Delaware in the United States, and she comes to the University of Birmingham (UOB) as a Fulbright Distinguished Scholar. Her research is on toxicities and bioactivities of natural and synthetic phenolics, with a focus on developing new methods to understand mechanisms between food and toxicity. During her visit at UOB, she will work on research on dietary nanoplastics. With unique physiochemical properties, nanoplastics have big toxic risks to life on Earth. Food consumption is a key route of human exposure to nanoplastics. Huge knowledge gaps exist on the health impacts of nanoplastics-containing foods. She will work with collaborators at the UOB, leverage their facilities and resources to conduct experiments on the health impacts of nanoplastics within foods. She is excited to know more of UK and enhance institutional collaboration on fundamental and applied research regarding the nanoplastics within foods.

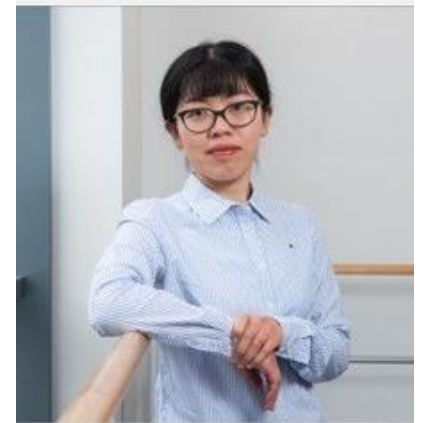


Water Challenges in a Changing World

WATER SEMINAR SERIES IN FEBRUARY

We were delighted to have [Dr Sihan Li](#) from the University of Sheffield with us at the University of Birmingham on the 8th February for her talk titled: **Challenges and Future Outlooks of Water in High Mountains: too much, too little?**

Abstract: Mountains are natural water towers. They capture water from the atmosphere, storing it as snow and glacier ice, as well as in permafrost, wetlands, lake and river. The supply of water from mountains is crucial for numerous communities situated both along and downstream of the mountain ranges, supporting essential needs such as domestic consumption, irrigation, hydropower generation, and ecosystem services. Climate change is having rapid and dramatic impacts on the mountain cryosphere, and these cryospheric changes are spatially and temporally complex: snowfall amounts increasingly delivered by fewer, more extreme precipitation events; glacio-climatic feedbacks moderating glacier mass loss; and potential increase in landslides, infrastructure damage and release of greenhouse gases due to thawing of permafrost. Understanding the changes of the mountain cryosphere is vital for water resource management.



In this seminar, Sihan discussed ongoing work over the Andes, assessing the sensitivity of water resources across the Andes to the changing supplies of snow and ice, through integrating observations with combined climate, ice-flow and hydrology models, across ten key glacierized catchments which span the climatological and latitudinal range of the Andes. The talk also covered some of Sihan's work on landslides during monsoon season over High Mountain Asia, and incorporation of this work into developing more detailed and specific Emergency Response and Preparedness Plans with humanitarian partners.



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PLASTICUNDERGROUND TRAINING

Prof Stefan Krause and his team led an advanced training course from the 29th January to the 2nd February, for the PlasticUnderground, EU Horizon funded project. The course focused on **Microplastic Sampling and Extraction Techniques**, with training in different microplastic sampling techniques in aquatic and terrestrial environments, including soil and sediment extraction and microplastic identification. It took place over three days and was a mixture of classroom-based learning and lab-based learning. We received some excellent feedback for how this course was delivered and we look forward to holding similar courses later in the year, so keep an eye out for them.



This project has received funding from European Union's HORIZON EUROPE research and innovation program GA N°101072777-PlasticUnderground HEUR-MSCA-2021-DN-01



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15TH ANNUAL CATCHMENT SCIENCE SUMMER SCHOOL

The 15th annual Catchment Science Summer School will be running from **the 1st September until the 6th September 2024**. It is designed for PhD students and postdocs in catchment science. The course is taught by **Jeff McDonnell** (University of Saskatchewan and University of Birmingham) **Dr. Chris Soulsby**, **Dr. Jan Seibert**, **Dr. Ilja van Meerveld**, **Dr. David Hannah**, **Dr. Stefan Krause** and **Dr. Dorte Tetzlaff**. It is co-hosted by the University of Birmingham and the University of Aberdeen, University of Zurich, TU Berlin and the Global Institute for Water Security.

The Catchment Science Summer School is a 5-day short course that is intended for post-graduate students and post-docs interested in a hands-on catchment science curriculum, focusing on northern catchments, runoff processes and combined hydrometric, isotope/chemical tracer and modeling techniques in catchment hydrology. The learning objectives for this short course are to understand:

- Rainfall-runoff processes
- Rainfall-runoff model development, use, and testing
- Hydrochemical and isotopic measurement and analyses
- Linking field experiments with modeling approaches
- Evolution of empirical and theoretical understanding of runoff processes
- Landscape analysis, land-use and climate change impacts on streamflow



Buy tickets for this course [here](#). Tickets will sell out, so if you are interested in attending, please purchase tickets soon.

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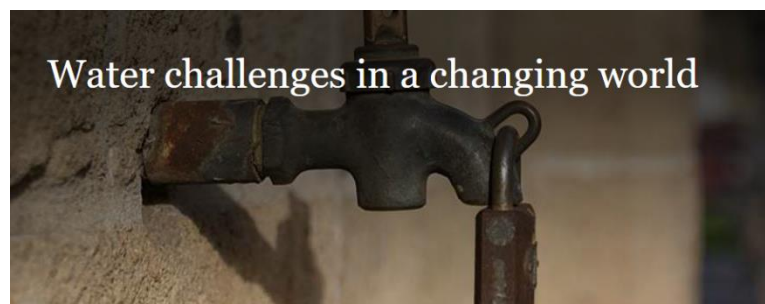
GOODBYE TO CSC STUDENT



We say goodbye to Neeraj Chauhan this month, as he returns back to India after being with us for the past year. Neeraj was with us as a Commonwealth Scholarship Commission Student. During his time with us Neeraj was awarded the overall winner of the poster competition at the 5th Annual Early Career Researcher Conference (EBNET ECR23) where he presented a poster on “Monitoring Toxic Elements in River Water and Wetlands Using Water Hyacinth (*Eichhornia crassipes*): Safeguarding Endangered Species and Ecosystem”. We wish Neeraj the best of luck for the future.

THEME MEETING – 20TH MARCH

The next Water theme meeting will be taking place on the **20th of March from 1pm – 2pm** in room G08 at Elm House. Please join us to watch the World Water Day Seminar by Tahmina Yasmin from 12pm until 1pm and we will have the meeting straight after that has taken place.



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UPCOMING GRANTS

[Innovate UK – Environmental Monitoring Innovation](#)

Deadline to apply: 06/03/2024

Award amount: £450k

The aim of this competition is to fund collaborative projects that develop environmental monitoring solutions to enable improved monitoring of environmental variables.

[NERC – Large Grant Outlines](#)

Deadline to apply: 07/03/2024

Award amount: £3.7M

Apply for funding to support innovative, large-scale and complex projects that tackle big science questions and have the potential to produce world-leading research.

[NERC - Research biological influence on future ocean storage of carbon](#)

Deadline to apply: 29/03/2024

Award amount: £1.9M

This supports research providing new understanding of the role of marine life in ocean carbon storage. The aim of the call is to fund research addressing three specific challenges that will provide a fundamental understanding of key biological processes that are globally relevant.

[RSC – Water Science Bursary](#)

Deadline to apply: 31/03/2024

Award amount: £2k

This supports researchers engaged in projects that involve the application of chemical sciences in the management of the water cycle, and the impact these activities have on the environment.

[11th Hour Racing – Ocean Health Grants](#)

Deadline to apply: 31/03/2024

Award amount: \$150k

As the climate crisis intensifies, so does the impact on ocean health. We need a global paradigm shift from an extractive economy that depletes our natural resources to a sustainable economy that uses resources wisely and protects our ocean. We work to facilitate this transition by supporting local solutions to global problems, led by community organizations and industry leaders.

[NERC/BBSRC - Sustainable and Resilient Aquaculture Systems in Southeast Asia](#)

Deadline to apply: 09/05/2024

Award amount: £3M

Water Challenges in a Changing World

Apply for funding to undertake interdisciplinary research for the development of sustainable, resilient and productive aquaculture in Southeast (SE) Asia.

[AHRC - Doctoral focal awards in the arts and humanities](#)

Deadline to Apply: 02/07/2024

Apply for a doctoral focal award in the arts and humanities. Formerly pre-announced as focused Centres for Doctoral Training, this is the same funding opportunity but under a new name to align it with other upcoming UKRI doctoral funding opportunities. There are two broadly defined priority research themes or areas for this funding opportunity: arts and humanities for a healthy planet, people, and place creative economy.

Open Calls with no closing date:

[UKRI – Knowledge Transfer Partnership](#)

Open for business and not-for-profit organisations. Partnerships can last between 12 and 36 months. Business provide one-third to half the project cost depending on their size.

[NERC - Work with US-based researchers on environmental science research](#)

Award amount: £300k Apply for funding to work with US-based researchers on an environmental science application. Collaborative work is governed by an agreement between NERC and NSF.

[Work with Brazilian researchers: NERC FAPESP lead agency](#)

This opportunity allows UK-based researchers and researchers in the State of São Paulo, Brazil to submit a collaborative proposal under existing NERC funding opportunities. This will go through a single review process.

[UKRI - Collaborate with researchers in Norway](#)

UK Research and Innovation (UKRI) and Research Council of Norway (RCN) have signed a Money Follows Cooperation agreement to reduce barriers to cross-border collaboration.

[UKRI - Collaborate with researchers in Luxembourg](#)

UK Research and Innovation (UKRI) and FNR have signed a memorandum of understanding (MoU) to welcome and support collaborative applications. The MoU provides for a lead agency agreement whereby UKRI will receive and assess joint applications from eligible UK and Luxembourg applicants on behalf of both organisations.

We welcome your contributions and suggestions for the newsletter. Please feel free to email
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