



Contribution ID: 36

Type: **Session**

Certified Data Repositories in Asia-Pacific and Africa: towards Sustainable Science, Education, and Development

Tuesday 14 October 2025 16:00 (1h 30m)

This 90-minute session, featuring five 10-minute presentations followed by a 40-minute panel discussion, aims to tackle critical challenges in scientific data repository certification across the Asia-Pacific and Africa (APA) regions. The session seeks to establish a collaborative framework for improving repository management standards and fostering cross-regional synergies. By convening experts from academia, policymaking, and technical fields, it will explore how certification mechanisms can enhance data interoperability, service quality, and ethical compliance, ultimately supporting the United Nations Sustainable Development Goals (SDGs). Current challenges in APA regions include fragmented certification criteria, uneven infrastructure development, and insufficient multilingual support, collectively hindering the adoption of globally recognized standards such as the FAIR (Findable, Accessible, Interoperable, Reusable) principles and cross-domain interoperability. For instance, a 2024 UNESCO report indicates that only 18% of repositories in these regions meet basic metadata certification requirements, compared to 42% in Europe and North America. The session will highlight case studies demonstrating how certification protocols can bridge gaps in data accessibility and governance while respecting regional socio-technical contexts.

This proposal is jointly supported by CoreTrustSeal, World Data System, and CODATA, with additional collaboration from early-career researchers via WDS-ECR and WDS China Group. Potential participants include leading experts from China, Singapore, Thailand, Japan, South Africa, Australia and New Zealand. Their contributions will emphasize practical strategies for familiarizing themselves with existing certification systems, such as CoreTrustSeal and Re3Data. Additionally, the session will demonstrate how certified data repositories can work in sector such as higher education, ocean, disaster risk reduction, scientific research and poverty reduction.

The panel discussion will concentrate on solutions that can be implemented to overcome the barriers encountered in the certification process, with a particular focus on indigenous language and capacity-building initiatives. The anticipated outcomes encompass the promotion of mutual assistance, the cultivation of co-operation, and the training of experts on certification among data repository institutions in these regions. The session will achieve this by aligning technical rigor with cultural inclusivity, thus catalyzing long-term advancements in data-driven sustainability efforts across the Global South.

Session Team:

☒ Li Guoqing, Director of China National Earth Observation Data Center, and the Board member of CoreTrustSeal, co-chair of CODATA FAIR-DRR TG (onsite)

☒ Dr. Zhao Jing, China National Satellite Meteorological Centre, and the co-Chair of WDS ECR (online)

☒ Yuyun Wirawati, Nanyang Technological University Library, and leader of Community of Practice (CoP) for Southeast-Asia repositories (online)

☒ Daisy Selematsela, University of Witwatersrand, and the Vice President of CODATA (onsite)

☒ Olivier Rouchon, Centre National de la Recherche Scientifique, and chair of the CoreTrustSeal board (onsite)

☒ Wang Juanle, Institute of Geographic Sciences and Natural Resources Research, and Scientific Committee member of WDS (onsite)

☒ Noriko Kaneshima, Japan National Institute of Informatics (online)

☒ Bapon Fakhrudin, Green Climate Fund, and co-chair of CODATA FAIR-DRR TG(onsite)

☒ Liu Chuang, Institute of Geographic Sciences and Natural Resources Researchs, and Director of WDS center on Global Change Research Data Publishing Repository, and co-chair of CODATA GIES TG.(onsite)

☒ Jun Shen, School of Computing and Information Technology, University of Wollongong, Australia.(onsite)

Potential Speakers (5 x 10 mins):

(1) CoreTrustSeal update, challenges in Asia-Pacific region (by Olivier Rouchon & Guoqing LI, in-person)

- (2) Certified repositories development in Earth Science and their value added potential in APA regions (by Juanle Wang, in-person)
- (3) Asia Pacific case study on World FAIR (by Bapon Fakhruddin, in-person)
- (4) Conceptualisation of an RDM framework for the Wits Graduate Online Learning and Development (GOLD) Programme, South Africa (Daisy Selematsela and Lazarus Matizirofa, in-person)
- (5) Community of Practice: Collaborating Across Certified Repositories (by Yuyun Wirawati, online)

Panel Discussion (40 mins)

Panelist (TBD): Jun Shen, Olivier Rouchon, Liu Chuang, Daisy Selematsela, Bapon Fakhruddin

Panel Discussion Topics (draft):

- (1) How to select a right certification for scientific data repository?
- (2) Lessons and Learned: preparation, writing, and communication during with certification procedure
- (3) The benefits from certification of data repositories
- (4) Regional cooperation due to the certification of data repositories

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Presenters: FAKHRUDDIN, Bapon (Green Climate Fund); LI, Guoqing (AIRCAS); ROUCHON, Olivier (Centre National de la Recherche Scientifique); Prof. SELEMATSELA, Daisy (University of Witwatersrand)

Track Classification: SciDataCon2025 Specific Themes: Empowering the global data community for impact, equity, and inclusion