

# Executive summary

## Progress report

July-September 2006

### Species and Specimen Thematic Network



As usual, three types of activities were conducted this quarter:

- a. Planning.
- b. Product development.
- c. Training and outreach.

a. Planning

Besides operational planning activities with different actors such as INBio staff, consortium members, IEC, and IABIN's Secretariat, the key planning activity was of technical nature, namely, organizing the SSTN Technical Workshop. Because this workshop involved specialists on information at the specimen and at the species level, it was particularly challenging to establish a definitive list of participants, the topics to be covered, and logistics aspects. Besides, a particular effort was made to be as inclusive as possible. Representatives of focal points, the IEC, other thematic networks, GBIF, ENBI, the UNESCO Chair of Biodiversity Informatics, IABIN's Secretariat and all members of the SSTN consortium were invited. An executive summary of the event is included at the end of this report. All materials used in the presentations, as well as minutes and produced documents are available at

[http://www.inbio.ac.cr/taller\\_iabin](http://www.inbio.ac.cr/taller_iabin).

Finally, other technical planning activities included weekly meetings with the software development team and local and international taxonomists.

b. Product development

Product development activities focused on finishing up the analysis documents for the workshop, coordinating and conducting the technical discussions around them during the workshop, updating the documents according to the recommendations

given by workshop participants, and note withstanding, developing the first prototype of the integrated access portal for species and specimen level information (IAP).

The following are the main products obtained (a number in parenthesis indicates the degree of progress with respect to the final product that should be obtained at the end of the first year).

1. User Requirements Analysis document (100%).
2. Integrated Access Portal for Species and Specimen Level Information (IAP) analysis document (75%).
3. Data Capture and Management System (DACAMS) analysis document. (80%).
4. Information Use Policies document (100%, Spanish translation pending)".
5. Call for Specimen Data Digitization Proposals document (100%).
6. First prototype of the IAP (20%).

It important to note that a very important standard that has been under development since early this year was presented in the workshop and received not only total support, but also, very important suggestions that have already been incorporated into the standard. The product is called *Plinian Core 1.0*, a proposal developed jointly by the Spanish GBIF node and the Costa Rican GBIF node. It aims at becoming a world-wide standard for species level information. Analogously to Darwin Core, which has become a standard at the specimen level, the Plinian Core establishes a standard that will allow the SSTN to integrate distributed information in data bases in the Americas, through protocols developed by GBIF and other initiatives, and tools such as the IAP developed by the SSTN. An updated document that describes the Plinian Core 1.0 can be found at [http://www.inbio.ac.cr/taller\\_iabin/pdf/analisis-requerimientosl-portal-de-acceso-integrado\(draft-v.2\).pdf](http://www.inbio.ac.cr/taller_iabin/pdf/analisis-requerimientosl-portal-de-acceso-integrado(draft-v.2).pdf)

c. Training and outreach

The following were training and/or outreach activities conducted in connection with other initiatives:

1. Dr. Mata received funding from GBIF to attend, as head of the Costa Rican delegation, the 13<sup>th</sup> Governing Board meeting of GBIF in Iquitos, Perú. This meeting took place on the third quarter of the year (first week of October) and

- had strong participation of representatives from Latin America, which presented an important opportunity to coordinate collaborations with other countries. In the next progress report we present fruitful results of this participation.
2. The implementation of a GBIF-funded mentoring program in Biodiversity Informatics with the Peruvian GBIF node was concluded. This program included a first workshop in Costa Rica and a larger one in Peru. One of the most important topics discussed was “development of biodiversity information networks”, for which the SSTN and IABIN case studies were presented. The workshop in Costa Rica was conducted in May 29 – June 2. The workshop in Peru, took place in July 10-14. Ninety-two people, from two Peruvian biodiversity information networks, now have knowledge about biodiversity informatics, IABIN standards, protocols and future tools, and were motivated to both, use those standards and join IABIN.
  3. Four professors associated with the UNESCO Chair of Biodiversity Informatics from the Costa Rica Institute of Technology and four graduate students of that program were invited to participate during the first day (28th of August) of the Technical Workshop in Costa Rica. The goal was to update them and get them interested in getting involved in future software developments of the SSTN and IABIN.

Finally, recommendations from the technical meeting in Washington DC were implemented to improve the graphical design of the SSTN communication and cooperative work portal, which we expect to become operational in October.

## Executive Summary

# Species and Specimen Thematic Network (SSTN) Technical Workshop

Santo Domingo de Heredia, Costa Rica

*August 28 – September 01, 2006*

## 1. Antecedents

IABIN encompasses six thematic networks: the species and specimen (SSTN), ecosystems (ETN), invasive species (ISTN), pollinator (PTN), geospatial (GTN), and protected areas (PATN) networks.

The SSTN started its work in January 2006. Methodologically speaking, it has approached the challenge of achieving its goals from an information systems development perspective. Thus, during the first months, it has focused on defining several documents that will be the basis for the development of the two critical information systems: the integrated access portal for species and specimen level information (IAP) and the data capture and management system (DACAMS). Besides, two consultants were hired to investigate and write a document on “Information Use Policies”, which, as its name indicates, should be the basis to establish information systems that promote wide use, appropriate acknowledgement of contributions of data providers and trust on data quality and adequate use of the information served by the SSTN.

The next step in the implementation of the SSTN was the execution of the Technical Workshop. Its main goal was to discuss the IAP and DACAMS analysis document with a wider technical audience, improve them so that they could be submitted to the IEC (IABIN Executive Committee), IABIN focal points and IABIN Secretariat for political and technical approval. As these documents make up the “blue prints” of the information systems to be developed, they will be the obligatory reference for their implementation in 2007 and 2008.

## 2. Expected results

The following were the expected results of the workshop

- a. A critical mass of experts established to support, as Technical Advisory Group (TAG), the development of the IAP and DACAMS.
- b. Analysis and design document for the IAP discussed and improved.
- c. Analysis and design document for the DACAMS discussed and improved.
- d. Information Use Policies document discussed and improved.
- e. Call for Specimen Data Digitization Proposals discussed and improved.

### 3. List of participants

More than thirty people actively participated during five days of the workshop. On the first day, additional participants were invited to learn about and discuss the expert presentations about biodiversity information standards, protocols and tools (see workshop program in section 5 of this document).

The audience included IABIN focal points (from Uruguay, Chile and Costa Rica), representatives from other IABIN thematic networks, international experts (Spain and USA) members of the SSTN consortium, one IEC member and one representative from IABIN Secretariat.

Name	Institution	Capacity
Abreu, Vincent	IABIN Ecosystem and Geospatial thematic networks	Coordinator of both networks
Aguilar, Róger	INBio, Costa Rica	Speaker, technical staff of SSTN
Avilés, Reinaldo	CONAMA, Chile	Representative of focal point
Beltrán Javier	Consultant, Argentina	SSTN consortium member
Cascante, Alfredo	Nacional Museum, Costa Rica	MNCR representative
Clavijo, José	AndinoNet	AndinoNet coordinator
Correa, Mireya	Mesoamerican and Caribbean Herbaria Network, Panamá	SSTN consortium member
Correa, Pedro	University of Sao Paulo, Brazil	Pollinator thematic network representative
Cuadra, José Miguel	INBio, Costa Rica	Speaker, SSTN technical staff
De la Torre, Javier	Natural Sciences National Museum, Spain	Speaker, invited technical expert
Espinoza, José	Nature Serve, EE.UU.	SSTN consortium member
Garita César	UNESCO Chair of Biodiversity Informatics, Costa Rica	UNESCO Chair of Biodiversity Informatics chair holder
González, Francisco	Ministry of the Environment and Energy, Costa Rica	Focal point, member of IEC
Gutiérrez, Jaime	INBio, Costa Rica	SSTN technical staff
Hernández, Diana	CONABIO, México	CONABIO representative
Lizarralde, Mercedes	National University of Tucuman, Argentina	UNT representative
Mata, Erick	INBio, Costa Rica	Speaker, SSTN coordinator
Mora, María	INBio, Costa Rica	Speaker, SSTN technical staff
Muniz, Pablo	Oceanographic Institute, Uruguay	Oceanographic Institute representative
Murillo, Bernal	INBio, Costa Rica	SSTN technical staff
Pineda, Cecilia	National Museum, Costa Rica	MNCR representative
Quesada, Carmen	GBIF-Spain	Invited scientific expert
Quirós, Sandra	Organization of Tropical Studies, Costa Rica	OTS representative
Ramírez, Boris	IABIN Secretariat	Speaker
Saraiva, Antonio	University of Sao Paulo, Brazil	Pollinator thematic network representative
Simpson, Annie	NBII	I3N representative
Suárez, Ángela	Alexander von Humboldt Institute, Colombia	SSTN consortium member
Ugalde, Jesús	INBio, Costa Rica	SSTN scientific staff
Ulate, William	INBio, Costa Rica	Speaker, technical staff of SSTN
Vargas, Manuel	INBio, Costa Rica	Speaker, technical staff of SSTN
Wieczorec, John	U.C. Bekeley, USA	Speaker, invited technical expert

### 4. Conclusions and Recommendations

All the expected results from the workshop were attained, namely, a Technical Advisory Group was established, the analysis and design documents of the IAP and DACAMS were discussed and improved, as well as the Information Use Policies and Call for Specimen and Specimen Data Digitization Call for Proposals documents.

Concerning the Technical Advisory Group, it was established that the collaboration mechanism would be the SSTN portal. All members of the TAG will have access to draft documents and be able to make suggestions before they are made available to the general public in their final form.

With respect to the the analysis and design documents of the IAP and DACAMS, critical use cases were selected, discussed, and improved; later, technical staff from INBio updated them and made them public at:

[http://www.inbio.ac.cr/taller\\_iabin/](http://www.inbio.ac.cr/taller_iabin/) .

This web site includes the minutes of the parallel session where specific use cases were discussed (to access them, click on the boxes that correspond to those sessions in the workshop program). The Plinian Core was discussed and supported as the standard to share species level information<sup>1</sup>. Besides, use cases of the IAP were prioritized in three main groups, as is indicated in

[http://www.inbio.ac.cr/taller\\_iabin/pdf/priorizacion-casos-uso.pdf](http://www.inbio.ac.cr/taller_iabin/pdf/priorizacion-casos-uso.pdf)

Briefly, the following are the three groups of case uses established:

1. As first priority, it was indicated to include: search by scientific and vernacular name, search by geographic region, by uses, through images, advanced search, map production, profile administration, user-defined personalization, and feedback about access.
2. In second place, come all navigations, search by indicators, usage statistics, portal configuration, and thematic portal generation.
3. The lowest priority was assigned to metadata and providers list in a thematic portal.

Concerning, Information Use Policies, many observations were made, especially, vis a viz making more concrete recommendations to orient data providers and users of the information served by the SSTN. Besides, it was indicated that those policies should be applied to all IABIN thematic networks. A definitive document was presented by the consultants a week after the workshop took place and is been translated to English.








Finally, for the Specimen Data Digitization Call for Proposals document, the following recommendations were made:

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<sup>1</sup> Ver definición actual del Plinian Core en la página 21 de [http://www.inbio.ac.cr/taller\\_iabin/pdf/analisis-requerimientosl-portal-de-acceso-integrado\(draft-v.2\).pdf](http://www.inbio.ac.cr/taller_iabin/pdf/analisis-requerimientosl-portal-de-acceso-integrado(draft-v.2).pdf)

1. Do not restrict the taxonomic groups, let proponents argue about the importance of their proposed groups digital data.
2. Give priority to proposals that fill information gaps.
3. Give priority to data of specimens that have already been collected rather than support field work to collect new data.
4. Give priority to proposals in which the geographic scope is ample or several data providers are involved, in order to be more cost-effective.

## 5. Workshop Program

Hora	Monday	Tuesday	Wednesday	Thursday	Friday
8.00	Registration	<b>User Requirement Analysis</b> <i>William Ulate</i>		<b>Plenary session</b> <b>IAP System Analysis</b>  <i>Rapporteurs and</i> <i>Erick Mata</i>	Transportation to INBioParque
8.30	<b>Welcome</b> <i>Erick Mata</i>				<b>Development Methodology to be Used in the Workshop</b> <i>María Mora</i>
9.00	<b>General Introduction to the SSTN</b> <i>Erick Mata</i>	<b>The Plinian Core</b> <i>María Mora</i>			
9.30					
10.15		<b>The Plinian Core</b> (continuación) <i>María Mora</i>			
10.30	<b>Introduction to Initiatives, Standards and Tools</b> IST I <i>William Ulate</i>				
11.00	IST II				
11.30	<b>Schemes and Standard Protocols</b> (Darwin Core, DiGIR) <i>John Wiczorek</i>				
12.00					
12.30					
1.00		<b>Introduction to the IAP</b> <i>María Mora</i>			
1.30	IST III				<b>Case Uses Priorization</b> <i>María Mora</i>
2.00	<b>Standards and y Tools in Biocase</b> (TAPIR, PyWrapper and OGC) <i>Javier de la Torre</i>	<b>System Architecture</b> <i>José Cuadra</i>			
2.30	IST IV				<b>IAP</b> <b>System</b> <b>Analysis</b>
3.00	<b>Tools and Networks</b> (MaNIS/ORNIS, Biogeomancer) <i>John Wiczorek</i>				
3.30					
4.00	<b>Information Use Policies for the SSTN</b> <i>Javier Beltrán</i>				
4.30					
5.00					
5.30					
6.00	Consortium meeting REyE	Technical staff meeting	Technical staff meeting	Technical staff meeting	
6.30					
7.00	Consortium member dinner				
7.30					Transportation to hotel



## 6. Workshop Participant's Evaluation

A questionnaire was applied to all participants on the last session of the workshop. In general, the results are very satisfactory. The following charts depict the answers given to each question.

