



The IGU Commission on *Geography for Future Earth*:

Coupled Human-Earth Systems for Sustainability

Annual Report for 2020-2021

The report includes membership, meetings, networking, and publication for the IGU Commission on *Geography for Future Earth: Coupled Human-Earth Systems for Sustainability* (IGU-GFE).

1. Steering Committee

The IGU Commission on *Geography of Future Earth: Coupled Human Earth Systems for Sustainability* (IGU-GFE) has been formally established in October 2017 and its second term started in 2020. IGU-GFE focuses on human-earth systems and their interfaces with the coast, the ocean, and the atmosphere. It aims to promote a wider analysis and innovative thinking about global land sustainability through the bridging and synthesis of physical geography, human geography, ecology, hydrology, atmospheric, climate, and social sciences. It provides a platform for communication among geographers globally to promote research and innovation about sustainability. The steering committee structure of IGU-GFE is as follows:

Initiator and Honorary Chair

Dr. Prof. Bojie Fu

Dean and Distinguished Professor of Faculty of Geographical Science, Beijing Normal University

Distinguished Professor of Research Center for Eco-Environmental Sciences, Chinese Academy of Sciences

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Chair

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University of California, Irvine

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Dr. Prof. Paulo Alexandre da Silva Pereira

Professor and Head of Environmental Management Laboratory

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Secretary

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2. Meetings held in 2021

The Environmental Governance and Social Network Workshop

The Nature Based Solutions Implementation and Ecosystem Services Assessment in a Changing Environment Workshop

From June 23rd to 26th, 2021, the Nature Based Solutions Implementation and Ecosystem Services Assessment in a Changing Environment Workshop was jointly held by IGU-GFE, Beijing Normal University(China), Mykolas Romeris University (Lithuania), and the journal *Geography and Sustainability* via Zoom. Dr. Paulo Pereira, Dr. Miguel Inácio, Dr. Katarzyna Bogdzevič, Dr. Nuno Jeronimo and Dr. Eduardo Gomes from Mykolas Romeris University were the lecturers of the workshop. The workshop was freely open to all participants worldwide through live streaming and attracted more than 80 experts, scholars, and students. The participants had discussions on nature-based solutions and land degradation in a changing environment, nature-based solutions for coastal management, basic principles of ecosystem services mapping, soil ecosystem services, mapping terrestrial ecosystem services, mapping marine ecosystem services, mapping future ecosystem services, legal implications of flood management, flood assessment in urban areas, and how to draft a good paper.

The poster features a green background with a forest image. It lists the workshop title, dates (23-26 June, 2021), and the authors: Paulo Pereira, Miguel Inácio, Katarzyna Bogdzevič, Nuno Jeronimo, and Eduardo Gomes. Logos for Mykolas Romeris University, IGU-GFE, and GEOSUS are present. A QR code and registration link are provided at the bottom.

Nature Based Solutions Implementation and Ecosystem Services Assessment in a Changing Environment

Author Workshop
23-26 June, 2021

Paulo Pereira
Nature based solutions and land degradation in a changing environment
Basic principles of ecosystem services mapping
Soil Ecosystem Services
Mapping terrestrial ecosystem services
How to draft a good paper

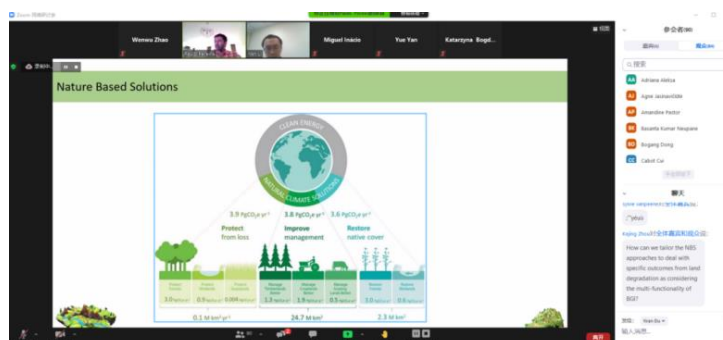
Miguel Inácio
Nature based solutions for coastal management
Mapping marine ecosystem services

Katarzyna Bogdzevič
Legal Implications of flood management

Nuno Jeronimo
Flood assessment in urban areas

Eduardo Gomes
Mapping Future ecosystem services

Registration Link: <http://t.hk.uy/tb4>
<https://www.journals.elsevier.com/geography-and-sustainability>



Screenshot of the Nature Based Solutions Implementation and Ecosystem Services Assessment in a Changing Environment Workshop

International Workshop on Geography and Sustainability 2021

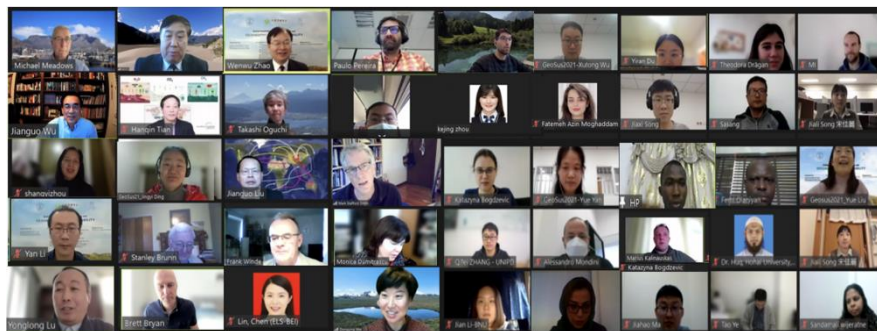
From November 23rd to 24th 2021, International Workshop on Geography and Sustainability 2021 was successfully held via Zoom. The workshop theme was “Geography of the Anthropocene: Transforming our world for sustainable development”, which aimed to present the latest research progress on geography and sustainability, provide a valuable contribution to transforming our world for sustainable development. The workshop was hosted by International Geographical Union, co-organized by Faculty of Geographical Science at Beijing Normal University and the Geographical Society of China, collaborated with the IGU Commissions on Geography for Future Earth, Agricultural Geography and Land Engineering, Geoheritage, Hazard and Risk, Land Degradation and Desertification, Land Use and Land Cover Change, Water Sustainability, Modeling Geographical Systems and the Young and Early Career Geographers Working Group on Geography and Sustainability.



Flyer of International Workshop on Geography and Sustainability 2021

The workshop was freely open to all international audiences through live streaming and attracted more than 500 attendants from 40 countries. The workshop had 11 keynote speeches, which focused on the key research areas on promoting geography for sustainability. With a scientific session for young and early-career researchers, the topics of the 10 panel sessions included land use change, urbanization, agricultural geography, land degradation, water resources, disaster risk reduction, geographic modeling, heritage park, and geography education. Around 100 oral presentations have been delivered during the two days' workshop. Prof. Bojie Fu and Prof. Michael Meadows (current president of IGU) co-chaired this workshop, delivered the welcome and closing remarks respectively. Prof. Monica Dumitraşcu, Prof. Frank Winde, Prof. Takashi Oguchi, Prof. Paulo Pereira, Prof. Min Chen, Prof. Matija Zorn, Prof. Yuheng Li, Prof. Dongying We, Prof. Yan Li, Prof. Wenwu Zhao, Dr. Gabriela Morosanu, Dr. Xutong Wu chaired these sessions. The workshop will be organized continually, and provide an international platform for communication

on promoting sustainable development through an integrated geography perspective.

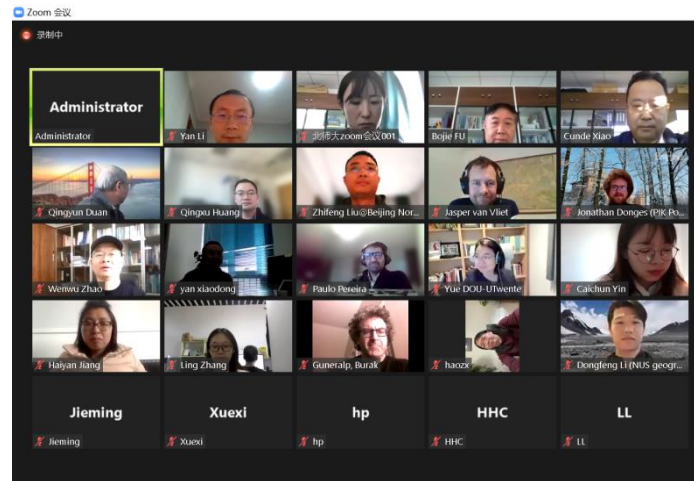


Screenshot of International Workshop on Geography and Sustainability 2021

The 4th International Workshop on the Human-Earth System Dynamics and Modelling

From December 18th to 19th, 2021, the 4th International Workshop on the Human-Earth System Dynamics and Modelling was successfully held via Zoom with more than 100 participants. It was hosted by State Key Laboratory of Earth Surface Processes and Resource Ecology (ESPRE), Beijing Normal University, and co-organized and IGU-GFE. Fourteen invited speakers including Prof. Jasper van Vliet (VU University Amsterdam, NL), Prof. Paulo Pereira (Mykolas Romeris University, Lithuania), Jonathan F. Donges (Potsdam Institute for Climate Impact Research, PIK), Richard S.J. Tol (University of Sussex, UK), Matteo Pedercini and Weishuang Qu (The Millennium Institute, USA), Burak Güneralp (Texas A&M University, USA), Safa Mote (University of Maryland, USA) shared their ideas with participants. The speakers discussed many aspects of the Human-Earth System Dynamics and modelling, including large-scale modeling of urban development trajectories, systems integrations for understanding sustainability goals and challenges, nature based solutions in urban environments, social tipping dynamics in world-earth system model simulations, mapping land systems across Europe-Redefine land cover/land use for biodiversity modeling, economic impact of weather and climate, integrated simulation for sustainable development, terrestrial ecosystem carbon cycle model for carbon neutrality, infrastructure development with(out) ecological conservation: the case of the northern forests in Istanbul, a two-way coupling study of

energy economic models and earth system models, a novel approach to carrying capacity, T21 China 2050: a tool for national sustainable development planning, impact of social economic development on climate change using coupled earth system model and integrated assessment model, and an integrated assessment model of the Yangtze economic belt.



Screenshot of the 4th International Workshop on the Human-Earth System Dynamics and Modelling, 2021

3. Networking

3.1 Young and Early Career Geographers Working Group on Geography and Sustainability (YECG-GeoSus)

YECG-GeoSus is an interdisciplinary working group of young and early career scientists interested in geography and sustainability constituted within IGU in 2021 through the collaboration of IGU-YECG and IGU-GFE. The mission of YECG-GeoSus is to promote research and education in sustainable development for young and early career geographers involved in all branches of Geography. YECG-GeoSus and its members were co-announced by IGU-GFE and IGU-YECG officially during the 34th International Geographical Congress “Geography: bridging the continents”, Istanbul, 16-20 August 2021.

Governing Council

Wenwu Zhao (Chair of IGU-GFE; Beijing Normal University, China)

Komali Yenneti (Chair of IGU-YECG; University of Wolverhampton, UK)

Chairs

Gabriela Morosanu (Institute of Geography of the Romanian Academy, Romania)

Xutong Wu (Beijing Normal University, China)

Secretariat

Yiran Du (*Geography and Sustainability*, China)

Core Members

Mengyao Han (Institute of Geographic Sciences and Natural Resources Research, Chinese Academy of Sciences, China)

Alexis Alamel (Sciences Po Rennes, France)

Sandamali Wijeratne (University of Colombo, Sri Lanka)

Eugenio Straffelini (University of Padova, Italy)

Regular Committee Members

Jianxiao Liu (The University of Hong Kong, China)

Youjia Liang (Wuhan University of Technology, China)

Sujayita Bhattacharjee (University of Mumbai, India)

Oluwasegun Adetunde (University of Ilorin, Nigeria)

Radmila Jovanović (University of Malaga, Spain)

E-mail address of YECG-GeoSus: yecg.geosus@gmail.com

4. Publication

4.1 A special issue on Carbon Neutrality Potentials

Prof. Changqing Song, Prof. Cunde Xiao, Prof. Zahra Kalantari, and Prof. Carla Ferreira will organize a special issue on *Carbon Neutrality Potentials from Geographical Perspectives* in *Geography and Sustainability* in 2021.

This special issue aims to provide an in-depth insight into the potential ways to reduce carbon emission and enhance carbon sink balance, and interactions between human societies and natural systems in achieving carbon neutrality from the view of geography sciences. The special issue

kindly invites submissions from a wide range of topics relating to carbon neutrality, carbon emissions, carbon sequestration, carbon and cropping systems, greenhouse gas reductions, climate extremes mitigation, clean energy revolution, ecosystem conservation, and sustainable development across different scales (e.g., local, regional, continental, global) and biomes (e.g., terrestrial ecosystems, marine ecosystems, agricultural systems, industries, and urban areas). Papers using empirical local/contextual analyses for presenting recommendations to achieve carbon neutrality based on knowledge in geography sciences are particularly encouraged.

Submission Deadline: June 30, 2022

Link: <https://www.sciencedirect.com/journal/geography-and-sustainability/about/call-for-papers#special-issue-on-carbon-neutrality-potentials-from-geographical-perspectives>

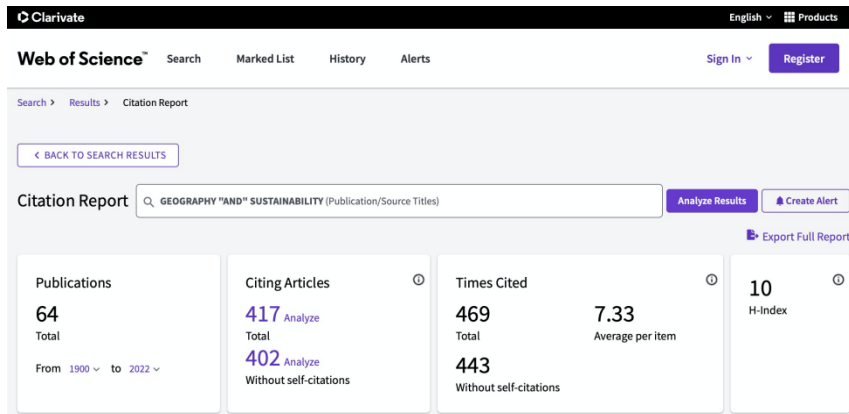
4.2 *Geography and Sustainability*—the official journal of IGU-GFE

Geography and Sustainability, an international journal sponsored by Beijing Normal University and IGU-GFE, is jointly published by Beijing Normal University Press and Elsevier. Prof. Bojie Fu, dean of the Faculty of Geographical Science of Beijing Normal University and vice president of IGU, serves as the chief editor of the journal.

The first issue of *Geography and Sustainability* was published in March 2020. At present, 73 papers have been published in the journal with an average publishing time of 3 months. The journal has been indexed by the Scopus database on November 20th, 2020. On April 23rd, 2021, *Geography and Sustainability* was indexed by Emerging Sources Citation Index. In July 2021, *Geography and Sustainability* was indexed by Norwegian Register for Scientific Journals, Series, and Publishers and Directory of Open Access Journals.

The CiteScore Tracker 2021 is 7.6 (by December 4th, 2021). The average per item is 7.33 (by December 14th, 2021).





The journal is open to submission. Scope of the journal includes:

- Geographical processes
- Human-Environmental Systems
- Ecosystem services and human wellbeing
- Sustainable development
- Geo-data and model for Sustainability.

For inquiry and paper submission issues, please contact the editorial office: geosus@bnu.edu.cn. (<https://www.journals.elsevier.com/geography-and-sustainability/>)