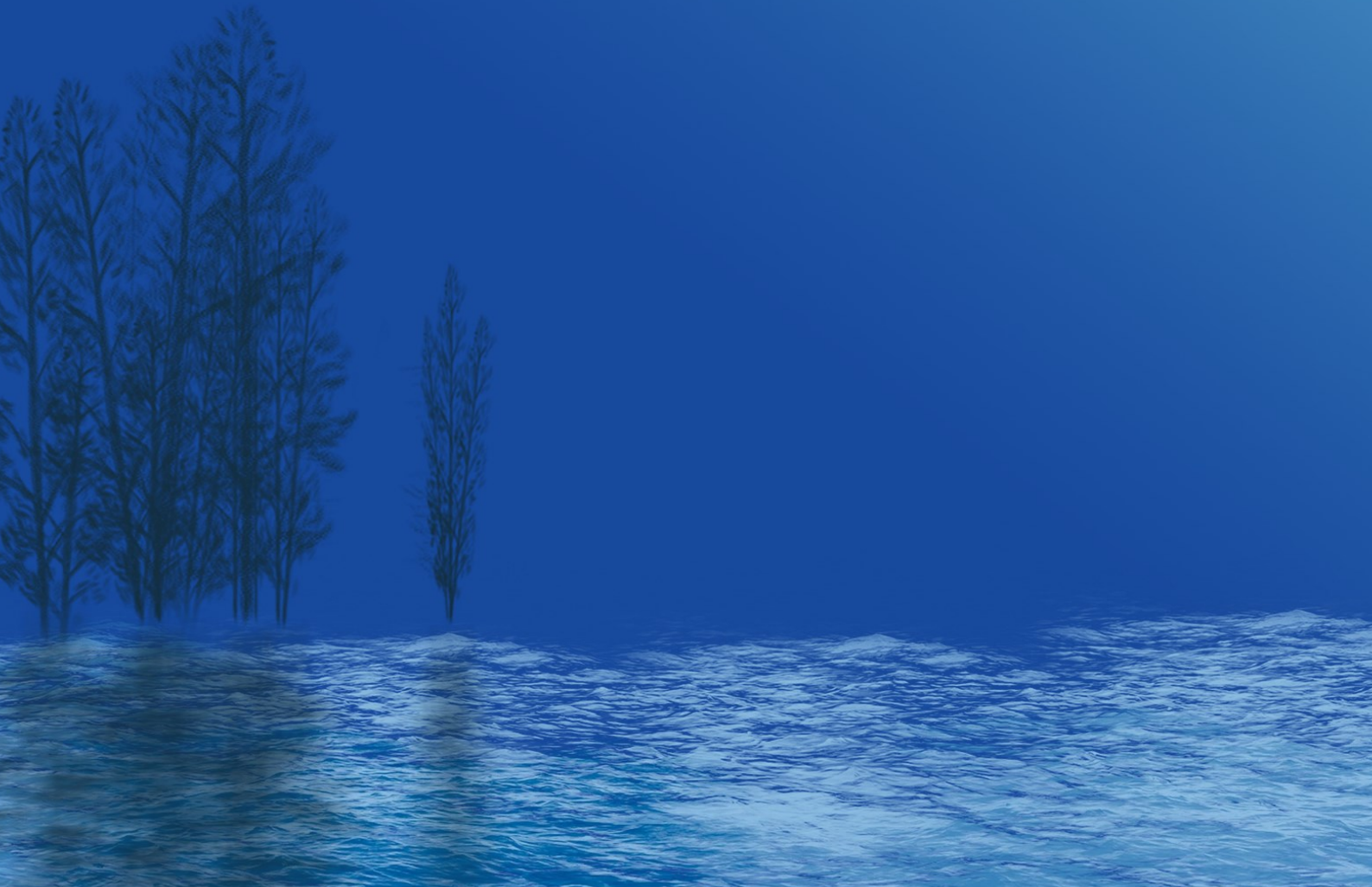




HOT NEWS

ISSUE 02, 2022



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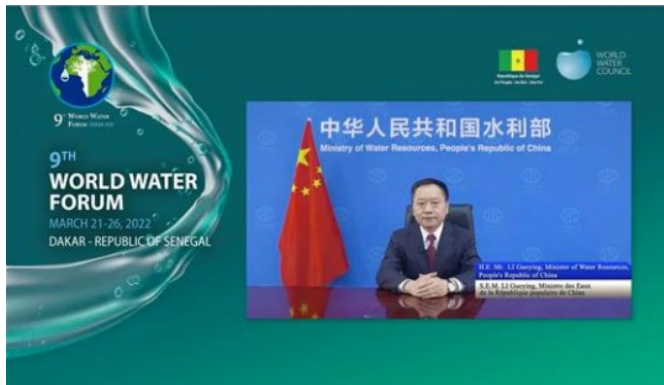


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Editor: Pengfei DU

UNESCO & China to enhance human capacities and promoting water



Mr. Li Guoying, the Minister of Water Resources of China, attends and delivers speech

Since 1997 the World Water Forum (WWF) has been organized every three years by the World Water Council with the aim to catalyze collective action regarding water issues and to provide a platform for the international water community and key decision makers to collaborate on this subject. The ninth edition of the World Water Forum held from the 21 and 26 March 2022 in Dakar, Senegal, bringing people from all around the world, and from water-related sectors, such as academics, civil society, policy makers, utilities, among others. During March 22nd the side-event “Enhancing capacities and water cooperation in Africa - MWR, China-UNESCO-Africa” took place at the World Water Forum. Dr. Shamila Nair-Bedouelle, Assistant Director-General for Natural Science at UNESCO,

opened the event highlighting the challenges that Africa encounters when facing water disasters, such as floods and droughts, and emphasized on the need to enhance human capacities to be able to face these water related natural hazards. She further mentioned the richness of the cooperation between UNESCO, China, and Africa to address water challenges in countries of the continent.

Mr. Li Guoying, Minister of Water Resources of China, remarked on the traditional bond between China and Africa and recalled the UNESCO’s Memorandum of Understanding between both countries, which embraces a Water Partnership through which technical cooperation in water resources management, disaster prevention and mitigation, and climate change adaptation is being developed. The Secretariat of the African Ministers' Council on Water: (AMCOW) further stressed the importance of the importance of water security and sanitation in Africa. And that the expectations of the Water Cooperation shall support the achievement of sustainable development in water issues. AMCOW’s spokesman further explained that the Cooperation will

bring enhancement of human capacities on water issues and strengthen water resources assessment through the understanding of the hydrogeological context in the region. The strengthening cooperation between China and Africa, on water falls within objectives of the 9th phase of the Intergovernmental Hydrological Programme (IHP) of UNESCO which is to run from 2022 to 2029 with the main thematic focus being Science for a Water Secure World in a Changing Environment”: which is to boost international scientific cooperation among Member States.

More information:

World Water Forum:

<https://www.worldwaterforum.org/en>

UNESO-China-Africa Cooperation:

<https://www.unesco.org/en/articles/unesco-andchina-join-hands-africa-0>

Forum on China-Africa Cooperation:

<http://www.focac.org/eng/>

Brief Introduction on World Water Forum

The World Water Council catalyzes collective action during and in between each World Water Forum – the world's largest event on water. Organized every three years with a host country, the Forum provides a unique platform where the water community and key decision makers can collaborate and make long-term progress on global water challenges.

The Forum brings together participants from all levels and areas. 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.

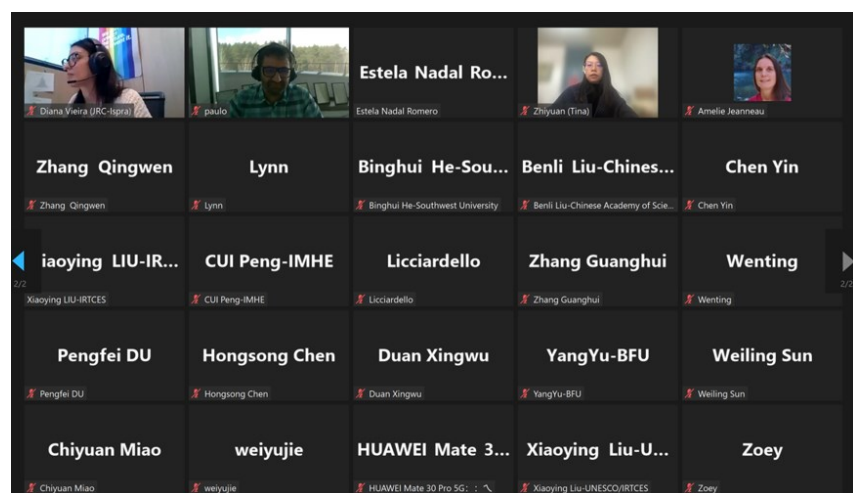
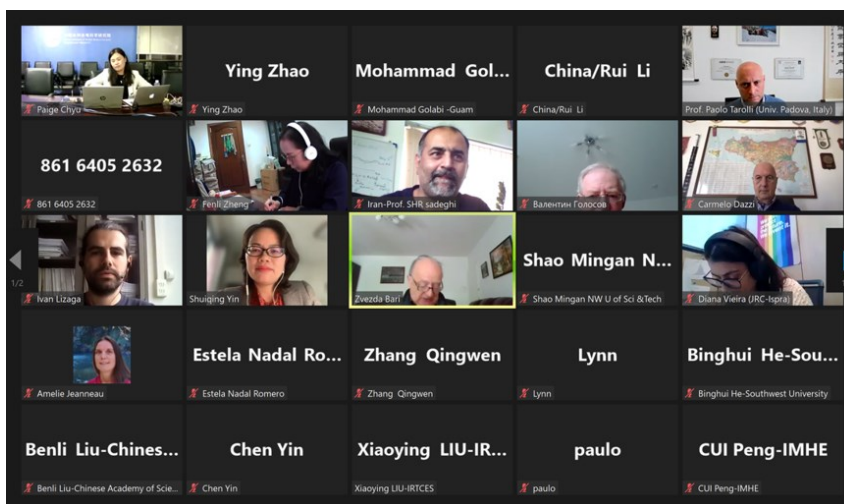
Building on this momentum, the Council encourages you to join the Forum's efforts and strengthens the ability of the entire world to respond to water related challenges of our times.



WASWAC Official Journal - ISWCR Editorial Meeting was Held

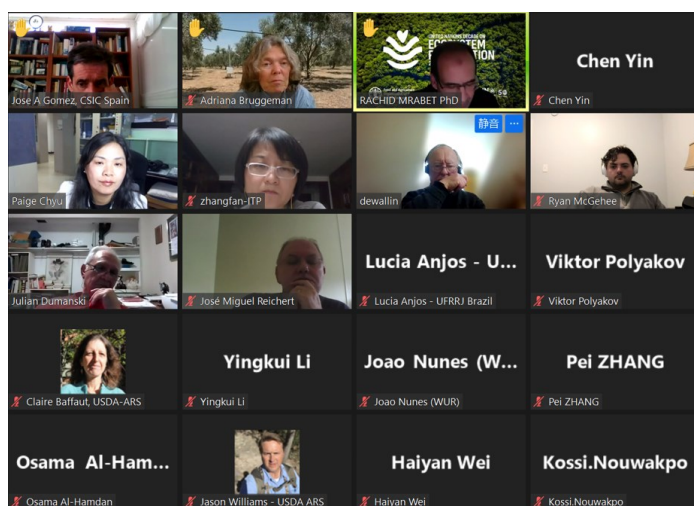
The first ISWCR Editorial Board meeting was successfully held on April 8, 2022. To facilitate the participation of editorial board members from different countries across continents, the meeting was divided into two parts and organized online, with the theme of "meet beyond keyboard and text". There were 53 participants in the meeting, including 27 participants in Section A and 28 participants in Section B. The participation rate of the editorial board members was 75%.

During the meeting, Paige Chyu, the Executive Editor of ISWCR, reviewed the developments of the Journal in recent years. The special guest from the publisher, Ms. Zoey Yu, evaluated the strengths and problems of the current journal performance from the publisher's perspective. Finally, a special issue under planning was announced to the editorial board. The special issue was initiated to remark Mark Nearing, the honorary editor-in-chief of ISWCR, for the outstanding contribu-



tion of more than 30 years of career in the study of soil erosion. Prof. Viktor Polytor is the invited leading editor for the special issue. The most important discussion session of the editorial board meeting was exciting in both parts of the meeting. The editorial board members and representatives from the editorial office had an in-depth exchange and lively discussion on issues related to the development of the journal. The topics discussed included the optimization of the journal review process, the financial situation of the journal, the improvement of the journal content, the editorial board and the review award scheme, etc. The highlights from the discussion sessions are also listed in this report.

versity, China, and Prof. Fan Zhang, Institute of Tibetan Plateau Research, Chinese Academy of Science, China, they have done a great job on co-chairing the discussion and made the whole process well-guided, intense and productive.



Special thanks to Prof. Des Walling from the University of Exeter, UK, Prof. Paolo Tarolli from the University of Padova, Italy, Prof. Shuiqing Yin, from the Beijing Normal Uni-

ISWCR is planning to organize regular Editorial Meetings to strengthen communications among board members. The first meeting is a good start, we will hold the meeting twice a year in the future. We are highly encouraging our board members to join us at the meeting once a year at least. Please pay attention to the future meeting, and show up to say hi to everyone at appropriate ones that fits your time well. We aim to create a virtual forum, which will provide us with face-to-face opportunities for brainstorming and discussion in-depth concerning the running and development of the Journal in the future.

Presentations and Materials to share

(1) Journal Performance Summary

[https://www.jianguoyun.com/p/](https://www.jianguoyun.com/p/DRyK6twQxNu8CBjr_bwEIAA)

[DRyK6twQxNu8CBjr_bwEIAA](https://www.jianguoyun.com/p/DRyK6twQxNu8CBjr_bwEIAA)

(2) KeAi publishing support for ISWCR

[https://www.jianguoyun.com/p/](https://www.jianguoyun.com/p/DZYePD8QxNu8CBj3_bwEIAA)

[DZYePD8QxNu8CBj3_bwEIAA](https://www.jianguoyun.com/p/DZYePD8QxNu8CBj3_bwEIAA)

(3) Announce a New Special Issue

[https://www.jianguoyun.com/p/](https://www.jianguoyun.com/p/Da6jaqsQxNu8CBiH_rwEIAA)

[Da6jaqsQxNu8CBiH_rwEIAA](https://www.jianguoyun.com/p/Da6jaqsQxNu8CBiH_rwEIAA)

Highlights in Discussions

(1) With the increasing submission volume, we need a plan for future development. For example, we need to think whether the Journal should be maintained for publishing quarterly or should the frequency needs to be increased to for publishing bimonthly.

(2) According to experience from other peer journals, it is popular and effective to reward/credit the reviewer and editors.

(3) We should keep on building up the template pool for both editors and authors. Some letters in EM need to be refined in quality and increased in quantity.

(4) Add a frequently asked question for authors and reviewers on the web page of the guide for authors.

(5) We should put more effort on the special issue and combine the Journal Promotion with

relevant conference

(6) It is suggested to select the best papers for the Journal. It will be a good solution to encourage authors and increase the visibility of the article.

(7) The capability of the associate editor in the EM system needs to be refined. Do we need to take comments from the reviewers into account completely or can we edit it according to our opinions? Occasionally, it happens that the comments from a particular reviewer will mislead the author in the wrong direction.

(8) How about considering crediting the member with a lifetime membership for associate editors and members who contributed to the Journal significantly?

(9) We need to publish other types of articles such as editorial, perspectives, short communications, and so on. For example, an editorial to indicate the focus of the Journal will be a valuable resource to both board members and potential authors.

(10) The Journal administrative level needs to provide the Journal with stable final support with the high-speed development of the Journal.

2022 Hohai University Master's Program of Senior Water Conservancy

About the Program

Since 2018, the Ministry of Water Resources and the Ministry of Education, China have jointly implemented the “Chinese Government Scholarship on Senior Water Conservancy Professionals” to select government officials responsible for water conservancy policy, project management, and river basin planning and governance, young experts in water engineering related fields from scientific research institutions, and engineers of water conservancy enterprises to pursue their master’s degree in China at Hohai University. More than 100 candidates from Belt and Road countries have learned advanced experience and technologies in China's water resources management, water conservancy project construction, and other fields, and have participated in extensive cultural exchange activities.

In 2022, the Program will provide 20 scholarships dedicated to the applicants from the member states of UNESCO Intergovernmental Hydrological Program (IHP), especially those from the Belt and Road countries, African countries, and Small Island Developing States (SIDS).

About Hohai University

Established in 1915, Hohai University (HHU) already has a century-old history. Under the direct supervision of the Ministry of Education, HHU has upgraded itself with good momentum of development in hydraulic engineering and water resources as its main focus, education of engineering subjects as its first priority, and coordinated development of a wide array of disciplines. HHU is a state key university under the “Double First-Rate” discipline plan, with national level innovation platforms as well as the graduate school. Over the past 100 years, HHU has contributed greatly to the nation’s rejuvenation in the course of water governance and enjoyed a high reputation as China’s cradle of hydro-power innovators and entrepreneurs and a hub of water science and technology innovation. It is located in the Yangtze River Delta region, one of China's most economically active, open and innovative regions and currently comprises 3 campuses in Jiangsu Province (Xikang Road Campus & Jiangning Campus in Nanjing, and Changzhou Campus in Changzhou). Being first batch of universities authorized to grant doctoral, master and bachelor's degrees to international students, HHU has cultivated thousands of international tal-

ents so far.

Diploma, Graduation and Degree Awarding

The standard master's length of schooling is set to 3 years (no less than 2 years& no more than 5 years).

Those who have completed all courses stipulated in the academic plan and passed all the exams and thesis defense shall be awarded the graduate diploma. Those who pass the degree examination shall be awarded the corresponding academic degree. According to the relevant regulations of the Ministry of Education, China, graduate students taught in English should reach level 3 of <Chinese Language Proficiency Scales for Speakers of Other Languages>.

Application Requirements

The applicant should have a relevant bachelor's degree with the applied major or above, under age 35 (born after Sep. 1st, 1987), be healthy physically and mentally, abide by Chinese laws and regulations, respect Chinese traditions and customs.

Majors

Hydrology and Water Resources

Hydraulics and River Dynamics

Hydraulic Structure Engineering

Water Conservancy & Hydropower Engineering

Harbor, Coastal and Offshore Engineering

Civil Engineering

Environmental Science and Engineering

Public Administration

Resettlement Science and Engineering

Application Documents

1. Scan copy of the passport (Valid after Aug.30, 2023);
2. Scan copies of all the original diplomas and degrees starting from undergraduate (Chinese or English version); Those to be graduated should provide the proof of graduation from current school.
3. Scan copies of the original transcripts with all the courses starting from the undergraduate (Chinese or English version);
4. Curriculum vitae (Consecutive study experiences since undergraduate. Full study experience is required for those who have studied in China);
5. A personal statement or study plan, at least 800 words;
6. English language proficiency certificate (For applicants from non-English speaking countries, TOEFL, IELTS or other proof of their English proficiency is required);
7. Two recommendation letters from the head of the applicant's current working or studying institute;
8. Foreigner Physical Examination Form (see Attachment 2). The applicant should conduct

the examination strictly according to the list.

The result is valid for 6 months.

9. Non-criminal record;

10. Signed personal commitment (see Attachment 3);

Application Time and Procedures

Deadline: May 25, 2022

1. Complete Chinese Government Scholarship online application via

<http://studyinchina.csc.edu.cn> (Agency number:10294, type: B);

2. Complete Hohai University online application via <http://admission.hhu.edu.cn>;

3. Send Application Form (see Attachment 1) to shenkejun@mwr.gov.cn, kejun723@163.com;

4. The application fee is waived.

Scholarship

The scholarship consists of tuition, accommodation, comprehensive medical insurance and living allowance 3000 RMB Yuan/month, international airfare not included.

Admission and Announcement

The university will comprehensively evaluate the applicant's educational background, academic performance, school performance, research ability and development potential, etc. and organize an interview to select the best. The final result subjects to the approval of the Ministry of Education of China.

The university will send the admission notice, visa application form for study in China (Form JW201) and other materials to the applicants upon the approval. If any adjustment is made due to the pandemic, subsequent arrangements of the university shall be notified.

Dormitory

The students will live on Jiangning campus. There're 3 single rooms in one apartment. The facilities include the bed, desk, closet, chair, hot water, internet access, toilet and public laundry room.

Visa Application and Registration

Those who're enrolled shall submit ordinary passport, the admission notice, visa application form for study in China (Form JW201), physical report and blood test report to local Chinese Embassy or Consulate to apply for a student visa (X1) to China. The applicant shall bring all the above materials and register at International School of Hohai University within the appointed time on the admission notice. Those who have provided proof of pre-graduation at the time of application but fail to obtain the corresponding degree before Sep. 2022 will be disqualified for registration. In case of irresistible force, like the pandemic, the time and method of registration shall be subject to official notices or emails.

Contacts

International School, Hohai University

Add: No.1, Xikang Road, Nanjing, Jiangsu Province, China

Zip Code: 210098

Tel: +86 25 83787955 Fax: +86 25 83787981

Email: admission@hhu.edu.cn

Website: <http://ie.hhu.edu.cn>

Attachment

1. Application Form
2. Foreigner Physical Examination Form
3. Personal commitment

Available here:

<http://www.waswac.org.cn/waswac/Announcements/webinfo/2022/05/1648445327118322.htm>



Soil Productivity Management Techniques

Building Blocks

Carbon is the fuel for your soil "factory," says Don Reicosky, USDA-ARS soil scientist emeritus, Morris, Minnesota. "Crop leaves are soil factories' solar collectors, absorbing solar energy, carbon dioxide and water to produce sugars (carbon) and oxygen. Soil microbes are your factory workers, recycling nutrients -- they need to be fed (carbon) just like us. Their meals are 45% carbon, the No. 1 food source driving this whole living system."

SOIL STRUCTURE

"Carbon is the framework and the fuel of every living thing," says no-tiller Bryan Jorgensen, Ideal, South Dakota. He and his family believe their native prairie ecosystem of no-till, cover crops and grazing livestock efficiently recycles roots, crop residues and organic matter into carbon and nitrogen that feed crops.

"Green growing plants are the best way to convert the sun's energy to carbon efficiently, as native prairie plants have done for thousands of years," he adds.

Alliance, Nebraska, 30-year no-tiller Mark Watson labels carbon as the building block of soil productivity. "It's the main tool you have to work with in farming more productively. Aggregates are formed by soil microbe excre-

tions, which 'glue' soil particles into larger aggregates. This provides a home for all the soil microbes. Soil carbon also raises soils' water-absorption capacity."

Given his 15-inch annual rainfall, storing soil water is critical to crop production. Higher soil carbon levels have raised Watson's winter wheat yields from 35 bushels per acre (bpa) to 60 bpa with the same fertilizer rates and eliminated summer fallow from his rotation while adding corn and yellow field peas.

In wet regions, these carbon-fed aggregates translate to more resilient soil after downpours. "You'll have virtually no runoff after a heavy rainfall," Reicosky says.

"Unlike other synthetic crop nutrients, there isn't a synthetic form of carbon that can be added to the soil," Watson says.

YIELD STABILITY

What does soil carbon have to do with profits? "Stored rainfall and the increased nutrient cycling resulting from higher soil carbon are what adds to grain weight and makes the high yields," says Jerry Hatfield, director emeritus, National Laboratory for Agriculture and the Environment. "If we go from 2 to 4% soil organic matter (half of which is carbon), that translates to having 13 days of available soil

moisture without water stress during grain-fill instead of just eight days. Yield variability results from soils' inability to supply moisture during grain-fill. Profit comes from being able to achieve a yield above break-even costs. Field areas with low organic matter are low-yielding, and yet we apply just as many inputs. Enhancing the soil organic matter makes low-yielding areas profitable."

Research bears this out. Continuous no-till requires 50 fewer pounds per acre of nitrogen (N) in a long-term system, according to research by North Dakota State University Extension soil scientist and soil science professor Dave Franzen. "After five or six years of continuous no-till, the soil microbial population is much more diverse, and there are more of them," he says.

MORE AVAILABLE NUTRIENTS

An active soil biological system releases nutrients in the soil that are normally tied up or unavailable for plant use, says South Dakota no-tiller Jorgensen. "As an example of how feeding soil microbes carbon feeds crops more efficiently: We have several lifetimes' worth of phosphorus (P) in our soil system, but it's not readily available." He's reduced commercial N rates and P application rates by 70% under this prairie system.

When soils gain carbon, they also improve in

nutrient availability, structure and water-holding capacity, says soil scientist Christine Jones. She explains how carbon-rich topsoil is formed biologically: "Plants' photosynthesis convert carbon dioxide (CO₂) gas to soil humus -- the only mechanism by which deep topsoil can form."

SOIL CARBON GOALS

Your soil organic matter level (found on soil-test reports) should be 3 to 3.5%, and your soil structure should be spongy. This translates to 1.5 to 2% of soil organic carbon," says Rattan Lal, soil physicist at Ohio State University. "A fertile topsoil's surface contains 3 to 4% organic matter, and about half of this is soil organic carbon."

The last 150 years of tillage have cut U.S. soil carbon levels by 30 to 70%, USDA-ARS soil scientist emeritus Reicosky says. "This contributes to soil degradation, excessive runoff and erosion, water pollution and costly environmental damage because there is less soil organic matter (carbon) to build soil physical, chemical and biological properties, and to retain and cycle nutrients."

Sources: <https://www.dtnpf.com/agriculture/web/ag/news/article/2022/04/01/building-blocks>

Future Global Rainfall Erosivity in 2050 and 2070

Introduction

The erosive force of rainfall (rainfall erosivity) is a major driver of soil, nutrient losses worldwide and an important input for soil erosion assessments models. Here, we present a comprehensive set of future erosivity projections

at a 30 arc-second (~1 km²) spatial scale using 19 downscaled General Circulation Models (GCMs) simulating three Representative Concentration Pathways (RCPs) for the periods 2041–2060 and 2061–2080.

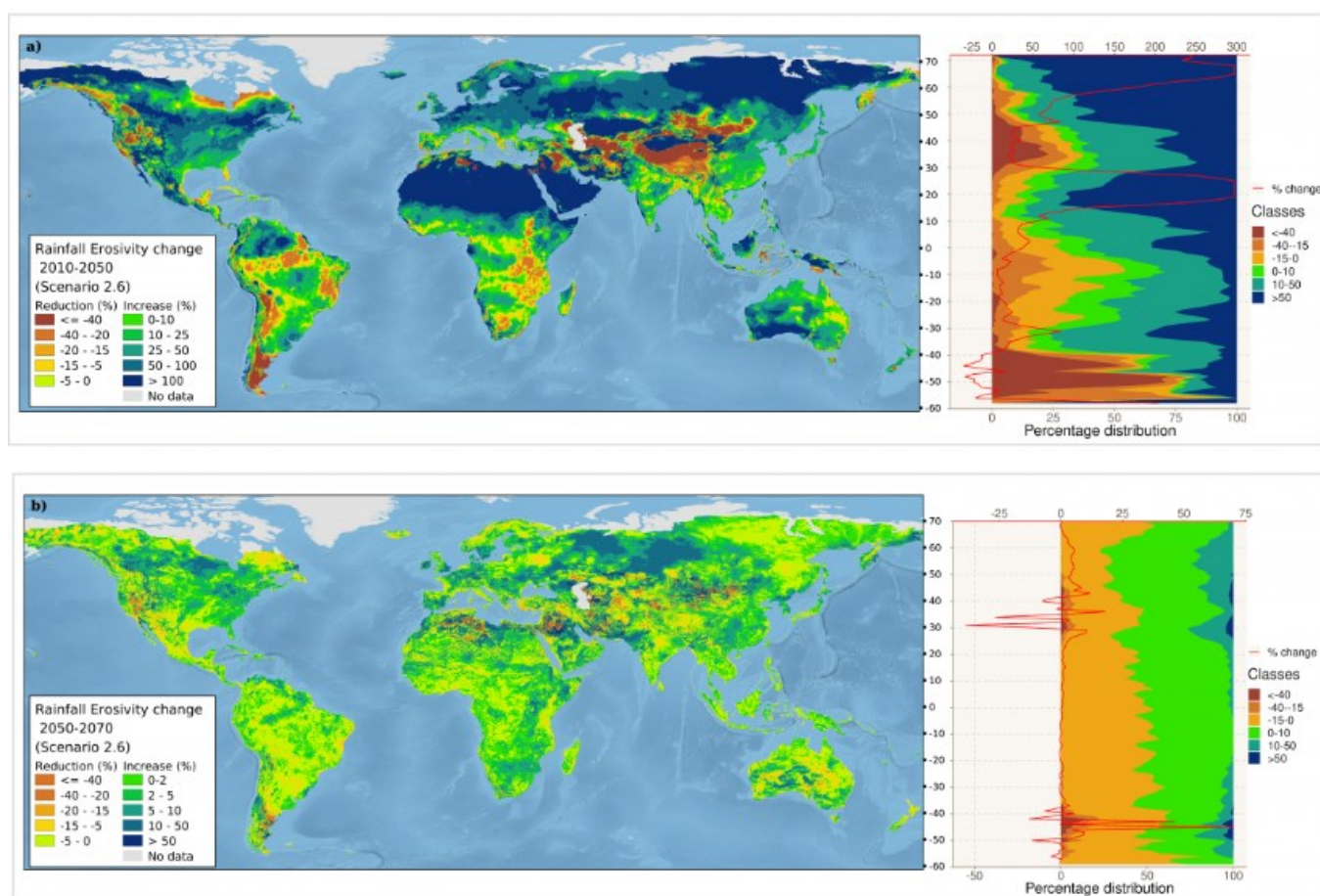


Figure. Geographical distribution of erosivity changes for RCP2.6 for both 2010–2050 (a) and 2050–2070 (b). Right graphs represent the latitude change with percentage distribution per class (bottom axis); the red line is the mean % change (Top axis).

Studies have emphasized the nonlinear response of soil erosion to changing rainfall amount and intensity due to the importance of runoff in eroding soil. The impact of these hydrological driving forces on soil erosion will be exacerbated or reduced depending on the resilience of the land characteristics (e.g. plant biomass and residue, soil physical characteristics, land use) to buffer their effect in future climatic states .

Global Rainfall Erosivity projections 2050 and 2070

For the climatic state in 2050, the mean estimation derived from the 19 model endmembers projects a global average rainfall erosivity value in the range of 2,765 – 2,822 MJ mm ha⁻¹ h⁻¹ yr⁻¹. The range of values is due to the dependency on the RCP scenario, with RCP2.6 increasing erosivity by 26.2%, RCP4.5 by +27.6% and RCP8.5 by 28.8% compared to the 2010 baseline. For 2070, the global average rainfall erosivity is predicted in the range of 2,782 – 2,942 MJ mm ha⁻¹ h⁻¹ yr⁻¹, an increase of 27% in the case of RCP2.6, 30% for RCP4.5 and 34.3% for RCP8.5 compared with the 2010 baseline.

The Northern Hemisphere shows larger increases compared with the Southern Hemisphere for the period 2010–2050, the latter of which has relatively broader areas experiencing decreased rainfall erosivity. Interestingly, the red line representing the mean latitudinal change (%) also has a higher variation in the Northern compared with the Southern hemisphere. This is a manifestation of the increased

spatial complexity of the changing precipitation patterns in the Northern Hemisphere. The average change in rainfall erosivity in the Northern Hemisphere under the RCP2.6 scenario shows 2 distinct latitudinal peaks. These peaks occur between 59 and 65°N and 15–28°N, representing the large percentage changes in rainfall erosivity in cold and arid climate zones. The latitudinal zones between these peaks show a lower relative magnitude of change, particularly the zone between 30 and 45°N where the magnitude of change is limited to roughly 25%. In the Southern Hemisphere, the variability in the change in rainfall erosivity with latitude is relatively lower. The mean increase in rainfall erosivity across the upper part of the hemisphere (0–40°S) is roughly 10%, as Central Africa and North Latin America have mixed trends. Between 2050 and 2070, the magnitude of change in rainfall erosivity is reduced compared to the period between 2010 and 2050.

Data

Available here:

<https://esdac.jrc.ec.europa.eu/content/global-rainfall-erosivity-projections-2050-and-2070>

Sources: <https://esdac.jrc.ec.europa.eu/themes/future-global-rainfall-erosivity-2050-and-2070>

Workshop on soil erosion for Europe – Emerging challenges

Call for presentations 20-22 June 2022, (WEBEX - Online)

Moderator: Panos Panagos, European Commission Joint Research Centre

Rapporteur: Diana Vieira, European Commission Joint Research Centre

Scope: Exploring the role of soil erosion in relation to land degradation, climate change, food security

The EUSO Soil Erosion Working Group (WG) organizes a workshop split in the following sessions:

1. Sediments (including monitoring network). Chair: Nejc Bezak (Necj.Bezak@fgg.uni-lj.si)
2. Farm/Field scale modelling. Chair: Marcella Biddoccu (marcella.biddoccu@stems.cnr.it)
3. Erosion mitigation & management practices. Chair: Artemi Cerda (artemio.cerda@uv.es)
4. Soil organic carbon and erosion integration. Chair: Negrel Philippe (p.negrel@brgm.fr)
5. Food security, nutrient losses with erosion. Chair: Christine Alewell (christine.alewell@unibas.ch)
6. Large scale modelling. Chair: Pasquale Borrelli (pasquale.borrelli@unipv.it)
7. Early Career Research on Soil Erosion. Chair: Daniel Evans (Daniel.L.Evans@cranfield.ac.uk)
8. Landslides and soil erosion. Chair: Nikolaos Tavoularis (ntavoularis@metal.ntua.gr)
9. Climate change and soil erosion. Chair: Joris Eekhout (jeekhout@cebas.csic.es)

Overall co-ordination: Diana Vieira (Diana.SIMOES-VIEIRA@ec.europa.eu)

We are looking for presentations for this workshop. If you are interested to present your work, please send your proposal with a tentative title (and 5-10 lines of abstract) to one of the nine Session Chairs (in cc Diana Vieira). Based on the number of proposals, sessions may be merged, extended or changed.

Deadline for proposals: 29.5.2022 - Participation is free and open

Registration here:

<https://ec.europa.eu/eusurvey/runner/SoilErosionWorkshop2022>

IUSS Division 2 WCSS Travel Award

This programme will provide fellowships to graduate students or early-career researchers (within 5 years of PhD) presenting papers (oral or poster) on the divisional sessions related to the IUSS Division 2 at the 22nd World Congress of Soil Science (WCSS), July 31-August 5, 2022 in Glasgow, UK.

Travel awards will be provided up to \$500 per person for up to 35 individuals.

Final Submission by: May 30, 2022 - noon UTC

Eligibility of application

Applicants must be enrolled in M.Sc., Ph.D. at a university, or up to five years post-doc at academic institute. However, who are WCSS grants winners cannot apply this programme (the results of the WCSS grants will be informed after this May).

Applicant must be the first author of an accepted paper (oral or poster) to be presented at a session related to IUSS Division 2. The session numbers and titles are :

2. Soil carbon: From particle to planet
3. Interdisciplinary soil science for impact
4. Plant soil interactions and their roles in soil formation and sustainable crop production
9. Novel methods and techniques
15. Soil structure - Observation, resilience and its role in ecosystem functioning.
16. Nitrogen Cycling and Soil Health
17. Sustainable Use of Legacy Soil Phosphorus

18. Biogeochemical cycles in the soil - processes linking the abiotic and biotic realms

19. Soil microorganisms under changing environment

20. Soil biology in transition: from descriptive to mechanistical understanding

36. WG2.1 The Legacy of Henry Lin and the future of Hydropedology

37. WG2.2 Modelling soil processes from ped to global scale

What to submit

1. Name of applicant:
2. E-mail address
3. Academic Institute
4. Grade at university or institute (MS, PhD or up to five years Post-Doc)
5. Title of the paper you will be presenting
6. Name of the authors:
7. Session number and title (Choose one from above list)
8. Text of accepted abstract
9. Financial plan for attending the WCSS, including other sources of funding available.
10. CV (1 page).
11. Copy of a certificate of being a MSc, PhD or Post-Doc

Submission destination Please send your application to Prof. Ryusuke Hatano who is the chair of IUSS division 2 by e-mail by May 30, 2022. Email: hatano@chem.agr.hokudai.ac.jp

The 77th SWCS International Annual Conference



This year's conference theme, "Elevating Conservation to New Heights," embraces the mountainous region of the location while emphasizing the shared vision held by conservationists around the world to scale our work, repair ecosystems, and create resilient working lands.

This year's event is situated on the Front Range, where the plains meet the Rocky Mountains and where one can see the vast impacts of a changing climate and increased populations on our natural resources. A central concern for much of this semiarid to arid region is water, most often the lack of water. The west depends upon irrigation for crop production, which depletes both surface water and groundwater supplies. Additionally, competition between urban and agricultural land and water uses has increased as populations and cities grow. Other challenges pressing to the region include wind erosion, high soil sa-

linity, rangeland soil health, brush control, and wildfire impacts. Here, the possibilities for partnerships to elevate soil health and water conservation are not only endless, but necessary. Regional sessions and tours will provide a space to share the latest projects and tools addressing impacts of a changing climate and increased populations on the natural resources of the area.

In addition to working lands, many of the nation's most awe-inspiring parks and protected areas are present in the region, and the natural beauty serves as a reminder of the value of the conservationists' work. Colorado is a wild and scenic state where residents and visitors alike immerse themselves in the natural resources our professionals labor daily to improve and protect.

Registration here:

<https://registration.socio.events/e/swcs22ac>

“GSBI Speaks” webinar

What can we learn about climate change from Antarctic soil biodiversity?

will be held **May 25, 2022 at 7am MDT**

The polar desert of Antarctica continues to be impacted by climate change. What can we learn about the resilience of mosses, lichens and simple soil food webs to increased temperatures and wetting events? Are these ‘pristine systems’ now vulnerable to invasive species? What are scientists learning about the changing polar terrestrial ecosystems, their biodiversity and ecosystem functions that may apply to temperate soils? Join moderator Byron Adams (Brigham Young University, Utah, USA) and panelists Gemma Collins (Senckenberg Society for Nature Research, Frankfurt am Main, Germany LOEWE Centre for Translation Biodiversity Genomics), Claudia Colesie (University of Edinburgh, UK), Jackie Goordial (University of Guelph, Canada) and Jasmine Lee (British Antarctic Survey, Cambridge, UK) for a discussion on hidden soil life, (microbes, invertebrates, cryptogams) and the changing terrestrial environment of Antarctica.

Registration here:

https://zoom.us/webinar/register/9116509132453/WN_HOJoVq4qSX-bS_36euDqGw



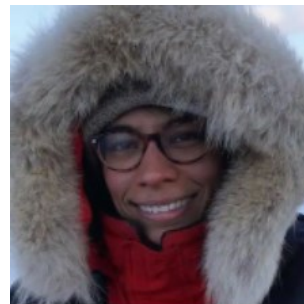
Claudia Colesie



Gemma Collins



Jasmine Lee



Jackie Goordial



Byron Adams

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