



The IGU Commission on *Geography for Future Earth*:

Coupled Human-Earth Systems for Sustainability

Annual Report for 2020

The report includes membership, meetings, publication, and other important information 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-land 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:

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2. Meetings held in 2020

The Second Ecosystem services, Academic Writing and Editing Workshop

“*The Second Ecosystem Services, Academic Writing and Editing Workshop*” for training young scientists and students on scientific writing and sustainability science was delivered online via Zoom from June 22nd to 26th 2020. The workshop was co-organized by Beijing Normal University, the journal Geography and Sustainability, IGU-GFE, and the Working Committee for Young Geographer of the Geographical Society of China. Prof. Dr. Paulo Alexandre da Silva Pereira was the lecturer of the workshop. The workshop was freely open to all international audiences through live streaming and attracted more than 300 experts, scholars, and students.

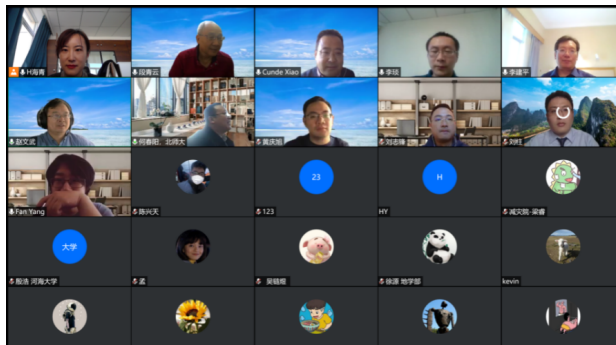


The Second Ecosystem Services, Academic Writing and Editing Workshop

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

On November 3rd, 2020, the Third International Workshop on the Human-Earth System Dynamics and Modelling was held online. This workshop was hosted by the State Key Laboratory of Earth Surface Processes and Resource Ecology, and the Center for Human-Environment System Sustainability of Beijing Normal University, and IGU-GFE. The workshop attracted nearly 100

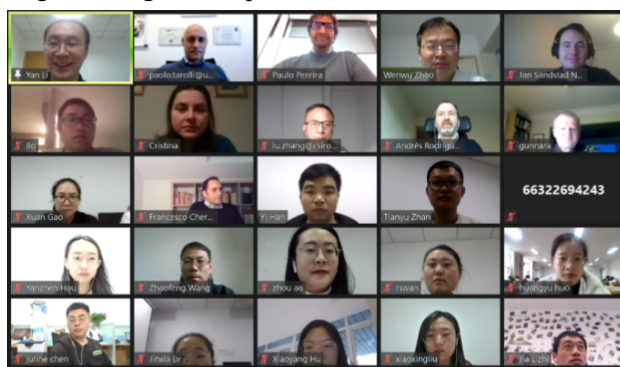
participants. The speakers discussed four main aspects of the Human-Earth System Model and Simulation, including Earth Surface System Modelling and Land-Use/Land-Cover Change (LUCC), the Human-Earth System Dynamics, Bi-directional Coupling of Earth System Models and Socio-economic Models, Linkages and Dynamics among Ecological Processes, Services, and Human Well-being, and Coupled Human-Earth System and Sustainable Development.



Screenshot of the Third International Workshop on the Human-Earth System Dynamics and Modelling

Geography and Sustainability Workshop 2020

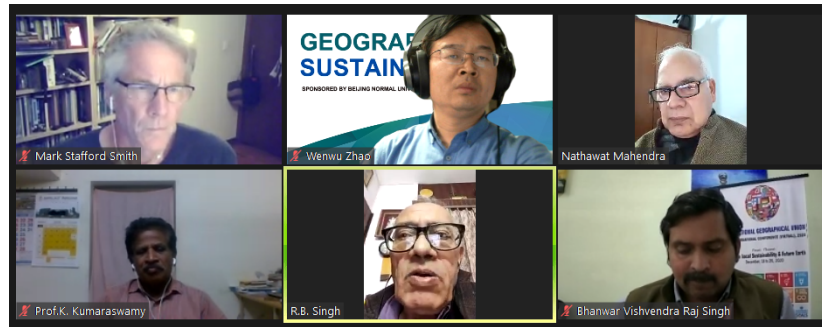
From November 30th to December 1st, 2020, Geography and Sustainability Workshop 2020 was jointly held by IGU-GFE and Geography and Sustainability via zoom. The workshop attracted more than 40 participants from Norwegian University of Science and Technology, Norwegian Institute for Nature Research (NINA), University of Padova, Mykolas Romeris University, Beijing Normal University, and the Institute of Geographic Sciences and Natural Resources Research of Chinese Academy of Sciences. On the first day, the participants had discussions on spatiotemporal dynamics of vegetation in the middle to high latitudes, the impact of livestock and wild herbivores on Norwegian forest ecosystems, impacts of grazing exclusion across Tibetan Plateau and sustainable management, sustainable road network, ecosystem services, and its influencing factors, ecosystem carbon storage and adaptive management, etc. Presentations on the second day included pressures and drivers on ecosystems, ecosystem state assessment, effects of multiple stressors on ecosystem quality and biodiversity, impacts of multiple pressures on ecosystem services, and mitigation strategies of ecosystem pressure under a changing environment. At the end of the conference, the participants had in-depth discussions on international cooperation, international courses, and exchange funding, which provided a solid foundation for further cooperation.



Screenshot of Geography and Sustainability Workshop 2020

The Thematic Forum of the IGU India International Conference (Virtual) 2020

From December 18th to 20th 2020, the thematic forum of The IGU India International Conference (Virtual) 2020 was held by the IGU-GFE Commission with a themed session of “Geography Future Earth: Coupled Human-Earth Systems for Sustainability”. Prof. Wenwu Zhao, the chair of IGU-GFE Commission, and Dr. Prof. Mark Stafford Smith, the vice-chair of IGU-GFE Commission attended the Panel Discussion and contributed to frontier topics such as global sustainable development, geography and sustainability, arid region ecosystem and sustainability during the COVID-19 pandemic, etc.



Screenshot of the Thematic Forum of the IGU India International Conference (Virtual) 2020

3. Publication

3.1 Loess Plateau: from degradation to restoration

Prof. Paulo Pereira, Prof. Wenwu Zhao, Prof. Yang Yu, and Prof. Juan Francisco Martinez-Murillo organized a special issue on *Loess Plateau: from degradation to restoration* in Science of The Total Environment in 2019. Twenty-eight papers have been published on this issue. (<https://www.sciencedirect.com/journal/science-of-the-total-environment/special-issue/10P5TMNL3SQ>)

This special issue aimed to quantify the effects of vegetation restoration on soil quality, soil fertility, land production, hydrological conditions, and ecosystem services and assess the policy implications on ecological management. It discussed the significance and problems under “Grain for Green Program” (GFGP) implementation in Loess Plateau.

3.2 Global Ecosystems Restoration for SDGs: Implications on soil and water conservation

Prof. Paulo Pereira, Prof. Damia Barcelo, Prof. Panos Panagos, and Prof. Wenwu Zhao will organize a special issue on *Global Ecosystems Restoration for SDGs: Implications on soil and water conservation* in Environmental Research from 2020 to 2021. The special issue kindly invites submissions from various disciplines and is open from September 1st 2020 to April 30th 2021. The special issue will mainly address the following scientific issues:

- Ecosystem restoration in, but not limited to warfare affected areas, urban, industrial, mining and agricultural
- Techniques applied for restoration
- Implications of restoration on soil and water ecosystem services
- Implications of soil and vegetation restoration in SDG’s achievement

3.3 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, 37 papers have been published in the journal with an average publishing time of 3 months. The journal has been selected as a high-quality journal catalog in the field of geographical resources in China on November 14th. On November 20th, 2020, Geography and Sustainability was indexed by the Scopus database.

The articles published in Geography and Sustainability have been cited 194 times by Google Scholar, 110 times by Scopus, and 70 times by Web of Science in total (by January 6th, 2021). Among the published articles, 48.6% of articles are from the international institutes. 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/>)

4. Other information

4.1 Prof. Bojie Fu was named an Honorary Fellow of the Royal Geographic Society

In May 2020, Prof. Bojie Fu, the distinguished chair of the IGU-GFE, was named an honorary fellow of the Royal Geographic Society (with the Institute of British Geographers).

4.2 Prof. Mike Meadows and Prof. Celine Rozenblat were elected as the president and vice-president of the International Geographical Union (IGU)

Prof. Mike Meadows and Prof. Celine Rozenblat, members of the IGU-GFE were elected as the president and vice-president of the International Geographical Union (IGU) for 2020-2024.

4.3 The Research plan of IGU-GFE for 2020-2024 was made

The Research plan for 2020-2024 was made by the IGU-GFE committee. The plan includes the following areas: 1) promote the new journal Geography and Sustainability for a wider international audience and while increasing the international influence, 2) regularly organize sessions on the coupled human and natural system and sustainability in international conferences, 3) organize new special issues in prestigious journals, 4) and launch a special working group for youth and early career scientists under IGU-GFE.