Activity Report from International Strategic Advisor in 2023

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1. Observation

    (1) The open science data governance and practices are shared in different regions in A-O, such as China, Malysia, Australia, and some science programmes, like GEOCRI for GEO Cold Regions Initiate. More challenges and opportunities for international collaborative data management are proposed.

    (2) For data systems and networks, more experiments are shared by AuScope Virtual Research Environment in Australia, DataON from Korea, SDRA and NASSDA, Polar data discovery portal, and BigFlow framework from Chinese Academy of Sciences.

    (3) FAIR principles progresses are exchanged coving PIDs and Global Open Identifier, Indonesia's progress, IRINS in India, and open science policy in Japan.

    (4) Data Science are promoted in different fields, such as geoscience for glacial landforms, climate change with pollutant retrieving and methane emission from cattle, space science in NSSDC, and scientific data linking and integration.

    (5) A-O data forum covered more data centers inside World Data System or outside, like Indian geomagnetism data center, Indonesia national scientific repository, nation space science center and global microbiology data center in China, and open government data in Bangladesh, and so on.

2. Consideration

The Joint Support-Center for Data Science Research (ROIS-DS) is part of ROIS and focus on supporting researchers with data driven research. As data is the basis for data driven research, so enhance the data repository development and the big data management is still the fundamental work.

    (6) World Data System has massive data storage in different disciplinaries, such as in Geo Science, Space Science, Biological Science, Life Science, Agriculture Science, Astronomy Science, Ocean Science, etc. This biennial meeting in A-O regions is helpful for involving more data centers work together and support data driven research.

    (7) Encourage more repositories in A-O regions, and let them go close to WDS (IPO/ITO), with support from WDS local communities/SC members/regular members in A-O region.

    (8) Find more cooperation fields related with data driven research, such as polar regions (including Tibetan Plateau), Life sciences (including animal, plant, and microorganism), Earth Science (including atmosphere, hydrosphere, cryosphere, pedosphere, biosphere,

lithosphere, and Anthroposphere), et al.

3. Recommendation for ROIS-DS

(9) Organized or supported by ROIS-DS, continually enhance the data network in A-O regions, organize more webinar, training, workshop, seminar for field application and technology exchange with open data and data science.

(10) Strengthen the cooperation with nine data centers of WDS in mainland China, including WDS renewable resources and environmental data center, WDS global change scientific research data publishing system, WDS China space science data center, WDS cold dry area science data center, WDS world microbiological data center, WDS ocean data center (Tianjin), WDS China astronomical data center, WDS geophysical scientific data center (Beijing), Geoscientific Data & Discovery Publishing System.

(11) Strengthen the cooperation with more international programmes or cooperation platform, such as the Disaster Risk Reduction Knowledge Service of International Knowledge Centre for Engineering Sciences and Technology under the Auspices of UNESCO (IKCEST-DRR), the Deep-time Digital Earth big data programme lunched by IUGS, et al.

(12) Some potential cooperation fields for ROIS and others maybe disaster risk reduction, Polar study (including Tibetan Plateau), COVID-19 and healthy study, Geoscience data sharing, and Large Language Models.

(13) Recommend benchmark Institutions include WDS ITO, IGSNRR-CAS, and IKCEST-DRR in UNESCO. WDS ITO is affiliated to WDS in Canada, University of Victoria. It can provide repository interoperability technology support for ROIS in the near future. IGSNRR-CAS is the Institute of Geographic Sciences and Natural Resources, Chinese Academy of Sciences. This institute host the WDS-China centers portal, it is a hub for connection the WDS centers in China. Prof. Juanle Wang is a right person for connection, and he also is the director of the World Data Center for Renewable Resources and Environment. Lastly is IKCEST-DRR, it is named the Disaster Risk Reduction Knowledge Service (DRRKS) of International Knowledge Centre for Engineering Sciences and Technology (IKCEST) under the Auspices of UNESCO. IKCEST-DRR platform (drr.ikcest.org) has been recommend by UNESCO as a demonstrate platform for Open Science in UNESCO's website. It is a good platform for connection and exchange more about open science.