

## Scientific Collections International

### Accompanying document 2: Work Programme and budget for 2011-2013

**Background.** This document articulates a draft work programme and budget for Scientific Collections International (SciColl; see [www.scicoll.org](http://www.scicoll.org)) developed by a Steering Committee over the period 2007-2010. The process of developing the work programme included two international workshops, two meetings of the Steering Committee, and one international conference with 90 participants from 36 countries, held at the Royal Belgian Institute of Natural Sciences in February 2010. If the proposal to establish SciColl as an international coordinating mechanism for scientific collections at the April 2010 meeting of the OECD's Global Science Forum is accepted, an Interim Executive Board will be formed from contributing governments and organisations. This Board, in consultation with SciColl's members, will refine this draft work programme into an operational three-year work programme.

**SciColl Mission.** The Steering Committee has established the following mission for SciColl:

- *Help scientific collections and their host institutions increase their effectiveness and the return on investments they realise from the long-term management of collections and the training they provide to the professional workforce responsible for them, and*
- *Catalyse ground-breaking interdisciplinary research that relies on access to scientific collections and their associated information.*

**The Draft Work Programme.** The Steering Committee proposes four main deliverables for SciColl achieved by means of a series of Work Packages (WPs).

In general, networking activities will be supported from SciColl's 'core' budget provided by member contributions. Some WPs will require additional funds and in some cases SciColl's Secretariat will prepare and submit some grant proposals. In other cases, the Secretariat will promote and facilitate the development and submission of grant proposals by the SciColl Member that is leading the WP that will use the funding.

#### **Deliverable 1. Create a community network of scientific collections.**

As defined by SciColl, "science collections" are objects-based collections of specimens and their associated information that are preserved long-term in repositories for future research and other uses. These collections have developed in a 'stove-piped' manner. SciColl will work to overcome this isolation with the goal of creating an integrated global community of scientific collections. SciColl will concentrate initially on the following disciplines but will remain open to adding others in the future:

- Anthropology and ethnology,
- Archaeology,
- Biology,
- Biomedical sciences,
- Earth and planetary sciences,
- Applied fields such as agriculture, engineering, and environmental protection.

#### ***WP 1. Building the community***

- Initiate communications with and outreach to scientific collections, providing information on SciColl, its mission, work programme, and potential impact and benefits;
- Raise awareness of the use and impact of scientific collections by developing and disseminating outreach material on SciColl's mission and work programme using print and electronic media;

- Establish a SciColl website and Facebook-like online Community Network to facilitate communication among scientific collections and related people and organizations; and
- Invite their involvement in SciColl's work programme.

## **Deliverable 2. Improving the quality of collections care and management**

Across the wide range of scientific collections there are many areas of excellence in the management of collections and yet these are often unknown to other specialists. To prevent the 'reinvention of the wheel' there is real value to be gained in sharing and developing best practice for cost effective collections management, including widening access. There is a growing need for capacity building and training in collection care/management, especially in developing countries and those initiating new collections.

This deliverable will be met by two working groups:

**WP2. Improving collection management.** Scientific collections in all disciplines share an interest in improving their organizational performance. SciColl will create and support one or more interdisciplinary WGs that bring together collection professionals. The WGs will:

1. Define the aspects of collection management that are most important to them, potentially including but not limited to:
  - Specimen curation and preservation;
  - Documentation of provenance and ownership;
  - Performance measurement;
  - Budgeting;
  - Workforce training; and
  - Systems of self-assessment and organizational improvement;
2. Collect examples of good practices, policies and procedures and make them available through SciColl's website and online Community Network;
3. Identify areas of collection management for which good practices need to be developed and tested; and
4. Facilitate pilot projects to test potential good practices in these management areas.

**WP3. Improving digital access to scientific collections.**

- Create general "use cases" that
  - articulate the most important uses of collections and
  - capture the data structures needed to serve these uses;
- Compile information on successful programmes of digitization and make it available through SciColl's website and online Community Network. This information will be useful to institutions planning their own digitization projects by providing tested approaches to challenges including but not limited to:
  - Data standards;
  - Protocols for interconnectivity and web services;
  - User interfaces;
  - Defining priorities for digitization projects;
  - Challenges related to digitizing label data and specimen images;
  - Projecting budget and workforce needs;
  - Selecting database management systems;
  - Using an effective mixture of professionals, students, and volunteers;
  - Maximizing exposure and use of digitized collections; and
  - Monitoring progress and impact.

**Deliverable 3. Improving access to and usability of collections**

SciColl will develop a “clearing house” mechanism to all information on collections, by which researchers will find materials relevant to their research from collections across all disciplines. Such a mechanism will incorporate finding tools using language and ontologies from different disciplines so that collections are described in terms of the research needs.

***WP 4. Widening access:***

1. Create an inventory of the major repositories, associations of repositories, professional societies, scientific unions and other organizations involved in scientific collections
2. Develop a “yellow pages” approach to facilitate the presentation of research collections to the wider community (i.e. providing raw data with some form of editing and harmonisation)  
SciColl will focus on a value-added benefit to collections and build on recent work on “collection level descriptions”
3. Develop a wide range of ontologies reflecting potential uses of the collections

**Deliverable 4. Catalyzing new interdisciplinary research**

The second component of SciColl’s work program will catalyze new interdisciplinary research programs and projects. SciColl will convene meetings and online discussions of research communities that rely on scientific collections in different disciplines and the funding agencies that support them. The goal will be to identify high-priority research topics that require access to scientific collections and coordination across disciplines. Research funding agencies that are members of SciColl will have first-hand involvement in these discussions while leverage their investment through international partnerships brokered by SciColl.

This deliverable will be progressed through two working groups:

***WP5. Explore, identify, and promote new research programmes and approaches that rely on or could be greatly enhanced by scientific collections in different disciplines.***

Scientific collections and their systems of knowledge representation and management have developed within their respective disciplines. The ability to use collections and their associated data across disciplinary boundaries has suffered as a result. SciColl workshops and symposia will focus on a series of research themes and will bring together an interdisciplinary cohort of researchers, collection professionals, and representatives of research funding agencies and foundations. Examples of potential research programmes that rely on interdisciplinary access to collections include but are not limited to:

- Evidence for and impact of global climate change in specific ecosystems;
- Patterns of human migration through pre-history and history;
- Integrated analyses of changes in biodiversity;
- Ecosystem analysis of montane ecosystems;
- Evidence of human trade and cultural interactions in archeological provenance
- Forensic science
- Contemporary emerging diseases and infectious diseases in history

The goals of these meetings will be to:

- Identify an area of novel and exciting interdisciplinary research that will be greatly enhanced by on access to scientific collections;
- Develop a draft research programme for consideration by potential funding agencies, including:
  - A description of the proposed research and its anticipated impact on science and society;
  - A research agenda with priorities; and

- A list of the kinds of collections and associated data that will be needed to pursue the research programme.

***WP6. Create and support a network of institutions, collections, researchers, and funding sources to promote and coordinate two or three ‘pioneer’ research programmes.*** This WP will focus on one or two research areas selected by SciColl’s Executive Board and General Assembly from among candidate areas proposed by WP4. The SciColl Conference held in Brussels in February 2010 discussed one such possible research programme: Environmental change since the Dawn of Humanity: Reciprocal Impacts between Society and the Environment. Other potential topics are ocean acidification and emerging diseases (human, animal and plant diseases).

### Proposed Budget

The income to SciColl is twofold: member subscriptions from governments and organizations and project oriented funding. The proposed membership fees are presented in the draft Terms of Reference presented to the 22<sup>nd</sup> meeting of the GSF as an annexe and reproduced here for completeness.

The proposed budget is presented for the first four years showing how the expenditure increases as staff are recruited and anticipated activities are launched. The costs in year four are expected to be average costs in the long term. It is anticipated that the 'programme' costs will be matched by externally funded projects. Costs are estimated in Euros.

**Table 1 proposed budget for SciColl**

	Year 1	Year 2	Year 3	Year 4
<b>Secretariat costs</b>				
Executive Director	120,000	120,000	120,000	120,000
PA, secretary	40,000	40,000	40,000	40,000
Deputy Executive		70,000	70,000	70,000
0.5 ITC specialist	30,000	30,000	30,000	30,000
Communications/PR officer	25,000	50,000	50,000	50,000
Travel and meeting expenses for Exec Director and staff	18,000	36,000	36,000	36,000
Office furniture and copiers	8,000			2,000
Computer hardware and software	8,000			2,000
Consumables and other recurrent costs	10,000	10,000	10,000	10,000
Auditing costs	4,000	4,000	4,000	4,000
Communications (PR/marketing) costs	16,000	16,000	16,000	16,000
Staff training		6,000	6,000	6,000
IT and ISP costs	10,000	10,000	10,000	10,000
<b>Total secretariat costs</b>	<b>289,000</b>	<b>392,000</b>	<b>392,000</b>	<b>396,000</b>
<b>Committees and other costs</b>				
Costs of Exec. Board Chair	10,000	10,000	10,000	10,000
Scientific Advisory Board meetings	20,000	20,000	20,000	20,000
General Assembly costs -	50,000	50,000	50,000	50,000
total committee costs	80,000	80,000	80,000	80,000
<b>Secretariat &amp; committee costs</b>	<b>449,000</b>	<b>552,000</b>	<b>552,000</b>	<b>556,000</b>

<b>Programme of work</b>				
Programme officer (to manage the scientific impact of collections stream WP4 & WP5)	35,000	70,000	70,000	70,000
Programme officer (to manage the collections management stream WP1 – WP3)	0	35,000	70,000	70,000
Programme of work costs, including administration of finance: matching grant funding	0	50,000	100,000	100,000
Convening/supporting ad hoc activities and task groups	25,000	50,000	50,000	50,000
<b>Total programme of work costs</b>	<b>60,000</b>	<b>205,000</b>	<b>290,000</b>	<b>290,000</b>
<b>Total costs (Euros)</b>	<b>509,000</b>	<b>757,000</b>	<b>842,000</b>	<b>846,000</b>

**Annexe****Financial Contributions by Members****a) Full Members**

Full Member, national government contributions. For single national representation, an annual financial contribution will be requested for the first 3 years of SciColl, according to Gross Domestic Expenditure on Research and Development (GERD), divided into four proposed categories detailed below. It is anticipated that national representative contributions will be significantly reduced after 3 years by the General Assembly.

Category	GERD (latest available figs)	Countries (examples)	Expected contribution (€ p.a.)
1	> \$50 billion	USA, Japan, Germany, China	90 k€
2	\$18-50 billion	Canada, France, Italy, Korea, Russia, UK	40 k€
3	\$7.5-18 billion	Australia, Austria, Israel, Netherlands, Spain, Sweden, Switzerland	20 k€
4	< \$7.5 billion	Belgium, Finland, Singapore, South Africa, Portugal, Norway, Poland	10 k€

Full Member, institutional contributions. The expected annual financial contributions are determined by institutional size (operational budget including staff costs for collections), according to the four categories as indicated below:

Category	Operational budget, including staff [US\$]	Staff number on collections [additional indicator]	Institutions (examples)	Expected Contribution € (p.a.)
Large -1	>\$5 million	>150	NHM, SI, MNHN, IODP	16,000
Medium – 2	\$1 million - \$5 million	50-150	MfN Berlin, Naturalis, NICL	8,000
Medium-small - 3	\$200k - \$1 million	10-50	INBIO, NMK, University of New Mexico	4,000
Small - 4	<\$200k	<10	Linnean Society London,	2,000

For consortia, the annual financial contribution will be determined in agreement with the Executive Board.

Institutions from developing countries (based on the UN definition) are entitled to a reduction of 50% from the proposed scale.

#### b) Associate Members

For Associate Members, the nominal annual financial contribution will be 500,- Euro.