



February 21, 2011

**TO:** The World Bank

**FROM:** GS/OAS

**RE:** **12th Semester Report – Period:** July- December 2010  
Building the Inter-American Biodiversity Information Network (IABIN)

## 1. SUMMARY AND IABIN PROJECT MILESTONES BY COMPONENT

In the second semester of 2010, the GEF “Building IABIN” project continued accelerated progress compared to previous project years. Disbursements were in line with the first semester of 2010 and higher than previous semesters given that (i) TNs and the Catalogue Agreements have advanced to the point where the data is available to be used by other TNs and other Networks, (ii) RfPs for data content grants were active in all 5 TNs and the Catalog and a last RfP was recently advertised, (iii) data content grants funded or in preparation have reached 128, (iv) four of the six grants for the development of value added tools under Component #3 have been completed (v) grants awarded under the Catalog to develop web services under most TNs are in progress (vi) partnerships and fundraising efforts started to nurture potential partnerships based on proposals written by the Vision/MTR (Mid-Term Review) and fundraising consultant, as well as individual Thematic Networks.

The major challenges expected in the last Semester of the project will be to (i) promote the sustainability of IABIN by preparation of several fundraising proposals and migrating IABIN technology to more sustainable hosting solutions (ii) set the vision for IABIN after the GEF Project and formulate a project profile for the GEF 2 project (iii) continue facilitating the work of the CIs and interoperability of data across the Thematic Networks and IABIN Catalogue (iv) complete, make available and integrate the 128 data content creation grants, (v) integrate Component #3 “Information Tools for Decision Making” into TNs and Catalogue, (vi) improve the IABIN portal to make it more functional and user friendly (vii) place IABIN thematic network data and data content grant data on a geospatial platform with Data Basin.

The IABIN Project is helping IABIN to position itself by building an important hemispheric information network and forging partnerships between Government agencies, NGOs, academic institutions, and museums that house biological and geospatial information. The project enters its final six months of implementation in January 2011. Following a one-year extension granted by the GEF and World Bank, the project is on track to finalize both planned project activities and disbursements in June 2011. Finalization of Components 2 and 3 will proceed at a rapid pace in 2011, and both IABIN’s data holdings and available tools to visualize and utilize those data holdings are expected to be complete by June 2011. The project is foreseen to be completed on time given that: (i) TNs have completed their work on standards and protocols, and most have

fully implemented Component 1 funds for data digitization and organization tools (ii) at least 60 Component 2 data content grants are now complete and nearly all remaining grants will submit their final products in the next 3 months (iii) the IABIN Catalogue has implemented grants for each TN to develop web services, metadata and other interoperability objectives, for completion in the first semester of 2011 (iv) 4 out of 6 value added tools grants from Component 3 have been completed, and (v) outreach and fundraising efforts will start to nurture potential partnerships based on proposals written by the Vision/MTR/ and fundraising consultant, and the new IABIN Coordinator.

### **IABIN Project Milestones for July - December 2010**

In the second half of 2010, IABIN made progress on a number of fronts:

- 128 (average 10k) data content creation grants were awarded or are in process between 2006-2010. Nearly half of them half of them have been completed.
- The IABIN Council and Executive Committee (IEC) members were kept informed of project execution and network activities through Semester and Workshop Reports, and by keeping IABIN.net and <http://www.oas.org/dsd/Bio-Proj-Sum.htm> up-to-date.
- IABIN webpage. [www.iabin.net](http://www.iabin.net) is operational in Spanish and English and the main server continues to operate with extensive co financing from the University of Tennessee under the management of USGS/NBII.
- 4 projects under Component 3: Information Products for Decision Making are completed and two projects are well advanced and should be completed in the upcoming months (see <http://www.oas.org/dsd/IABIN/Component3.htm>).
- All TNs have developed a training module, with many training materials in both English and Spanish. PATN and PTN will develop the training materials in Portuguese.

## **2. COMPONENTS 1 AND 2 – INTEROPERABILITY AND ACCESS TO DATA AND DATA CONTENT CREATION<sup>1</sup>**

### **2.1. IABIN Catalog Service**

The following major tasks and deliverables related to the IABIN Catalog have been accomplished or are near completion.

#### **Accomplishments:**

The IABIN Catalog, initially released in July 2008, is now active on IABIN.net, as well as [iabin-catalog.nbii.gov](http://iabin-catalog.nbii.gov). The IABIN Catalog is currently searching approximately 254,000 biological databases, web-sites, publications, and images relevant to the Americas. Additional content is being added monthly as relevant sources are identified.

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<sup>1</sup> Note: These 2 components have been merged in this Semester Report due to the interoperable nature of these 2 components at this time in the project


Development during the second semester of 2010 focused on web services for the IABIN Multilingual Thesaurus, which will allow users to retrieve records in Spanish, Portuguese and English based on a single query. NBII, the Catalog CI, also began planning for an improved version of the Catalog based on the Vivisimo search technology NBII has implemented for use in other applications.

The IABIN Catalog Consultant, Simon Aristeguieta-Trillos, was hired in September and has taken an active role in reviewing Component 2 grants, reviewing the IABIN.net website, working with Component 3 tools and other technical issues within the network.

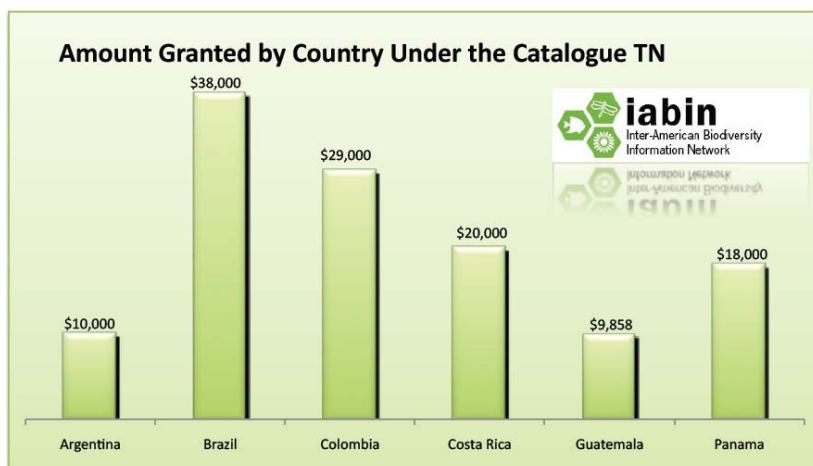
Catalog developments include:

- IABIN Technical Working Group meeting was held in Knoxville TN in July 2010. Over 25 attendees from IABIN Thematic Networks, Informatics Experts, and other individuals attended the workshop. Topics included: IABIN Standards, pilot projects, sustainability, IABIN Infrastructure, Data Integration across TNs, and TN Content Grants.
- Web services to allow remote access of the IABIN Trilingual Thesaurus: these will permit IABIN TNs and partners to utilize the thesaurus for other search and organization functions and make it available to the broader conservation and development community. For example, terminology (i.e. invasive species) is referred to through a number of different and similar terms throughout the Americas. Sometimes invasive species is referred to as “non-native”, “alien”, or “introduced” species. By incorporating a thesauri-based Web Service, the IABIN Catalog will be able to provide more accurate search results to its users. The planned Web Service will include three thesauri, one each in English, Spanish, and Portuguese. By incorporating these thesauri, users will be able to retrieve related results regardless of the language of the search term entered.
- NBII is investigating migration of the IABIN Catalog to the Vivisimo search technology it currently uses for its own search engine. This technology includes a number of benefits such as improved clustering of search results and an easy user interface. Additional investigation into this technology’s compatibility with IABIN systems and possible implementation will take place in the second semester of 2010.
- Crawling of IABIN relevant content continues with integration of new content from IABIN partners, NBII and related initiatives on a regular basis.
- Continued revisions to include as much metadata as possible related to Geographic Location, Resource Type, and IABIN TN properties. This required considerable processing and reprocessing of IABIN content to insure accurate and high quality results would occur.
- Continued hosting and resolving issues, including Content Updates, to the IABIN.net Joomla based website hosted at the University of Tennessee. Began migration of IABIN.net to outside hosting service
- The IABIN Catalog Consultant, SAIC, completed development of the IABIN Catalog Search System, Version 1.x, and the merger and integration of the IABIN Multilingual Thesaurus. The IABIN Thesaurus was delivered to the Catalog CI, USGS NBII, for permanent hosting and operation. The Thesaurus Is scheduled for integration into the IABIN Catalog Search System by the end of March 2011.

Complete list of Data Content Grants awarded under the IABIN Catalog:

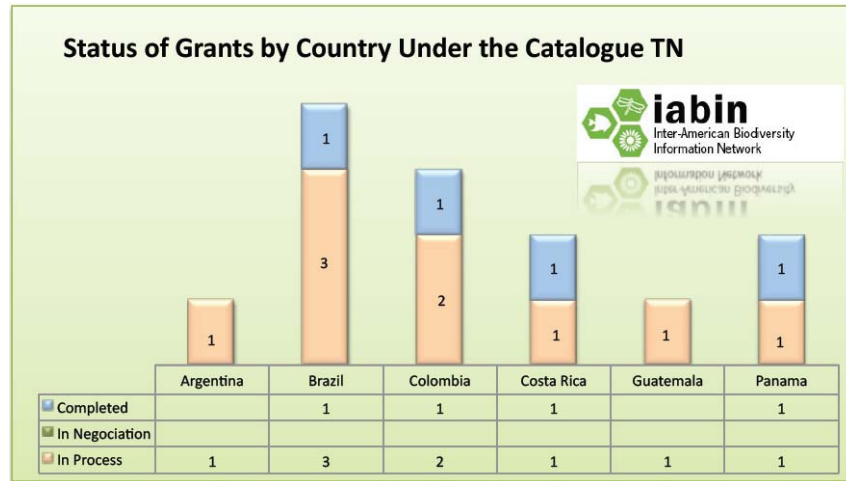
Grants Summary Catalogue TN		
Country	Institution	Amount (USD)
Argentina	Universidad Tecnologica Nacional (UTN)	\$ 7,500.00
Brazil	The Horus Institute for Environmental Conservation and Development	\$ 8,000.00
Brazil	Universidade de Sao Paulo - Images	\$ 10,000.00
Brazil	Universidade de Sao Paulo - References	\$ 10,000.00
Brazil	Universidade de Sao Paulo - WebServices	\$ 10,000.00
Colombia	International Center for Tropical Agriculture (CIAT)	\$ 10,000.00
Colombia	Corporación Selva Humeda	\$ 9,000.00
Colombia	Instituto Amazónico de Investigaciones Científicas (SINCHI)	\$ 10,000.00
Costa Rica	Instituto Nacional de Biodiversidad (INBio) - Webservices	\$ 10,000.00
Costa Rica	Organización para Estudios Tropicales (OET)	\$ 10,000.00
Guatemala	Comision Nacional de Areas Protegidas (CONAP)	\$ 9,858.00
Panama	Fundación Ciudad del Saber	\$ 10,000.00
Panama	Smithsonian Tropical Research Institute (STRI)	\$ 8,000.00

**Status of Data Content Grants awarded under the IABIN Catalog:**



Several IABIN Catalog Content grants were awarded this past semester. These focused primarily on supporting TN and/or data provider's tools and methods to better enable sharing of data to the IABIN Catalog. Highlights from these include: Over 4,000 images were delivered by STRI related to biodiversity within the region. These images are being made available via the new IABIN Catalog Search system in March 2011. Web-services are being developed and near completion by the USP related to

provided improved access and standards for pollinator specimens and images within the region. USP created IABIN Support FGDC metadata for all pollinator datasets and is creating Dublin Core Metadata for all Data providers within the PTN network. These services were also shared with the SSTN for potential adoption within their systems. All Catalog grants are scheduled for delivery in June 2011.



**Upcoming Efforts:**

- NBII is working with OAS and the Catalog Consultant to migrate the IABIN.net website, as well as the ETN, geospatial and cofinancing sites, from the University of Tennessee to an outside hosting service. The current server at UT has experienced stability problems, including hacking, and significant downtime over the second semester of 2010.
- The IABIN Catalog began piloting a new Catalog Search System. The system is based on Vivisimo Search technology and provides a number of significant improvements including: Topic based queries, automatic preview of content, downloading of results, filtering of content, and improved user analytics. The new Catalog System was piloted beginning in July 2010 through December 2010. The final rollout is scheduled for March 2011.
- NBII will be hosting a Catalog meeting with the developers of this Vivisimo based search tool in late March 2011 in Denver. The meeting will finalize development of this tool, and plan for its continued use and sustainability with the support of NBII and USGS.
- The Catalog is planning a training activity, likely in April/May 2011, to finalize integration of data and web services to the Catalog as well as discuss data and information updating and maintenance processes.

***IABIN Indicators Reporting Table, 2<sup>nd</sup> Semester 2010***

Indicator	Actual— 2nd Semester 2010	Baseline	Last Semester's actual (Jan- Jun10)	Target — 2010	Summary Comments
1. Increase of Visits to the portal of Catalog	1364	200	218	250	Increase in Hits was due to the IABIN Technical Working Group,

					Increased Content, and the IABIN Catalog Content Grants that were awarded.
4. Data and metadata content increase in the Catalog increases:	254,000	150,000	200,000	250,000	Based on conversion to new Catalog Search System (In pilot November/December 2010). Full implementation scheduled for March 2011
5. Number of people trained per year on data creation tools, data quality and use of tools developed by Catalog	25	10/year	0	10/year	IABIN Technical Working Group Meeting, Knoxville TN

## 2.2. Thematic Networks (TNs)

Assuring that biodiversity data from these networks is as accurate as reported is essential given the myriad uses of such data in biological research, conservation assessment and education. Fortunately, the community has actively developed standardized approaches and methods for sharing biodiversity records. However, despite the best efforts of all involved, undocumented problems with geospatial data still persist. Each user therefore must vet records carefully to determine their fitness-for-use: often, a time consuming task. As a result, one of the Component #3 Value added products for decision making grants has been awarded to CIAT Colombia to do data cleansing and georeferencing where lat/long data has not been available, so the point data such as specimen collections can be pinpointed on a map.

### 2.2.1 Species and Specimens TN (SSTN)

As indicated in previous reports, the SSTN finished the execution of all activities corresponding to component 1 (interoperability and data access) in 2008. In addition, it executed the remaining budget according to schedule. As a result, since 2009, INBio fully assumed the cost of maintaining and further enhancing the two developed tools, namely, Ara 2.0, which is the species and specimen information digitization and management tool, and the SSTN portal (version 2.0). In late 2009 and during 2010, as a contribution to the sustainability of the SSTN, INBio has been looking for additional funding to support further development of Ara 2.0., examples of this effort are:

- A \$62,000 grant awarded by CONICIT (Consejo Nacional de Investigación en Ciencia y Tecnología) has been formalized and will cover a period of two years (June, 2010 – May, 2012). The main objective of these funds is to develop the required functionality to migrate its institutional biodiversity system (Atta) to the new tool that results from these enhancements (an “Atta 2.0” based on Ara). Additionally, INBio is using the current updated software to replace the version of the system that is being used at the Entomological Museum of León, Nicaragua.
- From February 15th, 2008 to November 30th, 2010 a project funded by Fundecooperación in Benin and Bhutan allowed the implementation of a portal based on the SSTN portal and minor adjustments to Ara. The approximate amount of the funding invested in Ara was \$20,000 as a result some functionality of the system was improved.

- A pre-proposal presented to the JRS Biodiversity Foundation was selected for the submission of a final proposal and INBio is preparing the final document. The project objective is to enhance Benin national capacity in biodiversity informatics through the establishment of its National Biodiversity Information System based on the SSTN portal and Atta 2.0. Part of the funds will be used to improve the software tools.

Throughout 2010 INBio maintained operation of the SSTN portal, which included the following tasks:

- answering questions from users and data providers,
- making sure the portal was up and running,
- and indexing and re-indexing the databases that data providers make available for the first time or enrich by digitizing more data.

Additionally, an e-learning portal was implemented and six courses related with the use of the SSTN software tools are available at <http://www.inbio.ac.cr/iabin/e-learning>

### SSTN Data Content Grants

Concerning component 2 (creation of data content), INBio supported IABIN with the design of a new call for seed money grant proposals for digitization of specimen and species level information. In addition, progress reports from institutions that are already executing a project through a seed money grant were assessed.

The table below shows the number of records agreed with SSTN Data Content Grantees according to the signed Agreements, however these numbers do not necessarily reflect the number of records indexed in the SSTN portal. The institution names highlighted in red show the records indexed in the period July – December 2010. Moreover, on the second semester of 2010, 324 new specimen records of *Speothos venaticus* (bush dog) gathered by Guillermo Gil from Argentina’s Administración de Parques Nacionales – APN were indexed. These records were assigned to the resource *Speothos venaticus* (Guillermo Gil) of APN and does not appear in the table below.

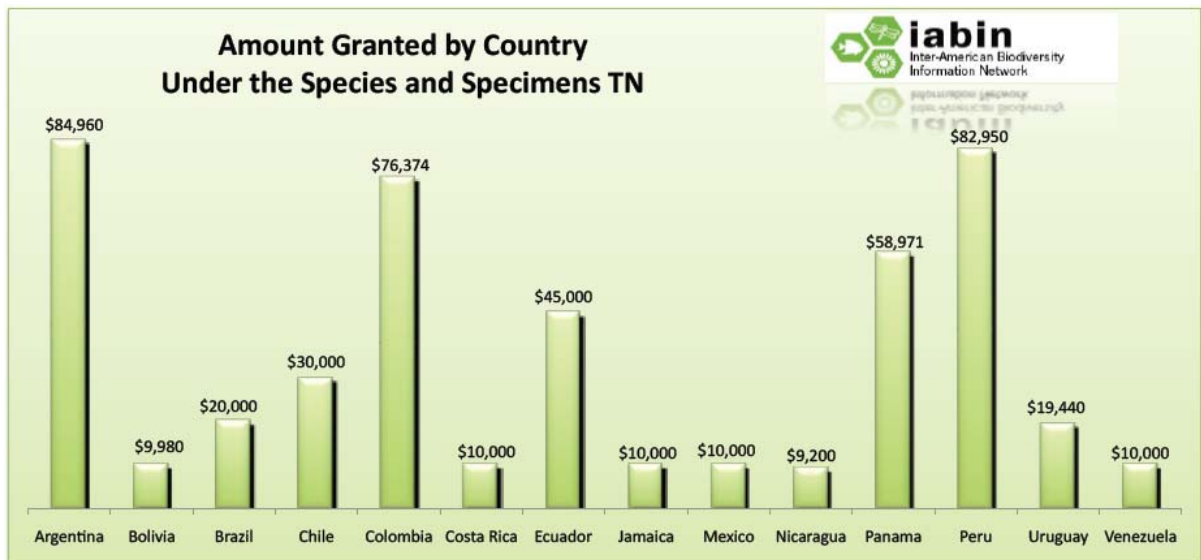
The following table summarizes the SSTN Data Providers as of December 2010:

Institution		Expected # Specimen Records	Expected # Species Records	Specimens Data Providers	Species Data Providers
Administración de Parques Nacionales, Argentina - Algas, Líquenes y Hongos	Species		2,200		1
Administración de Parques Nacionales, Argentina - Aves Acuáticas de Laguna Blanca	Specimens	200,000		1	
Administración de Parques Nacionales, Argentina – Mamíferos de Valor Especial	Specimens	7,062		1	
Administración de Parques Nacionales, Argentina - Vertebrados Patagónico	Specimens	26,835		1	

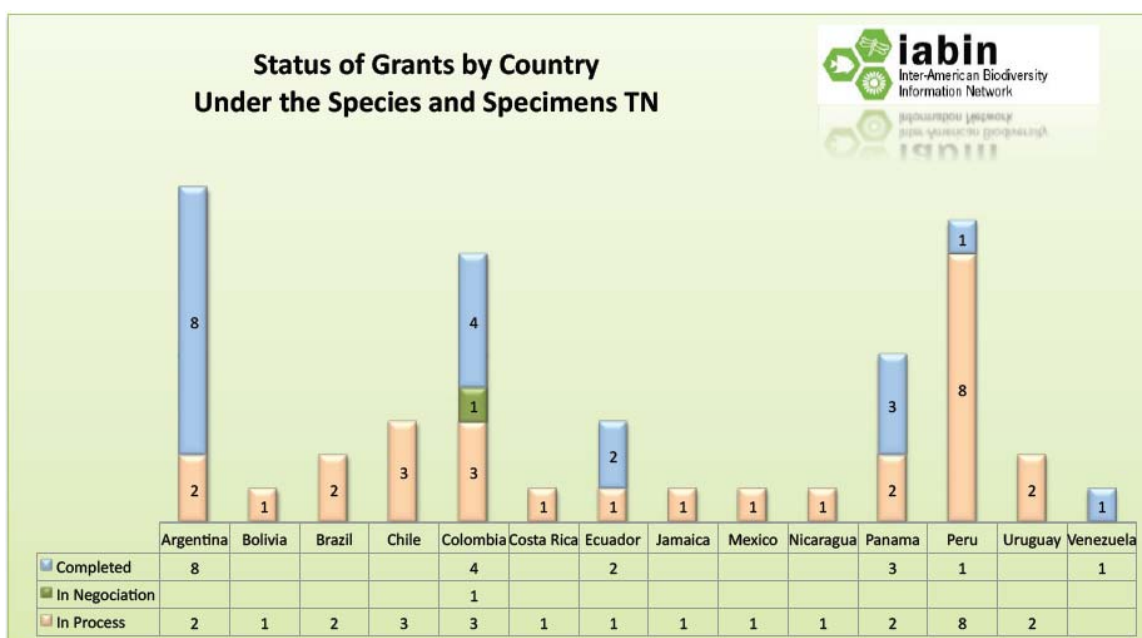
Aves & Conservación (A&C) – BirdLife en Ecuador / Dr. Olaf Jahn	Species		842		1
Aves & Conservación (A&C) – BirdLife en Ecuador / Dr. Olaf Jahn / 3 llamado	Specimens	90,000		1	
Aves & Conservación (A&C) – BirdLife en Ecuador / Olaf Jahn / 5 llamado	Specimens	35,000		1	
Fundación para el Desarrollo Agrario – Universidad Nacional Agraria La Molina	Specimens	64,527		1	
Centro de Ornitología y Biodiversidad – CORBIDI / Thomas Valqui, Pablo Venegas y Manuel Apaza	Species	27,000	1,000	1	1
Universidad Estadual de Campinas Centro Pluridisciplinar de pesquisas químicas, biológicas e agrícolas	Species		1,250		1
CONICET – ARG	Specimens	41,800		1	
Departamento de Biología, Facultad de Química y Biología, Universidad de Santiago de Chile	Specimens	20,756		1	
Departamento de Biología, Facultad de Química y Biología, Universidad de Santiago de Chile	Species		16,158		1
INVMAR, Colombia	Specimens	10,000		1	
Circulo Herpatologico de Panama	Specimens	4,900		1	
Fundacion Miguel Lillo, Argentina	Species	50,000	5,000		1
Fundación Óga - ARG	Specimens	11,500		1	
Fundación Ornitológica Sierra Nevada / Walberto Naranjo	Specimens	400,000		1	
Herbario CPUN de la Universidad Nacional de Cajamarca	Specimens	10,000		1	
Herbario de Panamá, Universidad de Panamá. Briófitos y Líquenes	Specimens	17,000		1	
Herbario de Panamá, Universidad de Panamá. Vasculares	Specimens	28,000		1	
Herbario Nacional Colombiano de la Universidad Nacional de Colombia	Specimens	40,000		1	
Herbarium Arequipense (HUSA) de la Universidad Nacional de San Agustín	Specimens	11,000		1	
Instituto Alexander Von Humboldt (escarabajos coprófagos)	Species		250		1
Instituto de Botánica Darwinion, Argentina	Specimens	40,000		1	
Instituto Nacional de Tecnología Agropecuaria	Species		2,000		1
Herbario Nacional Colombiano de la Universidad Nacional de Colombia	Specimens	72,000		1	
Museo de Historia Natural de la Universidad Nacional Mayor de San Marcos (UNMSM)	Species		164		1
Museo de Historia Natural de la Universidad Nacional Mayor de San Marcos (UNMSM)	Specimens	18,000		1	
Museo de Historia Natural, Universidad Ricardo Palma - PERU	Specimens	11,000		1	
Museo de Historia Natural, Universidad Ricardo Palma - PERU	Species		1,589		1
Universidad Federal de Pernambuco	Specimens	15,000		1	



Museo de Malacología de la Universidad de Panamá (MUMAUP)	Specimens	10,000		1	
Museo del Instituto de Zoología Agrícola (MIZA), Universidad Central de Venezuela	Specimens	20,000		1	
Museo Entomológico León, Nicaragua	Specimens	60,000		1	
Museo Nacional de Costa Rica	Specimens	58,100		1	
Museo Nacional de Historia Natural y Antropología, Uruguay	Species		379		1
Museo Nacional de Historia Natural y Antropología, Uruguay	Specimens	32,000		1	
PRONATURA Veracruz A.C. / Eduardo Martínez	Specimens	18,867		1	
Red Nacional de Jardines Botánicos de Colombia	Species		1,450		1
Sociedad Malacológica de Chile / Sergio Letelier	Specimens	20,000		1	
The Institute Of Jamaica / Elizabeth Morrison and Damian Jackson	Specimens	23,500		1	
Smithsonian Tropical Research Institute	Species		4,000		1
Pontificia Universidad Católica del Ecuador	Specimens	10,000		1	
<b>Total</b>		<b>666,364</b>	<b>33,282</b>	<b>30</b>	<b>13</b>



In terms of the sustainability of IABIN, as described in previous reports, EOL granted us \$22,172 to conduct a feasibility study to implement a regional EOL in Central America. The study has been finished and, hopefully, will result in a proposal to implement a regional EOL in countries where it is technically feasible and politically viable (Panama, Costa Rica, Nicaragua, and El Salvador). Funding for that project will have to be raised but it would result in the generation of thousands of species level records that we will argue should be facilitated by the SSTN as well as EOL.



IABIN Indicators Reporting Table, 2<sup>nd</sup> Semester 2010

Indicator	Actual—2 <sup>nd</sup> semester 2010	Baseline	Last Semester's actual (Jan-Jun 2010)	Target—2010	Summary Comments
1. Increase of Visits to the SSTN portal	2,335 monthly average visits to the page registered in the last 5 months of the year. Portal was out of service for some time in July for migration to other server	667 monthly average visits to the page registered in 2007	3,712 average monthly page visits hits. Portal was out of service for some time in July for migration to other server	5,000 page visits on average per month.	Detailed information available on <a href="http://larus.inbio.ac.cr/awstats/awstats.pl?config=species.iabin.net">http://larus.inbio.ac.cr/awstats/awstats.pl?config=species.iabin.net</a>
4. Data and metadata content increase in the SSTN portal:	<b># Specimen data providers and specimen records:</b> 5 new data suppliers with 6 resources were indexed for a total of 67,712 new specimens' records. 421,207	<b># Specimen data providers and specimen records:</b> 7 data providers with a total of 3 420 718 specimens records by the end of 2007.	<b># Specimen data providers and specimen records:</b> 6 new data suppliers for a total of 311,077 new specimens records.	<b># Specimen data providers and specimen records:</b> 26 data providers for a total 651 177 specimens records projected by 2011	The target for 2010 was exceeded

	<p>new records were added as the result of re-indexation processes.</p> <p><b># Species data providers and species records:</b> data of 2 new species data providers were indexed with 1,718 records;</p>	<p><b># Species data providers and species records:</b> 1 supplier was added to the SSTN with 3 784 records during 2007 in accordance to the report of that year.</p>	<p><b># Species data providers and species records:</b> We worked with 1 provider of species data. however they digitized specimens data reason why that project is not included in this box.</p>	<p><b># Species data providers and species records:</b> 11 data suppliers with a total of 33 282 species records.</p>	<p>In terms of species data the target was not met given (i) the lack of species proposals (ii) and that some of the data providers confused the concepts of specimens and species records</p>
<p>5. Number of people trained per year on data creation tools, data quality and use of tools developed by the SSTN</p>		<p>9 people from 9 Countries were trained during the second semester of 2008 in accordance with the report presented.</p>	<p>3 people from 2 countries trained on Tools developed by SSTN. Damian Jackson (Institute of Jamaica), Carlos Enrique Aparicio and Isidoro Sanchez Vega (University of Cajamarca, Peru)</p>	<p>5 people trained using virtual mechanisms.</p>	.

### 2.2.2 Invasive Species TN (I3N)

#### Objectives

Activities in the second half of 2010 continued to focus on completion of content grant agreements, growing I3N records, and I3N database redesign.

#### Milestones and achievements in the second semester of 2010 (categorized by main subtitles in work plan)

#### Tools and Standards

- The second deliverables were made under a contract on the Redesign and Conversion to Open Source of the I3N Database and completion of the tool is expected in the first semester

of 2011. The new version of the database has become more than a migration to Open Source software for compatibility reasons; it will result in significant improvements to the capacity and types of data that may be managed by I3N users. The tables of data structure have grown from 60 in the previous version to more than 150 in the updated version. The result is a more versatile and robust database that is better capable to manage all of the countries' invasive species information needs.

- Several I3N staff and partners were able to test the new database and web template and provide feedback for improvements. At the end of December nearly all of these improvements had been incorporated and finalized and the migrating of the first two I3N databases (Brazil and Argentina) was being initiated.



### Collaboration and Communications

- In the first week of August the I3N Coordinator and the I3N-Leads from Argentina and Brazil participated in the IABIN Technical Working Group meeting in Knoxville, TN and presented a prototype of the new I3N database.
- In coordination with the IABIN Technical Working Group meeting, I3N held a technical working group meeting that included the I3N-Leads from Argentina, Brazil, and Jamaica, a technical representative from the Global Invasive Species Information Network, partners at the Oak Ridge National Laboratory, and two representatives from the IABIN Catalog.
- In October, the I3N-Leads for Argentina and Brazil participated in the CABI “Mitigating the threats of invasive alien species in the insular Caribbean” strategic planning meeting and represented I3N in advocating for and advising the CABI participant nations in managing information on invasive species. Additionally, the I3N-Lead from Brazil made herself available for mentoring to several nations on the process of drafting and advocating for a national strategy for invasive species.
- The I3N-Lead for Brazil worked with the representatives at Humboldt Institute to mentor them in drafting a national strategy for dealing with invasive species.
- The I3N-Lead from Brazil reviewed the draft national strategy for dealing with invasive species from Uruguay and provided feedback and guidance.
- The I3N community was kept informed via the Web site and the I3N listserv with postings and announcements.
- Countries' additional products and initiatives include: All countries that participate in I3N make their datasets available to the public via the Website. In addition, some countries choose to provide reports, publications, presentations, photographs and other materials of interest to invasive species specialists. Please click on [http://i3n.iabin.net/participants/country\\_contributions.html](http://i3n.iabin.net/participants/country_contributions.html) to access any of these country resources.
- The I3N listserv has been periodically notified by the Jamaica CHM of its online posting of newsletter "Aliens of Xamayca" ([www.jamaicachm.org.jm](http://www.jamaicachm.org.jm) , see Articles). The newsletter is produced by the National Environment and Planning Agency in Jamaica and features introduced species including those that are invasive.

### Project Management

- Each country that actively participates in I3N has one or more organizations, represented by individuals, leading its efforts. These individuals, called I3N Leads or Co-Leads, coordinate I3N activities among the I3N Coordinating Institution, their country's IABIN Focal Point, and data providers. Current active members (18) are (click on country name to see I3N lead information: Argentina, Bahamas, Bolivia, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Jamaica, Mexico, Panama, Paraguay, Peru, USA, Uruguay).

### **Capacity Building**

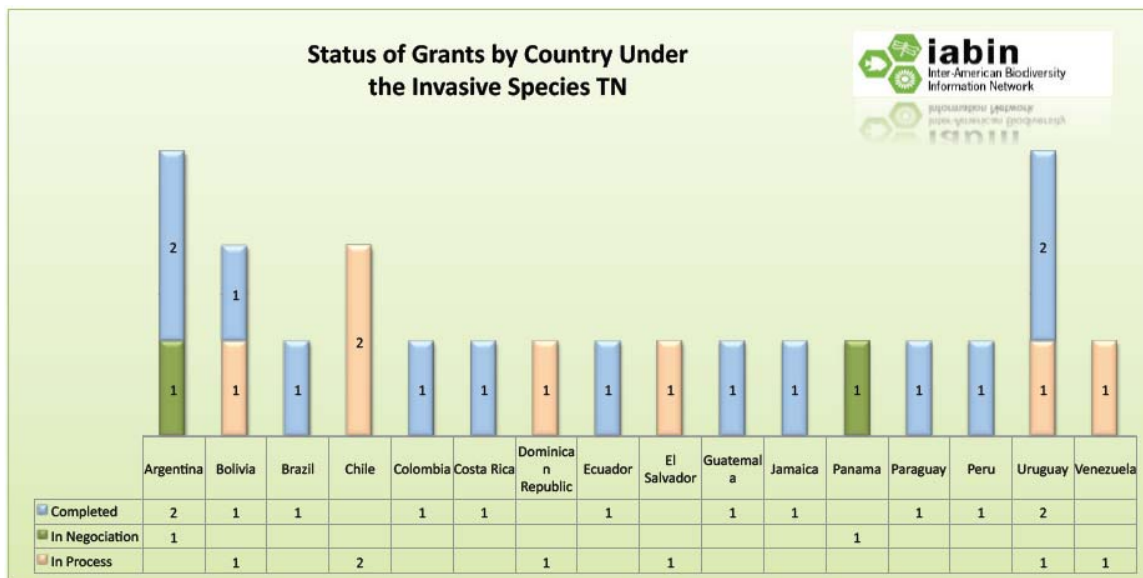
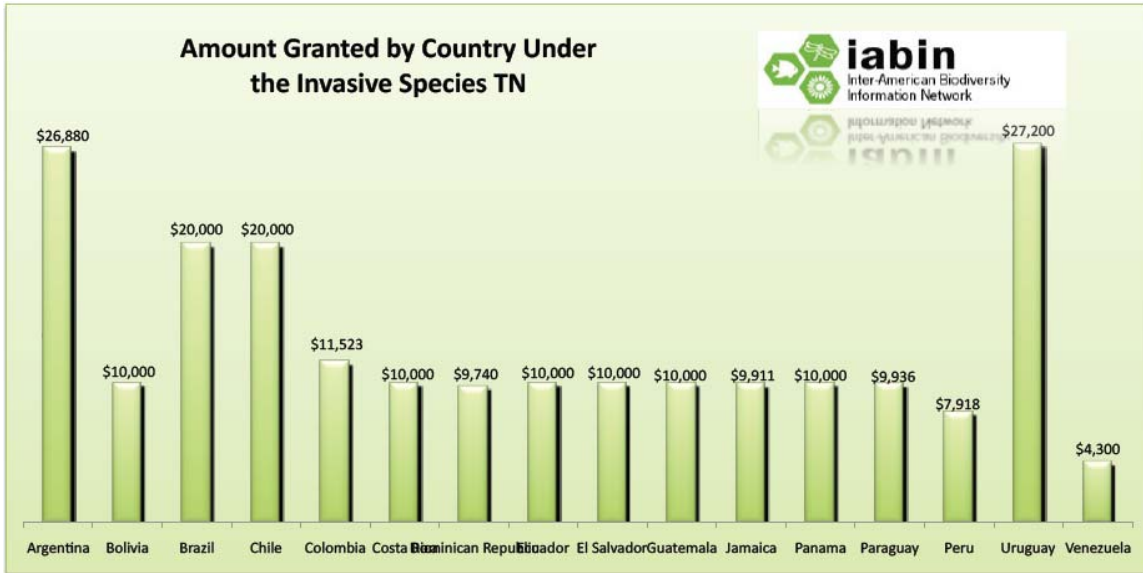
- The I3N Leads from Argentina and Brazil lead a workshop in St. Lucia in October to train representatives from 5 countries on the new open source version of the I3N database and the risk analysis tools. Representatives participated from the Bahamas, Dominican Republic, Jamaica, St. Lucia, and Trinidad and Tobago. This workshop was carried out in cooperation with the CABI/GEF project "Mitigating the threats of invasive alien species in the insular Caribbean".
- A workshop was also carried out by local representatives in the Dominican Republic as part of an on-going content grant.

### **Data Content Grants**


- With funding from the main IABIN project funds I3N was able to advertise for and accept proposals for further content development from Argentina, Brazil, Chile, Panama, and Uruguay. These grants are expected to be completed in the first semester of 2011.
- Other on-going content grants that will conclude in the first semester of 2011 include the Dominican Republic, El Salvador, and Venezuela.
- Ten countries<sup>2</sup> now have their own standardized I3N Web sites based on the I3N Country Web system, and more are under development (click on country name to see country home page): [Argentina](#) | [Bolivia](#) | [Brazil](#) | [Chile](#) | [Colombia](#) | [Costa Rica](#) | [Jamaica](#) | [Paraguay](#) | [Uruguay](#) | [Guatemala](#)

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<sup>2</sup> Ecuador has a country database, but it is currently in transition and is only available in the I3N search engine. Once it has been moved to a new server, it will again be available on-line.



List of Data Content Grants Awarded under I3N:

Grants Summary Invasive Species TN			 iabin Inter-American Biodiversity Information Network
Country	Institution	Amount (USD)	
Argentina	Fundacion Nacional del Sur	\$ 9,780.00	
Argentina	Administración de Parques Nacionales	\$ 10,000.00	
Argentina	Fundacion Universidad Nacional del Sur	\$ 7,100.00	
Bolivia	Universidad Mayor de San Andres - Fundacion para el Desarrollo de la Ecologia	\$ 10,000.00	
Brazil	The Horus Institute for Environmental Conservation and Development	\$ 10,000.00	
Brazil	The Horus Institute for Environmental Conservation and Development	\$ 10,000.00	
Chile	Corporacion Instituto de Ecologia y Biodiversidad	\$ 10,000.00	
Chile	Centro de Estudios Avanzados en Ecologia y Biodiversidad - Pontificia Universidad Catolica de Chile	\$ 10,000.00	
Colombia	Instituto de Investigaciones de Recursos Biológicos Alexander Von Humbolt	\$ 11,523.10	
Costa Rica	Asociación para la Conservación y el Estudio de la Biodiversidad	\$ 10,000.00	
Dominican Republic	Secretaria de Medio Ambiente y Recursos Naturales	\$ 9,740.00	
Ecuador	Corporación Centro de Datos para la Conservación	\$ 10,000.00	
El Salvador	Ministerio de Medio Ambiente y Recursos Naturales	\$ 10,000.00	
Guatemala	Consejo Nacional de Areas Protegidas a Través de la Oficina Técnica de Biodiversidad (OTECBIO)	\$ 10,000.00	
Jamaica	Institute of Jamaica	\$ 9,911.13	
Panama	Instituto de Investigaciones Tropicales	\$ 10,000.00	
Paraguay	Asociación Guyra Paraguay	\$ 9,936.00	
Peru	Universidad Ricardo Palma - Museo de Historia Natural	\$ 7,918.26	
Uruguay	Universidad de la República Oriental del Uruguay - Facultad de Ciencias	\$ 10,000.00	
Uruguay	Universidad de la República Oriental del Uruguay - Facultad de Ciencias	\$ 8,500.00	
Uruguay	Universidad de la Republica Uruguay (UDELAR) - Facultad de Ciencias	\$ 8,700.00	
Venezuela	Universidad Central de Venezuela	\$ 4,300.00	

### IABIN Indicator Measuring Matrix

Indicator	Actual 1— 2nd semester 2010	Baseline	Last Semester's actual (Jan-Jun 2010)	Target — 2010	Summary Comments
1. Increase of Visits to the portal of I3N	2,371	?	2,372	6,000	- 1 visit (0% change): The total visits did not change, but visits from search engines were down and visits from referred pages were up by over 22%. Our bounce rate was also down. Together these statistics show that as our Web site has matured and users who find our information useful are linking to us. The search engine results and bounce rate may be down because their algorithms have improved and they are no longer sending people to our pages who are searching for other information.
4. Data and metadata content increase in the I3N	2,400 (est)	?	2,400 (est)	2,400	Because most of our databases are already on-line we expect to see a maintenance, or small decrease, in the amount of new data over the next couple of semesters. This reflects the fact that the bulk of

increases:					IAS data digitization has already taken place in participating countries.
5. Number of people trained per year on data creation tools, data quality and use of tools developed by I3N	48	?	0	36	Only one training event was held in the second semester of 2010 in St. Lucia. Two other training events were delayed for reasons beyond our control and are planned for Jamaica and the Dominican Republic for spring 2011. A potential additional workshop is being explored in Nicaragua during the first semester of 2011.


### 2.2.3 Ecosystems TN (ETN)

#### 1. Component 1 Interoperability and Access to Data

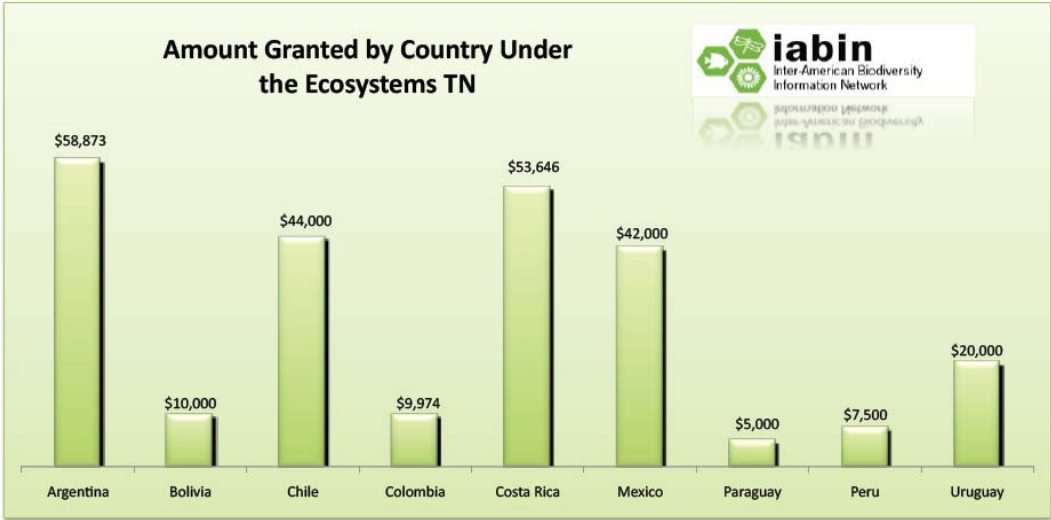
- **New ETN Portal:** The new ETN Portal was implemented in Joomla! The new portal will be on line as soon as the ETN databases are transferred to a new server to be subcontracted by USGS. This will be done during the first semester, 2011.
- **Implementation of Web Services for the ETN Terrestrial Standard Format:** 16 Web Services were created with the idea of transferring to the countries the functionality present in the ETN Portal.
- **Provide technical assistance to data providers and users:** Technical assistance was provided to data Grant holders in Paraguay, México, and Chile. Also migration of Continental and Insular Waters data provided by TNC was carried out.
- **Development of Visualizer by the University of Mississippi with funds provided by TNC/NatureServe and GEF Component 3:** The visualizer allows the user to move back and forth between the Standard Format Database and the maps for each terrestrial ecosystem class. The visualizer is currently at the University of Southern Mississippi and it is in process of being moved to a new server to be provided by USGS. This will be done during the first semester, 2011.

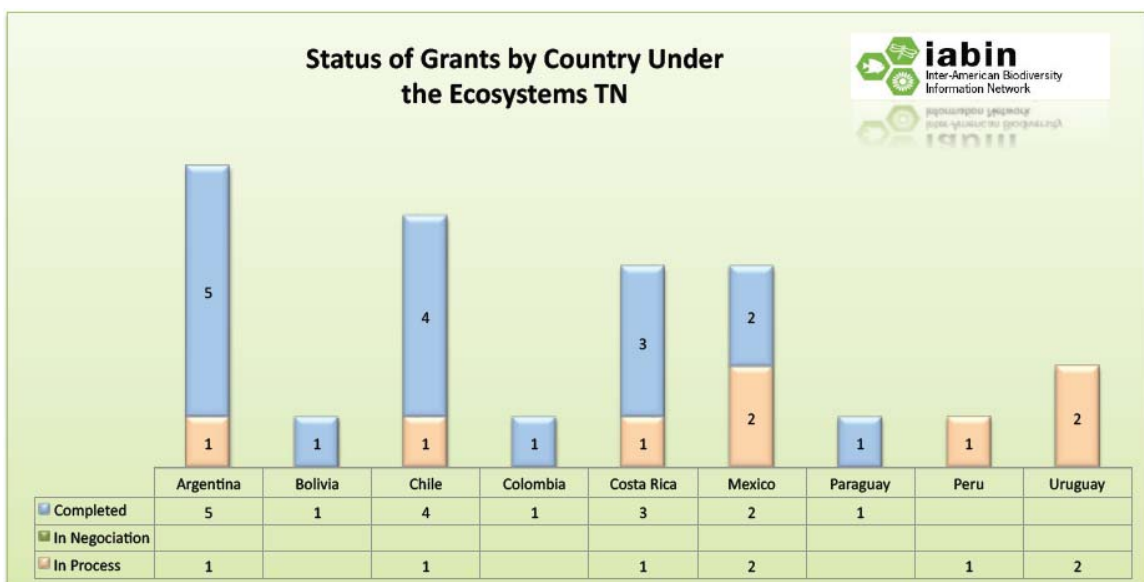
#### 2. Ecosystem (ETN) Data Content Grants

- One grant was awarded in the 2nd Semester of 2010 to Promar Pacifico to systematize the existing cartographic information of environmental and biodiversity layers gathered by different initiatives and institutions in Chile.
- The following is the list of all Data Content Grants awarded under the ETN

Grants Summary Ecosystems TN				
Country	Institution		Amount (USD)	
Uruguay	Dirección Nacional de Medio Ambiente (DINAMA)	\$	10,000.00	
Argentina	Universidad Maimónides - Fundación Felipe Fiorellino	\$	11,500.00	
Argentina	Centro Nacional Patagónico	\$	10,000.00	
Argentina	Museo Argentino de Ciencias Naturales (CONICET)	\$	10,000.00	
Argentina	Centro Nacional Patagónico	\$	10,000.00	







### 3. Data Quality

- A \$20,000 Grant given to NatureServe to monitor data quality continued in operation.

### 4. Sustainability

- Participated in the IT meeting in Knoxville, Tennessee – August 2010.
- Planned the installation of the ETN data, tools and new portal in two servers of opportunity (USGS and NatureServe). This will guarantee that data collected during the IABIN GEF project is available to users. The transfer will take place in the first semester of 2011. This is essential for ETN sustainability.
- Participated in discussion of Component 3 Grants concerning the ETN.
- Coordinated transfer of ETN data to Databasin.

### 5. Indicators

Records in the ETN (Terrestrial Standard Format)

Countries	Records
Reference Classification (NatureServe)	679
Bolivia	547
Brasil	7
Argentina	196
Chile	127
Uruguay	5
Central America	743
Mexico	240
Peru	4
TNC Paraguay	49
<b>Total</b>	<b>2,597</b>

*Note: There are 7 records from Brazil added by Gonzalo Navarro.*

Records in the ETN (Marine Standard Format)

Countries	Records
Mexico	12
Chile	3
Uruguay	5
Colombia	1
Argentina	116
<b>Total</b>	<b>137</b>

Records in the ETN (Fresh Water Standard Format)

Region	Records
Central America	436
South America	1,377,773
<b>Total</b>	<b>1,378,209</b>

Spatial Records in the Terrestrial Standard Format

Country	Total	WMS	Shape downloads	Other
Argentina	196			196
Bolivia	547		547	
Brasil	7		7	
Chile	127		127	
México	240		64	80
Reference Classification	679			679
Central America - TNC	743			743
Uruguay	5			5
Paraguay	49		48	1
Peru	4		4	
<b>Total</b>	<b>2,597</b>		<b>893</b>	<b>1704</b>

Spatial Records in the Marine Standard Format

Country	Total	WMS	Shape downloads	Other
Argentina	116	116		
Colombia	1			1
Chile	3		3	
México	12	11		1
Uruguay	5			5
<b>Total</b>	<b>137</b>	<b>127</b>	<b>3</b>	<b>7</b>

Spatial Records in the Fresh Water Format

Region	Total	WMS	Shape downloads	Other
Central America	436			436

South America	1,377,773			1,377,773
<b>Total</b>	<b>1,378,209</b>			<b>1,378,209</b>

### Visits to the ETN Portal

Year	Jan-March	April-June	July - September	October - December	Total
2006				215	215
2007	313	1091	503	612	2519
2008	555	1232	1265	962	4014
2009	922	438	743	821	2924
2010	464	872	805	923	3064
Total	2254	3633	3316	3533	12736

### IABIN Indicators Reporting Table, 2<sup>nd</sup> Semester 2010

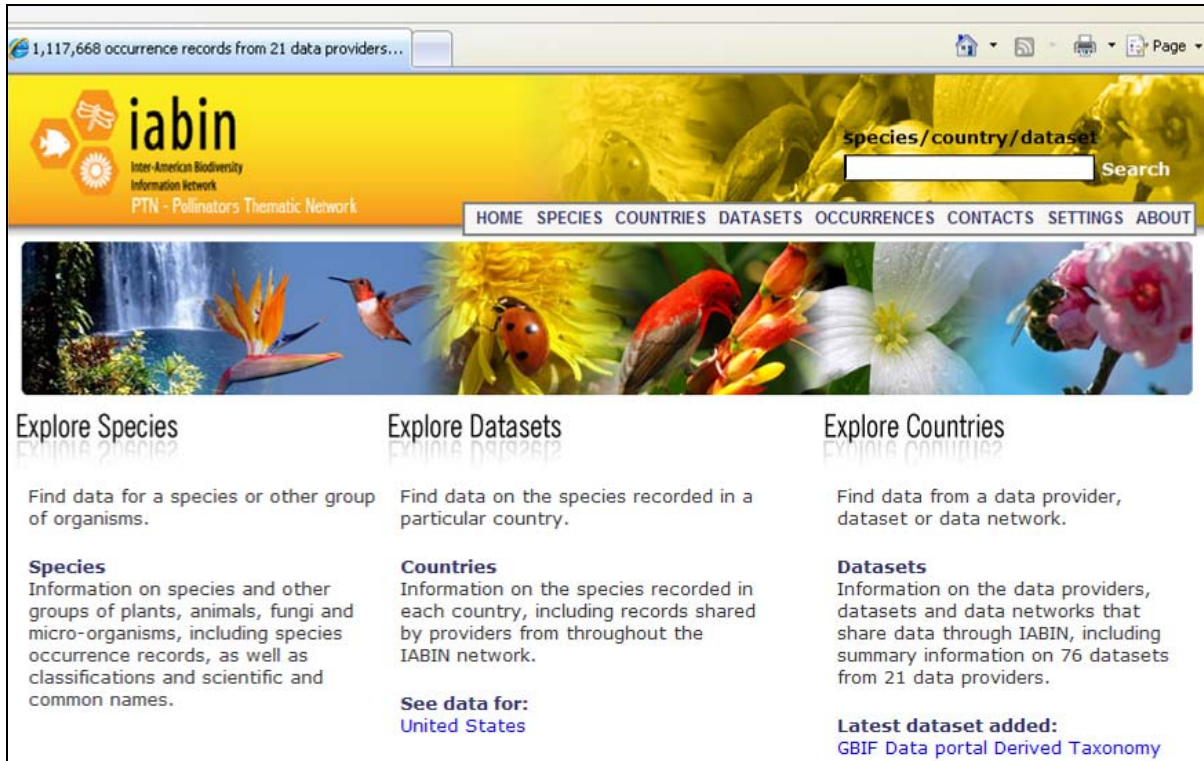
Indicator	Actual – 2 <sup>nd</sup> Semester, 2010	Baseline	Last Semester's actual (Jan-Jun 2010)	Target – 2010	Summary Comments
1. Increase of Visits to the portal of ETN	1,728 visits	215 visits	1,336 visits	3000 visits	We expect this number to increase significantly next semester. The new visualizer, more data and new reports should significantly increase usage in the later part of next semester.
4. Data and metadata content increase in the ETN:	<b>Standard Format:</b> 1,378,209 records <b>Metadata:</b> 796 records		<b>Standard Format:</b> 2585 records <b>Metadata:</b> 506 records	<b>Standard Format and Metadata</b> : unknown depending on funding	Concerning the Standard Format, a record is the description of an ecosystem class within a classification system and includes a map.
5. Number of people trained per year on data creation tools, data quality and use of tools developed by the ETN	None				

## 2.2.4 Pollinators TN (PTN)

### Activities and Results

#### IABIN PTN Portal

The IABIN Pollinator Thematic Network has continued to meet and make great progress on the IABIN PTN web portal which is central to the architecture of PTN. IABIN Pollinator Thematic Network: 1) Data Entry Tool, 2) Data Portal, 3) Contacts Database, and 4) training manuals are accessible at <http://pollinators.iabin.net/>.



The screenshot shows the IABIN PTN Portal website. The browser address bar displays "1,117,668 occurrence records from 21 data providers...". The website header includes the IABIN logo (Inter-American Biodiversity Information Network, PTN - Pollinators Thematic Network) and a search bar with the text "species/country/dataset" and a "Search" button. A navigation menu below the header lists: HOME, SPECIES, COUNTRIES, DATASETS, OCCURRENCES, CONTACTS, SETTINGS, ABOUT. The main content area features a banner image of various pollinators and flowers. Below the banner, there are three columns:

- Explore Species**: Find data for a species or other group of organisms. Information on species and other groups of plants, animals, fungi and micro-organisms, including species occurrence records, as well as classifications and scientific and common names.
- Explore Datasets**: Find data on the species recorded in a particular country. Information on the species recorded in each country, including records shared by providers from throughout the IABIN network. **See data for:** [United States](#)
- Explore Countries**: Find data from a data provider, dataset or data network. Information on the data providers, datasets and data networks that share data through IABIN, including summary information on 76 datasets from 21 data providers. **Latest dataset added:** [GBIF Data portal Derived Taxonomy](#)

#### IABIN PTN Training

A Training Workshop was convened in Ribeirao Preto, SP, Brazil 26-27 July 2010 to provide instruction for use of the PTN Data Digitizer, PTN Web Portal, and PTN Contacts Database. Participants were provided with training manuals to help guide their learning of the various tools and applications.

Forty-four participants from 12 countries throughout the Americas were trained in the use of the PTN tools and applications during this semester period of July through December 2011. Several participants were recipients of PTN Content Grants for digitizing pollinator data.

The objectives of the workshop were to:

1. learn how to digitize and share specimen or observation data, and pollinator-plant association records with the network and others using the Pollinator Data Digitizer,
2. learn to use the Pollinator Data Portal developed and hosted by the IABIN PTN, and
3. learn to enter data and navigate the PTN Contacts database.

A pre- and post-workshop assessment was conducted to gauge the quality and effectiveness of the training in meeting the objectives. Generally, the quality and effectiveness were rated as very positive.

### Meetings and Conferences

Members of the PTN team represented the PTN at several well-attended meetings and conferences during the second semester of 2010.

Michael Ruggiero represented the PTN at the North American GBIF meeting in Guelph, Canada; the GBIF Governing Board meeting in Seoul, Korea; and the 10th Conference of the Parties (COP 10) in Nagoya, Aichi Prefecture, Japan.

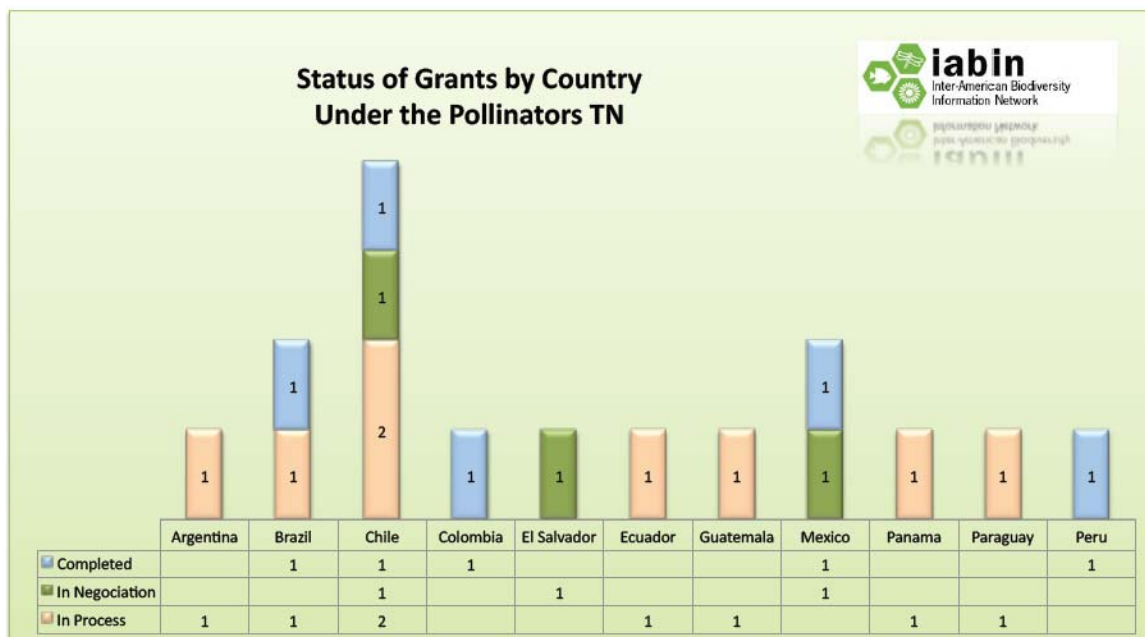
Antonio Saraiva and Etienne Cartolano Jr. of University of Sao Paulo presented on the PTN at the TDWG 2010 Conference. Dr. Saraiva also presented at the BIOTA/FAPESP - International Conference Getting Post 2010 Biodiversity Targets Right, in December.

Laurie Davies Adams, Elizabeth Sellers, and Jennifer Tsang represented PTN at the North American Pollinator Protection Campaign's 10th Annual International Conference in Washington D.C. hosted by the U.S. Department of Agriculture from October 20-22, 2010.

### Data Content Grants

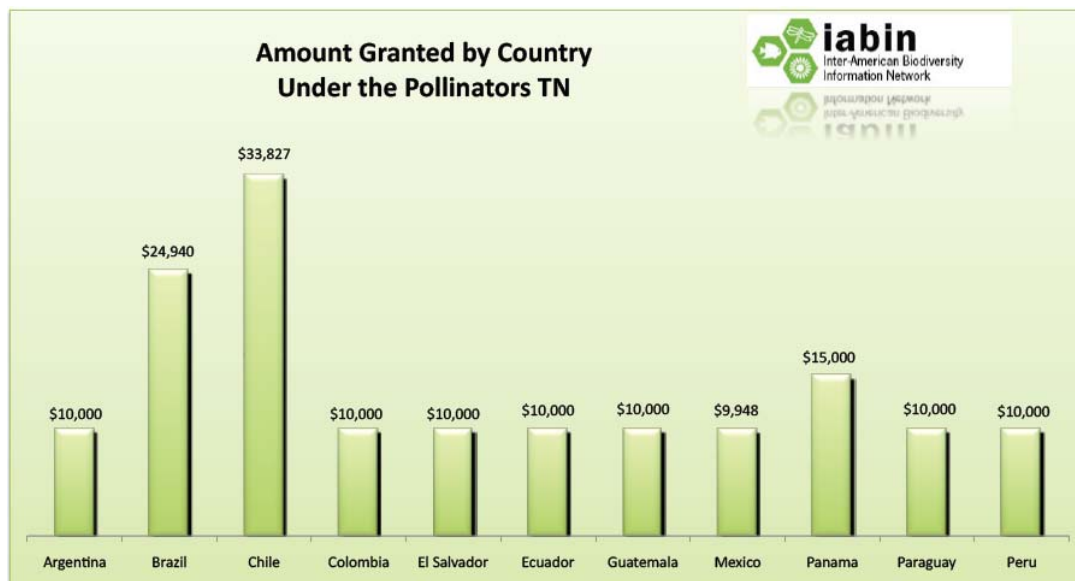
The PTN is currently working with approximately 15 content grantees to help them digitize and standardize their data (where necessary) and publish it online through the Pollinator Data Portal (PDP) and the IABIN metadata catalog (<http://pollinators.iabin.net/index.html>).

Countries represented by these grantees include Brazil, Colombia, Peru, Panama, Guatemala, Chile, Paraguay, Ecuador, Mexico and Argentina. All of the PTN Content Grantees have received training in the use of the Pollinator Data Digitizer, Pollinator Data Portal, and Pollinator Contacts Database. The Pollinator Contacts database, including all the content grantees contact information, currently totals 184 contacts.



Three of the grantees are still in process of drafting the agreement for signature. Three have completed digitizing their data and have incorporated them into the PTN Data Portal. Eight are in the process of digitizing their pollinator data. We expect all of the Content Grantees to have completed digitization and publishing of their pollinator data through the Pollinator Data Portal by June 2011.

Grants Summary Pollinators TN		 iabin Inter American Biodiversity Information Network
Country	Institution	Amount (USD)
Argentina	Universidad Nacional de Misiones	\$ 10,000.00
Brasil	Universidade de Sao Paolo	\$ 15,000.00
Brasil	Universidade Federal de Maranhao	\$ 9,940.26
Chile	Pontificia Universidad Catolica de Valparaiso	\$ 10,000.00
Chile	Corporacion Instituto de Ecologia y Biodiversidad	\$ 9,840.00
Chile	Corporacion Instituto de Ecologia y Biodiversidad	\$ 9,986.88
Chile	Pontificia Universidad Catolica de Valparaiso, Instituto de Biologia	\$ 4,000.00
Colombia	Universidad Nacional de Colombia	\$ 10,000.00
Ecuador	Fundacion para la Conservacion de la Educacion Biologica BioCe	\$ 10,000.00
El Salvador	SalvaNATURA	\$ 10,000.00
Guatemala	Universidad de San Carlos USAC	\$ 10,000.00
Mexico	Universidad de Las Americas, Puebla	\$ 7,000.00
Mexico	Universidad de Las Americas, Puebla	\$ 2,948.00
Panama	Smithsonian Tropical Research Institute	\$ 15,000.00
Paraguay	Asociacion GUYRA Paraguay	\$ 10,000.00
Peru	Red de Accion de Agricultura Alternativa y CONAM	\$ 10,000.00



Six of the grantees are using the Pollinator Data Digitizer to digitize and standardize their data, which is hosted at the Universidade de Sao Paulo. Three of the grantees opted to use other software to complete the digitization process. The remaining five will probably also use the PDD but are still in the process of evaluating the tool in relation to their pollinator data digitization needs.

All of the Content Grantees are following the pollinator data template that the PTN has provided to them, which follows Darwin Core (draft version 1.4) and ensures that their data is standardized and fit for publishing in the Pollinator Data Portal.

### Data Quality Review

Antonio Saraiva from the University of Sao Paulo has been steadily reviewing content grantee reports. Each report requires a great deal of time and attention because they come in several languages (mainly English, Portuguese, and Spanish) and all their data is reviewed and checked against the PTN for quality. Additionally, the content grantees' narrative and financial reports are reviewed.

**IABIN Indicators Reporting Table, 2<sup>nd</sup> Semester 2010**

Indicator	Last Semester's Actual (Jan-Jun 2010)	Baseline	Actual – 2 <sup>nd</sup> Semester (Jul-Dec 2010)	Target – 2010	Summary Comments
1. Increase of Visits to the web site of Pollinators Thematic Network (PTN) <a href="http://pollinators.iabin.net/">http://pollinators.iabin.net/</a>	795 visits	Sem1 '07: 1061 visits  Sem1 '08: 323 visits Sem2 '08: 505 visits  Sem1 '09: 796 visits Sem2 '09: 848 visits  Sem1 '10: 795 visits	848 visits	5% increase	There was an increase in the number of visits to the PTN Web site <a href="http://pollinators.iabin.net">http://pollinators.iabin.net</a> likely due to increased interest within and communication with the international pollinator research community.  A training workshop held in July 2010 in Brazil and the North American Pollinator Protection Campaign's annual October conference helped promote the network and may have also contributed to an increase in the access to the web site and tools.
Increase of visits to Pollinator Data Digitizer ( <a href="http://pollinators.iabin.net/digitizer">http://pollinators.iabin.net/digitizer</a> )	53	Sem2 '09: 246 visits (155 new visits from 23 countries from America, Europe and Asia)	327		A training workshop held in July 2010 in Brazil and the North American Pollinator Protection Campaign's annual October conference helped



Increase of visits to the contacts database ( <a href="http://pollinators.iabin.net/contacts">http://pollinators.iabin.net/contacts</a> )	72	<b>Sem2 '09:</b> 454 visits (217 new ) from 26 countries	787		promote the Pollinator Data Digitizer and may have also contributed to an increase in the access to this tool.
4. Data and metadata content increase in PTN:					
<b>New Specimen Occurrence Records:</b> Pollinator Data Portal ( <a href="http://pollinators.iabin.net/portal/welcome.htm">http://pollinators.iabin.net/portal/welcome.htm</a> )	aprox. 1,117,668 occurrence records from 21 providers	<b>Sem2 '07:</b> 36,000 <b>Sem2'08:</b> 162,542 <b>Sem2'09:</b> 86263 (Colômbia (50360) Brazil (35069) Peru (834))	Additions Chile 36010 UDLAP 8002 GBIF pollinator data Total: 1,144,678	Add 100000 records	The data portal was not designed to record the dates when new records are added. Therefore we are only able to provide cumulative totals of new records for this tool. Most new data grantees are in a process of digitizing their data, and therefore, those data are not yet available. After digitization we will still have to pass through a data quality assessment.
<b>New Interaction Records</b> (plant-pollinators): Mainly through the Pollinator Data Digitizer ( <a href="http://pollinators.iabin.net/digitizer/">http://pollinators.iabin.net/digitizer/</a> )	0	Sem2 '09: 18,348	22390	Approx. 200	This involves 17,535 records from CEPANN (Brazil), 813 from RAAA (Peru) (both used PDD) and 450 registers from Colombia, not digitized using the PDD
<b>-New Data Providers:</b>	3 Content Grantees	<b>Sem2 '07:</b> 2 Content Grantees	4 new Content Grantees (RAAA, IBUSP, PUCV, ICN) plus CRIA	Add data from remaining data content grantees	15 content grantees are currently working with the PTN and are in various stages of digitizing and publishing their pollinator occurrence and plant-pollinator interaction data online.
<b>- Records in Contacts Database:</b> ( <a href="http://pollinators.iabin.net/contacts/">http://pollinators.iabin.net/contacts/</a> )	184 Cum. Total	<b>Sem1 '07:</b> 91 <b>Sem1 '09:</b> 99	184 cumulative total	Add 10	Records are added to the Pollinator Contacts database on an ad hoc basis as members of the public contact us via the Web site. We also encourage/add larger numbers of records at conferences and workshops.
<b>- Metadata Records</b> cataloged by NBII:	* The tool used to assess this information is undergoing	<b>Sem2 '07:</b> 1196 Cum. Total		Add 3100	This measure of metadata records currently only consists of those records already cataloged by NBII

	maintenance and is not available at this time.				as part of the regular operations of the NBII Pollinators Project. Currently, there are three grants providing pollinator metadata to the catalog. This includes providing metadata for the portal providers, bibliographic references (2400), and images (700).
5. Number of people trained per year on data creation tools, data quality and use of tools developed by Pollinators Thematic Network (PTN)	0	Dec '06: 40  Sem2 '08: 3 people from Columbia, Peru, and Costa Rica) received instructions at the Ribeirão Preto, Brazil IABIN PTN Workshop  July '10: 44	44	20	A Training Workshop was convened at the JP Hotel during 26-27 July 2010 to provide instruction for use of the PTN Data Digitizer, PTN Web Portal, and PTN Contacts Database.  44 participants from the Americas were trained in the use of the PTN tools and applications. Several participants were recipients of PTN Content Grants for digitizing pollinator data.

### Sustainability of IABIN - PTN

Many conversations have been circulating about the sustainability of the IABIN PTN. Several discussions were held on the sustainability of PTN and ways of promoting and funding it. The PTN has been working closely with Denny Grossman of Databasin.

Our hopes for future objectives are to enhance the current user interface and through the training of more PTN end users (contributors and database users), especially in the Americas and in Africa. Access to the PTN system and the ability to integrate existing data with the PTN format (based on the universally accepted Darwin Core principles) ultimately determine the global scope and reach of the project. A goal is to develop, test, and launch a data digitization tool that will facilitate the accurate transfer of data from database management programs into the PTN database. Following the development of data acquisition technologies, the network capacity and reach of the PTN will be enhanced by providing targeted user training to pollination biologists, pollinator taxonomists, researchers, and managers in important pollinator hot spots. The overall goals are to:

- 1) Expand the detail of entry information fields available to contributors and both increase data entry efficiency and reduce error;
- 2) Build a better network that meets the needs of the end users and is adaptable to local needs;
- 3) Refine and increase data training in underserved and required areas;
- 4) Increase the number of PTN entries and contacts, especially in biodiversity hot spots.

## Results

As a result of our work this semester, the IABIN Pollinator Thematic Network team has made major strides in the development of the digitalization tool and portal. Please visit <http://pollinators.iabin.net/> to see the most up-to-date progress.

## Lessons Learned, Problems and Possible Solutions

The Pollinator Thematic Network meets monthly for two hours. Extensive conference call notes are taken and action items are highlighted for each conference period. We consistently deliver our work product in a timely manner and put a lot of hard work into collaborating with partners in 3 different time zones and two different native languages.

We have found that various forms of communications cannot always be relied upon. Emails are not transferable, teleconference call numbers are unclear, documents and attachments cannot be opened, etc. We have tried to quell the communication problems by using the on-line community at my.nbio.gov to upload documents and WebEx (shared desktops) is used in addition to our conference calls.

### 2.2.5 Protected Areas TN (PATN)

Activities in the period of July - December 2010 of the IABIN PATN project execution focused on the improvement of protected areas (PA) data management through the development of, and promotion of standards, protocols and tools for data management and update. Activities also focused on optimising and promoting access and exchange of protected areas data through the development and promotion of tools for the exchange of data, such as the PATN database as well as the data management generic tool and web service.

The following activities were undertaken by the PATN during this period:

#	Activity	Output (product)	Indicator
1.4	Generate and update the PATN database	The PATN database developed and operational	Database developed
1.5	Development of the IABIN Webservice	Webservice developed and operational	PATN database linked to other databases in the region
1.6	Develop and deploy a PATN data management generic tool	PATN data management generic tool developed and instructions manual produced and circulated in 3 languages	Generic tool disseminated in the region
2.1	Publication and dissemination of PATN standards and protocols	Document with PATN standards and protocols	PATN standards and protocols published and disseminated in the region.
2.2	Dissemination of the PATN data management generic tool	PATN data management generic tool	PATN data management generic tool disseminated in the region.
2.3	Linkage of the PATN database with other regional and national initiatives	N/A	PATN database linked to other databases in the region
3.2	Development and dissemination of a document describing data management best practices	Document describing PATN data management best practices	Document describing data management best practices disseminated

**Activity 1.4: Generate and update the PATN database:** The PATN database has been developed by building on the existing WDPa technology and is constantly being updated with new data from the Americas. The PATN database contains the de facto standard on protected areas data collection in an operational and tested system. It contains high quality and updated information for the Americas, collected mainly from governmental organisation. It can be used as the foundation for the development of the PATN database and allows users to query and download data according to their particular site on areas of interest and also provides a mechanism where authorized data providers can submit information. This can be made by uploading their protected areas dataset on line, by ftp or automatically via webservice. In order to update the database, regular contact is established with international and national agencies, often forming long-term working relationships. New contacts are also identified to try to update lower quality data or data that has not been updated for a long period of time. Contact information is maintained in the shared contact management system 'High Rise'. Information on the status of data updates, negotiation and data due to be received is recorded in shared spreadsheets.

In 2010, four countries have provided complete updates, with a further 19 countries having undergone partial updates, such as updates to World Heritage sites, Ramsar Wetlands of International Importance and mangrove sites. In addition data updates have been received from Canada and Chile, and will be integrated as soon as possible. Negotiations to update protected areas data are ongoing in seven countries. Contacts have been identified in all the IABIN countries, although responses have not been received from all these contacts, suggesting some of these may not be the correct contact. Eleven countries have directly corresponded with the WDPa team to provide data updates. Due to difficulties contacting the relevant person, there have been no changes to the data in seven countries in the IABIN region.

**Note: this activity will be finalized by March 2011**

**Table 1: Status of contacts and data for IABIN countries**

Country	Status of data	Details	Organisation	First and Middle Names	Last Name	Status of contact
1 Antigua & Barbuda	Updated mangrove sites.		National Parks	Anne Marie	Martin	Confirmed contact
			National Parks	Reg	Murphy	New contact suggested
2 Argentina	Ongoing negotiations. Updated World Heritage sites.		Department of Environment and Sustainable Development - Management Unit Forest Assessment System	Julieta	Bono	Corresponded
			Grupo de Trabajo de Areas Protegidas Subsecretaria de Política y Planificación Ambiental	Guillermo	Cañete	Corresponded
			Administración de Parques Nacionales	Rodolfo	Burkart	Contacted
			Fundación Vida Silvestre Argentina	Alejandra	Carminati	Contacted
3 Bahamas	Updated mangrove sites.		Bahamas National Trust	Tamica J.	Rahming	Confirmed contact
			BEST Commission	Stacy	Gray	New contact suggested
4 Barbados	Updated mangrove sites.		Ministry of Environment	Ricardo	Ward	Confirmed contact
5 Belize	Updated World Heritage site and mangrove sites.	Complete update of polygons and attributes last done in October 2009.	Belize Tropical Forest Studies (BTFS)	Jan	Meerman	Confirmed contact
6 Bolivia	Updated	All polygons received through the IABIN network and Servicio Nacional de Areas Protegidas (SERNAP).	Servicio Nacional de Areas Protegidas de Bolivia (SERNAP)	Carlos Eduardo	De Ugarte Ochoa	Confirmed contact
			Dirección de Monitoreo Ambiental del Servicio Nacional	Adrián	Nogales	Confirmed contact

			de Areas Protegidas				
7	Brazil	Updated and more data being uploaded.	Updated 197 new polygons: 387 updated and 33 new points from the Ministry of Environment. This included both Federal and State Protected Areas. Have received the signed Data Contributor Agreement are waiting to update the new dataset from Fundacao Nacional do Indio (FUNAI-National Indian Foundation) and integrate the data. The National Private Protected Areas Database (approx. 1,000 sites) is undergoing formatting and will be integrated into the WDPA. Also updated World Heritage and mangrove sites.	Ministério do Meio Ambiente	Helen	Gurgel	Corresponded
				UNEP-WCMC Latin America and the Caribbean Office	Helena	Pavese	Corresponded
				Ministério do Meio Ambiente	Mercelo	Lima	Corresponded
8	Canada	Data received - upload imminent. Updated World Heritage sites.	Canadian Protected Areas were provided through the Conservation Areas Reporting and Tracking System (CARTS). This data was received through a new MoU with the Canadian Council on Ecological Areas, excluding Quebec. Working hand in hand with Canadian Council on Ecological Areas to ensure successful update of their CARTS database which continues in January 2011. Quebec Provincial Protected Areas Data was received and reviewed. Formatting is underway to prepare the data for integration into WDPA.	Environment Canada	Robert	Vanderkam	Corresponded
				Environment Canada	Robert	Helie	Corresponded
				Fisheries and Oceans Canada	Jessica	Mitchell	Corresponded
9	Chile	Data received - upload imminent.	Through IABIN, the Chilean data is under its second review and has been formatted to the WDPA Data Standard for integration into the WDPA.	Comisión Nacional del Medio Ambiente (CONAMA)			Corresponded
10	Colombia	Updated	Updated 55 existing and added 6 new boundaries from Parques Nacionales Naturales - Unidad Administrativa Especiales del Sistema de Parques Nacionales Naturales. Also updated World Heritage and mangrove sites.	Unidad de Parques Nacionales Naturales	Lilian	Barreto	Corresponded
				Unidad Administrativa Especial del Sistema de Parques Nacionales Naturales de Colombia			Corresponded
11	Costa Rica	Updated World Heritage and mangrove sites.	Complete update of polygons and attributes last done in October 2009.	"Sistema Nacional de Areas de Conservación	Francisco J.	González S.	Confirmed contact
				Areas Silvestres Protegidas del Sistema Nacional de Areas de Conservación	Marco Vinicio	Araya	Confirmed contact
12	Dominica	No change		Forestry & Wildlife Division, Ministry of Agriculture and the Environment	Eric	Hypolite	No response
13	Dominican Republic	Updated mangrove sites.	Complete update of polygons and attributes last done in November 2009.	Dirección de Areas Protegidas	José Manuel Mateo	Feliz	
14	Ecuador	Ongoing negotiations. Updated World Heritage and mangrove sites.		Ministerio de Medio Ambiente			Contacted
15	El Salvador	Ongoing negotiations. Updated mangrove sites.	Complete update of polygons and attributes last done in October 2009.	Áreas Naturales Protegidas de El Salvador (ANP)	Cristela	Gutierrez	Corresponded
16	Grenada	No change		Ministry of Agriculture and Land Use Department	Michael	Mason	No response
17	Guatemala	Updated World Heritage and mangrove sites.	Complete update of polygons and attributes last done in October 2009.	Consejo Nacional de Areas Protegidas (CONAP)	Román Estuardo	Cancinos Arbizú	Contacted
				Consejo Nacional de Areas Protegidas, CONAP	Claudia Eugenia	Santizo	Contacted
18	Guyana	Ongoing negotiations. Minor update.	Substituted one point with one polygon for the Iwokrama Forest.	Iwokrama International Centre for Rainforest Conservation and Development	Raquel	Thomas	Corresponded

Country	Status of data	Details	Organisation	First and Middle Names	Last Name	Status of contact	
			Environmental Protection Agency (EPA)	Damian	Fernandes	Corresponded	
19	Haiti	No change	Ministry of Environment	Jean Max Dimitri	Norris	Confirmed contact prior to earthquake.	
20	Honduras	Updated World Heritage and mangrove sites.	Administracion Forestal Estatal - Corporacion de Desarrollo Forestal Hondureña (AFE-COHDEFOR)	Ivonne	Oviedo	No response	
21	Jamaica	Ongoing negotiations through IABIN. Updated mangrove sites.	National Environment and Planning Agency (NEPA)	Sheries	Simpson	Corresponded	
22	Mexico	Updated World Heritage and mangrove sites.	Complete update of polygons and attributes last done in November 2009.	Office of Social Communication of the Ministry of Environment and Natural Resources (SEMARNAT)	Miguel Bernal	Gonzalez	Contacted
23	Nicaragua	Updated mangrove sites.	Complete update of polygons and attributes last done in October 2009.	Ministerio del Medio Ambiente y de los Recursos Naturales (MARENA)	Marta Lucía	Sánchez	No response
				Ministerio del Medio Ambiente y de los Recursos Naturales (MARENA)	Ivan	Ortega Gasteazoro	No response
				Ministerio del Ambiente y Recursos Naturales - MARENA-Áreas Protegidas	Freddy Rivera	Umanzor	No response
24	Panamá	Updated World Heritage and mangrove sites.	Complete update of polygons and attributes last done in November 2009.	Autoridad Nacional del Ambiente (ANAM)	Marisol E.	Dimas	Confirmed contact
				Dirección Nacional de	Adrián	Benedetti	Confirmed contact

Country	Status of data	Details	Organisation	First and Middle Names	Last Name	Status of contact	
25	Paraguay	No change	Áreas Protegidas				
			Secretaría del Ambiente - Dirección General de Gestión Ambiental	Carolina	Pedrozo Silva	Confirmed contact	
			Dirección Protección y Conservación de la Biodiversidad	Dario	Mandelburger	Confirmed contact	
26	Perú	Ongoing negotiations. Updated World Heritage and mangrove sites.	SERNANP	Jeff	Pradel Cáceres	Corresponded	
27	Saint Kitts & Nevis	No change	Ministry of Sustainable Development	Ellis	Hazel	No response	
28	Saint Lucia	Updated World Heritage and mangrove sites.	Saint Lucia National Trust	Bishnu	Tulsie	Confirmed contact	
			Saint Lucia National Trust	Lavina	Alexander	Confirmed contact	
29	Saint Vincent & The Grenadines		National Parks	Andrew	Wilson	No response	
30	Suriname	Updated World Heritage and mangrove sites.	Suriname Forest Service	B.	Drakenstein	No response	
31	Trinidad and Tobago	No change	National Parks Commission	Neemedass	Chandool	No response	
			The Environmental Management Authority	Robin	Cross	Replacement contact	
			The Environmental Management Authority	Glenn	Goddard	New contact suggested	
32	Uruguay	Ongoing negotiations	Partial update of polygons and attributes in November 2009.	Proyeto SNAP	Rosina	Segui	Corresponded

Country	Status of data	Details	Organisation	First and Middle Names	Last Name	Status of contact
33 USA	Updated – but ongoing review and editing continue.	Updated 46 points and 23161 polygons as part of the new PADUS v1.1 dataset. However, 7,003 sites were removed from the previous US dataset in the WDPA due to the sites not meeting the IUCN definition of a protected area or had unknown names or designations which are minimum required attributes for inclusion in the WDPA. 3,789 sites that would have been new to the WDPA were not updated because they had unknown names and designations. All of these sites are being considered by the PADUS team who are attempting to reconcile the minimum attribute gaps and provide reasons for the sites that did not meet the IUCN criteria. Also updated World Heritage and mangrove sites.	USGS National Gap Analysis Program University of Idaho	Mason	Croft	Corresponded
			USGS National Gap Analysis Program University of Idaho	Lisa	Duarte	Corresponded
34 Venezuela	Updated World Heritage and mangrove sites.		Center of Ecology of the Venezuelan Research Institute (IVIC)	Margarita	Lampo	Contacted - no response
			Center of Ecology of the Venezuelan Research Institute (IVIC)	Jon Paul	Rodríguez	Contacted - no response

**Activity 1.5: Develop an IABIN PATN Web Service:** In order to facilitate the exchange of data between the PATN's and other protected areas databases, the PATN has developed a web interface to upload and manage protected areas data, a web service to allow anyone to consume the PATN data and a more advanced pilot webservice, in partnership with the Ministry of Environment of Brazil, that will link the countries database and WDPA.

Note: this activity will be finalised by March 2011

### Overview

The original purpose of this activity was to automate a two-way exchange of spatial protected areas information between PATN members and the WDPA infrastructure. This was approached in a pragmatic three way process:

1. Create tools to upload and edit protected areas data in a web interface rather than a programming web service interface.
2. Generate web-services for anyone to consume IABIN PATN protected areas information
3. Partner with the Ministry of Environment of Brazil to pilot a two-way data exchange purely through web services.

Using this approach we maintain a low technical barrier to adding new information whilst offering sophisticated tools to consume download and re-purpose the protected areas information.

### Methodology

The online upload and editing tools for the PATN will be described in Activity 1.6

### IABIN PATN web-services

Two types of web services were developed for the IABIN PATN.

1. Spatial data in the form of OGC standard web mapping services (WMS), web feature services (WFS) and custom tile services.
2. RESTful data application programming interface (API) to programmatically search and retrieve data.

The spatial data API has been built on top of the open source software Geoserver and PostGIS database. It allows full access to the geospatial data as both images and XML. This follows the Open Geospatial Consortium standards for publishing geospatial data. The entire infrastructure for the PATN is hosted using amazon's cloud computing platform, EC2. This reduces the cost of physically managing servers and at the same time bringing the applications and data closer to people in the region.

There are limitations in using OGC standard webservice. The volume of information that is passed across the internet when calling these services can be prohibitive in low bandwidth areas. This was the primary reason for also developing a much lighter API for querying the PATN database. The types of requests that can be made from this interface include:

- Search API- search the database using a key word and get the protected areas back that match the key word
- Geospatial API- query the database by bounding box or place name.
- Detailed individual protected area API – Return pictures, Wikipedia articles and protected areas boundaries.

These API's are fully documented and will be found on the [iabinpatn.net](http://iabinpatn.net) website.

### **Conclusion and recommendations**

- Building highly sophisticated web services is highly dependant on the capacity of the member countries to manage their own nodes.
- Lowering the technological bar on capturing the spatial information whilst maintaining standards is a good compromise to get a greater coverage of data.
- Hosting the services in the 'cloud' reduces the logistical and economic cost to managing these large datasets.
- Solely delivering protected areas data in open standard formats limits it's use due to the verbosity of the data format.

### **Webservice pilot with the Ministry of Environment of Brazil**

Over the past year UNEP-WCMC and the Ministry of Environment in Brazil have worked together on the development webservice which will be used to link the WDPA to the Brazilian protected areas database. Although initial testing has already been in place, shifts in the Brazilian government's IT unit have caused delays on deployment of this webservice and the linkage of the PATN and the Brazilian databases. The final testing and establishment of this linkage are still on hold until the Brazilian government becomes ready to continue moving this process forward.

**Activity 1.6: Develop and deploy a PATN data management generic tool:** The PATN is currently working on the production of a generic data management tool which will be provided to those IABIN countries who express their interest in adopting it as their official data management tool. In order to help countries to adapt the tool to their specific needs and to be able to use it, the PATN will produce manuals specifying the technical requirements for



installation and use of the tool, as well as describing the procedures in case adaptation is required. **Note: this activity will be finalised by March 2011**

## Overview

The output of this activity was to create a tool that will allow countries to upload, edit, download and manage their protected areas data within the bounds of the PATN data standards. Countries on the most part are using non-enterprise GIS techniques to manage their protected areas data therefore UNEP-WCMC needed to find a solution that allowed countries to upload their GIS data and manage it centrally without the need for their own enterprise systems.

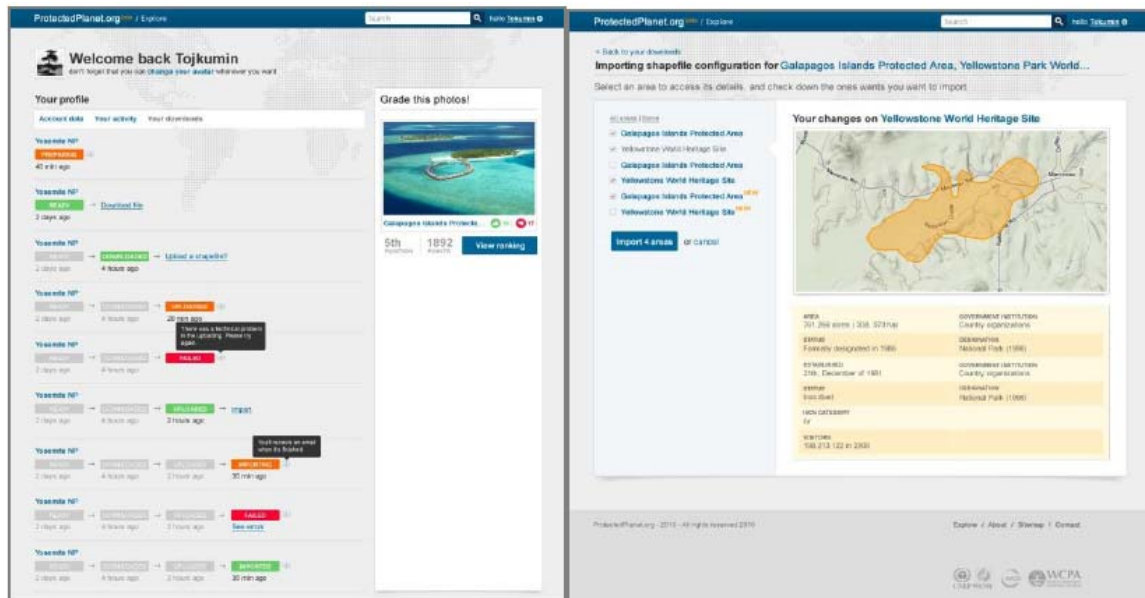
The tool was developed by UNEP-WCMC built on the WDPA/protectedplanet.net technology. Although built for the IABIN PATN, this tool will equally serve every other country in the world that contributes information to the WDPA. This guarantees the further development of this tool for at least another two years after the end of the IABIN project.

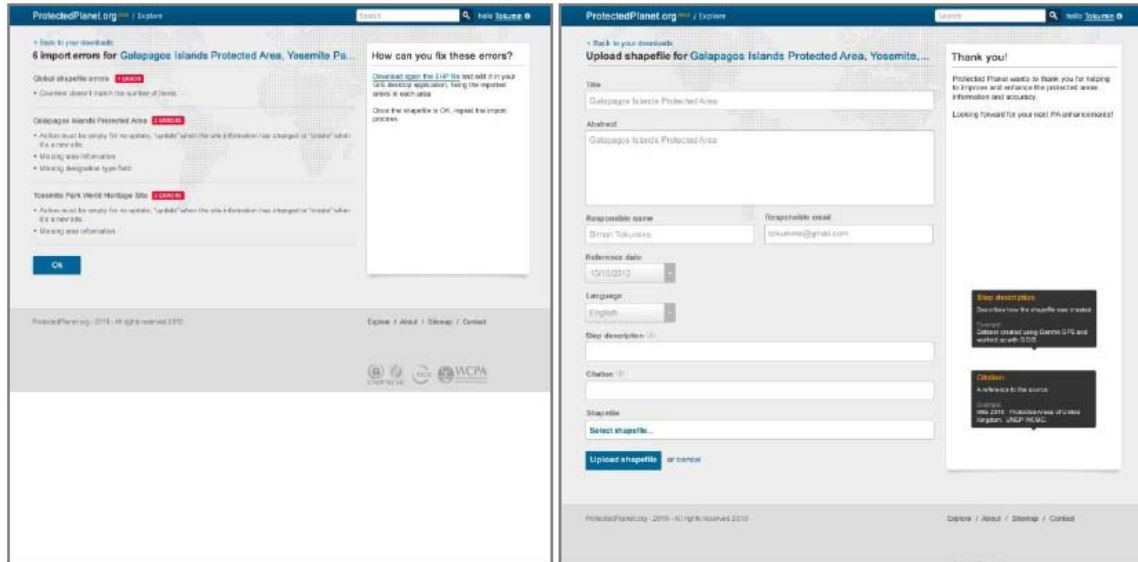
## Methodology

The application has been built on top of the WDPA using the open source technology stack ruby on rails, PostGIS and Geoserver. The tool will allow countries to manage their data in a simple step by step way.

1. Download the existing data from the WDPA
2. Alter the dataset on or offline using open source or proprietary GIS software
3. Upload the data to the WDPA
4. Reconcile the changed data against what is in the WDPA
5. Get a report outlining the changes
6. Instantly be part of the IABIN PATN and the protectedplanet.net website

Below are some screen shots demonstrating the tool.





The tool will be available for use from the 28th February 2011 after an initial testing phase.

#### Conclusion and recommendations

- A lower tech solution to the generic tool will increase usage and be the first step towards a more advanced enterprise solution to spatial data management in countries
- The tool will be further developed with funds outside of the IABIN project sustaining it's usage for the next 2 years
- The tool developed as part of the PATN will be repurposed for all other countries in the world extending the reach of the IABIN project beyond the member countries.
- The tool is based on open source technology with the codebase available to other countries.

**Activity 2.1 Publication and dissemination of PATN standards and protocols:** The document presenting the IABIN PATN data structure and data management standards produced on activity 1.3 has been made available on the PATN web portal, as well as circulated within the PATN network. This allows countries to develop new databases or adapt existing ones which are compatible with the PATN database, facilitating the information flow.

**Activity 2.2 Dissemination of the PATN data management generic tool:** Once finalised, the PATN data management generic tool will be made available on the PATN web portal for download. CDs will also be produced to be distributed to governmental and non governmental data management agencies and in protected areas related events. This material will be translated in Spanish, English and Portuguese.

Note: this activity will be finalised by March 2011

**Activity 2.3 Linkage of the PATN database with other regional and national initiatives:** Once the PATN webservice is finalised, the PATN database will be linked to the WDPa and other countries databases so that the information can flow automatically and periodically. A guideline for using this webservice on data exchange will be developed and disseminated through the PATN Web portal and other appropriate means.


Note: this activity will be finalised by March 2011

**Activity 3.2 Development and dissemination of a document describing data management best practices:** Following the findings of activity 3.1, the PATN will produce a document describing best practices for protected areas data management aiming to help countries to tackle their specific needs and gaps. This document will be made available on the PATN Web Portal and will be disseminated through the PATN network of contacts.

Note: this activity will be finalised by March 2011

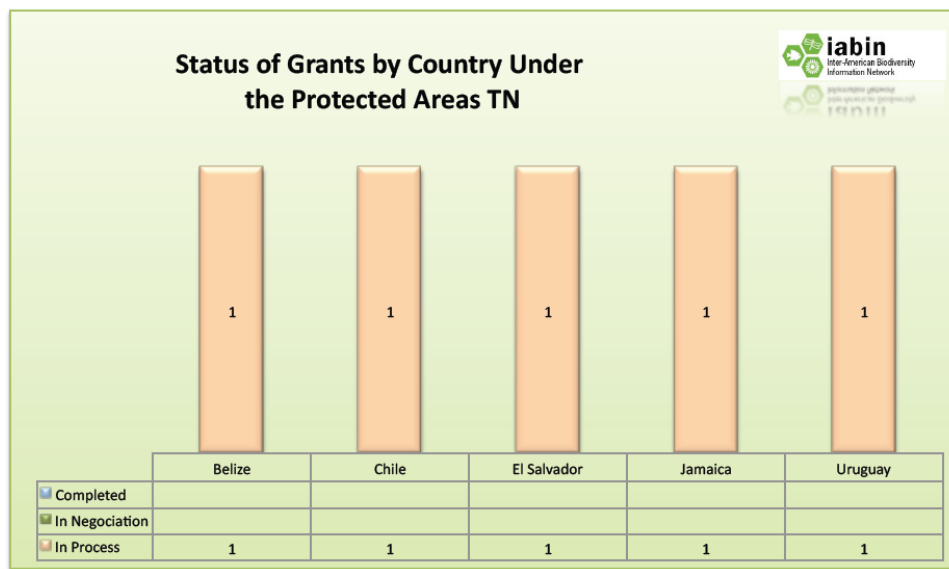
### Data Content Grants

In September 2008, the PATN distributed a request for proposals in order to support countries on the achievement on the following objectives:

Grants Summary Protected Areas TN		 iabin Inter-American Biodiversity Information Network
Country	Institution	Amount (USD)
Belize	Land and Surveys Department	\$ 10,000.00
Chile	Comisión Nacional del Medio Ambiente (CONAMA)	\$ 14,079.00
El Salvador	Ministerio de Medio Ambiente y Recursos Naturales	\$ 9,500.00
Jamaica	National Environment and Planning Agency	\$ 10,000.00
Uruguay	Dirección Nacional de Medio Ambiente	\$ 10,000.00

1. To improve and develop technical capacity of individual IABIN countries, when appropriate, to collect and manage their protected areas data in a way that meets their specific needs and context;
2. To help develop or improve, when appropriate, individual country's protected areas data management systems;
3. To update the data available at the World Database on Protected Areas (WDPA) with highest quality official protected areas data available.
4. To develop and implement a sustainable strategy in order to periodically update the World Database on Protected Areas (WDPA).

The status of all PATN data content grants is as follows:



### PATN Indicator Measuring Matrix<sup>3</sup>

Indicator	Actual – 2nd <sup>st</sup> Semester, 2010	Baseline	Last Semester’s actual (Jan-June 2010)	Target – 2010	Summary Comments
1. Increase of Visits to the portal of PATN		200 visits per day	300 visits per day	1000 visits per day	
4. Data and metadata content increase in the PATN increases :		10 countries updated	3 countries updated totaling 15000 protected areas	20 countries updated	
5. Number of people trained per year on data creation tools, data quality and use of tools developed by PATN		n/a	n/a	1 country representative per country	

### 3. COMPONENT 3: TOOLS FOR DECISION-MAKING

The following six sub-projects for the development of value added tools were selected to receive funding through IABIN’s Component 3 and are under different stages of implementation:

#### 3.1 Project Title: [Developing the Functionality of the IABIN Ecosystems Thematic Network \(ETN\) Database](#)

**Institution:** NatureServe

**Funding:** US\$49,971.00

**Purpose:** The purpose of this project is to make of the ETN Dataset a functional and relational map database that support comprehensive information about ecosystems of the Americas, facilitates the cross referencing between classifications, provides ecosystems distribution maps at different levels of resolution, informs about the conservation status of the ecosystems, and relates subsets of its data to other IABIN thematic network databases, all this through a web interface that is user friendly for both, data providers and information users.

**Project status, milestones and achievements:** The project has been completed and NatureServe delivered the following with the overall aim of developing a fully functional ETN database:

1. US and LAC terrestrial ecosystems classification entered as reference classifications in ETN database (English and Spanish respectively)
2. Latin American fresh water classification in ETN database

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<sup>3</sup> The PATN indicators for this period have not yet been included

3. Maps of US and South American terrestrial ecosystems served over the IABIN ETN geoportal
4. Map of South America freshwater ecosystems served over the IABIN ETN geoportal
5. Query options with retrievable reports that inform users about:
  - a. Ecosystems diversity defined by geography or related theme (regional, country, ecoregion or biome)
  - b. Conservation status of ecosystems (a subset of South American ecosystems at this point) linked to distribution maps.
  - c. Similarity of ecosystems across different geographies and classifications (crosswalks)
  - d. Links between species and habitat, particularly for plant species, based on level 6 of terrestrial standard format that includes diagnostic plant species of the ecosystem type (could link ETN database with species database)
  - e. Total distribution range of queried ecosystems as portrayed by maps available over the IABIN geoportal
  - f. Clickable maps as means of content search

Screenshot of result of query made on the US terrestrial ecosystems data in the ETN database.

The screenshot shows the ETN database search interface. On the left is a navigation menu with categories like 'ETN', 'PROYECTOS', 'REUNIONES Y EVENTOS', and 'REDES TEMATICAS'. The main area is titled 'Criterios de Búsqueda' (Search Criteria). It includes a dropdown for 'Tipo de vegetación:' set to 'Herbacea (no graminoides)', a dropdown for 'Seleccionar los Países:' with 'Estados Unidos' selected, and a 'Buscar' button. Below the search criteria, it indicates 'Encontrados 18 resultados' and 'Valor de filtro: Criterio = 840'. A table of results is displayed with columns for 'Vista Breve', 'Nombre Ecosistema', 'Breve Descripción', and 'Cross Walk'. The table lists four ecosystem types: 'Temperate Pacific Freshwater Aquatic Bed', 'Temperate Pacific Freshwater Mudflat', 'North-Central Interior Freshwater Marsh', and 'Northern Atlantic Coastal Plain Subtidal Aquatic Bed'. Each row includes a magnifying glass icon, a search ID, a brief description, and a 'Cross Walk' icon.

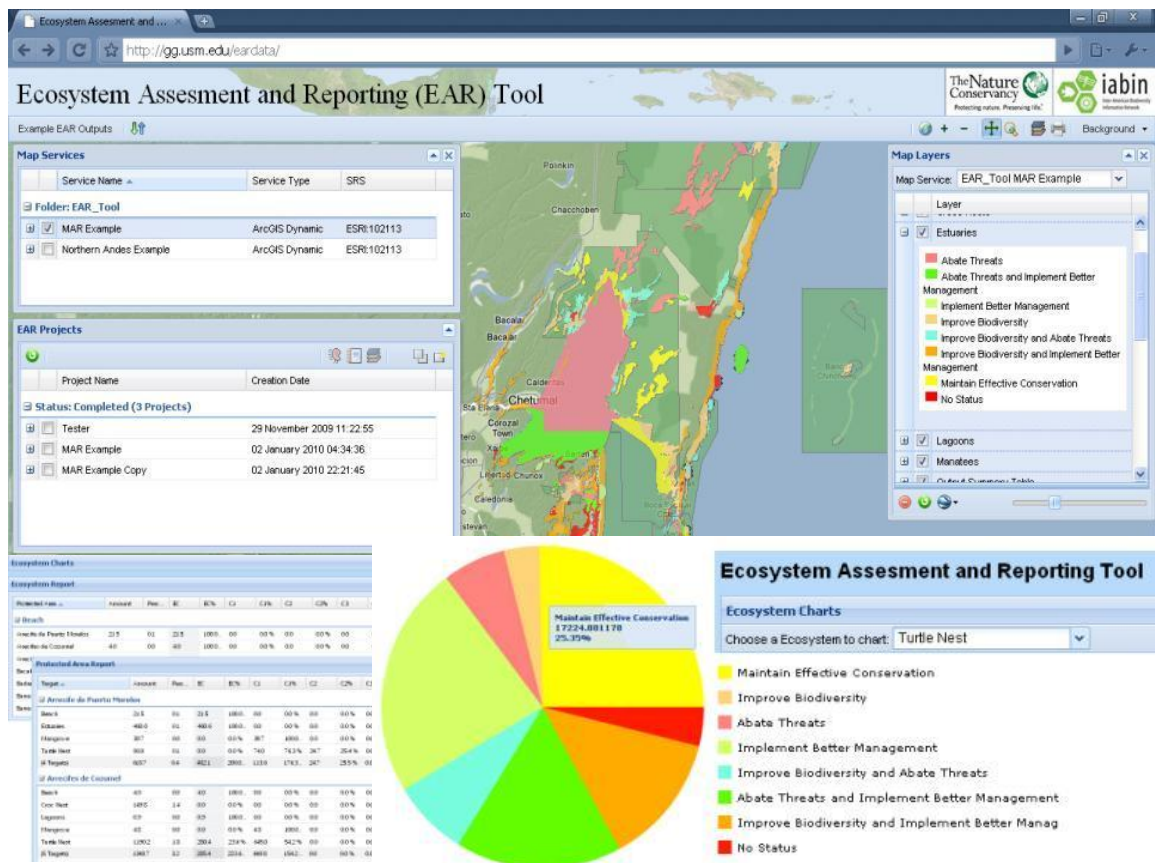
Vista Breve	Nombre Ecosistema	Breve Descripción	Cross Walk
🔍	CES200.876 Temperate Pacific Freshwater Aquatic Bed	Freshwater aquatic beds are found throughout the humid temperate regions of the Pacific Coast of North America. They are small patch in size, confined to lakes, ponds, oxbows, and slow-moving portions of rivers and streams. In large bodies of water, they are usually restricted to the littoral region where penetration of light is the limiting factor for growth. A variety of rooted or floating aquatic herbaceous species may dominate, including <i>Azolla</i> spp., <i>Ruppia polysepala</i> , <i>Polygonum</i> spp., <i>Potamogeton</i> spp., <i>Ranunculus</i> spp., and <i>Wolffia</i> spp. Submerged vegetation, such as <i>Hydrophyllum</i> spp., <i>Ceratophyllum</i> spp., and <i>Elodea</i> spp., is often present. These communities occur in water too deep for emergent vegetation.	🔍
🔍	CES200.878 Temperate Pacific Freshwater Mudflat	Freshwater mudflats are found scattered throughout the temperate regions of the Pacific Coast of North America. In the Pacific Northwest, they occur primarily in seasonally flooded shallow lakebeds on floodplains, especially along the lower Columbia River. During any one year, they may be absent because of year-to-year variation in river water levels. Mudflats must be exposed before the vegetation develops from the seedbank. They are dominated mainly by low-stature annual plants. They range in physiognomy from sparsely vegetated mud to extensive sods of herbaceous vegetation. The predominant species include <i>Eleocharis obtusa</i> , <i>Lilaeopsis occidentalis</i> , <i>Carex</i> spp., <i>Limnolobos</i> spp., <i>Gracilaria</i> spp., <i>Erigeron</i> spp., and <i>Ludwigia palustris</i> .	🔍
🔍	CES202.899 North-Central Interior Freshwater Marsh	This system is found throughout the northern Midwest ranging into southern Canada. It is typically found on glacial potholes, along small streams, ponds, channels in glacial outwash and on lakeplains. This system contains a deep to shallow area of freshwater marsh dominated by emergent and submergent species. Stands may be open ponds with floating or rooted aquatics, or deep marsh with bulrush or cattails, and range from fairly small to several acres. It contains hydric soils flooded by water ranging from several centimeters to over 1 meter for most of the growing season. Emergent marsh species such as <i>Typha</i> spp. and <i>Scheuchzeria</i> spp. dominate this system with an occasional scattering of tall <i>Carex</i> spp. and forbs that can vary from dense to open cover. Trees are generally absent and, if present, are scattered. Submergent wetlands include a variety of macrophytes.	🔍
🔍	CES203.921 Northern Atlantic Coastal Plain Subtidal Aquatic Bed	This system represents submerged aquatic beds of brackish - freshwater tidal upper bays, rivers, and tributaries, ranging from Chesapeake Bay northward to the Massachusetts coast. Typical species include <i>Stuckenia pectinata</i> , <i>Potamogeton perfoliatus</i> , <i>Zostera marina</i> , and others.	🔍
🔍	CES204.899 North Pacific Subtidal Aquatic Bed	This system includes shallow ephemeral water bodies found in depressions (up to several hectares in size) among grasslands and open woodlands throughout intermountain valleys of California, Oregon and the Gulf and San Juan islands of Washington and British Columbia. Northern hardpan vernal pools include an indurated clay or cemented (Si or Fe) hardpan that retains water inputs throughout some portion of the spring, but typically the depression dries down entirely into early summer months. In the San Juan and Gulf islands, they are created in small depressions in bedrock. This system typically occurs with a hummocky micro-relief. They tend to be	🔍

**3.2 Project Title:** [Internet-Based GIS Ecosystem Assessment and Reporting Tool for Conservation Decision-Making](http://gg.usm.edu/eardata/)

**Institution:** The Nature Conservancy

**Funding:** US\$75,000

**Purpose:** The tool developed for this project demonstrates how data from the Ecosystems and Protected Area Thematic Networks can be effectively integrated and used in the decision making process to guide and enhance environmental management decisions. The principal outcome of this project was the development of a web-based Geographic Information System (GIS) Ecosystem Assessment and Reporting (EAR) Tool for conservation decision-making. The tool can be accessed either through an internet browser or executed on a local machine using GIS software, providing a user-friendly “manager’s dashboard” approach for querying current spatial information on ecosystem condition, socioeconomic threat to these ecosystem, and protected area management status. By integrating biodiversity, socioeconomic and protected area datasets, the Ecosystem Assessment and Reporting Tool provides a simple, but powerful interface designed to answer questions such as “Which ecosystems are least protected?” “Of these ecosystems, where and how do we need to improve management?” and “Where are the opportunities to most efficiently reduce threats to these ecosystems?” This decision-support tool takes advantage of powerful new internet-based GIS technologies that go beyond traditional desktop GIS functionality, and have been designed using open advanced analysis techniques in a dynamic and easy-to-use web interface.



By integrating data from the Ecosystems and Protected Area Thematic Networks that have been assigned biodiversity, threat, and management status, conservation decision-makers are able to cross-query ecosystems/species with protected area information, then report back spatial and tabular results formatted using user-defined categories on the condition and vulnerability of selected ecosystems. This information can then be used by conservation decision-makers to develop focused and prioritized strategies, effectively allocating resources and activities to the most appropriate places in order to achieve maximum results [www.eartool.org](http://www.eartool.org)

**Project status, milestones and achievements:** The development of this tool has been completed. TNC completed the translation of the user manual into Spanish <http://gg.usm.edu/EAR/tutorial.htm>

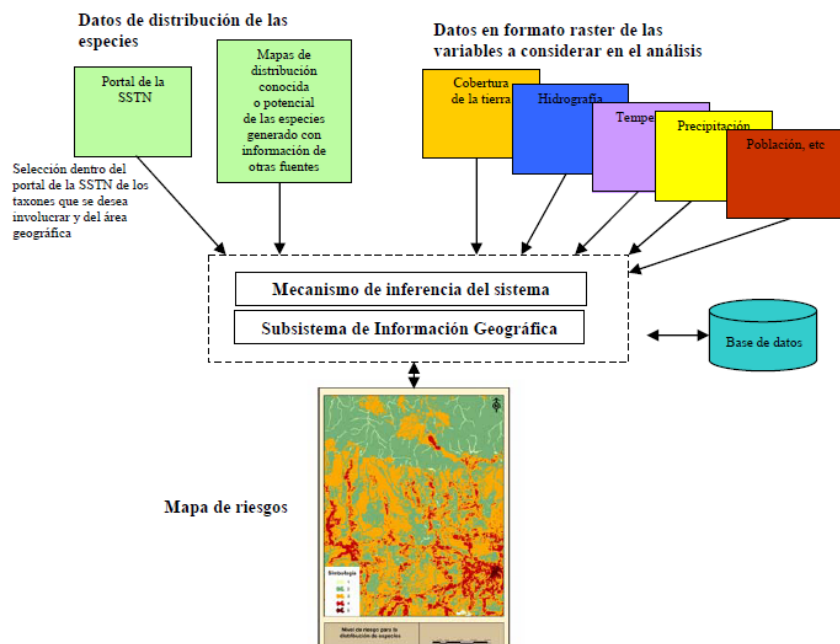
**3.3 Project Title:** [Sistema para el modelado de escenarios de acciones de desarrollo o posibles amenazas a la biodiversidad](#)

**Institution:** Asociación Instituto Nacional de Biodiversidad (INBio)

**Funding:** US\$107,298

**Purpose:** Given the large number of variables involved and the high sensitivity of populations to changes in variables such as climate, infrastructure development, invasion of species, etc, an analytical model to predict the impact of those changes in a population are practically impossible. Thus, this project proposes the development of an interactive, user-friendly and modular system that integrates biotic and abiotic data to visualize and model scenarios for potential threats and leads to better biodiversity resources management. The system is highly interactive to facilitate experimentation with causal variables and their effects, user-friendly to make more appealing to decision makers and modular so that it can be implemented as a stand alone system or as part of the SSTN portal. The project articulates the following types of activities: software development, application of the resulting software to a pilot case in Costa Rica, and an evaluation by experienced potential users. The target beneficiaries are decision makers that define policies and concrete biodiversity conservation actions.

**Description of the System:** The tool allows users to select a specific geographic area, and the system will gather maps potentially generated from other information sources for the segment you want to get information with known distributions. For this end, the database must be



updated in advanced with the required information, using an interface mechanism that can be configured for the user depending on his criteria to rate the categories to choose from. Based on this information, the system executed a difficult analysis and generates the corresponding risk maps for the involved species.

The interface of the system is multilingual. In other words, the administrator will only have to translate the extern text files and the interface can be configured for a new language. The initial system is available in English, Spanish and Portuguese. The software operates in a Web environment and will be available through the SSTN, IABIN and others related websites. The following figure shows the structure of the system for a better understanding.



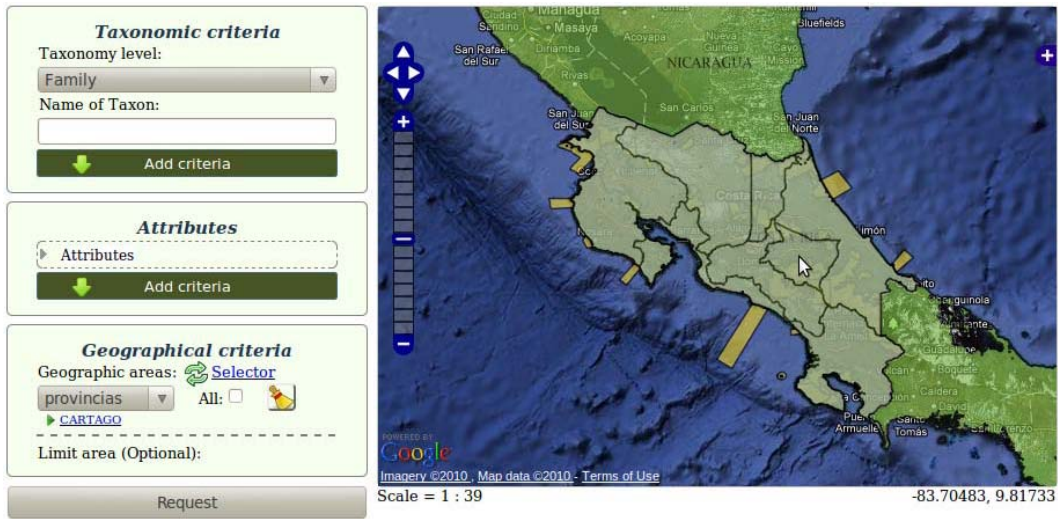
**3.4 Project Title:** [Sistema para la toma de decisiones con base en categorías de conservación y usos de la biodiversidad.](#)

**Institution:** Asociación Instituto Nacional de Biodiversidad (INBio)

**Funding:** US\$75,000

**Purpose:** To develop and document an open source and bilingual (English and Spanish) software tool, which facilitates the geo-spatial and statistic analysis of biodiversity information from species, specimens, conservation categories and biodiversity uses, to support at least three kinds of decision making: scientific (e.g. Determination of collection areas), conservation (e.g. Establishment of protected areas) and administrative (e.g. Wood extraction ratifications) decisions. Likewise, this tool will take advantage of the new Ara's





functionality developed by the SSTN, in order to promote and encourage greater use of species and specimens information digitalization processes. Finally, this tool will prove and illustrate the utility of the new module through the development of a case study: Analysis of Costa Rica ASP's (Protected Areas) limits and the potential for other areas to become ASP's based on the distribution of threatened plants and its categories of use.

**Project status, milestones and achievements:** The development of this system has passed the analysis, design and implementation stages, as well as the stage to collect information that must be converted into the databases which will be available for the user's tests. As stated in the proposal, the development of this system consists not only on providing the tool for the users to use with their own data, but accompanied with to data bases. The first is a database about documented uses through bibliographic references. The second one is a database about threatened plant species according to the established list of each country in Central America. Currently the system is totally complete and can be accessed through Species and Specimen Thematic

Network (<http://species.iabin.net/en/index.html>), specifically under the section called "SSTN tools and services" or directly from this link: <http://lucina.iainbio.ac.cr:54989/ait-web/welcome.htm>

**CARTAGO**  
3 species that match with some attribute

Hide detail Hide map Occurrences

Species	Conservation Status	Occurrences
<i>Quercus rapurahuensis</i>	VU	1 (1 Occurrences)
<i>Quercus bumelioides</i>	VU	3 (3 Occurrences)
<i>Quercus costaricensis</i>	VU	14 (14 Occurrences)



**3.5 Project Title:** Providing means for a better understanding of biodiversity: improving primary data and using it for threat assessment and in situ conservation planning in South America

**Institution:** International Centre for Tropical Agriculture, CIAT

**Funding:** US\$

**Purpose:** One of the most relevant issues regarding the analyses and latter conclusions derived from the usage of primary biodiversity data is the reliance on its quality. Poor quality biodiversity data could lead to incorrect and biased conclusions as well as cause inefficient and/or wrong investment of the available resources and inadequate policy development.

Checking of biodiversity data quality as well as using it adequately is a key issue in order to aid decision-making processes. Through this tool, CIAT will (1) assess and improve the quality of IABIN's terrestrial holdings using automated scripts, (2) use the primary biodiversity data to develop niche models, (3) couple those results to assess the extent at which South American taxa are both under threat and conserved by the current Protected Area network, and (4) implement an interface through which all results will be made available to policy-makers. The timeline to develop the project is six months, and the total budget that will be used is 120,800 USD, from which 50% is matched via CIAT, and the other 50% is financed by IABIN.

**Project Goals and Objectives:**

1. To finalize and implement a Java-based algorithm to cross-check coordinates of IABIN's terrestrial biodiversity data.

2. To finalize and implement Java-based algorithm to add value to non-georeferenced records within the IABIN network.
3. To assess all the primary data using the algorithms in (1) and (2) and provide IABIN with a detailed evaluation of all its primary biodiversity data.
4. To finalize and implement a Java-based algorithm for the training of niche models (using a maximum entropy approach) and apply it to plant taxa with enough data located in South America.
5. To overlay the developed geographic distributions with ecosystem threat, and protected areas layers, generate analysis metrics to provide the necessary background data for scenario assessment and policy making for South America.
6. Development of an interactive Google-maps based interface to navigate through the biodiversity data and the modeling and overlaying results.
7. To generate the appropriate documentation and reports on the developed tools.

**Project status, milestones and achievements:** Attempts to correct geographic errors in IABIN Thematic Networks (TNs) were done and software packages based on the Java programming language were developed and tested. Documentation was also provided so that partners are able to use the tools CIAT provides. Using these automated tools, CIAT found that 14% (~500,000 records) of the Species and Specimens Thematic Network (SSTN) has either not reliable coordinates or have no coordinates at all; whereas for the I3N database (for which we could only assess 14.3% of the data owing to difficulties in the interpretation of coordinates), CIAT found that 30.3% have unreliable coordinates. All these data can be potentially georeferenced, though particular attention needs to be paid to the location data needed to retrieve coordinates. The Pollinators Thematic Network (PTN) database has not been yet assessed as it has not been delivered by TN partners. CIAT was able to properly implement the georeferencing algorithm and apply it over various sets of test data. Their results indicate that in the vast majority of cases a reliable geographic reference can be retrieved from the biogeomancer service. In addition, CIAT set up several trials to test the algorithm on its accuracy, but were not able to perform them. Particular attention needs to be paid to the processing time given the condition of the biogeomancer service as an online platform and optimisation pathways are currently under investigation.

**3.6 Project Title:** Data Integration and Analysis Center (IABIN DIAC): A Pilot Application for the Integration, Visualization, Sharing and Analysis of IABIN Thematic Network Data

**Institution:** Conservation Biology Institute (CBI)

**Funding:** US\$89,593.00

**Purpose:** To develop a prototype application, the IABIN Data Integration and Analysis Center (DIAC), to improve the accessibility of TN information for important conservation, development, planning and scientific applications. The IABIN DIAC will be built on the Data Basin ESRI platform, developed by the Conservation Biology Institute in partnership with ESRI. This prototype will allow users to aggregate TN datasets, integrate TN data with other available information, and to conduct structured data queries. We will carry out a pilot demonstration where TN datasets are both well-developed and compliant with standard data sharing protocols. This project will demonstrate the ability of the emerging technology to increase the value of these data to decision makers through structured data integration, visualization and analysis functions. This demonstration project will help define the blueprint for future management, distribution and application of all TN datasets across Latin America and the Caribbean.

**Project status, milestones and achievements:** CBI has recently submitted its first report and has made important progress on the following activities:

1. **Deliverable 1.1** Report on the status of IABIN data and technology across the different TNs relative to the ability to integrate and analyze this data in the IABIN DIAC
2. **Deliverable 2.1** Document the IABIN DIAC system requirement: The IABIN DIAC is being constructed using ArcGIS Online (a new ESRI initiative) and traditional ESRI GIS mapping technology on the Data Basin software platform. Data Basin is programmed in English, but capabilities are being built that will allow multiple language facility. The IABIN DIAC will be made available in English, Spanish and Portuguese. The IABIN DIAC site will be created to have its own branding within Data Basin and will be dynamically linked to the IABIN.net web site. The home page and the workspace for the IABIN DIAC will showcase the different Thematic Networks and the consortium of organizations within each network and other pertinent IABIN OAS relationships. IABIN DIAC will allow users to (1) access and visualize datasets across all of the Thematic Networks, (2) combine any selected datasets in a selected geographic area, (3) create and customize their own maps, (4) use specific analytical tools to query and report on the datasets, and (5) access direct links to data providers and subject experts.
3. **Deliverable 3.1** Document the queries that will be supported in the prototype IABIN DIAC system: Queries that will be supported by this IABIN DIAC fall into two different processes. One of these processes will support the query of specific data themes, and the ability to display the results of this query on the map visualizer. The features that can be queried include the different data categories within a TN. An example of this type of query is “Show all of the occurrences of the Invasive Species in Costa Rica”. A query could also focus on subset of a data categories. An example is “Show all of the records for collections of the *Swietenia humilis* (Honduran Mahogany) in Central America”. The resulting polygons from either type of query will be displayed on the visualizer and can be output as a physical report. The other process will involve a query of the intersection of different datasets. Examples of these types of queries include “What are all of the invasive species that have been identified associated with the Desierto tropical interior con vegetación escasa ecosystem in Chile?”
4. **Deliverable 5.1** Report on the strategy and the implementation plan for populating the IABIN DIAC prototype with standardized and compatible Thematic Network data.

The biodiversity informatics matrix was completed that shows links to all websites that house biodiversity data. <http://www.oas.org/DSD/IABIN/Component%203v2/3rdRfPv2.htm>

## **4. COMPONENT 4: SUSTAINABILITY OF IABIN**

### **4.1. Outreach and Communications**

Arturo Restrepo, the IABIN Coordinator, and Luisa Neira of the OAS represented IABIN at the OAS Ministerial on Sustainable Development Meeting in October 2010 in the Dominican Republic. Arturo and Luisa presented on IABIN at a booth during the meeting and engaged Ministers and employees of the Ministries of the Environment throughout the Americas. More information can be found at:

[http://www.oas.org/dsd/MinisterialMeeting/SecondMeetingSustainableDevelopment\\_e.htm](http://www.oas.org/dsd/MinisterialMeeting/SecondMeetingSustainableDevelopment_e.htm)

## 4.2 TNs Sustainability

An IABIN Technical Working Group Meeting was held in Knoxville, Tennessee, in August 2010, organized by USGS and GS/OAS. Representatives from the Coordinating Institutions and component #3 project participants met with the objective to review status of tools/applications, data content grants, (<http://www.oas.org/dsd/IABIN/Component2.htm> ), and Component 3 products (<http://int.usde.oas.org/IABIN/Component%203v2/Component3v2.htm>).

The overall goal was to begin to coordinate between the Thematic Networks so that data from species/specimens, pollinators, invasive species, protected areas, and ecosystems could be uploaded on a geospatial platform (DataBasin -- <http://databasin.org>) and manipulated to facilitate research on climate change, ecosystems services, and carbon sequestration potential for possible carbon offset projects (as examples) that might be further explored through a follow up GEF project currently under development. Contacts with both CAF, CCAD, and IDB will be made to coordinate related geospatial activities.

The group reviewed the GEF 2 draft outline that has the objective to improve and enable updated and integrated biodiversity information to support informed decisions for sustainable conservation and resources management for countries in the Americas.

## 4.4 Fund Raising

**The following proposals are submitted or in development:**

Donor	Theme	Amount requested	Status
Google.org	protected areas	2,140,000	no response
Howard G Buffett Foundation	vulnerability atlas (informatics for sustainable development)	1,260,000	Sent 8/18/2010 Rejected Sent in early 2010 --
German Climate Fund	vulnerability atlas (emphasis on climate vulnerability assessment)	1,545,000	rejected
Moore Foundation	Climate Adaptation Monitoring, Evaluation, and Decision Support	800,000	to be sent
Tinker Foundation	capacity building - training decision-makers in use of IABIN	80,000	Sent 8/18/2010
Wallace Global Fund	awareness building-outreach - use of IABIN for IIRSA planning	80,000	Sent 8/18/2010
Fundacion Biodiversidad	Inter American Biodiversity Institute feasibility study/pilot distance learning project	120,000 (euros)	to be sent
German Climate Fund II	REDD-GAP integration of carbon into biodiversity gap analysis to pinpoint areas with high carbon and biodiversity values	~@ 1,200,000	under development

## JRS Biodiversity Foundation

The proposal “Enhancing Knowledge for Establishing Ecosystem Conservation Priorities in the Neotropics by Integrating Biodiversity and Geospatial Data” was approved in December 2007 for US\$200K. The first installment of \$120,000 was received in February 2008. In late 2008, INBio was identified as the Principal Investigator for this project. In June of 2009 JRS gave the final go ahead to the current version of the project and implementation began in late 2009. In the second half of 2010, the project completed most remaining planned activities, and is on target to end in early to mid 2011. Final project deliverables will be distributed to relevant IABIN participants upon project completion (and where possible for comments prior to completion), with a special emphasis on partners in Central America.

4. The Western Hemisphere Migratory Species Initiative (WHMSI) is building country capacity to conserve and manage migratory wildlife. It improves hemispheric communication on conservation issues of common interest, provides training in priority areas, strengthens the exchange of information needed for informed decision-making, and provides a forum to address emerging issues such as new threats to migratory species, or the connections between wildlife disease and human diseases.

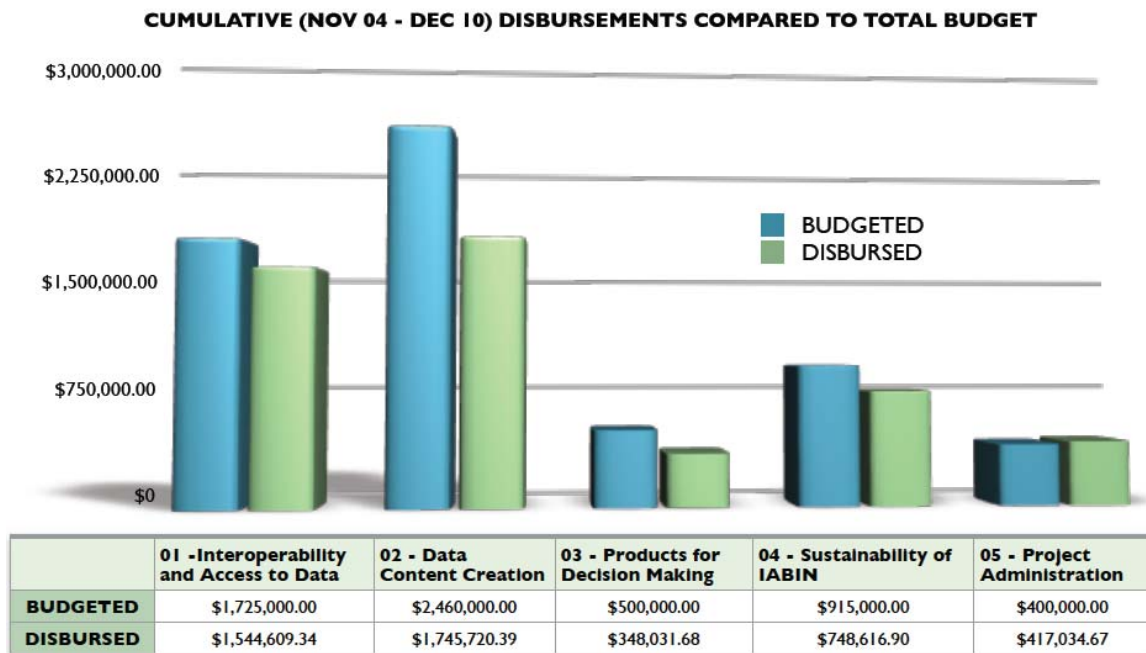
Projects funded under WHMSI 3 - 2010					
Capacity Building for the Cooperation in Conservation:					
Western Hemisphere Migratory Species Initiative (WHMSI)					
No.	Institution	Country	Title of the Proposal	WHMSI Funding	Co finance Funding
1	Consejo Nacional de Areas Protegidas - CONAP	Guatemala	<a href="#">Estudio sobre la migracion de ballenas jorobadas (Megaptera novaeangliae) en el Oeste del Pacifico de Guatemala</a>	\$22,965.23	\$86,505
2	Asociacion GUYRA	Paraguay	<a href="#">Creando Capacidades para Unir Iniciativas de Conservacion de Aves Migratorias de Pastizales</a>	\$25,500	\$31,234
3	Society for the Conservation and Study of Caribbean Birds	Jamaica	<a href="#">Monitoring Land Birds in Caribbean Protected Areas for Adaptive Management and Public Education</a>	\$26,000	\$29,000
4	World Wild Fund (WWF)	United States	<a href="#">“Incorporating climate adaptation into marine turtle conservation: capacity strengthening for planning and implementation”</a>	\$25,999	\$22,082

5	American Bird Conservancy	United States	<a href="#">Training Local Stakeholders in Reforestation and the Managment of Land Neotropical Migrants in Colombia, Nicaragua, and Peru.</a>	\$16,100	\$245,612
			-	\$116,564	\$414,433

## 5. COMPONENT 5: PROJECT ADMINISTRATION

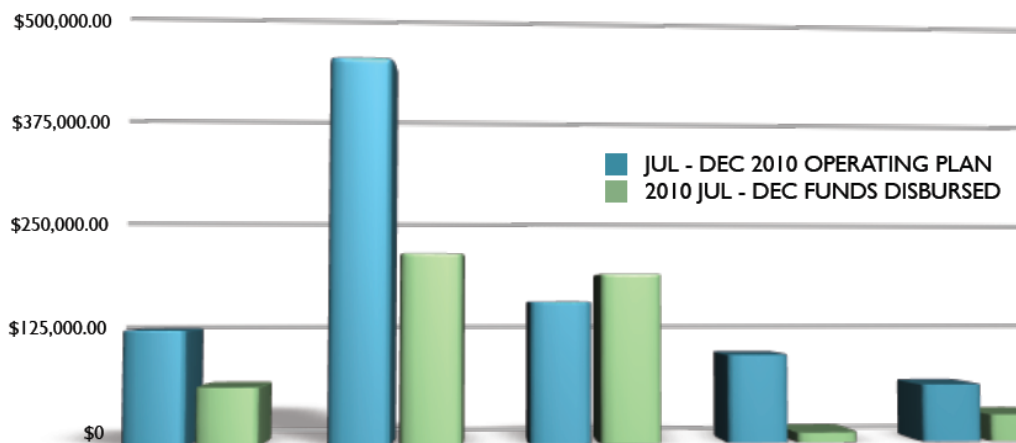
### 5.1 IABIN Financing

From Project inception to December 2010, the project has disbursed \$4,804,012.98 or 81% of the total Budget. In the 2010 AOP, IABIN projected disbursements of up to \$872,231.69 for the period of July through December 2010. Even though, actual disbursement of funds amounted to \$502,734.91, this amount represents over 30% more than in the previous semester showing that overall the level of disbursements has increased through the life of the project.



The breakdown of disbursements by component show that the greatest difference between planned and actual disbursements is in Components 1 and 2 given the time required to negotiate, approve and sign the Sub-Project Agreements under said components; the performance of the other components is as follows:

**JUL - DEC 10 DISBURSEMENTS COMPARED WITH SEMESTER OPERATING**



	01 - Interoperability and Access to Data	02 - Data Content Creation	03 - Products for Decision Making	04 - Sustainability of IABIN	05 - Project Administration
<b>JUL - DEC 2010 OPERATING PLAN</b>	\$126,004.00	\$427,505.32	\$156,727.75	\$97,994.62	\$64,000.00
<b>2010 JUL - DEC FUNDS DISBURSED</b>	\$63,919.22	\$210,429.71	\$187,730.81	\$10,792.95	\$29,862.22

- (i) *Component 1:* Disbursements totaled 51% of the planned amount for the second semester of 2010. The coordinating institutions are implementing most of their activities on schedule as programmed in their respective operating plans; Most of them, specially the SSTN, ETN and PTN have already completed all of their programmed activities under component one. In the case of the Protected Areas Thematic Network, the Coordinating Institution, UNEP/WCMC, was expected to finalize all activities before the end of 2010. However given the long time required to sign the agreement, some of the activities were postponed to 2011. PATN should complete all activities by March 2011 and over half of the CI Transfer Agreement amount will be disbursed in the last semester of the project. Likewise disbursements under the Catalog's Component one accelerated in this semester. All pending disbursements under the contract with SAIC for the development of the IABIN Catalog Search System were made in the period Jul-Dec 2010 and a Technical Working Group Meeting was held on July 2010.
- (ii) *Component 2:* Disbursements in this component remained high compared to previous semesters and totaled 49% of the planned amount for the second semester of 2010. During this period the GS/OAS negotiated the terms and conditions of GS/OAS administrative and legal procedures with the recipients of the grants awarded under the last Request for Proposals. This process has taken several months for many institutions since some of grantees don't have a legal personality or don't have the necessary accounting system. In addition, these institutions also have to send the Sub-Project Agreements for the review and approval of their own Legal Department causing delays in the signature of the Agreements and in the disbursement of the first payment. As set in the grant agreements, most of the institutions require



approximately 40% of the grant amount to be disbursed upon signature while the remaining balance is paid upon submission of satisfactory performance on their deliverables. Approximately 60 data content grants Agreements have been signed and are well advanced. In addition almost 65 projects have been completed and 3 Agreements are currently under negotiation with the corresponding institutions. Therefore the GS/OAS expects to disburse the remaining data content grants funds in the first semester of 2011. In addition, during this semester the last training funds under the PTN were disbursed after the implementation of a training workshop in Brazil held on July 2010.

- (iii) *Component 3:* Disbursements totaled 120% of the planned amount for the second semester of 2010. After signing the 3rd Amendment to the GEF Trust Fund Agreement required in order to include a new procurement category and agreeing on the Sub Grant Agreement model with the World Bank, the GS/OAS finally signed six sub-projects for the development of value added tools for decision making. Four Component 3 projects under The Nature Conservancy, NatureServe and Asociación Instituto Nacional de Biodiversidad de Costa Rica (INBio) concluded in the period July-December 2010 explaining the increase in fund disbursed under this Component compared to what had been originally planned. Two more projects are underway and will be finalized by June 2011.
- (iv) *Component 4:* Disbursements totaled \$10,792.95 of the planned amount for the second semester of 2010 corresponding in great part to the hiring of the consultant in the role of IABIN Coordinator.
- (v) *Component 5:* Disbursements totaled 47% of the planned amount for the second semester of 2010.

**Execution level for the period July though December 2010:**

COMPONENT	SEMESTER			
	Planned	Actual	Unspent balance for semester	Variance: Actual Vs. Planned
	Jul-Dec 2010	Jul-Dec 2010	(US \$)	%
01 Interoperability and Access to Data	\$126,004.00	\$63,919.22	\$62,084.78	50.73%
02 Data Content Creation	\$427,505.32	\$210,429.71	\$217,075.61	49.22%
03 Products for Decision Making	\$156,727.75	\$187,730.81	-\$31,003.06	119.78%
04 Sustainability of IABIN	\$97,994.62	\$10,792.95	\$87,201.67	11.01%
05 Project Administration	\$64,000.00	\$29,862.22	\$34,137.78	46.66%
<b>Grand Total</b>	<b>\$872,231.69</b>	<b>\$502,734.91</b>	<b>\$369,496.78</b>	<b>57.64%</b>

The Table below shows that from the project inception through December 2010, IABIN has disbursed 80% of the total funds achieving almost full completion of Component 1.

## Total Funds disbursed by Components

COMPONENT	CUMULATIVE		
	PAD: Life of Project	Actual	Level of Implementation
	Nov 04 - Jul 2011	Nov 04 - Dec 2011	%
01 Interoperability and Access to Data	\$1,725,000.00	\$1,544,609.34	90%
02 Data Content Creation	\$2,460,000.00	\$1,745,720.39	71%
03 Products for Decision Making	\$500,000.00	\$348,031.68	70%
04 Sustainability of IABIN	\$915,000.00	\$748,616.90	82%
05 Project Administration	\$400,000	\$417,034.67	104%
<b>Grand Total</b>	<b>\$6,000,000.00</b>	<b>\$4,804,012.98</b>	<b>80%</b>

## 5.2 IABIN Co-Financing

The IABIN partner organizations, Coordinating Institutions and grantees funded under the IABIN Content Development Program for Data Creation submitted their co-financing information for the period July through December 2010; the Table below shows that IABIN financing from GEF and co-financing amounted to a total of \$1,113,066.00 for this period. However, please note that as of February 14, 2011 the co financing of a few CIs hadn't been reported and is not included in the table below.

IABIN Financing						
<i>Period: July- December 2010</i>						
	Component 1	Component 2	Component 3	Component 4	Component 5	Total
Global Environmental Facility (GEF)	\$63,919.22	\$210,429.71	\$187,730.81	\$10,792.95	\$29,862.22	<b>\$502,734.91</b>
Co-Financing						
Core Co-Financing						
Coordinating Institutions						
Catalogue -- U.S. Geological Survey/National Biological Information Infrastructure	\$64,500.00	\$3,520.00		\$47,440.00		\$115,460.00
I3N -- U.S. Geological Survey	\$91,530.00	\$202,125.00		\$21,000.00		\$314,655.00
PTN -- CoEvolution Institute	\$67,384.00					\$67,384.00
PATN -- UNEP /WCMC						\$0.00
Data Content Grants						
Administración de Parques Nacionales		\$13,600.00				\$13,600.00
Asociación GUYRA Paraguay Coordinador:Cristina Penayo Alberto Yanosky		\$1,550.00				\$1,550.00
Asociación GUYRA Paraguay Coordinador:Cristina Penayo Alberto Yanosky		\$3,950.00				\$3,950.00
Comisión Nacional del Medio Ambiente (CONAMA PO#225054)		\$14,079.00				\$14,079.00
Corporación Centro de Datos para la Conservación		\$5,554.00				\$5,554.00
Corporación Instituto de Ecología y Biodiversidad (IEB)		\$10,697.00				\$10,697.00
Corporación Selva Humeda (PO#246720) Coordinador: Ian Sajid		\$9,000.00				\$9,000.00
Dirección Nacional de Medio Ambiente.		\$6,000.00				\$6,000.00
Fundación Ciudad del Saber		\$10,000.00				\$10,000.00
Fundación Oga		\$6,594.00				\$6,594.00
Herbario Universidad de Panama (Briofitas y Liqueños)		\$38,430.00				\$38,430.00
Herbario Universidad de Panama (Briofitas y Liqueños)		\$35,475.00				\$35,475.00
Instituto Amazónico de Investigaciones Científicas SINCHI		\$5,217.00				\$5,217.00
Instituto Amazónico de Investigaciones Científicas SINCHI		\$8,783.00				\$8,783.00
Instituto de Investigaciones de Recursos Biológicos Alexander Von Humbolt		\$4,058.00				\$4,058.00
Museo Argentino de Ciencias Naturales, CONICET - Innova -T		\$7,300.00				\$7,300.00
Museo Argentino de Ciencias Naturales, CONICET - Innova -T		\$9,535.00				\$9,535.00

Museo Entomológico de León / Asociación Nicaraguense de Entomología			\$9,200.00				\$9,200.00
Organización para Estudios Tropicales – OET			\$5,806.00				\$5,806.00
Pontificia Universidad Católica de Valparaiso			\$565.00				\$565.00
Programa EcoPlata-DINAMA			\$3,000.00				\$3,000.00
Secretaría de Medio Ambiente y Recursos Naturales			\$36,210.00				\$36,210.00
Sociedad Malacológica de Chile			\$10,000.00				\$10,000.00
TNC - Fresh Water Central America Coordinador: Steve Schill			\$15,023.00				\$15,023.00
TNC - Fresh Water South America Coordinador: Steve Schill			\$15,008.00				\$15,008.00
TNC (3rd Terr Pino-Roble Fase I)			\$10,000.00				\$10,000.00
TNC (5th Pino-Roble Fase II) Coordinador: Steve Schill			\$15,926.00				\$15,926.00
U. Nacional de Cajamarca - Herbario CPUN			\$5,304.00				\$5,304.00
U. Nacional de Cajamarca - Herbario CPUN			\$5,524.00				\$5,524.00
U. Nacional de San Agustín - Herbario Arequipense			\$4,800.00				\$4,800.00
Universidad Central de Venezuela			\$51,030.00				\$51,030.00
Universidad de San Marcos MUSM - Coleccion Mastozoologica			\$7,750.00				\$7,750.00
Universidad Nacional de Misiones			\$49,800.00				\$49,800.00
Universidad San Marcos - Museo de Historia Natural Peces Amazonicos			\$6,500.00				\$6,500.00
<b>Value Added Tools Sun-Projects***</b>							
INBio A Project				\$3,000.00			
INBio B Project				\$12,450.00			
NatureServe				\$48,849.00			
SG/OEA						\$110,000.00	\$110,000.00
<b>Total Core Co-Financing</b>	<b>\$223,414.00</b>	<b>\$646,913.00</b>	<b>\$64,299.00</b>	<b>\$68,440.00</b>	<b>\$110,000.00</b>		<b>\$1,113,066.00</b>
<b>Non-Core Co-Financing</b>							
							\$0.00
<b>Total Non-Core Co-Financing</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>		<b>\$0.00</b>
<b>Total Co-Financing</b>	<b>\$223,414.00</b>	<b>\$646,913.00</b>	<b>\$64,299.00</b>	<b>\$68,440.00</b>	<b>\$110,000.00</b>		<b>\$1,113,066.00</b>
<b>Total IABIN Financing</b>	<b>\$287,333.22</b>	<b>\$857,342.71</b>	<b>\$252,029.81</b>	<b>\$79,232.95</b>	<b>\$139,862.22</b>		<b>\$1,615,800.91</b>
* Non-Core Co-Financing for ETN							
** Non-Core Co-Financing for PATN							
*** The Cofinancing from PATN/UNEP, CBI and CIAT for the period Jul-Dec 2010 hasn't yet been received. It will be included in the next report.							

### **Annex 1 - List of Acronyms**

AOP = Annual Operating Plan

CABI = Intergovernmental Organization. Invasive Species is one of its three key scientific areas for international development that works toward reducing the spread and impact of invasive species throughout the world.

CI = Coordinating Institution

CONABIO = Comisión Nacional para el Conocimiento y Uso de la Biodiversidad.

ECS = Ecosystem Class Standard

ENBI = European Network for Biodiversity Information

ETN = Ecosystem Thematic Network

FP = Focal Point

FAO = Food and Agriculture Organization

GBIF = Global Biodiversity Information Facility

*SBSTTA = Subsidiary Body on Scientific, Technical and Technological Advice*

*GISP = Global Invasive Species Programme*

*GISIN = Global Invasive Species Information Network*

IAS = Invasive Alien Species

I3N = Invasive Information Network

IEC = IABIN Executive Committee

IUCN = The World Conservation Union

JICA = Japan International Cooperation Agency

LAA/USP = Laboratório de Automação Agrícola da Escola Politécnica da University of São Paulo

NBII = National Biological Information Infrastructure

PAII = Portal de Acceso Integrado a Información de Especies y Especímenes

PATN = Protected Areas Thematic Network

PATWG = Protected Areas Technical Working Group

*PAIGH = Pan American Institute of Geography and History*

PIP = Project Implementation Plan

PP = Procurement Plan

PTN = Pollinators Thematic Network

REMIB = The World Biodiversity Information Network

SAIC = Science and Application Information Systems

SICAMAI = Sistema de Captura y Manejo de Información de Especies y Especímenes

STRI = Smithsonian Tropical Research Institute

SSTN = Species and Specimens Thematic Network

TN = Thematic Network

TWG = Thematic Working Group

TNC = The Nature Conservancy

UDDI = Universal Description, Discovery and Integration

UNEP = United Nations Environment Program