CODATA Strategy and Achievement
2015-2016

The CODATA mission is to improve the quality, reliability, management, accessibility and use of data of importance to all fields of research. The delivery of this mission perennially adapts to changes in science, and currently focuses on priorities that are essential to the coordinated international response to the digital revolution:

1. promoting open data principles, policies and practices;
2. advancing the frontiers of data science;
3. building capacity for Open Science by improving data skills and the functions of national science systems needed to support open data.

Promoting Open Data Principles, Policies and Practices

CODATA works to establish widely acceptable principles, record and broadcast effective policies and develop enabling practices for open data. Current activities in this domain include:

1.1 Production of the Science International Accord on *Open Data in a Big Data World*, which has been endorsed by over 100 major science bodies worldwide.

1.2 A comprehensive survey of current data policies in the CODATA Report on Current Best Practice for Research Data Management Policies.

1.3 The influential report 'Out of Cite, Out of Mind' and a leading role in developing principles of data citation, followed by an international series of workshops to support implementation.

1.4 Principles and implementation guidelines for minimizing legal obstacles to data reuse, from a joint CODATA-RDA Interest Group on Legal Interoperability.

1.5 Coordination and leadership of an OECD Global Science Forum project on Sustainable Business Models for Data Repositories, crucial to long-term availability of data.
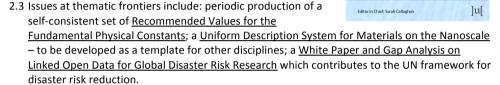
1.6 Collaborating in developing Open Science strategies in an African Open Science Platform, with possible analogous South American and Polish initiatives.

1.7 CODATA gives strong support to the development of open data sharing for the Group on Earth Observations (GEO).

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Advancing the Frontiers of Data Science

CODATA works to address frontier challenges through:

2.1 The Data Science Journal, re-launched on an up-to-date platform, with an innovative Open Access publisher.

2.2 Major meetings such as SciDataCon 2014 (New Delhi, 3-5 November 2014); SciDataCon 2016 (Denver, 11-13 September 2016), embedded in International Data Week, co-organised with WDS and RDA; an International Symposium on Big Data for Science (2014) jointly run by CODATA and the Chinese Academy of Science; and the CODATA China Scientific Data Conference – Scientific Research Big Data and Data Science (2015), which has now become an annual event organized by CODATA China.

2.3 Issues at thematic frontiers include: periodic production of a self-consistent set of Recommended Values for the Fundamental Physical Constants; a Uniform Description System for Materials on the Nanoscale – to be developed as a template for other disciplines; a White Paper and Gap Analysis on Linked Open Data for Global Disaster Risk Research which contributes to the UN framework for disaster risk reduction.

Building for Open Science

Exploiting the digital revolution and open data depends not only on researchers but at all levels of national systems in systemic capacity building. Relevant priorities are:

3.1 Training workshops for postgraduate and early-career researchers have recently been delivered in China, India, Kenya and Indonesia, and which will also be embedded in the African Open Science Platform.

3.2 The CODATA-RDA School of Research Data Science builds on the above series to create an international, scalable and sustainable series of 'Research Data Science' short courses that provide an introduction to a broader set of data-related skills that all researchers will need in the 21st century.

Delivering the Strategy

These strategic objectives are delivered through the work of CODATA's Officers, Executive Committee, Task Groups, Working Groups and National Members. CODATA has a relatively small subscription income from its national members, but is able to mobilise a large international community of experts. The impact of the latter is to magnify CODATA's influence and convening power such that we estimate a leverage of approximately 9.6:1 from its own investment. This benefits national members through engagement in a larger international enterprise and as a means of projecting national priorities onto the global stage.

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