







Coordination & policy development in preparation for a European Open Biodiversity Knowledge Management System, addressing Acquisition, Curation, Synthesis, Interoperability & Dissemination



Project Acronym: pro-iBiosphere

Project Full Title: Coordination & policy development in preparation for a European Open Biodiversity

Knowledge Management System, addressing Acquisition, Curation, Synthesis,

**Interoperability & Dissemination** 

Grant Agreement: 312848

Project Duration: 24 months (Sep. 2012 - Aug. 2014)

### D1.2.3 Management report (month 7 to 9)

Deliverable Status: Final

File Name: pro-iBiosphere\_WP1\_Naturalis\_D1.2.3\_VFF\_31052013.pdf

Due Date: 31 May 2013 (M9)
Submission Date: 31 May 2013 (M9)

Dissemination Level: Public

Task Leader: Soraya Sierra (Naturalis)
Authors: pro-iBiosphere consortium







Germany





#### Copyright

© Copyright 2012-2014, the pro-iBiosphere Consortium. Distributed under the terms of the <u>Creative Commons Attribution 3.0</u> <u>License</u>.

#### Consisting of:

Museum für Naturkunde Berlin

**Naturalis Naturalis Biodiversity Center** Netherlands **NBGB** Nationale Plantentuin van België Belgium **FUB-BGBM** Freie Universität Berlin Germany Pensoft Pensoft Publishers Ltd Bulgaria Sigma Sigma Orionis France **RBGK** The Royal Botanic Gardens Kew **United Kingdom** Plazi Switzerland

Museum für Naturkunde Berlin

Disclaimer

All intellectual property rights are owned by the pro-iBiosphere consortium members and are protected by the applicable laws. Except where otherwise specified, all document contents are: "© pro-iBiosphere project".

All pro-iBiosphere consortium members have agreed to full publication of this document. The commercial use of any information contained in this document may require a license from the owner of that information.

All pro-iBiosphere consortium members are also committed to publish accurate and up-to-date information and take the greatest care to do so.

However, the pro-iBiosphere consortium members cannot accept liability for any inaccuracies or omissions nor do they accept liability for any direct, indirect, special, consequential or other losses or damages of any kind arising out of the use of this information.









### **REVISION CONTROL**

Version	Author	Date	Status
1.0	Sierra, S. (Naturalis)	15.05.2013	Initial draft
2.0	Agosti, D. (Plazi)	23.05.2013	Second draft
3.0	Bénichou, L. (Muséum national d'Histoire naturelle)	30.05.2013	Third draft
4.0	Groom, Q. (National Botanic Garden Belgium)  Don Kirkup (Royal Botanic Gardens Kew)	31.05.2013	Final Version
	Hagedorn, G. (Museum für Naturkunde Berlin)		
	Penev, L. (Pensoft)		









### **Table of Contents**

Executive summary	. 6
· · · · · · · · · · · · · · · · · · ·	
Workpackage 1: Management and coordination	. 6
T1.1 Administrative and financial management (Lead: Naturalis. Start: M1, End: M24)	. 6
T1.2 Quality management, assessment and reporting (Lead: Naturalis. Start: M1, End: M24)	. 6
T1.3 Internal Communication (Lead: Plazi; participants: PENSOFT. Start: M1, End: M24)	. 7
T1.4 Consortium and review meetings (Lead: SIGMA; participants: all partners. Start: M1, End: M24)	. 7
Workpackage 2: European and international policy coordination	. 8
T2.1 Coordination and routes for cooperation across organizations, projects and e-infrastructures (Lead: Plazi; participants: Naturalis, NBGB, FUB-BGBM, PENSOFT, RBGK. Start: M6, End: M13)	
T2.2 Stakeholder requirements (Lead: RBGK; participants: Naturalis, NBGB. Start: M2, End: M12)	. 9
T2.3 State-of-the-art tools to facilitate acquisition of core biodiversity data (Lead: NBGB; participants: Naturalis, Plazi, RBGK, FUB-BGBM. Start: M1, End: M12)	
T2.4 Legal issues of data acquisition, curation and dissemination (Lead: Plazi; participants: all partners. Start: MS End: M23)	•
Workpackage 3: Scientific content and workflow coordination	11
T3.1 Data acquisition and curation (Lead: Naturalis; participants: NBGB, FUB-BGBM, RBGK. Start: M3, End: M9)	
T3.2 Semantic mark-up generation, data quality, and user-participation infrastructure (Lead: Plazi; participants: FUB-BGBM, PENSOFT, Naturalis, RBGK. Start: M3, End: M12)	
T3.3 Semantic integration of biodiversity literature (Lead: MFN; participants: FUB-BGBM, PENSOFT, Plazi. Start: M1, End: M24)	
Workpackage 4: Technical and infrastructure coordination	12
T4.1 Improve technical cooperation and interoperability at the e-infrastructure level (Lead: FUB-BGBM; participants: Naturalis, PENSOFT, RBGK. Start: M4, End M24)	
T4.2 Promote and monitor the development and adoption of common mark-up standards and interoperability between schemas literature (Lead: Plazi; participants: Naturalis, FUB-BGBM, PENSOFT, RBGK. Start: M4, End M24)	13
·	
Workpackage 5: Dissemination, communication and public awareness	14
T5.1 Development of the project image, documentation and external communication web platform (Lead: PENSOFT; participants: SIGMA, Plazi. Start: M1, End M24)	14
T5.2 Dissemination of the project results through outreach activities (Lead: SIGMA; participants: all partners.  Start: M3, End M24)	15
,,,	









T5.3 Stakeholder engagement and communication (lead: SIGMA, participants: all partners. Start: M18, End M22	•
	16
Workpackage 6: Sustainability planning	16
T6.1 Measuring and Constraining the costs of delivering services (lead: Naturalis; participants: FUB-BGBM, PENSOFT, RBGK, Plazi. Start: M6, End M21)	16
T6.2 Identifying and measuring the benefits of delivering services (Lead: RBGK; participants: Naturalis, FUB-BGBM, PENSOFT, NBGB, Plazi. Start: M7, End: M18)	17
T6.3 Evaluating business models currently in use by partners (Lead: SIGMA; participants: all partners. Start: M2, End M21)	-
T6.4 Towards Sustainability for Services (Lead: RBGK, participants: Naturalis. Start: M15, End M24)	18
References	18
Annex 1. Overview of budget	19
Table 1. Description of consumed costs per partner (period: 01 March to 31 May 2013)	19
Partner 1. Naturalis	19
Partner 2. NBGB	20
Partner 3. FUB-BGBM	20
Partner 4. Pensoft	21
Partner 5. SIGMA	21
Partner 6. RBGK	22
Partner 7. Plazi	
Partner 8. MfN	
Annex 2. Overview of person months consumed	25
Table 2. Description of person months consumed per partner (period: 01 March to 31 May 2013)	25
Partner 1. Naturalis	<b>25</b>
Partner 2. NBGB	25
Partner 3. FUB-BGBM	26
Partner 4. Pensoft	26
Partner 5. SIGMA	26
Partner 6. RBGK	27
Partner 7. Plazi	27
Partner 8. MfN	28









### **Executive summary**

The present document is a deliverable of the pro-iBiosphere project, funded by the European Commission's Directorate-General Information Society and Media (DG INFSO), under its 7th EU Framework Programme for Research and Technological Development (FP7).

The pro-iBiosphere project is divided into Work Packages (WP), each of them being sub-divided into Tasks (T). One of the objectives of T1.2., "Quality management, assessment and reporting", is to provide a transparent financial management and control of the project.

Within this task Quarterly Management Progress Reports will be prepared and submitted to the EU. The present deliverable (D1.1.3 – Management report (month 7 to 9), prepared by Naturalis (Project Task Leader), is the third report related to this activity. The purpose of the document is to describe the major achievements and difficulties per task, work performed per each partner, provide an indication of the resources spent and justifications, a.o.

### Workpackage 1: Management and coordination

#### T1.1 Administrative and financial management (Lead: Naturalis. Start: M1, End: M24)

From May 2013 onwards, Naturalis has hired a part time Project Assistant (Eva Kralt). Eva will provide support on the four tasks led by Naturalis and the dissemination activities of the project. Other partners like MfN, Plazi and RBGK are also in the process of hiring staff members to provide support on the tasks they are responsible for.

An overview of the budget and person months consumed by the consortium is available on Annexes 1 and 2.

### T1.2 Quality management, assessment and reporting (Lead: Naturalis. Start: M1, End: M24) Deliverables.

All four deliverables due in the period March 2013 - May 2013 have been produced according to the original planning (see Ref. 9)

These deliverables are:

D5.1.2.2 Electronic newsletter 2 (see Ref. 22)

D1.2.3 Management report 3

D3.1. Towards a Best Practices Guide on editorial policies

D3.2.1 Concept paper for involvement of individual experts, commercial vendors, and citizen scientists

All deliverables can be downloaded from the pro-iBiosphere online library (see Ref. 20)

**Milestones.** All three milestones due in the period March 2013 - May 2013 were achieved according to the original planning (see Ref. 11).

MS7. Workshop on stakeholder requirements (see Ref. 4)

MS19. Workshop on measuring and constraining the costs of delivering services (see Ref. 5)

MS6. Workshop on coordination & routes for cooperation across organizations, projects & e-infrastructures (see Ref. 6)









Online questionnaire for evaluation of workshops. In order to evaluate the 3 workshops organised by proiBiosphere on 21-24 of May 2013 (in Berlin) and assess satisfaction by participants, an online questionnaire was designed in Google Drive and linked to the website, see <a href="Ref. 13">Ref. 14</a> respectively. During the last week of May, the questionnaire was distributed among all participants of the pro-iBiosphere workshops. The results and analysis of the questionnaire will be available on the fourth management report (due August 2013).

**Online progress meetings.** In order to discuss progress of activities with the consortium and the 3 monthly work plan, several meetings took place with the various WPs and Task leaders. These online meetings concerned the organisation of the pro-iBiosphere meetings number 3 (21-25 of May 2013 – Berlin, see <a href="Ref.15">Ref.15</a> ), the progress on the pilots activities (see <a href="Ref.2">Ref. 7</a>), a.o.

#### T1.3 Internal Communication (Lead: Plazi; participants: PENSOFT. Start: M1, End: M24)

Internal communication between partners is currently being maintained through the pro-iBiosphere wiki, the Internal Communication Platform (ICP) and the Internal Document Library (IDL).

The pro-iBiosphere wiki (see Ref. 1) is being used as a platform for collaborative online work among partners as well as for communicating with the stakeholders (see T5.1). The Wiki has proven to be an excellent platform, exchanging ideas about the organisation of the workshops, preparing agendas, and making fast updates of the information that is being shared among the consortium and the stakeholders of the project. The ICP is primarily being used for sending emails to all partners or predefined groups of people. The IDL serves as a main repository for pro-iBiosphere documents, at present it contains 114 documents.

The ICP and IDL can be accessed by the consortium by logging into the website of pro-iBiosphere (see Ref.3).

The Internal Calendar feature of the website is also regularly used as a task manager facilitating the overall project implementation.

## T1.4 Consortium and review meetings (Lead: SIGMA; participants: all partners. Start: M1, End: M24)

The Third Consortium Meeting took place on the 24th of May 2013 at the JKI biological research centre in Berlin. The agenda (see Ref. 25) was prepared at M7 and shared among partners. During the meeting partners discussed the: (i) outcome of the workshops organized on 22-24 of May 2013; (ii) how to better disseminate the results and activities of the project through the use of project social media; (iii) exploitation plans, business models & discussion of sustainability; (iv) progress on the pilots; (v) and progress and status of the upcoming deliverables.

An action plan for the next months was drafted and reviewed at the end of the meeting by all project partners. The action plan and the minutes of the meeting will be soon available on the wiki.

The next 4<sup>th</sup> Consortium Meeting will be held on the 11th of October 2013 in Berlin









### Workpackage 2: European and international policy coordination

# T2.1 Coordination and routes for cooperation across organizations, projects and e-infrastructures (Lead: Plazi; participants: Naturalis, NBGB, FUB-BGBM, PENSOFT, RBGK. Start: M6, End: M13)

This task serves as a baseline coordination platform for general high-level policy and strategy coordination. As a prerequisite, a report will be collaboratively prepared, documenting and updating the present activities, strategies, goals, use cases, interests and visions as well as cooperation and interrelations of the various European and international partners interested in participating in a taxon treatment-like knowledge management system. This report will update and consolidate the present knowledge of the project partners, identify potential collaborators, users, and gaps in the infrastructure. The major stakeholders, with special emphasis on organizations cooperation in existing biodiversity e-Infrastructures, will then convene to identify common goals and reciprocal synergies and coordinate their policies and actions towards an open and shared knowledge curation system. The coordination will analyse existing digital infrastructures but also past publications and curation systems, including regional or global monographs as well as entire taxonomic treatments. This task will analyse the way the various groups cooperate, generate and exchange data. Two workshops will be organized for this purpose. A specific goal will be to understand the needs of external communities and report on the necessary software interfaces for these users. Of special importance are further potential routes for cooperation between European and non-European biodiversity projects and platforms. An Advisory Board of representatives from major global biodiversity projects will be established to develop recommendations for improvement of the data integration and interoperability in the three main directions:

- (1) Improving coordination and management of biodiversity data and platforms through active discussion and identification of stakeholders' needs and development of strategies for reduction of duplicated efforts and associated costs;
- (2) Improving the coordination between working groups that have participated or are currently participating in past and on-going EU projects;
- (3) Analysing and developing of strategies for integration and interoperability in the field of bioinformatics between EU and USA-based global initiatives, such as GBIF, EOL, Global Names Architecture (GNA), DataOne, PESI and others.

A workshop on "Coordination and Routes for Cooperation" took place on the 24th of May 2013. The meeting was held at the Julius Kühn Institute in Berlin. The agenda of the workshop is available on Ref. 6. The aim of the workshop was to document the status quo of data providers and discuss points for cooperation Memorandum of Understanding which will facilitate the sharing of resources among biodiversity organizations, projects, and initiatives. All presentations of the meeting are available online on the pro-iBiosphere wiki (see Ref. 10).

Prior to the workshop, a questionnaire was disseminated among all the participants that registered for the event, available on <u>Ref. 2</u>. The online survey targeted users and providers of biodiversity data. The survey was undertaken with the aim to assess the specifics of the available e-infrastructure and databases. The questionnaire consisted of 5 multiple choice questions and 12 open-ended questions. 60 completed survey questionnaires were received from 5 March 2013 to 14 May 2013. The answers received will be the basis for deliverable D2.1.1 (due end of June 2013).

A total of 45 participants were present during the meeting. Invited lectures were carefully selected to represent the potential collaborators, the topics and the interest of the users of the data, followed by discussions. In order to









have a broad acceptance among decision makers (i.e. Chief information technologist), it was decided to focus on specific recommendations at the institutions rather than a MoU at the level of directors. The following topics will be condensed to a maximum of five points:

- 1. Establishment of a multi-institutional focus group to coordinate software development to improve the efficiency of resource use by means of common Open Source based development projects using Open Source methodology.
- 2. Agreements on specialization, e.g., one institution specializes in geographical analysis and visualization, providing services to other institutions or projects perhaps ask which services institutions want to strengthen and share but also ask which activities they would rather like to use as services from others, in place of a missing, but also replacing an unsatisfying existing solution.
- 3. Agreement on shared crowdsourcing activities to clean up data, e.g. bibliographic references, or markup content in legacy literature, e.g. scientific names, treatments, material citations.
- 4. Agreement on long-term management procedures to provide stable identifiers. This agreement may be technology neutral (except that some way to use the identifiers in the human readable as well as semantic web should be specified). Both stable http-URIs (preferred in semantic web) and DOI technology (publishing industry) are possible implementations.
- 5. Agreement on following the Linked Open Data example. (Note: Edinburgh may be a best practices example?)
- 6. Agreement to communicate the data policies according to the Linked Open Data five star scoring (see Ref. 28).
- 7. Policy agreements on Open Access
- 8. Agreement to register all biodiversity web services that are provided to other Biodiversity institutions in the Biodiversity Catalogue (see <u>Ref. 29</u>; Hosted@Univ. Manchester)
- 9. Agreement to register all workflows that are provided to other Biodiversity institutions in myExperiment (see Ref. 30; Hosted@Univ. Manchester)
- 10. Agreement to communicate the expected and planned stability of services by means of a standard vocabulary (e.g.: undecided, experimental, long-term service without fixed API, long-term service with stable and versioned API)
- 11. Agreement to collaborate on the development of shared term definitions (glossary-style) with the understanding that new terms can be freely added, but an effort will be made to re-use or improve existing term definitions.
- 12. Paul Kirk: Centrally 'cached' data should have a clear mechanism for providing usage statistics back to sources. (Norman Morrison: consider W3C PROV model (see Ref. 27).
- 13. Norman Morrison: work towards specification and adoption of a common mechanism for data citation

Notes taken during the meeting will complement the above idea and allow to comment each of the points suggested for the recommendation. In order to find out where a consensus of recommendations exists a draft will be circulated during four weeks. The recommendations will be available by June 15 2013. The reconciled draft strategy for increased cooperation will be available on Sept. 2013.

## T2.2 Stakeholder requirements (Lead: RBGK; participants: Naturalis, NBGB. Start: M2, End: M12)

Task 2.2 deals with understanding stakeholder requirements with a specific focus on users and uses of information (stakeholder requirements for tools was realigned under T2.3 (lead NBGB) at the first project meeting). In order to achieve sustainable services, it is vital that the producers of e-Floras and e-Faunas deliver the information that users want. About 250 users were targeted by direct emailing as potential participants for the workshop "Uses and Users of Fauna, Flora and Mycota Information" held in Berlin, May 2013. The participants were drawn from a range









of domains - conservation, ecology, taxonomy, facilitators (e.g., data aggregators), earth systems science. A very large positive response was received, particularly from the first four groups listed below. The single largest group of participants were involved in conservation assessments, particularly IUCN red-list compilation and covered a range of taxonomic domains. The response from the earth system scientists was relatively poor, nevertheless, three participants from this field attended the workshop. Many of the ecologists were unable to travel to Berlin for the meeting and as several of these are UK based it was proposed during the consortium meeting that a separate UK workshop will be arranged at RBGK for these in late June or early July. The budget that was left from meeting nr 3 (i.e. Berlin workshops in May) will be used for that purpose.

In all 53 people took part in the workshop. The 2 morning sessions were split into 3 rooms, within which 13 small groups were formed, each to work on their particular "use-case" (listed in the table below). For each use case the participants constructed an activity map, then prioritised their activities according to those that they felt were the most time consuming, thus providing insights into what users feel are the "pain factors" in their work. In the second part of the morning, the groups constructed information maps to show what information they used and where they obtained it from. The maps grouped sources by the information types; they next ranked these information types in order of importance (value) to their work.

During the next months, all the information obtained from these exercises will be consolidated. The use-cases will be further developed in collaboration with the participants, mainly by email, and where necessary by follow-up visits on-site. The proposed UK workshop will allow further uses-cases to be developed. The information so far obtained is a solid basis on which to build the final report (due August 2013).

Group	Use case description
1	Making an IUCN Red list assessment (#1)
2	Making an IUCN Red list assessment (#2)
3	Plant trait Database compilation
4	Linking ecophysiology to vegetation modelling
5	I want to describe a new species
6	How do I identify a plant
7	I want to prepare a quick and dirty flora account for a taxon
8	I want to publish and disseminate high quality taxonomy
9	I want to carry out a plant survey of a small national park for management's decision making
10	Producing a Digital Flora
11	Re-Publishing Floras, Fauna & Mycotas
12	Producing a Field Identification Tool
13	ENM (Ecology Niche Modelling) based on Specimen/ Observation from Floras

### T2.3 State-of-the-art tools to facilitate acquisition of core biodiversity data (Lead: NBGB; participants: Naturalis, Plazi, RBGK, FUB-BGBM. Start: M1, End: M12)

During this period the NBGB has been building on the workshops of February. We have continued to promote the questionnaire we designed for the February workshops in Leiden and so far we have received 224 responses. Most of these respondents are alpha-taxonomists, other respondents include database managers, journal editors, conservationists, etc. These data have been used partly for the report of Task 3.1, but will also provide valuable data for Tasks 2.2 and 2.3.









Another data gathering exercise has been on the international collaboration of taxonomists. Taxonomists frequently collaborate and digital tools for taxonomy potential provide many advantages for taxonomists in networking, data generation, writing and editing Flora and Fauna works. We have been investigating the nature of international collaboration and how it may be facilitated by online tools.

A matter arising from the February workshops was how to how to progress the cause of semantic authorship and publication. Various ideas were suggested and discussed. Together with David Shotton (see <u>Ref. 31</u> on Semantic Publishing), we created a short questionnaire to poll people on which are the simplest steps that could be taken to achieve this aim. So far this questionnaire has received 45 responses and there is a high dropout rate. The low rate of participation to this questionnaire is expected due to the highly technical nature of the questions.

In collaboration with those groups working on WP4 we have been examining the availability and connectivity of digital data for taxonomy. The pilot on *Chenopodium* has helped highlight some of the advantages and limitations of current technology and workflows. We expect to deliver report 2.3 on time with supporting data gathered from a number of different sources. This will bring together a wide variety of technology specific reports to summarize the state-of-art in digital tools for taxonomists.

## T2.4 Legal issues of data acquisition, curation and dissemination (Lead: Plazi; participants: all partners. Start: M9, End: M23)

From April 15th-17th, Willi Egloff represented Plazi in a workshop on "Names Attribution, Rights and Licenses" organized by the Global Names Project at the Arizona State University in Tempe. The participants discussed copyright issues related to names of organisms and compilations of names. The findings of this workshop will be resumed in a paper that shall soon be published.

The same copyright issues will also be dealt with in the draft policy that will be elaborated in the framework of Task 2.4 of the pro-iBiosphere-project. This document will contain an overview of the actual copyright legislation in the EU, as far as the use of copyright protected works for scientific purposes is concerned. A questionnaire referring to this issue will be sent to copyright experts in different EU member states in the next few weeks. The questionnaire was introduced at the pro-iBiosphere workshop "Coordination and cooperation" in Berlin, May 23, including a request to support finding the proper legal experts in the EU countries. A first draft of the final document will be presented by August, 2013.

### Workpackage 3: Scientific content and workflow coordination

T3.1 Data acquisition and curation (Lead: Naturalis; participants: NBGB, FUB-BGBM, RBGK. Start: M3, End: M9)

The deliverable (D3.1) will be submitted by the end of May 2013 (i.e. month 9).

T3.2 Semantic mark-up generation, data quality, and user-participation infrastructure (Lead: Plazi; participants: FUB-BGBM, PENSOFT, Naturalis, RBGK. Start: M3, End: M12)









The deliverable (D3.2.1) will be submitted by the end of May 2013 (i.e. month 9). During the February workshop that took place in Leiden, it became clear that some of the issues in legacy literature will need more discussions. This concerns especially the topic of "unique identifiers". In order to receive input from institutions that issue DOIs in the publishing world, experts were invited to the Berlin workshop on "Coordination and Cooperation", that took place on May 23 2013.

Before the submission of the deliverable, Plazi plans to publish a paper in due course. This will allow to obtain opinions and discussions from a broader audience and to disseminate the concepts formulated in the report as widely as possible.

### T3.3 Semantic integration of biodiversity literature (Lead: MFN; participants: FUB-BGBM, PENSOFT, Plazi. Start: M1, End: M24)

From June 2013 onwards, G. Hagedorn will join the MfN as head of the Digital World. His association with Plazi remains.

From the 1st of May 2013 to the 18th of August 2013, J. Hoffmann has been re-appointed by the MfN as coordinator for Task 3.3. The BHL-Europe group including a representative of BHL US will communicate with her via regular calls. This will facilitate relevant knowledge transfer such as new developments in semantic integration of biodiversity literature.

In the next weeks the MfN will initiate the hiring process of a new staff member who will be responsible for the organisation of the Task 3.3 workshop (due Feb. 2014) and the two related deliverables, i.e.:

D3.3.1 Report on state-of-the-art and research horizons of semantic integration of biodiversity literature (due Dec. 2013)

D3.3.2 Report on progress during the coordination process of partners and non-consortium partners (due April 2014)

During the past consortium meeting that took place on the 24th of May 2013, it was unanimously agreed among the consortium members that in case the MfN is not able to hire the new staff member in the next two months (i.e. end of June 2013), the budget that was originally allocated to the MfN will be transferred to another partner in order to perform Task 3.3 activities.

In April 2013 the BHL-Europe main actors, NM (Prague), NHMW (Vienna), NHM (London) and MfN (Berlin), met in Prague during the OpenUp! Annual Review Meeting and set the path for the on-going support of the BHL-Europe infrastructure and network. It is planned to put BHL-Europe under the auspices of CETAF (Consortium of European Taxonomic Facilities). At present, the institutional commitments of the main BHL-Europe players have not been clarified

### Workpackage 4: Technical and infrastructure coordination

# T4.1 Improve technical cooperation and interoperability at the e-infrastructure level (Lead: FUB-BGBM; participants: Naturalis, PENSOFT, RBGK. Start: M4, End M24)

This task will analyse and coordinate strategies to improve interoperability and coordination between initiatives, projects and platforms at the infrastructure level. It will develop a workflow to facilitate linking legacy and prospective biodiversity literature and data through mark-up standards and tools.









A new service has been developed by PLAZI. This service allows the delivering of stored documents with markup based on the original document name or on a taxonomic name described in the original document. An important attribute, the original page number, has been added to the document metadata.

Linking of cited treatments within a treatment to the cited treatment has been tackled by redesigning the markup policy to use specific elements for treatment citations, so the import of Taxpub based documents from Pensoft to Plazi will retain the respective treatment citation element and in return will allow importing the markup to CDM. A further development has been the decision to deploy stable http URIs as unique identifiers for treatments. They will be assigned to every new treatment imported into the Plazi repository. Using them as annotation to citations of treatments will allow to link, similar to DOIs in bibliographic references, the citation with the cited treatment. This will eventually allow following each treatment back to the original treatment.

Currently the mechanisms of the deployment of stable http URIs at Plazi are under way. Plazi made also a commitment, similar to Edinburgh Botanical Garden and Botanischer Garten und Botanisches Museum Berlin, to provide stable http URI for treatments. This also involves the design of the content and form of the data that will be returned, both html and RDF.

The mark-up of pilot groups has successfully provided the possibility to monitor and improve the workflow from legacy literature to digital information available through Plazi and the EDIT Platform. Online meetings have allowed to discuss challenges and progress. The pilots have also given an idea of the time frame necessary to create fine-grained mark-up.

The three May workshops organised by pro-iBiosphere have prepared the ground and delivered the information needed for the planning of the workshop associated with Task 4.1 (i.e. MS13, due October 2013). Networking with participants has enabled to identify possible invitees for the October workshop.

# T4.2 Promote and monitor the development and adoption of common mark-up standards and interoperability between schemas literature (Lead: Plazi; participants: Naturalis, FUB-BGBM, PENSOFT, RBGK. Start: M4, End M24)

Interoperability between XML schemas was tested by Pensoft and Zoobank in order to provide the semantic background for automated registration of new taxa and nomenclatural acts. It was proven that TaxPub is suitable for automated extraction of registration data from unpublished XML manuscript versions. Planned activities and ongoing work was discussed during the coordination workshop that took place on the 23rd of May in Berlin.

Different institutions use variable technical approaches towards mark-up. The pilot mark-up process on different organism groups has provided the opportunity to monitor the mark-up process and set common standards, as well as to identify problems. These will have to be unified at one stage of the workflow. At present most of the treatments are being synchronized to result in the TaxonX output format. TaxonX can then be imported into the CDM to test compatibility. An export to TaxonX will be studied to facilitate the integration of RBGK marked up data into the EDIT Platform.

A mark-up requirements list has been posted online to avoid repeating detected mistakes in the future. This list will also simplify the mark-up with GoldenGATE for users, and set common mark-up standards. At present the agreed mark-up standards refer to:

**nomenclature:** scientific name, author and nomenclatural reference – the latter at least roughly marked as a brief or a citation

material\_citations (i.e. specimens, observations, types): scientific name, locality and observation/collecting event details









**description / supplemental taxon data:** diagnosis (for technical reasons here and not under descriptive data), biology\_ecology, scientific name - the CDM can't handle taxa from a descriptive part yet, it's handled as a normal string content

**distribution:** as string **references:** as string

**descriptive data:** currently only with very low granularity. These cannot be marked up in TaxonX yet. We have started communicating with the developer of CharaParser software.

**polytomous keys** are also important elements that can't be precisely marked up with TaxonX yet but are accommodated in the CDM. Developing a mark-up quality checker function is being discussed.

**treatment**: a block of text that is explicitly linked to a particular taxon. This taxon is defined in the nomenclature section of the treatment. A treatment will be given a unique identifier.

citation: a reference to a treatment

After the GoldenGATE training course given in January 2013 in Leiden, the manual for GoldenGATE has been revised to accommodate elements that have been ambiguous or missing. A Google Drive has been organized for the pilots whereby the data for the particular pilots can be uploaded and made accessible for all the participants. For discussions on markup with the persons leading the pilots, online and face-to-face meeting have been organized.

The discussions led to a redefinition of the citation element. Referring to a previous treatment (similar to referring to the bibliographic references for an article) is a crucial element. Each treatment will be given a unique identifier that allows linking from treatment to a previously cited treatment.

### Workpackage 5: Dissemination, communication and public awareness

# T5.1 Development of the project image, documentation and external communication web platform (Lead: PENSOFT; participants: SIGMA, Plazi. Start: M1, End M24)

**Website and wiki**. The pro-iBiosphere website and the wiki platform have continued to serve as main sources of information about the project results. The website has been visited 8398 times since its launch. 4540 visits come from the last three months. The total number of page views for the whole period is 45 345, and 19 632 in the period March-May 2013. Most visited pages are: 1) Home page 25.39% (25.93%)<sup>1</sup>; 2) News 7.72% (5.08%); 3) Login page 5.76% (5.50%); 4) Events 4.02% (4.71%); 5) Library 3.55% (4.19%). The source of the traffic is: 1) Direct 43.61% (41.99%); 2) Google 31.20% (41.94%); 3) Social Media 8.22% (63.08%); 4) wiki.pro-ibiosphere.eu 4.07% (32.85%); 5) naturkundemuseum-berlin.de 1.32% (72.62%).

#### Social media tools.

Per May 2013, pro-iBiosphere has 62 followers on Facebook, 46 posts (6 posts per month on average), and 74 followers / 121 following on Twitter. The overall number of tweets is 113. The source of visits by social networks is: 1) Facebook 30.69% (40.68%); 2) LinkedIn 28.71% (8.47%); 3) Twitter 24.26% (18.64%); 4) Blogger 10.40% (23.73%); 5) Google+ 1.98% (5.08%).

#### Registration and questionnaires for meetings.

In order to: (i) facilitate registration by participants to the 3 workshops organised in May 2013, an online registration form (see Ref. 13) was uploaded on the website; (ii) gather information previous to the workshops,

Page **14** of **28** 

<sup>&</sup>lt;sup>1</sup> The figures refer to the whole period versus last three months (in brackets).









three questionnaires were designed and uploaded on the website; (iii) provide feedback from participants after the workshop, an evaluation questionnaire was uploaded and distributed to all participants.

#### Presentations.

All presentations from the workshops that took place in May 2013 are available on the project's wiki page (see <u>Ref.</u> <u>10</u>).

## T5.2 Dissemination of the project results through outreach activities (Lead: SIGMA; participants: all partners. Start: M3, End M24)

From M7 onwards, Sigma Orionis has taken the lead of the different project social media accounts. In order to analyse the status of social networks to-date and to decide upon the specific actions that need to be undertaken to improve pro-iBiosphere presence on social media, a specific document (the "Social Media Action Plan") detailing the strategy to be put in place was prepared. The strategy document was shared with all partners at M8 and placed on the project website

Outreach through social media tools. Sigma Orionis, with the help of project partners, consolidated all project contacts. In order to make the list of contacts, the following sources were used: (i) participants of project events, (ii) contacts from other initiatives, (iii) experts identified during the preparation of the project and (iv) partners' contacts. Then, Pensoft created a mailing list containing all these 350 contacts: dissemination@pro-ibiosphere.eu. This mailing list has been used to disseminate the second eNewsletter at M8 (also placed on the project website). The list is being updated on a regular basis and will be used as a major dissemination channel to communicate with stakeholders regarding project activities, progress, events, outcomes, a.o.

Following the release of the social media action plan document, a series of internal and external promotional activities have been undertaken to improve the project visibility on social media and to increase the number of members or followers on Twitter, Facebook, LinkedIn and Google +. The project also joined and followed the groups of other biodiversity initiatives on these different social media. A postcard has been designed by Sigma Orionis promoting the different project groups on social media and was distributed to all workshops participants during Meeting #3 in Berlin. The postcard is available on the website and will be distributed along with the other project dissemination materials on the occasion of other project events.

Social media have been used as main channels for communication with stakeholders, in particular on the occasion of Meeting #3 in Berlin through the promotion of the workshop hashtag: #pibber enabling attendees to participate in the discussions and to share their comments. In order to improve the visibility and accessibility of workshops tweets, Pensoft added a stream function on the website displaying the different workshops tweets on the website homepage.

Helpdesk services to the project community have been ensured through the use of LinkedIn and enabled the project, for instance to get in contact with new stakeholders.

**Newsletter.** The second pro-iBiosphere newsletter (see <u>Ref. 26</u>) comprising 20 news items was released at the end of April and disseminated broadly to more than 250 pro-iBiosphere stakeholders.

**Calendar.** A Google Calendar was created to monitor and ensure the contribution of partners in dissemination activities. The different project deliverables, milestones and prospective events have been added to this calendar to have a clear vision of project activities and outcomes and to enable the project coordinator and the dissemination leader to encourage partners to contribute to post news on the website and discussions on the









social networks. This tool enables Sigma Orionis to send reminder emails to the responsible partner (with the project coordinator in copy) to post news and a discussion related to the activity.

**Contribution to events and articles.** The list of contribution to events and articles has been regularly updated by partners. As of today the project has already been involved in nine additional events and two articles have been published (see pro-iBiosphere online library).

**Other dissemination activities.** The project has been liaising with Advisory Board members to develop synergies and cross-promotional activities. Following the last Advisory Board meeting that took place in February 2013, an email was sent to all members to encourage them to contribute to project documents (e.g., list of events, list of other initiatives available on the project wiki).

Regarding the project participation during DG CONNECT major events, the project plans to participate in the ICT 2013 event held from November 6-8, 2013 in Vilnius, Lithuania. For this purpose, the consortium has been in contact with the eScienceTalk project, being the Support Action for e-Infrastructure projects, to submit a joint application to organise a networking session (on "e-science and big data") and to hold a booth for e-Infrastructure projects.

The project has also been in contact with other biodiversity projects to envisage a joint participation in ICT 2013.

### T5.3 Stakeholder engagement and communication (lead: SIGMA, participants: all partners. Start: M18, End M22)

No activities are reported within the reporting period.

### Workpackage 6: Sustainability planning

## T6.1 Measuring and Constraining the costs of delivering services (lead: Naturalis; participants: FUB-BGBM, PENSOFT, RBGK, Plazi. Start: M6, End M21)

Task 6.1 deals with documenting where do costs arise in the workflows of Biota producers and service providers. In order to (i) understand what costs are involved in providing Biota information and services, (ii) how to measure the baseline costs for comparison with new business models; and (ii) to document approaches to sustainability within the wider biodiversity information community, a workshop on "Measuring and constraining the costs of delivering Biota information and services" was organised on Wednesday the 22nd of May 2013 in Berlin. A total of 50 persons participated in the workshop. For detailed list of participants see Ref. 17.

In order to divide participants into break-out groups and facilitate discussion during the meeting, a questionnaire wad distributed to all participants (see <u>Ref. 18</u>).

During the workshop, participants were divided into 3 break-out groups: (i) Biota producers and publishers; (ii) Data resources managers; (iii) Technology infrastructure and services.

The workshop consisted of four phases:

Phase one - Where are costs incurred? In order to document where costs arise in the workflows of Biota producers and service providers, each of the break-out groups was split into small-groups, each to describe a particular workflow (e.g. taxonomic writing, desk editing, publication, software and service development, etc.).









Phase two - How can the costs be measured?. In order to decide how the costs identified in the previous exercise can be measured, each of the break-out groups brainstormed measurement methods for the costs they identified in the small groups and then they evaluated their feasibility. The main outcome of this exercise was a list of metrics that could be used against the costs identified above for each use-case. A selection of the best (most practical) metrics was made with the help of all participants.

Phase three - Constraining the costs of delivering information and services. During this exercise, participants brainstormed a wide range of possible cost-saving measures. Subsequently, their palatability with each stakeholder group was tested. The outcome of this phase was a list of possible cost-constraining measures, grouped by category and then sorted in order of preference within each category. Participants then gave short presentations to introduce potential ways of constraining costs.

Phase four – General discussion. In order to document provider experiences, the business models they currently use and their approaches to sustainability, participants shared their experiences through short lightning talks. The open discussion helped to draw out views on the key points on costs, sustainability, sharing and layers of services.

During the next months, all the information obtained from these exercises will be consolidated and the costs will be gathered in collaboration with the consortium and participants. The information will provide a solid basis on which to build the final report (due November 2013).

## T6.2 Identifying and measuring the benefits of delivering services (Lead: RBGK; participants: Naturalis, FUB-BGBM, PENSOFT, NBGB, Plazi. Start: M7, End: M18)

Task 6.2 explores the benefits to users and clients (can be viewed as a complementary exercise to Task 6.1 which explores the costs). The task is on track to deliver D.6.2.1 "report on benefits to users" (M15) and D6.2.2 "report on benefits to suppliers" (M18) both of which feed in to Task 6.3 and Task 6.4.

Preparation for the "user engagements and benefits" workshop (meeting 4, in October 2013, Berlin) includes the on-going work from Task 2.2 (and the final report M12 August 2013) which will inform as to potential benefits to users, and from Task 6.1 which will provide the method to be employed for estimating the costs to manage information. The recruitment process is underway for a project assistant (12 pm RBGK) who is due to start September 2013 and will continue desk based work, email correspondence and meetings with user communities (MS20) previously identified under T2.2.

## T6.3 Evaluating business models currently in use by partners (Lead: SIGMA; participants: all partners. Start: M2, End M21)

The upcoming deliverables and milestones of this task are the submission of the deliverable D6.3.2 on "diversity and strengths of existing business plans and discussion of sustainability" at M12, and the organisation of a "meeting to evaluate business models currently in use by partners and relevant non-partners" held at M14 on the occasion of Meeting #4 in Berlin from October 8-11, 2013 (see Ref. 33).

For this purpose, Sigma Orionis and RBGK will have a Skype meeting in M10 and will organise an office meeting in M11 to discuss and plan these two major activities.

In order to gather partners' inputs and updates on D6.3.2, the different matrix developed in the previous project period will be shared with partners at M10, a work plan has been prepared to plan (i) partners' contributions, (ii) consolidation and update of D6.3.1 and (iii) submission of the deliverable. This work plan was presented to all partners on the occasion of the 3<sup>rd</sup> Consortium meeting in Berlin on May 24 2013.









A first contribution of inputs regarding the envisaged business models at project's level will be required by partners.

### T6.4 Towards Sustainability for Services (Lead: RBGK, participants: Naturalis. Start: M15, End M24)

Task 6.4 activities are due to commence on the final quarter of 2013. Upcoming deliverables from Task 6.3 will form the basis of an analysis of partners' exploitation plans. At the same time, an early draft of alternative business models will be circulated amongst partners (produced from a summary of on-going work in Tasks 6.1, 6.2 and 6.3).

### References

- 1. <a href="http://wiki.pro-ibiosphere.eu/wiki">http://wiki.pro-ibiosphere.eu/wiki</a>
- 2. https://docs.google.com/forms/d/1vhD6xhq6C97OUql1U2du6fcQPBmJoDhaPosdEPSqCB4/viewform
- 3. <a href="http://www.pro-ibiosphere.eu/index.php">http://www.pro-ibiosphere.eu/index.php</a>
- 4. <a href="http://wiki.pro-">http://wiki.pro-</a>
  - <u>ibiosphere.eu/wiki/Workshop Berlin 1: Requirements of users of Flora, Fauna or Mycota publications or services</u>
- 5. http://wiki.pro
  - ibiosphere.eu/wiki/Workshop Berlin 2: Measuring and constraining the costs of delivering services
- 6. <a href="http://wiki.pro-ibiosphere.eu/wiki/Workshop\_Berlin\_3: Coordination\_and\_routes">http://wiki.pro-ibiosphere.eu/wiki/Workshop\_Berlin\_3: Coordination\_and\_routes</a> for cooperation
- 7. <a href="http://wiki.pro-ibiosphere.eu/wiki/Pilots">http://wiki.pro-ibiosphere.eu/wiki/Pilots</a>
- 8. <a href="http://wiki.pro-ibiosphere.eu/wiki/Press release">http://wiki.pro-ibiosphere.eu/wiki/Press release</a>
- 9. <a href="http://wiki.pro-ibiosphere.eu/wiki/Pro-iBiosphere Deliverables">http://wiki.pro-ibiosphere.eu/wiki/Pro-iBiosphere Deliverables</a>
- 10. <a href="http://wiki.pro-ibiosphere.eu/wiki/Meetings">http://wiki.pro-ibiosphere.eu/wiki/Meetings</a>
- 11. <a href="http://wiki.pro-ibiosphere.eu/wiki/Pro-iBiosphere Milestones">http://wiki.pro-ibiosphere.eu/wiki/Pro-iBiosphere Milestones</a>
- 12. <a href="http://wiki.pro-ibiosphere.eu/wiki/Pro-iBiosphere stakeholders meetings and workshops">http://wiki.pro-ibiosphere.eu/wiki/Pro-iBiosphere stakeholders meetings and workshops</a>
- $13. \ \ \, \underline{https://docs.google.com/spreadsheet/viewform?formkey=dGRYQ2pMNlpLYkUyc19nRTdrbXpKdEE6MA}$
- 14. <a href="http://www.pro-ibiosphere.eu/showpage.php?storyid=4007">http://www.pro-ibiosphere.eu/showpage.php?storyid=4007</a>
- 15. <a href="http://wiki.pro-ibiosphere.eu/wiki/Workshops\_Berlin,\_May\_2013">http://wiki.pro-ibiosphere.eu/wiki/Workshops\_Berlin,\_May\_2013</a>
- 16. <a href="http://wiki.pro-ibiosphere.eu/wiki/Pro-iBiosphere Consortium meetings">http://wiki.pro-ibiosphere.eu/wiki/Pro-iBiosphere Consortium meetings</a>
- 17. http://wiki.pro-ibiosphere.eu/wiki/22nd May Workshop Participant list
- 18. <a href="https://docs.google.com/forms/d/1qEXCDrW9uU-hjEjbE0d1q90iBaV-A92B-09QD49ZWDI/viewform">https://docs.google.com/forms/d/1qEXCDrW9uU-hjEjbE0d1q90iBaV-A92B-09QD49ZWDI/viewform</a>
- 19. <a href="http://www.ncbi.nlm.nih.gov/books/NBK100351/">http://www.ncbi.nlm.nih.gov/books/NBK100351/</a>
- 20. <a href="http://www.pro-ibiosphere.eu/documents/">http://www.pro-ibiosphere.eu/documents/</a>
- 21. <a href="http://www.pro-ibiosphere.eu/media/center/">http://www.pro-ibiosphere.eu/media/center/</a>
- 22. <a href="http://www.pro-ibiosphere.eu/news/">http://www.pro-ibiosphere.eu/news/</a>
- 23. <a href="http://www.pro-ibiosphere.eu/showpage.php?storyid=3957">http://www.pro-ibiosphere.eu/showpage.php?storyid=3957</a>
- 24. http://wiki.pro-ibiosphere.eu/w/media/2/2e/Pro-iBiosphere WP1 SIG MAG CM2 V3.2 12022013.pdf
- 25. <a href="http://wiki.pro-ibiosphere.eu/wiki/Consortium Meeting#3 Berlin.2C May 2013">http://wiki.pro-ibiosphere.eu/wiki/Consortium Meeting#3 Berlin.2C May 2013</a>
- 26. http://www.pro-ibiosphere.eu/news/0 4 2013
- 27. http://www.w3.org/2011/prov
- 28. <a href="http://5stardata.info/">http://5stardata.info/</a>
- 29. <a href="https://www.biodiversitycatalogue.org/">https://www.biodiversitycatalogue.org/</a>
- 30. <a href="http://www.myexperiment.org/">http://www.myexperiment.org/</a>
- 31. <a href="http://semanticpublishing.wordpress.com/2013/02/26/ten-next-steps/">http://semanticpublishing.wordpress.com/2013/02/26/ten-next-steps/</a>
- $32. \ \underline{https://docs.google.com/forms/d/1vhD6xhq6C97OUql1U2du6fcQPBmJoDhaPosdEPSqCB4/viewform}$
- 33. http://wiki.pro-ibiosphere.eu/wiki/Workshops Berlin, October 2013









### **Annex 1. Overview of budget**

### Table 1. Description of consumed costs per partner (period: 01 March to 31 May 2013)

#### Partner 1. Naturalis

	Partner 1. Naturalis			
Work Package	Item description	Amount (€)	Explanations	
WP1-WP6	Personnel costs	13.772,39	·	
	Indirect costs	964,07	7% reimbursement rate x personnel costs.	
WP2/WP3	Other direct costs	377,04	Meeting 2. February meeting (3 workshops), Leiden - the Netherlands (tickets for 2 participants)	
WP2/WP3	Other direct costs	16.522,83	Meeting 2. February meeting (11/2 -15/2), Leiden - the Netherlands (venue and catering).	
WP4	Other direct costs	79,73	Travel and subsistence 6/3-7/3 Brussels, Belgium	
WP6	Other direct costs	441,07	Travel costs 20/5-24/5 Berlin, Germany (2 participants)	
WP1	Other direct costs	122,06	Travel and subsistence various meetings	
WP1	Other direct costs	50,00	Memory card	
WP2-WP6	Indirect costs	1.231,49	7% reimbursement rate x total direct costs.	
Total used during period: 01 March 2013 to 31 May 2013		33.510,68		
Percentage of contribution used during period: 01 March 2013 to 31 May 2013		15,4%		
Total used during period: 01 Sept. 2012 - 28 Feb. 2013		61.534,18		
Percentage of contribution used during period 01 Sept. 2012 - 28 Feb. 2013		28.2%		
Subtotal used during periods one - three		95.044,86		
Percentage of contribution used during periods one - three		43,6%		
Requested EU contribution		218.048,00		









#### Partner 2. NBGB

Partner 2. NBGB				
Work Package	Item description	Amount (€)	Explanations	
WP1-WP6	Personnel costs	8.032,44	Salary Groom Q: 50% March, 50% April, 50% estimation May (incl. vacation payment)	
	Indirect costs	562,27	7% reimbursement rate x personnel costs.	
WP2	Other direct costs	2.219,15	Travel Cost Workshop Leiden Febr. 2013 (Bonaventure Sonké, Thomas Janssen, Andru Vallance)	
WP3	Other direct costs	484,27	Mission Groom Q Dahlem, Berlin, May 2013	
WP4	Other direct costs			
WP5	Other direct costs			
WP6				
WP2-WP6	Indirect costs	189,24	7% reimbursement rate x total direct costs.	
Subtotal used during Sept 2012 – Feb. 2013		19.075,61		
Subtotal used during March – May 2013		11.487,37		
Total used		30.562,98		
Percentage of contribution used		50,05 %		
Requested EU contribution		61.067,00		

#### Partner 3. FUB-BGBM

		Partner 3. FU	B-BGBM
Work Package	Item description	Amount (€)	Explanations
WP1-WP6	Personnel costs	11.340,00	WP 2:0.02 PM, WP 3: 0.91 PM, WP 4: 2.25 PM, WP 5: 0.02 PM
	Indirect costs	793,80	7% reimbursement rate x personnel costs.
WP2	Other direct costs		
WP3	Other direct costs		
WP4	Other direct costs		
WP5	Other direct costs		
WP6			
WP2-WP6	Indirect costs		7% reimbursement rate x total direct costs.
Subtotal used during Sept 2012 – Feb. 2013		25.820,00	
Subtotal used during		12.133,80	









	Partner 3. FUB-BGBM					
Work Package	Item description	Amount (€)	Explanations			
March – May 2013						
Total used		37.953,80				
Percentage of contribution used		19,84 %				
Requested EU contribution		191.314,00				

### Partner 4. Pensoft

		Partner 4. P	ensoft
Work Package	Item description	Amount (€)	Explanations
WP1-WP6	Personnel costs	7.555,28	1.7PMs for 2 researchers, 2 developers, 1 mark-up expert, 1 project manager
	Indirect costs	528,90	7% reimbursement rate x personnel costs.
WP2	Other direct costs		
WP3	Other direct costs		
WP4	Other direct costs	2.636,50	Travel and subsistence expenses related to the participation of PENSOFT in the Berlin meeting 20-24 May 2013 (3 participants).
WP5	Other direct costs		
WP6			
WP2-WP6	Indirect costs	184,56	7% reimbursement rate x total direct costs.
Subtotal used during Sept 2012 – Feb. 2013		43.139,97	
Subtotal used during March – May 2013		10905.24	
Total used		54.045,21	
Percentage of contribution used		45,5%	
Requested EU contribution		118.768,00	

### Partner 5. SIGMA

Partner 5. SIGMA				
Work Package	Item description	Amount (€)	Explanations	
WP1-WP6	Personnel costs	7 100 €	Resources in line with activities detailed in the progress report	
	Indirect costs	497 €	7% reimbursement rate x personnel costs.	









	Partner 5. SIGMA				
Work Package	Item description	Amount (€)	Explanations		
WP1	Other direct costs	951.91 €	Travel and subsistence expenses related to the participation of SIGMA in the 3 <sup>rd</sup> Consortium Meeting held on May 24 in Berlin, Germany (2 members).		
WP2	Other direct costs				
WP3	Other direct costs				
WP4	Other direct costs				
WP5	Other direct costs				
WP6					
WP1-WP6	Indirect costs	66,63€	7% reimbursement rate x total direct costs.		
Subtotal used during Sept 2012 – Feb. 2013		35.217,24 €			
Subtotal used during March – May 2013		8 615,54 €			
Total used		43.832,78 €			
Percentage of contribution used		27,59%			
Requested EU contribution		158.851,00 €			

### Partner 6. RBGK

		Partner 6.	RBGK
Work Package	Item description	Amount (€)	Explanations
WP1-WP6	Personnel costs	41.712,00	
	Indirect costs	2.920,00	7% reimbursement rate x personnel costs.
WP2	Other direct costs	1.400,00	Travel and accommodation in connection with Meeting 3, and Consortium management meeting, May 2013, Berlin
WP3	Other direct costs		
WP4	Other direct costs		
WP5	Other direct costs		
WP6			
WP2-WP6	Indirect costs	98,00	7% reimbursement rate x total direct costs.
Subtotal used during Sept 2012 – Feb. 2013		21.798,80	
Subtotal used during March – May 2013		46.134,00	
Total used		67.933,00	
Percentage of contribution used		44%	









Requested EU contribution	156.008,00	
Contribution		

#### Partner 7. Plazi

		Partner 7.	Plazi
Work Package	Item description	Amount (€)	Explanations
WP1-WP6	Personnel costs	27.789,00	
	Indirect costs	1.945,00	7% reimbursement rate x personnel costs.
WP2	Other direct costs	35.500,00	organization of workshop T2.1, participation of plazi at T2.1 in Berlin
WP3	Other direct costs		
WP4	Other direct costs		
WP5	Other direct costs		
WP6			
WP2-WP6	Indirect costs	2.485,00	7% reimbursement rate x total direct costs.
Subtotal used during Sept 2012 – Feb. 2013		43.709,00	
Subtotal used during March – May 2013		67.719,00	
Total used		111.428,00	
Percentage of contribution used		53%	the spike is due to the organization of the Berlin meeting (Plazi had the budget to reimburse all the expenses occurring during the meeting), was involved in the preparation and Deliverable D3.2.1, and had a major function of task 4.2 that will lower over the reminder of the project.
Requested EU contribution		209.860,00	

### Partner 8. MfN

	Partner 8. MfN												
Work Package	Item description	Amount (€)	Explanations										
WP1-WP6	Personnel costs	1.125,00	0.25 PMs for scientific coordinator Jana Hoffmann										
	Indirect costs	78,75	7% reimbursement rate x personnel costs.										
WP2	Other direct costs												
WP3	Other direct costs	1/4 / 44	Travel costs for pro-iBiosphere Management Meeting, Leiden, 15th February 2013										
WP4	Other direct costs												
WP5	Other direct costs												
WP6													
WP2-WP6	Indirect costs	55,86	7% reimbursement rate x total direct costs.										









	Partner 8. MfN												
Work Package	Item description	Amount (€)	Explanations										
Subtotal used during Sept 2012 – Feb. 2013		6.795,20											
Subtotal used during March – May 2013		2.057,55											
Total used		8.852,75											
Percentage of contribution used		13,41%											
Requested EU contribution		65.996,00											







### Annex 2. Overview of person months consumed

# Table 2. Description of person months consumed per partner (period: 01 March to 31 May 2013)

#### Partner 1. Naturalis

Work Package		WP1			W	P2		W	Р3	W	/P4	\	WP5			WF	<b>'</b> 6	
Task	T1.1	T1.2	T1.4	T2.1	T2.2	T2.3	T2.4	T3.1	T3.2	T4.1	T4.2	T5.1	T5.2	T5.3	T6.1	T6.2	T6.3	T6.4
Contractual PM (whole project period)		2.75	0.5	1.0	0.5	0.5	0.25	4.0	1.0	1.5	1.5	0.2	0.25	0.5	6	1	1	1
Used PM period: 01 March 2013 - 31 May 2013		0.18	0.03	0.07	0.13	-	-	0.59	-	-	-	0.06	0.04	-	0.8	-	-	-
Used PM period Sept 2012 – February 2013	1.76	0.55	0.1	1.05	0.54	0.66		1.08	0.47	0.1	0.1	0.36	0.36		0.33	0.1	0.06	-
Total used in the three reporting periods	2.47	0.73	0.13	1.12	0.67	0.66		1.67	0.47	0.1	0.1	0.42	0.4		1.13	0.1	0.06	

#### Partner 2. NBGB

Work Package	WP1	WP2 WP3 WP5					WP6		
Task	T1.4	T2.1	T2.2	T2.3	T2.4	T3.1	T5.2	T5.3	T6.3
Contractual PM (whole project period)	0.5	0.5	0.5	4	0.25	0.5	0.25	0.5	1.0
Subtotal used during period Sept 2012 – February 2013	0.075			2.85				0.075	
Subtotal used during period March - May 2013	0.15			1.05		0.15		0.075	0.075
Total used	0.225			3.9		0.15		0.15	0.075







#### Partner 3. FUB-BGBM

Work Package	WP1	W	'P2		V	/P3		WP4	WP5			WP6	
Task	T1.4	T2.1	T2.4	T3.1	T3.2	T3.3	T4.1	T4.2	T5.2	T5.3	T6.1	T6.2	T6.3
Contractual PM (whole project period)	0.5	0.5	0.25	4	4	3	6	2	0.25	0.5	1	1	1
Subtotal used during period Sept 2012 – February 2013	0.50	0.26		3.45			2.47		0.09				
Subtotal used during period March - April 2013		0.02		0.91			2.25		0.02				
Total used	0.50	0.28		4.36			4.72		0.11				

### Partner 4. Pensoft

Work Package	WP1		WP2	WP2			WP4		WP5			WP6		
Task	T1.3	T1.4	T2.1	T2.4	T3.2	T3.3	T4.1	T4.2	T5.1	T5.2	T5.3	T6.1	T6.2	T6.3
Contractual PM (whole project period)	1	0.5	2.5	0.25	0.5	2.5	4	3	5	0.25	0.5	1	1	1
Subtotal used during period Sept 2012 – February 2013	0.84	0.19	0.76		0.05	0.46	0.73	0.65	4.39	0.16	0.15			0.10
Subtotal used during period March - May 2013		0.10	0.18	0.1		0.30	0.50	0.40	0.12					
Total used	0.84	0.29	0.94	0.1	0.05	0.76	1.23	1.05	4.51	0.16	0.15			0.10

### Partner 5. SIGMA

Work Package	WP1	WP5	WP6		
Task	T1.4	T5.1	T5.3	T6.3	
Contractual PM	1.5	2	2	4	3.5







Work Package	WP1	WP5			WP6
Task	T1.4	T5.1	T5.2	T5.3	T6.3
(whole project period)					
Subtotal used during period Sept 2012 – February 2013	0.6	1.6	0.5	0	1.5
Subtotal used during period March - April 2013	0.2	0.4	0.2	0	0.2
Total used	0.8	2.0	0.7	0	1.7

#### Partner 6. RBGK

Work Package	WP1			WP2		W	′P3	WF	P4	W	P5		W	′P6	
Task	T1.4	T2.1	T2.2	T2.3	T2.4	T3.1	T3.2	T4.1	T4.2	T5.2	T5.3	T6.1	T6.2	T6.3	T6.4
Contractual PM (whole project period)	0.5	0.25	3.0	0.25	0.25	0.5	0.5	1.0	1.0	0.25	0.5	1.0	6.0	1.0	6.0
Used PM period: 01 December 2012 – 28 February 2013	0.35	1.63	0.54	0.06	0	0.6	0.06	0.2	0	0	0	0.9	0	0	0.75
Used PM period: March- April. 2013	0.05	0	1.0	0	0	0.05	0	0.25	0	0	0	0.1	0.25	0	0
Total used in the two reporting periods	0.4	1.63	1.54	0.06	0	0.65	0.06	0.45	0	0	0	1	0.25	0	0.75

### Partner 7. Plazi

Work Package	V	/P1	W	'P2	V	/P3	WP4		WP5			WP6	
Task	T1.3	T1.4	T2.1	T2.4	T3.2	T3.3	T4.2	T5.1	T5.2	T5.3	T6.1	T6.2	T6.3
Contractual PM (whole project period)		0.5	2,5	2	3	1	3	3	0.3	0.5	1	1	1
Subtotal used during period Sept 2012 –	0.4	0.7	0.6	0.3	1.6	0.3	0.7	0.2	0.1	0	0	0	0









Work Package	WP1		WP2		WP3		WP4	WP5		WP6			
Task	T1.3	T1.4	T2.1	T2.4	T3.2	T3.3	T4.2	T5.1	T5.2	T5.3	T6.1	T6.2	T6.3
February 2013													
Subtotal used during period March - April 2013	0.2	0.2	1.2	0.3	0.7	0.1	2	0.1	0	0	0.1	0	0.1
Total used	0.6	0.9	1.8	2.6	2.3	0.4	2.7	0.3	0.1	0	0.1	0	0.1

### Partner 8. MfN

Work Package	WP1		P2	WP	W	P5	WP6
Task	T1.4	T2.1	T2.4	T3.3	T5.2	T5.3	T6.3
Contractual PM (whole project period)	0.5	0.5	0.25	5.0	0.25	0.5	1.0
Subtotal used during period Sept 2012 – February 2013				0.7	0.02		
Subtotal used during period March - April 2013				0.25			
Total used				0.95	0.02		