

SYNTHESYS

Synthesis of systematic resources

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SYNTHESYS 3 / Work Package 2 (Network Activity 2) / Objective 2 / Task 2.4

Report on Deliverable 2.5: New physical collections policy Task 2.4 / Establish network of DNA and tissue banks

Task Leader: Ole Seberg (SNM)

The initial outlined task to develop a network of DNA and tissue banks has been superseded by developments elsewhere: the Global Genome Biodiversity Network (www.ggbn.org) was set up in 2011 and has progressed so far that it made the original task superfluous.

The defined goals and objectives (including milestones and deliverables) of WP 2.4 (and WP 1.3 p.p.) and of the GGBN are almost identical; e.g. the German led DNA Bank Network is integrated into GGBN and the ABS (Access and Benefit Sharing) Best Practices initiated by the ratification of the Nagoya-Protocol are perfectly aligned with that of CETAF, of which the SYNTHESYS3 partners are all members. At the Berlin meeting in 2014, six SYNTHESYS3 members (five of which are included in WP 2) were already deeply involved in GGBN. The leader of Task 2.4, Ole Seberg, was at that time Interim Chair of the Executive Committee as well as member of the Policies and Practices and Gabi Dröge from the Botanical Garden and Museum Berlin-Dahlem was Technical Manager and member of the Data Standards and Data Access as well as Communications and Outreach tasks. Additionally, several SYNTHESYS3 members were either in the process of or considering joining the GGBN. It was agreed, that SYNTHESYS3 members should join GGBN.

In the subsequent meeting of members of Task 2.4 in Vienna, November 2014, it was reiterated, that SYNTHESYS3 members should join GGBN, as this was considered the only sensible way to fulfil the objectives etc. as defined in the revised work plan of WP 2.4 (incl. WP 1.3 p.p.). At the Vienna meeting the GGBN Code of Conduct, Best practice and MTAs were presented and discussed. The decision to proceed according to the revised plan was endorsed and has subsequently been confirmed by the management team of SYNTHESYS3. Thus, the leader of Task 2.4, supplemented by WP leader of NA2 as well as the management of the SYNTHESYS3 project have since then promoted to join the GGBN which offers different levels of membership, incl. free membership with limited influence on strategic decisions, but with the possibility of participating in work groups, etc.

The Global Genome Biodiversity Network (GGBN) was established in 2011. To date it has 50 members (October 2016) of which 17 are core members, 21 associate and 10 observers. It provides genome-quality samples and open access to a global data management system hosting aggregated primary specimen data and associated metadata for all member institutions. That is to date in terms of samples (November 2016):

DNA:	127,828
Tissues	256,995
Enviros	74
Repositories	17

and in terms of taxa:

Families	2,253
Genera	11,553
Species	33,270

Genomic research depends on reliable and rapid access to high-quality, well-documented DNA and tissue samples that have been legally obtained. Despite the importance of these samples, information about them is often unavailable and fragmented across the repositories that maintain

them—until now. Historically, scientists seeking these genomic samples for research had no central registry of repositories to simplify their search, resulting in the wasteful collection of new samples. Without GGBN, opportunities for research, development, and conservation would be lost every day, and research agendas slowed or stopped due to a lack of access to available biological resources.

Members of GGBN such as Natural History museums, share a common interest in long-term preservation of genomic samples that represent the diversity of non-human life on Earth. Thus GGBN provides members and the scientific community at large with a platform for biodiversity biobanks from across the world to:

- Collaborate to ensure consistent quality standards for DNA and tissue collections;
- Improve best practices for the preservation and use of such collections;
- Harmonize exchange and use of genetic materials in accordance with national and international legislation and conventions and
- Enable targeted collection.

The GGBN has benefited from discussion and input from the SYNTHESYS3 Task 2.4 through discussions on Best Practices, Code of Conduct and the development of the MTAs particular at the Vienna meeting. SYNTHESYS has been a key factor in establishing Europe as the best represented region in GGBN and will strengthen this position further when all SYNTHESYS partners have finally joined GGBN.

During the joined SPNHC (The Society for the Preservation of Natural History Collections) and GGBN/SYNTHESYS3 meeting in Berlin in June 2016 an open session was held and the progress of GGBN *in casu* SYNTHESYS3 was presented and discussed. The final products of Task 2.4, the governance and sustainability model, were made effective by the transition of GGBN from an interim to a self-sustaining organization, driven by a user fees and in-kind support.

The Memorandum of Understanding and the Terms of Reference between SYNTHESYS3 partners and the GGBN can be found under the following links:

http://synthesys3.myspecies.info/sites/synthesys3.myspecies.info/files/Del_2.5_Attachment_1_GGBN_MoU.pdf

http://synthesys3.myspecies.info/sites/synthesys3.myspecies.info/files/Del_2.5_Attachment_2_GGBN_ToR.pdf