



MANOHAR PARRIKAR INSTITUTE FOR
DEFENCE STUDIES AND ANALYSES

मनोहर पर्रिकर रक्षा अध्ययन एवं विश्लेषण संस्थान

CHINA

SCIENCE AND TECHNOLOGY REVIEW

May 2024

- **China releases biodiversity database and a report on GLOFs**
- **Scientific Collaboration Projects**
- **Scientific Research Breakthroughs and Discoveries**
- **China Science Diplomacy**

China releases biodiversity database and a report on GLOFs

[Catalogue of Life China 2024 Annual Checklist](#), an updated version of China's native species database, was unveiled by the Chinese Academy of Sciences (CAS). In the latest database, a total 155,364 species and subspecies are recorded, up 6,690 from the 2023 figure. According to Ji Liqiang, a member of CAS Biodiversity Committee, the updated database will reportedly be critical for fostering biodiversity research and conservation efforts.

Meanwhile, under a joint project between China, the United Kingdom, Canada, Switzerland and Germany, the [Institute of Tibetan Plateau Research of CAS](#) released a comprehensive report on glacial lake outburst floods (GLOFs). According to Zhang Guoqing, one of the co-authors of the study, unlike the previous studies on GLOFs which were "more singular" with specific types of ice lakes or mountain areas, in the latest study the researchers synthesized global changes in glacial lakes. The latest study has identified more than 110,000 glacial lakes, covering a total area of around 15,000 square kilometers.

Scientific Collaboration Projects

Under a collaborative research team involving [Shanghai Astronomical Observatory \(SHAO\), China and Mykolaiv Astronomical Observatory, Ukraine](#), a new technique has been developed for studying

near-earth asteroids (NEAs) which will aid in identifying and preventing catastrophic asteroid impacts. The study leveraged an extensive dataset comprising more than 11,000 positional measurements of nearly 500 NEAs, captured by the two 50-centimeter telescopes located, respectively, in the north-western Chinese city of Xi'an, over the period 2019 to 2023, and in Mykolaiv, Ukraine, over the period 2011 to 2022.

During President Xi Jinping's [visit to France in the first week of May](#), the subject of achieving carbon neutrality received major attention. In the meeting, Yu Jianfeng, Chairman of the China National Nuclear Corporation (CNNC), and Jean-Bernard Lévy, Chairman and Chief Executive Officer of Electricité de France (EDF) jointly released a book titled *A Prospective Study or "Bluebook" on Nuclear Energy to Support Low Carbon*. In the meeting both sides gave assurances and shared confidence in their cooperation in nuclear energy strengthening further to deliver fruitful results.

In bilateral relations between China and France, nuclear energy is considered as one of the "most solid cooperation areas." Since 1982 when the two countries first signed a cooperation deal on peaceful use of nuclear energy, relations on the frontier of nuclear energy have expanded extensively. CNNC and EDF cooperation has resulted in experts being sent to support the work of international organization technical groups,

international research projects, and promotion of international coordination and standardization.

At the 31st International Symposium on “Deltas and Wetlands” held in Tulcea, Romania from 13 to 17 May, [a memorandum of understanding \(MoU\)](#) was signed between the Northeast Institute of Geography and Agroecology (IGA) of CAS and Romania’s Danube Delta National Institute for Research and Development (DDNI). The objective of the MoU is to promote scientific exchange and cooperation in biodiversity conservation, wetland restoration and ecological protection.

Scientific Research Breakthroughs and Discoveries

The lunar soil samples brought down to earth on 17 December 2020 by Chang’e 5 lunar exploration mission were discovered to contain hydroxyl radicals and molecular water by researchers from [the Institute of Geochemistry of CAS](#). The presence of water in these lunar samples has multiple potential sources, such as proton implantation from solar wind, delivery by water-rich meteorites or micrometeorites, and water native to the moon. The study concluded that the primary contributor is likely to be proton implantation from solar winds, highlighting its significant role in the formation of lunar water.

China Science Diplomacy

Further strengthening cooperation in addressing global challenges and achieving the Sustainable Development Goals, Vice President of the National Natural Science Foundation of China (NSFC) Dr. Lan Yujie held a meeting on 13 May in Beijing with a visiting delegation from the [International Institute for Applied Systems Analysis \(IIASA\), Vienna, Austria](#), headed by Prof. Wolfgang Lutz, Interim Deputy Director General of the IIASA. In the meeting, both sides discussed enhancing scientific collaboration.

Meanwhile, on 22 May, Prof. Dou Xiankang, President of the Natural Science Foundation of China SFC held a meeting with a visiting delegation from the [American Association for the Advancement of Science \(AAAS\)](#), headed by Dr. Sudip Parikh, CEO of AAAS. In the meeting, both sides exchanged ideas for cooperation in promoting scientific research activities and the dissemination of scientific achievements. In the meeting, Dr. Parikh applauded the increasing number of Chinese scholars’ contributions in the journal *Science*.