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C3.5.6 Agreement to Collaborate on International collaboration on training and capacity building, e-tools, and exchange of expertise and information

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PP	Restricted to other programme participants (including the Commission Services)	
RE	Restricted to a group specified by the consortium (including the Commission Services)	
CO	Confidential, only for members of the consortium (including the Commission Services)	

**International collaboration on training and capacity
building, e-tools, and exchange of expertise and
information**

AGREEMENT to COLLABORATE

**BETWEEN ABRS, SANBI AND EDIT WP3
(represented by NHN/Naturalis -NCB), WP6
(represented by NHML), WP8 (represented by
RBINS)**

Date November 2, 2009

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Paragraph 1 PURPOSE

- 1.1. The signers of this Agreement to Collaborate (AtC) agree that a co-ordinated international effort is needed to establish a basis for collaboration among the Partners in areas of taxonomic and biodiversity research, natural history collections maintenance, improvement and expansion, and capacity building, particularly with regard to:
 - 1.1.1. Botanical and Zoological Liaison Officers Exchange; virtual laboratories and remote microscopy
 - 1.1.2. Analysis of mega-datasets on southern African flora
 - 1.1.3. Training and online learning
 - 1.1.4. Fieldwork and Biological Survey
 - 1.1.5. Developing scratchpads as a systematic tool
 - 1.1.6. Publication issues, digitisation and electronic dissemination of taxonomic products
 - 1.1.7. Role of taxonomy and collections in global change research and biosecurity
- 1.2. The Agreement to Collaborate initiated by the EDIT partners, ABRS and SANBI is intended to encourage and gradually improve collaboration and integration of the signatory institutions in the various fields mentioned above. It provides evidence of concrete and specific development in international collaboration which build on the general commitment set out in the EDIT contract and Consortium Agreement.

Paragraph 2 GENERAL DEFINITIONS

2.1 NHN/NATURALIS – from January 1, 2010: NEDERLANDS CENTRUM VOOR BIODIVERSITEIT (Hereinafter referred to as “NCB”): A legal entity that acceded to the EDIT Contract on behalf of WP3.

2.2 THE NATURAL HISTORY MUSEUM OF LONDON (Hereinafter referred to as “NHML”): A legal entity that acceded to the EDIT Contract on behalf of WP6.

2.3 ROYAL BELGIAN INSTITUTE OF NATURAL SCIENCES (Hereinafter referred to as “RBINS”): A legal entity that acceded to the EDIT Contract on behalf of WP8.

2.4 SOUTH AFRICAN NATIONAL BIODIVERSITY INSTITUTE (Hereinafter referred to as “SANBI”): A Schedule 3A Public Entity of the Government of South Africa and a juristic person in terms of the National Environmental Management: Biodiversity Act # 10 of 2004.

2.5 AUSTRALIAN BIOLOGICAL RESOURCE STUDY (Hereinafter referred to as “ABRS”): A section within the Department of the Environment, Water, Heritage and the Arts responsible for national policy and grants funding of taxonomy. ABRS provides a central information dissemination to the collections councils and other peak bodies of taxonomic institutions in Australia

2.6 EDIT contract: The legally binding document signed by the Commission contractor of the European Communities, Research Directorate-General, and the (CDC) acting as coordinator of the EDIT consortium. To this contract legal entities (the EDIT partners) acceded as contractors assuming the rights and obligations established by the contract. The EDIT Contract (No 018340 – GOCE) is in the Sixth Framework Programme Sub-priority 1.1.6.3 “Global Change and ecosystems”.

2.7 EDIT Consortium Agreement: The formal agreement that the EDIT partners concluded amongst themselves for the implementation of the EDIT contract.

2.8 Partners: The signatories to this agreement, being EDIT, SANBI and ABRS.

2.9. Appendices: Concrete collaboration topics, actions and work plan.

Paragraph 3 GENERAL OBJECTIVES

The objectives of this Agreement to Collaborate are:

- To work towards a more unified approach to taxonomy across the institutions represented by the Partners through identifying global commonalities in workflow and services
- To contribute to the transformation of taxonomy into an integrated science
- To strengthen the scientific, technological and information capacities needed for Europe, Australia and South Africa
- To promote a standard of excellence in taxonomy products to fulfil the needs of global biodiversity science, industry, government and conservation end users
- To work towards biodiversity information systems which are sustainable, user-friendly, inter-operative, and based on sound taxonomy and systematics

Paragraph 4 AGREEMENT

4.1 The Partners recognise the importance of long-term institutional collaboration and integration in order to achieve sustainability of taxonomic activities in EDIT, SANBI and in Australia. The Partners also recognise the importance of this integration in supporting EDIT activities during the last two years of its existence and beyond.

4.2 The Partners agree to work co-operatively to globalise taxonomy and the opportunities for collaboration by:

4.2.1 Enhancing international staff exchange by temporary work in foreign collections, thereby exposing scientists to different collections and new ideas, sharing expertise, and accessing important global collections

4.2.2 Strengthening global capacity by twinning of research staff with taxonomic and data analysis expertise

4.2.3 Globalising “All Taxa Biodiversity Inventories + Monitoring” (ATBI+M) sites to scientists from EDIT, SANBI and Australia, skilling the next generation of young taxonomists; and expanding the teaching pool and taxonomic workforce for the benefit of all three regions and developing countries

4.2.4 Developing common manuals on collecting methodologies, enabling better science and the global adoption of results through the adoption of common methodologies

4.2.5 Providing the environment for early career researchers to adopt cutting-edge global taxonomy tools, including scratchpad technologies, and to provide training to use and maintain such tools and systems

4.2.6 Developing technologies and benchmarks to speed up description of species and on line publishing

4.2.7 Developing a strategic plan for seeking funding for the Partners through action on globally relevant issues, notably climate change and biosecurity

4.3 Concrete action and work plan will be made explicit in seven appendices attached to this AtC and signed by the individual participating institutions.

Paragraph 5 BOARD of DIRECTORS OF ALL PARTNERS (BoDP)

The directors or their designates of all Partners will meet in regular board meetings and form the forum in which all matters related to this AtC will be discussed. All the Partners will have equal voting rights.

The primary mechanism of the collaboration will be communication between the Partners to determine strategic needs, to identify institutions or new Partners working to fulfil those needs and to provide a mechanism to put groups with common interests across the three Partners in contact with one another.

The chair of the BoDP will be elected from within the Partner institutions by mutual agreement and will be rotated on an annual basis between the Partners, 12 months from the date of appointment.

The directors of the individual institutions are invited to participate in the discussions.

Paragraph 6 AMENDMENTS AND CHANGES

6.1 Paragraph 4 of this AtC may be amended to support textual improvements, updating of nomenclature or any other minor changes which do not alter the original intention of the paragraph. More substantial changes should be effected by termination of this AtC and its substitution with another.

6.2 Notwithstanding the focus of this Agreement, if opportunities are identified for collaboration in new areas of common interest, these will be explored.

6.3 An amendment to the text of the AtC is proposed to the BoDP by a Partner Institution. The proposal is circulated among the BoDP. Taking into account comments received, the Chair of the BoDP issues a recommendation within 6 weeks of the original proposal. The amendment is coming into effect by unanimous vote of the Partners.

Paragraph 7 ASSOCIATION AND DISASSOCIATION OF PARTNERS

7.1 Association of Partners

Association with this AtC is open to any institution or organisation that may assist EDIT, ABRS and SANBI to achieve its goals outlined in this AtC. Such association becomes effective upon signature of one or more of the appendices.

7.2 Disassociation of Partners

Any Partner may disassociate itself from this AtC by advising the chair of the BoDP and other Partners in writing of its intention to do so and of the effective date.

Paragraph 8 INTELLECTUAL PROPERTY

This AtC adheres to the provisions with respect to Intellectual Property Rights and meets the definitions used by EDIT and the South African and Australian Governments.

Paragraph 9 DURATION

This AtC covers the period 1st November 2009 onward (this means, the intention to continue beyond termination of the EDIT contract).

For EDIT

Museum National d'Histoire Naturelle
CP 43
57 rue Cuvier
75231 Paris cedex 05, France

Signed _____ month, day, 2009.
Prof. Simon Tillier, Project Leader EDIT

For ABRS

Signed _____ month, day, 2009.
Name and function

For SANBI

2 Cussonia Avenue
Brummeria
Pretoria
0002 South Africa

Signed _____ month, day, 2009.
Dr Tanya Abrahamse, Chief Executive Officer

Appendix 1. Botanical and Zoological Liaison Officers Exchange; virtual laboratories and remote microscopy

4.2.1 Enhancing international exchange by temporary work in foreign collections, thereby exposing scientists to different collections and new ideas, sharing expertise, and accessing important global collections

Action proposed

- Support exchanges between Australian, EDIT and South African collections based information systems
- Support exchanges of staff
- Use virtual laboratories and remote microscopy to access important collections (e.g., holotypes) that are not available in local institutions abroad

Products envisaged

- Enhance capacity building of early career researchers, access to collections by researchers and, potentially collection digitisation

Financial input

- Costs for foreign staff exchange (on a temporary basis, e.g., months) will be paid by the host institution, or negotiated if that institution is unable to carry the full costs.

Coordinating institution

- ABRS

For ABRS

Signed _____ month, day, 2009.

Partner institutions

For NHN/Naturalis-NCB

Leiden University P.O. Box 9514,
NL-2300 RA Leiden

Signed _____ month, day, 2009.
Prof. dr. E.F. Smets, Scientific Director/Program leader

For X institution

Signed _____ month, day, 2009.

For Y institution

Signed _____ month, day, 2009.

Appendix 2. Analysis of mega-datasets on southern African flora

4.2.2 Strengthening global capacity by twinning of research staff with taxonomic and data analysis expertise

Action proposed

- Collaborate with experts on e.g., data mining and the modelling of spatial information using data bases and sets on the flora of S. Africa
- Open postdoctoral and staff-twinning programmes for early career European scientists to work with an experienced and/or early career South African/Australian counterpart

Products envisaged

- Enhance capacity building through the twinning of research staff with taxonomic and data analysis expertise

Financial input

Funding would have to be sourced to accommodate both experts in South Africa, and collaborating partners.

- Agreement to foster South Africa - COST interactions (<http://www.esastap.org.za/esastap/cost/index.php>; <http://www.esastap.org.za/esastap/pdfs/southafricacost.pdf>).

COST avails travel and subsistence expenses funding for European researchers to undertake short-term (five days to three months) scientific missions to South Africa (€3,000 per visit), whilst ESASTAP avails funding to South African researchers undertaking such missions to Europe (R50 000 per visit).

Coordinating institution

- SANBI

For SANBI

2 Cussonia Avenue
Brummeria
Pretoria
0002 South Africa

Signed _____ month, day, 2009.
Dr Tanya Abrahamse, Chief Executive Officer

Partner institutions

For NHN/Naturalis-NCB

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Prof. dr. E.F. Smets, Scientific Director/Program leader

For X institution

Signed _____ month, day, 2009.

For Y institution

Signed _____ month, day, 2009.

Appendix 3. Training and online learning

4.2.3 Globalising “All Taxa Biodiversity Inventories + Monitoring” (ATBI+M) sites to scientists from EDIT, SANBI and Australia, skilling the next generation of young taxonomists; and expanding the teaching pool and taxonomic workforce for the benefit of all three regions and developing countries

Action proposed

- Offer grants to South African and Australian MSc and PhD students to participate in the 3rd DEST Summer School in 2010
- Consult with South African and Australian collection facilities as to their interest in providing trainers for the DEST Summer Schools
- Jointly develop the EDIT Summer Schools: RBINS and other BE-TAF partners (RMCA, NBGB), ABRS, SANBI, together with other institutions that might be interested
- Facilitate obtaining permits for the participants to bring collected materials back to their home institutions for further work
- Jointly develop a future Expert-in-training programme
- Find additional funding to continue with the DEST Summer Schools and DEST Expert-in-training concept
- Define a curriculum for the DEST Modern taxonomy inter-institutional programme (EDIT will first consolidate the European curriculum before expanding it in a later stage. For this, discussions with the training providers on integration possibilities, conditions and accreditation need to be started)
- Initiate information exchange on training providers between EDIT, South Africa and Australia for the Modern Taxonomy course programme (e.g., modules in Europe could complement the ones in Australia and vice versa. In Australia, a virtual entomology course is already being offered: <http://www.entomology.edu.au/>)
- Develop joint on-line courses in systematics and taxonomy
- Facilitate resource sharing, collaborative and integrated teaching and learning

Products envisaged

- Open EDIT “All Taxa Biodiversity Inventories + Monitoring” (ATBI+M) sites to scientists from ABRS and SANBI in selected protected areas on similar conditions as for Europe-based participants
- Participation of ABRS and SANBI in the 3rd EDIT Summer School (in 2010)
- Continue with the concept of the DEST Summer Schools and the Expert-in-training programme beyond EDIT, under the lead of WP8 (RBINS)
- Develop an Expert-in-training programme in Australia for young taxonomists with scope for reciprocal arrangements with the EDIT programme
- Make the DEST Modern Taxonomy course programme operational

Financial input

DEST Summer Schools

Matched finances from EDIT WP8 and ABRS for teachers and students (travel, subsistence and per diem for teachers) to participate in the DEST Summer School.

Currently, EDIT awards 20 grants for MSc students and PhD students from EDIT institutions or European universities/institutes. Additionally, it could offer a total of 4 grants for ABRS and SANBI. ABRS could offer 20.000 € per year.

Additional funding should be sourced to award student grants beyond EDIT. Student participation conditions could be different (subscription fee will be asked for; students coming from developing countries will pay less subscription).

DEST Expert-in-training programme

Grants for the DEST Expert-in-training programme 2009-2010 have been awarded and there will be no next call during EDIT's lifetime. For the future joint Expert-in-training programme it would be necessary for matching funding to be located by the post-EDIT network of institutions. Student participation conditions could be different (subscription fees will be asked for).

There is potentially ABRS funding that could be co-contributed with the post-EDIT network. The ABRS could also help investigating third party funding sources jointly with EDIT and SANBI.

DEST Modern Taxonomy course programme

During EDIT's lifetime, some of the e-learning components will be available (taxonomic resources as e.g., manuals, links to databases, library, software, etc.), but a 'Virtual DEST Campus' (on-line courses cf. Open University system) could be feasible beyond EDIT with matching funding.

Coordinating institution

- RBINS

For RBINS

Rue Vautierstraat 29,
B-1000 Brussels

Signed _____ month, day, 2009.
Camille Pisani, Director

Partner institutions

For NHN/Naturalis-NCB

Leiden University P.O. Box 9514,
NL-2300 RA Leiden

Signed _____ month, day, 2009.
Prof. dr. E.F. Smets, Scientific Director/Program leader

For X institution

Signed _____ month, day, 2009.

For Y institution

Signed _____ month, day, 2009.

Appendix 4. Fieldwork and Biological Survey

4.2.4 Developing common manuals on collecting methodologies, enabling better science and the global adoption of results through the adoption of common methodologies

Action proposed

- Participate in field expeditions
- Participate in virtual expeditions, by preparing specimens for identification through a Scratchpad
- Develop a common Manual on Methods of Collecting with ABRS and SANBI that specifies methods of collecting (where and how to collect)
- Create programs that enable Australian, South African and European and regional early career researchers to collaborate, share expertise, network and recognise regional biotas

Products envisaged

- Improve the EDIT fieldwork manual by collaborating in the development of keys and other identification methods
- Manual on Methods of Collecting with ABRS and SANBI
- Enhance capacity building through the twinning of research staff with taxonomic and data analysis expertise

Financial input

There is a possibility of a grant funding in IT but there would be access and trust issues to be approached with an AtC. The Marie Curie scheme could be exploited to bring SA participants for sabbatical periods to Europe. Australia could provide some co-funding as the basis for developing a joint approach to taxonomic research funding that enables collaboration between the Partners.

Coordinating institution

- NHML

For NHML

Signed _____ month, day, 2009.
Name and function

Partner institutions:

For NHN/Naturalis-NCB
Leiden University P.O. Box 9514,
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Signed _____ month, day, 2009.
Prof. dr. E.F. Smets, Scientific Director/Program leader

For X institution

Signed _____ month, day, 2009.

For Y institution

Signed _____ month, day, 2009.

Appendix 5. Developing scratchpads as a systematic tool

4.2.5 Providing the environment for early career researchers to adopt cutting-edge global taxonomy tools, including scratchpad technologies, and to provide training to use and maintain such tools and systems

Action proposed

- Identify commonalities in workflow and services
- Organise seminars or workshops by host institutions, local consortia or at other scientific meetings in order to inform users about available workflows and tools, and raise understanding of the strategic importance of particular projects
- Organise tutored courses at local institutions or associated with international meetings (e.g., TDWG workshop in Montpellier, November 2009) for technical experts to receive training on how to administer the system
- Investigate whether Scratchpads may offer a partial solution to some elements of the functionality offered by Bio-Link and other systems
- Investigate the extent to which the functionality of on-link names catalogues such as the Australian Plant Name Index and Australian Faunal Directory could be enhanced by Scratchpads
- Explore tools in a wiki environment

Products envisaged

- Attract early career researchers to do taxonomic research using scratchpad technology
- Offer environmental services that are grounded in biodiversity data generation and associated biodiversity informatics
- Speed up taxonomic descriptions using scratchpad technology

Financial input

Organise a public awareness workshop on the use of scratchpads as a systematic tool focusing on early career researchers

Host institutions will search for funds to cover the costs. After EDIT finishes, workshops could jointly be organized later on with the concept: one Australia/S. Africa/Europe training event, held at the three different locations reducing in this way the costs of participation. Funding for short modules could be obtained from the Monnet Foundation.

Facilitate the interactive development of systematic products

Work that is core to the Partners' respective organisations will be shared and will therefore be funded from Partner institution's budgets.

The resulting products will be open source, free to the user and platform independent. Data created within EDIT remain property and responsibility of the data creator; this means that SANBI and ABRS will take ownership of data together with maintenance responsibility.

Organise a workshop on how to administer the system

Host institutions will search for funds to cover the costs. Within the present scope of EDIT, local training courses will be limited by the availability of the core development team (who can offer the training). A mechanism of training trainers needs to be defined.

Coordinating institution

- NHML

For NHML

Signed _____ month, day, 2009.
Name and function

Partner institutions**For NHN/Naturalis-NCB**

Leiden University P.O. Box 9514,
NL-2300 RA Leiden

Signed _____ month, day, 2009.
Prof. dr. E.F. Smets, Scientific Director/Program leader

For X institution

Signed _____ month, day, 2009.

For Y institution

Signed _____ month, day, 2009.

Appendix 6. Publication issues, digitisation and electronic dissemination of taxonomic products

4.2.6 Developing technologies and benchmarks to speed up description of species and on line publishing

Action proposed

- Discuss policy among relevant organisations in order to be able to rapidly, validly and effectively create new names electronically, on web pages and in limited hardcopy
- Promote the use of scratchpads with international partners, so that taxonomists working on similar research projects and/or same taxa can join forces and work together more efficiently and help to improve these tools
- Share information about services to be developed and offered, to provide user feedback and testing to the developers, specifically to avoid duplication of effort
- Standardise methods that allow certain functions to be delivered as web services (e.g., analytical and presentation tools), and therefore platform independent
- Offer load-balancing and mirroring
- Negotiate copies of South African or Australian monographs in libraries in the BHL or BHL-Europe consortium
- Enhance mechanisms to mark-up content and carry out data extraction
- Enhance methods to identify semantic types (personal names, taxa, locations) and their orthographic variants within a text
- Implement use of remote microscopy, where scans are not sufficient, to avoid moving physical books away from collections

Products envisaged

- Offer services as web functions through migration of computing from the desk top to cloud computing (virtualisation) with software as a service (SaaS)
- Open access to facilities such as key generation and phylogenetic analysis to groups, for example amateur taxonomists or occasional users, whose requirements are infrequent and who cannot justify the financial investment in proprietary software
- Offer rapid direct publication mechanisms, from community web sites to refereed journals

Financial input

Species descriptions and easy access to taxonomic information

Work that is core to the Partners' respective organisations will be shared and will therefore be funded from Partner institution's budgets.

Develop innovative applications based on systematic knowledge and taxonomic data in IT environment

Existing funding could be used to improve existing products and to develop new, innovative ones. By using a common architecture, Partners could create opportunities to share software.

Collaboration on digitizing taxonomic literature jointly with BHL

EDIT does not have funding for digitizing taxonomic literature. EDIT is very keen to work with ABRS and involve other European partners. Australia could provide some co-funding as the

basis for developing a joint approach to taxonomic research funding that enables collaboration between the partners.

Coordinating institutions

- NHML & ABRS

For NHML

Signed _____ month, day, 2009.
Name and function

For ABRS

Signed _____ month, day, 2009.
Name and function

Partner institutions**For NHN/Naturalis-NCB**

Leiden University P.O. Box 9514,
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Prof. dr. E.F. Smets, Scientific Director/Program leader

For X institution

Signed _____ month, day, 2009.

For Y institution

Signed _____ month, day, 2009.

Appendix 7. Role of taxonomy and collections in global change research and biosecurity

4.2.7 Developing a strategic plan for seeking funding for the Partners through action on globally relevant issues, notably climate change and biosecurity

Action proposed

- Organise joint residential expert workshops in South Africa, Europe or Australia on the role of taxonomy and natural history collections in biosecurity and climate change research
- Find funding for jointly agreed, priority activities
- Cooperation in grant application for future common work (e.g., Cooperation with industrialised countries (ICI ECP), Jean Monnet, Edulink fosters, FP7 People Marie Curie World Fellowships, UNESCO)

Products envisaged

- Expand the in-house taxonomic expertise that can deal with biosecurity threats
- Raise public awareness and obtain support from governments for systematics and biodiversity issues, such as climate change

Financial input

- ABRS and SANBI would like to jointly support and share in the organisation of joint residential workshops. If several institutions participate in the organisation of such workshops, government attention and, hence, funding could be more successful.

Coordinating institutions

- ABRS & SANBI

For ABRS

Signed _____ month, day, 2009.
Name and function

For SANBI

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Dr Tanya Abrahamse, Chief Executive Officer

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For X institution

Signed _____ month, day, 2009.

For Y institution

Signed _____ month, day, 2009.

