

Scientific Collections International Conference: International Coordination of an Interdisciplinary Global Research Infrastructure

Brussels, 8-9 February 2010

Conference Report

[Scientific Collections International](#) (SciColl), an activity organized under the auspices of the OECD's Global Science Forum, held its first international conference at the Royal Belgian Institute of Natural Sciences in Brussels on 8-9 February 2010 (see agenda, Annex 1). The conference was supported by the European Science Foundation, the US National Science Foundation, the Belgian Science Policy Office. It was attended by **85** researchers and institutional officials from **35** countries (see list of participants, Annex 2)¹.

The conference goals were:

- 1. To introduce the concept of an international, interdisciplinary coordinating mechanism for scientific collections.** This conference was the first-ever interdisciplinary and international meeting to focus on object-based scientific collections. Participants represented the major research fields that depend on collections – biomedicine, biodiversity, earth and planetary sciences, anthropology, and archaeology – and they heartily endorsed the need for greater coordination and interoperability among their collections and with researchers.
- 2. To explore how the coordination of collections could promote more innovative interdisciplinary research.** Three speakers described how they are using collections in novel ways for research projects that cross traditional disciplinary lines. A representative of the Global Earth Observing Secretariat (GEO) described their efforts to integrate data from diverse fields and how scientific collections are facing many of the same challenges². However, it was acknowledged that there is a significant difference between data that GEO and the Global Biodiversity Information Facility (GBIF) connect and the objects and samples that SciColl connects, in that the latter can be re-examined by different technologies and approaches. Participants in the conference agreed that the proposed SciColl research program on environmental changes was highly relevant and timely, and highlighted the potential impact that scientific collections could have on major research issues. They also identified other topics, such as emerging animal, human and plant diseases that would benefit from the same multidisciplinary collections approach.
- 3. To discuss SciColl's program of work to help improve returns on investments in scientific collections.** In addition to promoting interdisciplinary research using scientific collections and thus enabling more and higher quality research to be produced, SciColl would promote improvements in overall management, user access, workforce training, curatorial practices, digitization processes, associated data management operations and interoperability, and other aspects of collection operations. Three presentations described efforts within and across disciplines to improve collection

¹ A list of participants, the conference agenda, and other relevant documents are posted at www.scicoll.org.

² Presentations from the conference are available at <http://www.scicoll.org/content/programme>.

management practices. Participants then discussed the proposed SciColl program of work in this area and there was broad agreement on the potential value of international and interdisciplinary coordination and sharing of good practices. A key recommendation was to describe collections in a range of discipline ontologies in order to maximise cross-discipline access to collections.

- 4. To discuss the proposed SciColl governance structure and costs of membership.** SciColl's steering committee envisions two types of paying and voting members: national governments, and institutions with collections (or consortia of institutions). Membership fees would be scaled according to the size of the member government or institution. International organizations, NGOs, associations of institutions, and other types of organizations could be non-voting members (perhaps paying a modest fee). SciColl would have a small Secretariat Office and an Executive Board that would conduct business on behalf of the Members in the General Assembly. Details concerning the composition of the Executive Board are still under discussion and would be affected by the relative numbers of national governments and institutions that decide to join SciColl.
- 5. To present and discuss the plan and timeline for SciColl's development.** SciColl's steering committee will be making its final presentation to the OECD Global Science Forum in April 2010, at which GSF will decide whether or not to endorse the concept. If it is approved, the steering committee will conduct a membership campaign to convince national governments and institutions to express their interest in joining SciColl. If there is sufficient commitment by potential members, they will be asked to sign a formal Memorandum of Understanding during 2010. An interim Executive Board would be formed. Bids to host the Secretariat Office will be sought and a search for an Executive Secretary will be conducted. Formal launch of SciColl would take place in early 2011.

Conclusions. Participants strongly supported scientific collections as essential parts of the international research infrastructure and they endorsed the idea that an international coordinating mechanism is needed. They provided many constructive suggestions on how SciColl could improve its proposed program of work to be more valuable to potential members. SciColl's goals and proposed activities align very well with those of a US inter-agency working group on scientific collections and with the European Science Foundation's 'Mapping of European Research Infrastructure Landscape' (MERIL) There was strong general interest in the proposed research program on environmental change and several additional research topics were suggested and discussed. SciColl's steering committee recorded these suggestions and will consider them as the initiative develops.

The participants ended the conference by expressing their enthusiasm for SciColl's overall approach and the positive impact that SciColl could have on interdisciplinary research and support for scientific collections. The conference organizers agreed to keep all participants informed as SciColl develops and to work through them whenever possible to provide information about joining SciColl to their national governments and institutions.

Postscript. SciColl's Steering Committee met for a half-day immediately after the conference. During the meeting the committee agreed on the steps leading to submission of documents to the April meeting of the OECD Global Science Forum at which plans to establish SciColl. The committee submitted the following SciColl documents to OECD on 30 March 2010:

- Progress report.
- Terms of Reference for establishing SciColl, including a strategic plan, governance plan, and proposed membership fee structure,
- Preliminary work program and budget, and
- Call for proposal to host the SciColl Secretariat Office.

The Global Science Forum discussed these documents at its meeting in Vienna on 8 April 2010 and invited the Steering Committee to implement the proposed plan. Delegates to the Global Science Forum were asked to transmit the documents to their respective governments and relevant institutions and to invite them to express their interest in SciColl membership. If a sufficient number of potential member governments and institutions have expressed interest by September 2010, the Steering Committee will seek formal commitments and will form an Interim Governing Board and issue a call for proposals to host the SciColl Secretariat Office.

ANNEX 1: Conference Agenda

Monday, 8 February 2010:

9:00 – 10:00 Session 1: Welcome and Overview; Session chair Patrick Grootaert

- **Welcome by host organization** Dr. Patrick Grootaert, Royal Belgian Institute of Natural Sciences, Brussels
- **The global landscape of scientific collections** Dr. Scott Miller, Smithsonian Institution, Washington, USA
- **SciColl: Overview of the concept** Dr. Richard Lane, Natural History Museum, London, UK
- **SciColl as part of the research infrastructure landscape** Dr. Marc Heppener, Director of Science and Strategy Development, European Science Foundation

10:00 – 10:30 Coffee break

10:30 – 12:30 Session 2: The role of collections in global research: What are limits of current information and what new information is needed for breakthroughs? Session chair David Schindel

- **Introduction of proposed SciColl research programme on Environmental Change** Dr. David Schindel, Consortium for the Barcode of Life, Smithsonian Institution, Washington, USA
- **Climate, Environment, and Ecosystem Change from Paleo Proxy Collections** Dr. David Anderson, World Data Center for Paleoclimatology, Colorado, USA
- **Hypothesis-driven research of changing disease patterns: The role of collections with three case studies** Dr. Gregory Glass, Johns Hopkins University, Baltimore, Maryland, USA
- **Importance of natural history collections in climate change research** Dr. Adrian Lister, The Natural History Museum, London, UK
- **Data Management in the Global Earth Observation System of Systems** Rob Koopman, Group on Earth Observations (GEO), Geneva, Switzerland
- Open discussion of interdisciplinary collections-based research

12:30 – 13:30 Lunch

13:30 – 14:30 Visit to research collections

14:30 – 15:30 Session 3: Breakout discussion groups. Each group will discuss:

- **Interdisciplinary solutions to research bottlenecks using collections**
- **Other opportunities for interdisciplinary research based on collections**
- **SciColl's proposed research programme on global change**

Discussion group A: Moderators Richard Lane and Gregory Glass

Discussion group B: Moderators David Schindel and David Anderson

Discussion group C: Moderators Christoph Häuser and Michel Guiraud

15:30 – 16:00 Coffee break

16:00 – 17:30 Session 4: Presentation and discussion of breakout discussion groups;
Session chair Richard Lane

- **Rapporteur reports on obstacles and opportunities**
- **Moderated discussion to identify priorities**

17:30 Adjourn

19:00 Dinner at the Royal Belgian Institute of Natural Sciences

Tuesday, 9 February 2010:

9:00 Session 5: Improving scientific collections; Session chair Leo Kriegsman

Presentations of four initiatives to improve collections and their management:

- **SciColl's proposed programme of work to improve collection management** Dr. Leo Kriegsman, Naturalis Museum, Leiden, The Netherlands
- **Global Biological Resource Centre Network (GBRCN): Aiming to improve the management and networking of collections of laboratory-held living microorganisms and cultured cells** Dr. David Smith, GBRCN Demonstration Project General Manager
- **Korean National Research Resources Center** Prof. Yeonhee Lee, Director General KNRRC, Korea
- **SYNTHESYS Networking activities: Assessing and sharing best practice in European collections to ensure their future survival and value as an infrastructure** Dr. Rob Huxley, Natural History Museum, London, UK

10:00 – 10:30 Coffee break

10:30 – 12:30 Session 6: Plenary discussion; Moderator Christoph Häuser

- Proposed SciColl Programme of Work
- Identification of priorities
- SciColl membership
- Next steps in the development of SciColl

12:30 Conference adjourns and lunch

ANNEX 2: Conference Participants

Name	Institutional Affiliation	Country	Email Address
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