TO:    IABIN Executive Committee and IABIN Council

IABIN Executive Committee:

Gladys Cotter* – (Chairperson) United States of America
Karin Molt* – (Vice-Chair) Chile
Ana Aber* – Uruguay
Daven Joseph – Antigua and Barbuda
Francisco González Salas – Costa Rica
María Esther Bondanza. – Argentina
Antonio Matamoros – Ecuador
María Luisa del Río Mispireta – Peru
Christoph Haeuser - Global Biodiversity Information Facility

FROM: GS/OAS and the IABIN Secretariat – Ciudad de Saber, Panama
      Building IABIN

RE:  1st Semester Report – Period December 1– June 1, 2005

General Secretariat Organization of American States (GS/OAS), acting as Executing
Agency of the World Bank implemented GEF assisted project “Building the Inter-
American Biodiversity Information Network” (IABIN) Project LCR-6L-Building
IABIN, P077187 - TF 053526, and IABIN Secretariat.

1. IABIN Milestones

- Summary of the “Building IABIN” Project. The Project Implementation Plan outlines a
  $35 million project. IABIN was awarded $6 million from the Global Environment Facility
  (GEF) towards this plan. The Project Implementation Plan (PIP) outlines agreements with
  the primary biodiversity informatics institutions throughout the Americas based on
  biodiversity data sharing priorities of these institutions and mandates of the first three
  IABIN Council Meetings. Co-financing of $28.9 million has been identified from 76
  regional or national institutions and programs
- Country Endorsements and Focal Points. Thirty-four out of 34 countries have designated
  IABIN Focal Points. Twenty five of 32 recipient countries have endorsed the GEF
  “Building IABIN” project
- IABIN Secretariat. The IABIN Secretariat is hosted in Panama at the City of Knowledge.
  The IABIN Secretariat is fully staffed with the Secretariat Director, Data Content Manager,
  and Thematic Networks Coordinator hired through an international search. Iván
  Valdespino, Director (Panama), Rita Besana, Data Content Manager, (Mexico) and Boris
Ramirez (Colombia) have been contracted on one year GS/OAS contracts. Performance reviews will be held at 6 months and 9 months into the contracts.

- **IABIN webpage.** www.iabin.net moved to Panama and is fully operational in Spanish and English and is receiving an average of over 60,000 hits/month.

- **IABIN Council Meeting.** The 4th IABIN Council Meeting of the National Focal Points of the Inter-American Biodiversity Information Network (IABIN) took place from April 6-8, 2005 in Panama. Forty-nine participants, including 22 IABIN National Focal Points, from 25 countries attended. Additionally both the Catalogue and Invasives programs (I3N) held technical working group meetings at the 4th IABIN Council meeting. Meeting minutes are being prepared in English and Spanish by Secretariat staff to be posted at IABIN webpage and to be distributed through iabinfriends.

- **Secretariat Staff attended the GBIF Meeting on April 18 -22, 2005 as part of the formal IABIN Delegation.**

- **Component 3; Connectivity Program: The IABIN-GEF project for the Connectivity Program is a part of IABIN third component. Its goal is the integration of Biological and Geospatial Data. This project is implemented in collaboration with the SERVIR Project led by NASA and Centro del Agua del Trópico Húmedo para América Latina y el Caribe (CATHALAC). With this collaboration, IABIN is taking advantage of the work, data and infrastructure that already exist. Also, IABIN is taking planning and fundraising steps to extend this program to South America.**

- **Fundraising.** Development Grant Facility of the World Bank approves project on “Developing Connectivity between Biological and Geospatial Data in Central America and the Caribbean” for $ 800,000 over 2 years. The Gordon and Betty Moore Foundation awarded the Office for Sustainable Development and Environment of the General Secretariat of the Organization of American States (OSDE/GS/OAS) 65k towards the IABIN Protected Areas Thematic Network. A workshop will be held in Panama June 22-25, 2005 between the protected areas managers of the Amazon. Microsoft Panama has donated one “Windows Server 2003 Enterprise Edition” license to be installed in the IABIN GeoSpatial Server.

- **Procurement Advancements.** The IABIN Protected Areas Thematic Network terms of reference were advertised and the technical selection committee reviewed the quality of the consortium of the one Expressions of Interest and found it to meet the minimum criteria. The consortium headed by Fundação O Boticário de Proteção à Natureza of Brazil was invited to submit a full proposal that was received May 23, 2005. This proposal has been fully evaluated and results are expected to be ready June 10, 2005.

- **The four other thematic networks (species, specimens, pollinators, and ecosystems) consortiums submitted their Expressions of Interest on May 2, 2005. Short lists were completed on May 23th, 2005 and the RFP package and short lists were sent to the World Bank for no objection on May 24th, 2005.**

- **Terms of Reference (TORs) for the catalogue were received in April, 2005 and modifications are being made. This TORs will be sent to the World Bank for no objection by June 8, 2005. It is expected that by the second week of June the formal Request for Expression of Interest and the TORs will be advertised.**
2. Summary of the “Building IABIN” Project.

The Project Implementation Plan outlines a $35 million project. IABIN requested and was awarded $6 million from the Global Environment Facility (GEF) towards this plan. The legal agreement was signed between the World Bank and the GS/OAS on July 15, 2004. The Project Implementation Plan (PIP) outlines agreements with the primary biodiversity informatics institutions throughout the Americas based on biodiversity data sharing priorities of these institutions and mandates of the first three IABIN Council Meetings. Co-financing of $28.9 million has been identified from 76 regional or national institutions and programs.

**The overall project will:**

(i) Develop an Internet-based, decentralized managed network to provide access to scientifically credible biodiversity information currently existing in individual institutions and agencies in the Americas,

(ii) Provide the tools necessary to draw knowledge from that wealth of resources, which in turn will support sound decision-making concerning the conservation of biodiversity, and

(iii) Provide a mechanism in the Americas to exchange information relevant to conservation and sustainable use of biological diversity, thus promoting and facilitating technical and scientific cooperation to help fulfill the mandate of the Clearing-House Mechanism of the Convention on Biological Diversity.

2.1. IABIN Secretariat.

The IABIN Secretariat will manage day-to-day activities of IABIN. The City of Knowledge (CoK) in Panama City, an NGO, is the Host organization for the IABIN Secretariat. In the months since January 2005, the Secretariat staffs have:

- Established and relocated IABIN staff in Panama
- Participated in the World Bank Evaluation Mission 26-28 Jan, 2005
- Managed relations with host organization, ensuring availability of physical space, logistics, equipment and technical support for IABIN office in compliance with the Letter of Agreement (LoA) signed. Furthermore, a Memorandum of Understanding (MOU) between CoK and CATHALAC has guaranteed internet connectivity, server requirements, and physical space for the Secretariat as part of the pledge made by CoK to the IEC in the LoA. This has also clarified to all parties concerned with in site logistic and technical collaboration agreements that the Secretariat is a technical body directly dependent only of the IABIN Council and IEC, and to certain degree of the GS/OAS in matters related to project implementation.
- During this period, the National Environmental Authority (ANAM) of Panama has been supportive of efforts made to establish IABIN at CoK.
- Read the PIP and most other relevant documents
- Developed a document to incorporate all activities and indicators for IABIN Secretariat under the GEF project, from all the different IABIN documents. This document will serve as basis for monitoring and evaluation.
- Organized and managed the logistics in Panama for the 4th IABIN Council meeting
- Developed discussion papers and presentations for the 4th IABIN Council meeting
- Delivered a successful 4th Council meeting, April 6-8, 2005 in Panama
- Assembled and posted minutes from the 4th Council meeting (in English)
- Started to translate minutes into Spanish
- Prepared for and participated in the I3N TWG meetings during the 4th Council Meeting as *ex officio* members
- Prepared for and participated in the GBIF-10 meeting in Belgium, in plenary and in the Outreach and Capacity Building (OCB) Science sub-committee and Nodes Managers meetings.
- Met with GBIF staff to commence a relationship and plan for future joint work
- Participated in Metadata training in NY and met with IABIN Catalog coordinator to review the TORs in Reston, VA
- Delivered two invited talks IABIN as part of the outreach and communication efforts:
  - IABIN: una iniciativa de colaboración e intercambio para el desarrollo sostenible del continente americano for the Mesoamerican and The Caribbean Herbaria Network Meeting at U of Panama & STRI, Panama (approx. attendees: 30 people, February 28, 2005)
- Continued communication efforts through IABINfriends and emails with National Focal Points, IEC, OAS & WB. In addition, regular (mostly monthly) teleconference meetings are being held with the Chair of the IEC and her staff in order to review planning and implementation of Secretariat activities according to Project Implementation Plan (PIP) and IABIN Council Directives
- Reviewed and commented on
  - IABIN Catalog ToRs
  - I3N TWG ToRs
  - I3N workplan
  - ToRs for call for LoIs for Protected Areas Thematic Network
  - ToRs for call for LoIs for the Species, Specimens, Ecosystems, and Pollinators Thematic Networks
- Reviewed and qualified
  - PATN LoI and Full Proposal
  - LoIs for the Species, Specimens, Ecosystems and Pollinators TNs and recommended organizations to send full proposals
- Negotiated and obtained approval for petty cash management at Secretariat office

2.2. WWW.IABIN.net.

The IABIN website has been moved to Panama and started the interim process to re-design and move the website to a new technology that allows the Secretariat to manage content on-line and integrate the website with future TN’s modules.
This new website will:

- Manage users, events, links, upload and download files, news
- Maintain IABIN web pages content on-line through working groups
- Use PHP (programming language) to build new modules that will permit the integration with the TNs websites
- Change the IABIN template without re-coding the whole website
- Integration with MySQL DB
- Manage the website on-line

The IAIBIN Secretariat updated and maintained the current website through the following activities:

- Moved the website to Linux OS
- Evaluated and selected Mambo as the Management Content tool for the new website.
- Created Templates for the new website
- Re-distribute the menu for the new website
- Began conversion of the old web pages to the new website using Mambo.

As the network grows and the demands for a real IABIN gateway materialize it is expected that a total re-engineering of architecture and structure, as well as an improvement in content development will take place. This process will be carried out in two phases. The first one will entail in-house content management and interim redesign in order to incorporate new data, resources and tools that are needed in a short period of time. This will be ready by September 30, 2005. The next phase includes a total re-engineering and redesign of the current IABIN website to transform it into a true Gateway with an interphase capable of accommodating users and data providers needs to access IABIN decentralized resources and data. This phase will be developed by professional web portal developers and include the development of a new architecture and structure, search tools, data content development, and Thematic Network modules incorporation, as well as the use of new programming tools under a user-friendly approach. The new IABIN Gateway should also be capable of recording users and data provider use of the network resources in order to measure some of the project indicators included in the log frame. This phase will initiate in June of this year and it is expected to be completed by the first quarter of 2006. This process will take advantage of World Bank (WB) suggested changes to the IABIN website and review by the Secretariat and will be developed by specialists with inputs from National Focal Point, IEC, Secretariat, OAS and WB.

2.3. Fourth IABIN Council Meeting.

The Fourth IABIN Council Meeting of the National Focal Points of the Inter-American Biodiversity Information Network (IABIN) took place from April 6-8, 2005 in Panama (Appendix 3).

Forty-nine participants from 25 countries attended the Council meeting, which was hosted by the Secretariat of IABIN. Attendees included 22 of IABIN National Focal Points or
their representatives and participants from inter-governmental, Non-governmental and academic organizations. The Council and the Secretariat gratefully acknowledges the support from the City of Knowledge (host institution of the Secretariat), the Organization of American States (OAS, diplomatic host of IABIN), the National Environmental Authority of Panama (ANAM), and CATHALAC for the development of the Fourth Meeting of the IABIN.

Overall objectives of the meeting were to:

- elect new members to the IABIN Executive Committee in seats that become vacant
- present country studies on biodiversity informatics
- review the one year work plan for IABIN
- discuss the six thematic networks species, specimens, ecosystems, pollinators protected areas, and invasive species as approved in the Project Implementation Plan found on www.iabin.net
- elaborate on monitoring and evaluation of the project
- discuss biodiversity standards and protocols for the hemisphere
- discuss the financial sustainability strategy for IABIN among other items.

During the meeting consensus on Roles of the National Focal Points, Standards and Protocols and IABIN Membership and Governing Structure were reached. Participants were very active in the different technical working groups convened and made specific suggestions in the areas of project monitoring and evaluation and to the preliminary fundraising strategy presented.

The election of three new members to the council was carried out by consensus. As a result Gladys Cotter (United States) was reelected to the post IABIN Executive Committee chairperson, Karin Molt (Chile) was elected Vice-Chair, and Ana Aber (Uruguay) was elected to the post of committee member.

The event received excellent media coverage both locally in Panama and abroad. There were newspapers articles on IABIN published and television coverage (Appendix 3).

A report of the Fourth IABIN Council Meeting minutes is included in Appendix 3 in English and a Spanish translation will by prepared also by Secretariat staff; both will be posted at IABIN webpage and distributed through IABINfriends. The Project Performance Indicators may be found in Appendix 1, including a table with New Suggested Indicators as proposed during the Council Meeting (Appendix 1.1).

2.4. I3N.

The Invasives species program (I3N) held two technical working group meetings at the 4th IABIN Council meeting. The Thematic Networks Coordinator and the Data Content Manager reviewed and commented on the ToRs for the Technical Working Group and on the I3N Work Plan. They are members of the Technical Working Group and participated in the meetings.
2.5. IABIN Attended GBIF-10 Meeting

A delegation comprised of Bonnie Carroll (IABIN Head of Delegation), Rita Besana (IABIN Data Content Manager) and Iván Valdespino (IABIN Secretariat Executive Director) traveled to Brussels from April 15 to 27th to participate in the GBIF-10 Meeting. Rita was designated as acting IABIN Node Manager and was required to attend the GBIF Nodes Managers Committee Meeting and she and Iván participated as invited non-voting guests of the Outreach and Capacity Building (OCB) Science sub-committee. The IABIN Project Implementation Plan calls for close collaboration between IABIN Secretariat and GBIF Secretariat in order to avoid duplication of efforts, share resources as appropriate and agree on the use of basic standards and protocols. The IABIN Executive Committee (IEC) requested that the IABIN Secretariat staff attend the GBIF-10 meeting with the following objectives (1) as part of Secretariat staff formal orientation, (2) to network with other GBIF participants, particularly those who also participate in IABIN, and strengthen relationships, (3) to initiate and cultivate a close working relationship with the GBIF Secretariat, and (4) to learn from GBIF “lessons learned”.

2.6. Component 3: Connectivity Program.

The IABIN connectivity program will integrate the Biological data with Geospatial data for Central American and the Caribbean. IABIN is working in close collaboration with the SERVIR Project lead by NASA and CATHALAC in the integration of both projects. This integration will allow IABIN to access important geospatial data for the region and to maximize resources in the following areas:

- Use SERVIR infrastructure: Servers, Data, Human Resources
- Use the same material for metadata training
- Take advantage of new software development
- Expand the project to other regions like South America
- Train more people.

The activities carried out by Secretariat under this component are:

- Participation in Metadata training in NY,
- Arranged First Metadata workshop training in Panama Mar 20 to April 1, 2005
- Purchase and setup a new windows server for geospatial data integrated with other CATHALAC servers
- Coordination and supervision of a Webpage programmer and a GSI specialist activities
- Geospatial data Survey for South America sent and analyzed in order to prepare grant proposal to expand connectivity program to this region.
2.7. Fundraising.

(i) In June 2004, the World Bank approved a proposal to the DGF entitled “Developing Connectivity between Biological and Geospatial Data in Latin America and the Caribbean” for $800k over 2 years. In April 2005, the second year budget of 400K was formally approved based on project implementation and results of the previous year. The proposal is helping to promote interoperability between biological information in the Americas (being achieved under IABIN) and different sets of non-biological information in order to promote the emergence of cross-thematic value-added applications in the areas of agriculture, disaster reduction, forestry, and rural development.

(ii) In 2005, The Gordon and Betty Moore Foundation awarded the Office for Sustainable Development and Environment of the General Secretariat of the Organization of American States (OSDE/GS/OAS) 65k to deliver the following IABIN activities:

- Information on protected area management of the following Amazon basin countries: Brazil, Bolivia, Peru, Ecuador, Colombia, Venezuela, Guyana, Suriname and French Guyana
- Tools and mechanisms to gather, publish, and update the above referenced protected areas data on line fully developed and operational.

Activities to be undertaken for this work that will be discussed in a workshop in Panama in June 22-25, 2005 between the 8 Amazon Countries protected areas managers include:

- Define a Metadata Schema to describe and evaluate management of protected areas (IUCN I-VI). This Schema should be in XML (eXtended Markup Language) and make reference to other standards used in its structure. A backup system would be developed in an easy to use system (i.e. Excel or Access) in case the more sophisticated schema in XML turns out too difficult and/or expensive to implement and run within the lifetime of the project (6 months).
- Develop, test and implement the computer tools (stand alone and on line) to gather at least the minimal set of variables for the Amazon National Protected Areas.
- Create and disseminate tutorials and training materials to guarantee the quality of the data and to avoid ambiguity in the interpretations. This material should be developed in English, Spanish and Portuguese.
- Establish formal links with UNEP – WCMC – IUCN and WCPA to make sure that this database is properly linked or uploaded into the World Database on Protected Areas. http://www.unep-wcmc.org/
- Gather the information required in the previous items through collaboration with the IABIN focal points in each designated Country. An official certification and authorization to publish the information should be released by the focal points.
- Publish the data with the metadata in IABIN’s website.

(iii) Microsoft Panama donated one “Windows Server 2003 Enterprise Edition” license to be installed in the IABIN GeoSpatial Server with a value of ca. $4k.
(iv) In addition, the Secretariat has established contact with a South Korean Government mission to Panama that discusses opportunities for cooperation and collaboration with IABIN. This same networking efforts were carried out during the GBIF-10 meeting in which contacts were established with the Programa de Ciencia y Tecnología para el Desarrollo (CYTED) and GBIF. As a result a formal letter has been submitted to CYTED to explore areas of mutual interest and cooperation leading to the preparation and submittal of a grant proposal to this organization. In the case of GBIF, the Secretariat explored possibilities of joint collaboration in fundraising efforts and other technical areas.

2.8. Procurement Advancements.

The IABIN Protected Areas Thematic Network terms of reference (TORs) were advertised and the technical selection committee requested a full proposal from Fundação O Boticário de Proteção à Natureza of Brazil.

Four other Thematic Network (TN) TORs (species, specimens, pollinators, and ecosystems) have received the no objection from the World Bank. The Publication Date was 15 March 2005 and the Deadline for Submissions of Expressions of Interest (EoIs) was May 2, 2005. Expressions of Interest included information on the consortiums experience and competence relevant to the assignment that allowed the technical selection committee to establish a short list of firms or consortium groups with the most appropriate qualifications and references. This list was formally prepared by May 23 and for the:

- Species and Specimens TN, ANDINOnet consortium and INBio consortium were short listed
- Ecosystems TN, Fundação O Boticário de Proteção à Natureza of Brazil, consortium, CATHALAC consortium, and University of Puerto Rico consortium were short listed
- Pollinators TN, the University of Maryland consortium and CRIA were short listed.

The No Objection from World Bank to the selection process has been requested. A formal announcement of short listed institutions for the 4 TN’s should be made during June 2005 by OAS in order for these to prepare proposals.


A report on the Project Financial Status is included in Appendix 2, including disbursement progress from November 2004 to April 2005.

3.0. List of Appendixes

Appendix 1: Project Design Summary and Performance Indicators
Appendix 1.1: Project Design Summary and New Performance Indicators as Proposed During Fourth IABIN Council Meeting
Appendix 2: Project Financial Status
Appendix 3: Report of the Fourth IABIN Council Meeting
### Appendix 1 - Project Design Summary and Performance Indicators

**LATIN AMERICA: Building the Inter-American Biodiversity Information Network (IABIN)**

<table>
<thead>
<tr>
<th>Hierarchy of Objectives</th>
<th>Key Performance Indicators</th>
<th>Data Collection Strategy</th>
<th>Critical Assumptions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sector-related CAS Goal:</strong> To develop enabling frameworks for sustainable environmental management</td>
<td>- IABIN-generated information or resources cited in environmentally positive policy changes in area of natural resource management in at least 10 countries, by Year 4, 20 by year 5.</td>
<td>- National reports - Independent evaluation</td>
<td>- Effective management of biodiversity information is a significant factor in sustainable development</td>
</tr>
<tr>
<td><strong>GEF Operational Program:</strong> To create an enabling environment for conservation and sustainable use of biodiversity in the Americas</td>
<td>- By end of Year 3, half the countries in the Americas using IABIN-generated information in the development of mechanisms for measuring the status/trends of the conservation and use of biodiversity (and two thirds by end of project)</td>
<td>- National Reports - CBD Analyzer - Governmental reports - External evaluation</td>
<td>- Development Gateway listings of projects - CBD Analyzer - Independent assessments</td>
</tr>
<tr>
<td><strong>Global Objective:</strong> To provide the tools necessary to draw knowledge from that wealth of resources to support sound decision-making concerning the conservation and sustainable use of biodiversity</td>
<td>- About 4 new multinational partnerships per year facilitated by IABIN involving access to biodiversity information within the Americas, starting in Year 2 (At least 16 in total)</td>
<td>- Project reports by the Secretariat - TN reports - Survey with selected participating institutions/users - User feedback (web forms)</td>
<td>- Decisions concerning conservation and sustainable use of biodiversity are significantly influenced by availability of good information</td>
</tr>
<tr>
<td>Output from each Component:</td>
<td>Output Indicators:</td>
<td>Project reports:</td>
<td>(from Outputs to Objective)</td>
</tr>
<tr>
<td>----------------------------</td>
<td>-------------------</td>
<td>-----------------</td>
<td>---------------------------</td>
</tr>
<tr>
<td><strong>Component 1: Interoperability and access to data</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.1 IABIN Catalog</td>
<td>1.1 - IABIN Catalog is developed and user-base expands to reach 10,000 users by Year 3, and continues to expand by 20% a year thereafter</td>
<td>- Project reports by the IABIN Secretariat</td>
<td>- Key catalog partnership with USGS maintained</td>
</tr>
<tr>
<td>1.2 Species Thematic Network</td>
<td></td>
<td>- Indicator monitoring system</td>
<td>- Data providers willing to provide adequate metadata to the Catalog.</td>
</tr>
<tr>
<td>1.3 Specimens Thematic Network</td>
<td></td>
<td>- Web statistics</td>
<td>- Sufficient coordination can be assured between TNs to allow development of interoperability between them</td>
</tr>
<tr>
<td>1.4 Ecosystems Thematic Network</td>
<td></td>
<td>- Surveys to IABIN Focal Points</td>
<td></td>
</tr>
<tr>
<td>1.5 Invasive Thematic Network</td>
<td>1.2 - 1.7 - Each TN is operational by end of Year 2 with established protocols, standards and tools which have been adopted by a wide range of organizations in the region - Number of institutions and number of countries participating in TNs increasing by 20% in Year 3 (baseline=Year 2) and by 10% in Years 4 and 5 - Use of datasets and websites developed by each TN increasing by 20% per year after the TN is operational for one year</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.6 Pollinators Thematic Network</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.7 Protected Areas Thematic Network</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Component 2: Data content creation</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.1 Data content creation</td>
<td>- IABIN Catalog content increases by 10% a year, and number of institutions contributing metadata increases by 10% a year (baseline = end of Year 2) - Number of datasets in the region consistent with IABIN interoperability standards increase by 20% a year (baseline = end of Year 2) - Each year, 5% of data available through IABIN is newly digitized data (in particular addressing known data gaps) - At least 100 people trained</td>
<td>- Indicator monitoring system - Data Content Manager’s report - Analysis of Catalog content - Surveys with IABIN FPs</td>
<td>- Sufficient incentives for data providers to adopt IABIN standards - Suitable personnel available for training - Sufficient data can be digitized to significantly impact data availability - Concerns about Intellectual Property Rights that arise can be adequately resolved</td>
</tr>
<tr>
<td>2.2 Technical training</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Component 3: Information tools for decision-making</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>--------------------------------------------------</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>3.1 Information tools for decision-making</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- At least 3 decision-support tools developed that integrate information from more than one TN</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Downloading of these tools increasing by 10% per year once they have been available for one year</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Component 4: Sustainability of IABIN</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>4.1 Project Coordination</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Visits to IABIN Portal increase by at least 20% per year the first year (and 10% thereafter) indicating effective coordination and maintenance (baseline = pre-project visits of 18,000/month)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Collaborative agreements established with at least two international initiatives and/or networks each year</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- IABIN Council Meetings and/or IEC meetings held every year</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Additional funding identified and obtained for continued and effective functioning of IABIN by end of year 2 (to cover costs covered on a declining basis by GEF)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Component 5: Project administration</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>5.1 Project administration</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Project M&amp;E is rated satisfactory or better by the World Bank and by the IABIN Council</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- WB’s supervision missions and project supervision reports (PSRs)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Component 1</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1.1 IABIN Catalog</strong></td>
</tr>
<tr>
<td><strong>1.2 Species Thematic Network</strong></td>
</tr>
<tr>
<td><strong>1.3 Specimens Thematic Network</strong></td>
</tr>
<tr>
<td><strong>1.4 Ecosystems Thematic Network</strong></td>
</tr>
<tr>
<td><strong>1.5 Invasive Thematic Network</strong></td>
</tr>
<tr>
<td>US$ 1.72 million</td>
</tr>
<tr>
<td>- Disbursements and audit reports</td>
</tr>
<tr>
<td>- Implementation of interoperability standards and prototypes is feasible</td>
</tr>
<tr>
<td>Component</td>
</tr>
<tr>
<td>-----------</td>
</tr>
<tr>
<td>1.6 Pollinators Thematic Network</td>
</tr>
<tr>
<td><strong>Component 2</strong></td>
</tr>
<tr>
<td><strong>Component 3</strong></td>
</tr>
<tr>
<td><strong>Component 4</strong></td>
</tr>
<tr>
<td><strong>Component 5</strong></td>
</tr>
</tbody>
</table>
### Appendix 1.1. - Project Design Summary and New Performance Indicators as Proposed During Fourth IABIN Council Meeting

**LATIN AMERICA: Building the Inter-American Biodiversity Information Network (IABIN)**

<table>
<thead>
<tr>
<th>Output from each Component:</th>
<th>Output Indicators:</th>
</tr>
</thead>
</table>
| **Component 1: Interoperability and access to data**  
1.1 IABIN Catalog  
1.2 Species Thematic Network  
1.3 Specimens Thematic Network  
1.4 Ecosystems Thematic Network  
1.5 Invasive Thematic Network  
1.6 Pollinators Thematic Network  
1.7 Protected Areas Thematic Network |  
• IABIN BIOBot Catalog is further developed with metadata and user-base has expanded. TORs completed and submitted to the World Bank for no objection.  
• Protected Areas Coordinating Institution (CI) is developing final proposal.  
• 4 TNs species, specimens, ecosystems, and pollinators advertised and EoI short lists completed. Proposals to be submitted in July 2005. TNs will be operational by September 2005.  
• Invasives TN (I3N) advances with technical working group meetings and increase in database content. I3N 2005 work plan sent to the TWG for review, with a deadline of June 23. Drafts for the 4 capacity building TORs under review. |

| Component 2: Data content creation  
2.1 Data content creation  
2.2 Technical training |  
• IABIN Catalog has increased by 10% in 2004/2005, and number of institutions contributing metadata will increase once the TN CIs have been established. |

| Component 3: Information tools for decision-making  
3.1 Information tools for decision-making |  
• The IABIN connectivity program is integrating the Biological data with geospatial data for Central American and the Caribbean. IABIN works in close collaboration with the Servir Project lead by NASA and Cathalac in the integration of both projects. This integration allows IABIN to access important geospatial data for the region. Program expanding into South America. |

| Component 4: Sustainability of IABIN  
4.1 Project Coordination  
4.2 Partnerships and Communications |  
• IABIN webpage. www.iabin.net moved to Panama and is fully operational in Spanish and English and is receiving an average of over 60,000 hits/month.  
• Collaborative agreements begun with RAMSAR, GBIF, and Moore Foundation.  
• 4th IABIN Council Meetings completed  
• Additional 65k funding secured from the Moore Foundation and 2nd installment of 400k approved by the DGF. |

| Component 5: Project administration  
5.1 Project administration |  
• Project procurement is completed for establishment of the Secretariat, and advancing for the TNs and Catalogue. |
Appendix 2. Project Financial Status

Disbursement progress (November 2004 - April 2005)

By Activity

<table>
<thead>
<tr>
<th>Activity</th>
<th>Committed</th>
<th>Payments</th>
<th>Remainder</th>
<th>Department</th>
</tr>
</thead>
<tbody>
<tr>
<td>1411</td>
<td>$2,876.68</td>
<td>$97.68</td>
<td>$2,779.00</td>
<td>Secretariat Office</td>
</tr>
<tr>
<td>2180</td>
<td>$48,000.00</td>
<td>$12,000.00</td>
<td>$36,000.00</td>
<td>Thematic Networks Coordinator</td>
</tr>
<tr>
<td>2280</td>
<td>$48,000.00</td>
<td>$12,000.00</td>
<td>$36,000.00</td>
<td>Data Content Manager</td>
</tr>
<tr>
<td>2412</td>
<td>$74,250.00</td>
<td>$24,750.00</td>
<td>$49,500.00</td>
<td>Director</td>
</tr>
<tr>
<td>3154</td>
<td>$3,795.54</td>
<td>$3,795.54</td>
<td>$0.00</td>
<td>Meetings of the Technical Working Groups</td>
</tr>
<tr>
<td>3413</td>
<td>$5,571.37</td>
<td>$9,571.37</td>
<td>$0.00</td>
<td>Secretariat - Travel</td>
</tr>
<tr>
<td>3422</td>
<td>$46,379.85</td>
<td>$37,656.58</td>
<td>$8,713.27</td>
<td>IABIN - Council Meeting</td>
</tr>
<tr>
<td>6414</td>
<td>$11,149.65</td>
<td>$9,199.65</td>
<td>$1,950.00</td>
<td>Secretariat - Operating Expenses</td>
</tr>
<tr>
<td>6511</td>
<td>$21,725.00</td>
<td>$21,350.00</td>
<td>$375.00</td>
<td>OAS - Operating Expenses</td>
</tr>
<tr>
<td>6512</td>
<td>$7,347.16</td>
<td>$7,347.16</td>
<td>$0.00</td>
<td>OAS - Consulting</td>
</tr>
<tr>
<td>6513</td>
<td>$5,544.95</td>
<td>$4,970.80</td>
<td>$574.15</td>
<td>OAS - Travel</td>
</tr>
<tr>
<td>Totals</td>
<td>$278,640.20</td>
<td>$142,748.78</td>
<td>$135,891.42</td>
<td></td>
</tr>
</tbody>
</table>

By Category

<table>
<thead>
<tr>
<th>Category</th>
<th>Committed</th>
<th>Payments</th>
<th>Remainder</th>
<th>Department</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>$2,876.68</td>
<td>$97.68</td>
<td>$2,779.00</td>
<td>Goods other than IABIN Subprojects</td>
</tr>
<tr>
<td>2</td>
<td>$170,250.00</td>
<td>$48,750.00</td>
<td>$121,500.00</td>
<td>Consultants' Services other than under IABIN Subprojects</td>
</tr>
<tr>
<td>3</td>
<td>$59,746.76</td>
<td>$51,033.49</td>
<td>$8,713.27</td>
<td>Non-Consultant Technical Services</td>
</tr>
<tr>
<td>6</td>
<td>$45,766.76</td>
<td>$42,867.61</td>
<td>$2,899.15</td>
<td>Operating Cost</td>
</tr>
<tr>
<td>Totals</td>
<td>$278,640.20</td>
<td>$142,748.78</td>
<td>$135,891.42</td>
<td></td>
</tr>
</tbody>
</table>

By Month

<table>
<thead>
<tr>
<th>Month</th>
<th>Committed</th>
<th>Month</th>
<th>Paid</th>
</tr>
</thead>
<tbody>
<tr>
<td>November</td>
<td>$26,970.00</td>
<td>Not Posted</td>
<td>$0.00</td>
</tr>
<tr>
<td>January</td>
<td>$170,031.67</td>
<td>November 2004</td>
<td>$18,000.00</td>
</tr>
<tr>
<td>February</td>
<td>$5,688.88</td>
<td>January 2005</td>
<td>$16,936.67</td>
</tr>
<tr>
<td>March</td>
<td>$48,169.40</td>
<td>February 2005</td>
<td>$13,129.23</td>
</tr>
<tr>
<td>April</td>
<td>$26,453.25</td>
<td>March 2005</td>
<td>$25,915.06</td>
</tr>
<tr>
<td>May</td>
<td>$3,327.00</td>
<td>April 2005</td>
<td>$68,767.82</td>
</tr>
<tr>
<td>Total</td>
<td>$278,640.20</td>
<td>May 2005</td>
<td>$0.00</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Total</td>
<td>$142,748.78</td>
</tr>
</tbody>
</table>
Appendix 3 – Report of the Fourth IABIN Council Meeting. Panama City, Panama
April 6-8, 2004

The Fourth Meeting of the Council of the Inter-American Biodiversity Information Network (IABIN) was convened in Panama City, Panama, from April 6th to 8th, 2005.

Forty-nine participants from 25 countries attended the Council meeting, which was hosted by the Secretariat of IABIN. Attendees included 22 of IABIN National Focal Points or their representatives, and participants from inter-governmental, Non-governmental and academic organizations (participants are listed in Annex 1). The Council gratefully acknowledges the support from the City of Knowledge (CoK, host institution of the Secretariat), the Organization of American States (OAS, diplomatic host of IABIN), the National Environment Authority of Panama (ANAM), and the Centro del Agua del Trópico Húmedo para América Latina y el Caribe (CATHALAC) for the development of the Fourth IABIN Council Meeting.

The objectives for the meeting included:

- elect new members to the IABIN Executive Committee in seats that became vacant;
- reach consensus on Roles of National Focal Points, Bioinformatics Standards and Protocols, and IABIN Membership (Categories of IABIN Participation)
- present country studies on biodiversity informatics update
- discuss the six thematic networks species, specimens, ecosystems, pollinators, protected areas, and invasive species as approved in the Project Implementation Plan (PIP) found on www.iabin.net
- elaborate on monitoring and evaluation of the project
- discuss the financial sustainability strategy for IABIN among other items
- strengthening IABIN through personal interaction, increasing collaborations among participants

The meeting agenda is included in Annex 2. Background papers, presentations, negotiated texts and other documents supporting or resulting from the Fourth IABIN Council Meeting are available on the IABIN web site (http://www.iabin.net).

The technical aspect of the meeting is best summarized in a series of key issues, described below, including a brief summary of the public opening of the meeting.

Public Opening of the Meeting

Mr. Guillermo Castro (Program Manager of the Academic Area of the CoK) opened the IV IABIN Council Meeting. He welcomed all the Panamanian and diplomatic authorities present, as well as the IABIN Chair (Gladys Cotter) and all the participants of the meeting. He provided a brief description and summary of the objectives of the CoK\(^1\). Mr. Castro emphasized the importance of IABIN as an innovative organization in the area of biodiversity, and by having its

\(^{1}\) http://www.cdspanama.org/
Secretariat housed at the CoK, it consolidates the environmental cluster of organizations hosted by CoK.

Mr. Juan Carlos Navarro (Mayor of Panama City) welcomed all on behalf of all the citizens of Panama City and pointed out the importance of biodiversity information in decision making processes, particularly those related to setting up public policies for environmental management and countries socioeconomic development. Ms. Ligia Castro de Doens welcomed all on behalf of the Panamanian Government. They both expressed how important IABIN will be in further advancing sustainable development in Panama and the Region.

Ms. Gladys Cotter, IABIN Council Chair, joined all in welcoming the participants and thanked CoK and ANAM in being instrumental for the establishment of the IABIN Secretariat in Panama. Ms. Cotter, pointed out this meeting was a very important milestone as many of those present had been working hard to have the Secretariat in place and make IABIN a reality. She also indicated the importance of continuing to work in partnership with the governments and Non-governmental organizations to advance in the implementation of IABIN. Ms. Cotter also pointed out the sustainability challenges that IABIN need to tackle in the future (Annex 3).

Ms. Cotter encouraged everyone to participate and bring ideas to make of IABIN a true network of the Americas. She also expressed the CHM/CBD’s regrets for not being able to attend the meeting.

The media coverage of this part of the event was substantial, with newspapers, radio and television reporters conducting a series of interviews to some of the members of the main table that were later published both in Panamanian and international media outlets (Annex 4).

Council Meeting

Introduction and Adoption of the Agenda

Master of Ceremonies (Bonnie Caroll) introduced the official meeting and Ms. Gladys Cotter (IABIN Chair).

Ms. Cotter welcomed everyone to the meeting and pointed out the importance of the meeting as it is the first one after the approval of the World Bank/GEF project and establishment of the Secretariat. It was also indicated that at this meeting the progress of the IABIN GEF project would be reviewed.

Ms. Cotter thanked the Invasive Species Thematic Network Technical Working Group (I3N TWG) for all their work directed towards the development of I3N, which will serve as a model for other Thematic Networks as these are established.
Agenda Review

Ms. Cotter opened the agenda for review and suggestions. Individual countries were invited to give short presentation on their activities related to IABIN and biodiversity informatics. The Agenda was approved after some minor changes (Annex 2).

Following the agenda approval there was a round of presentations from Focal Points and all other participants.

KEY ISSUES PRESENTED AND DECISIONS REACHED BY CONSENSUS

- **IABIN Overview and Background.** Mr. Iván Valdespino, Secretariat Director, presented a short overview and background on IABIN, in which he briefly explained the genesis of IABIN, governance, goals, principles of IABIN, institutional relationships, and other points (see power point presentation in Annex 5).

- **IEC Nominations Committee.** Three posts of the IABIN Executive Council were up for elections at the meeting: Chair, Vice-Chair and a regular member. Mr. Erick Mata explained the structure of the Nominations Committee2, the process for nominating candidates for the three vacancies available and the process for nominees to accept the nomination. More detailed information on this process can be found in the Final Report submitted by the Nominations Committee (Annex 6). The purpose of having a separate committee to collect nominations was to guarantee a transparent process. Mr. Mata indicated that there were three periods opened for nominations. After closure of the third period there were nominations for 3 posts:

  Chair – Ms. Gladys Cotter (USA) and Mr. Braulio Dias (Brasil)
  Vice Chair – Ms. Karin Molt, Ms. Ana Aber, Ms. Gladys Cotter
  IEC Regular Member – Ms. Ana Aber, Ms. Karin Molt and Ms. Gladys Cotter

The final list of candidates after consulting those nominated was:

Chair – **Ms. Gladys Cotter**
Vice Chair – **Ms. Karin Molt**
Regular Member – **Ms. Ana Aber**

The election took place at the end of the last day of the meeting (April 8th) and the United States (Gladys Cotter), Chile (Karin Molt) and Uruguay (Ana Aber) were elected by consensus to the IEC, in the positions listed above, replacing the United States, Jamaica and Brazil, who completed their service with the thanks of the Council. The newly elected IEC members will serve through the 7th Council meeting.

---

2. The Nominations Committee was composed of Ms. Ana Aber, Focal Point for Uruguay, Mr. Antonio Salas, and Mr. Erick Mata
Discussions Papers: Discussion papers prepared by the Secretariat, the OAS and the World Bank were presented. Papers prepared by the Secretariat included: Concept of IABIN Participant, Roles of Focal Points, and IABIN Initial Standards and Protocols, while papers on the convenience to organize an IABIN Forum and on Monitoring and evaluation of the IABIN project were prepared by Douglas Graham of the WB and by Richard Huber of the OAS, respectively. Most of these papers were presented as PowerPoint presentations, which are included in Annex 7 and were used as the basis for discussions carried out on Thursday, April 7 by ad-hoc technical committees.

- **Concept of IABIN Participant.** Ms. Rita Besana, IABIN Data Content Manager, prepared and presented this paper (see power point presentation). Members of the discussion group were Dionne Newell (Jamaica), Jacqueline Klavek (Panamerican Institute of Geography and History), Richard Smith (BioNet International), Vince Abreu (CoK), Yabanex Batista (USA), Mary Klein (Natureserve), Maria Luisa del Rio (Peru), Deon Stewart (Bahamas), Francisco Gonzalez (Costa Rica), Juan Pablo Arce (NatureServe).

The purpose of the paper was to clarify the definition of various terms normally used within the IABIN context.

After the working group made some initial recommendations most of the discussion at the plenary revolved around who has the right to vote at Council Meetings. The final consensus and conclusion on this matter was the following:

- All decisions in IABIN have been taken by consensus so far, and thus voting should only be used as a last resort
- Only Focal Points have a right to vote during Council and at the IABIN Executive Committee (IEC)
- New members to the Council will be admitted by consensus.

**Decision:**

- Voting in IEC is only a right of Focal Points, thus keeping in line with the fundamental principle that only Focal Points can vote during plenary.
- Maintain Rules of Procedures

For more details see recommendation made by the IABIN Council to the paper (Annex 8).

Action items: The Secretariat will incorporate modifications and suggestions approved by Council into the original paper and will distribute a revised version to all participants that will be also posted in IABIN website.
Roles of National Focal Points (NFPs). Mr. Iván Valdespino, IABIN Secretariat Director, prepared and presented this paper on a power point presentation. Members of the discussion group were Risha Alleyne (Trinidad), Nelida Rivarola (Paraguay), Gladys Cotter (USA), Hesiquio Benítez (Mexico), Ivis Chan (Belice), Jorge Quezada Diaz (El Salvador), Fernando García (Guatemala), Karin Molt (Chile), Ana Aber (Uruguay), Vivian Nolan (USA), Shontelle Wellington (Barbados), Martin Satney (Saint Lucia), and Iván Valdespino.

Mr. Valdespino presented the list of roles for the focal points agreed upon. In general all agreed with these. It was pointed out that some of the roles could be integrated and edited, as they were similar in nature or perhaps group them by themes. It was also stressed that Focal Points are important in guiding the development of Thematic Networks. Various countries pointed out that it was important to clarify many of these issues so they, as Focal Points, could return to the countries with clear guidelines and answers. The Secretariat agreed to take on this task and send a revised version to the participants. Participants also emphasized the importance of strengthening the communication between the Focal Points, the Secretariat and the IABIN Executive Committee.

As a result of the discussion within the ad hoc technical committee the following Roles of Focal Points were agreed upon and formally adopted by the Council on April 8, 2005.

**Decision:**

Revised list of Roles of National Focal Points

- Provide guidance to planning process for development of Thematic Networks, including monitoring of work plan implementation and general oversight (e.g., reporting, feedback),
- Promote and facilitate country participation in the Thematic Networks,
- Facilitate the adoption of standards used or proposed by IABIN,
- Facilitate capacity building in the form of relevant training sessions,
- Facilitate the dissemination of acquired knowledge on data creation tools to national IABIN participants,
- Promote in-country data and metadata creation and quality control,
- Encourage national IABIN participants with high quality data to make them available through the network, by taking advantage of the project’s grant competition mechanism or other funding opportunities,
- Promote development of the value added tools for decision-making,
- Promote efforts to establish technical and financial sustainability for IABIN at the local level,
- Promote the use of IABIN-generated information or resources in establishment and adoption by countries of environmentally positive policy changes,
Promote countries use of IABIN-generated information or resources to create biodiversity conservation monitoring mechanism,

Promote countries use of IABIN-generated information or resources in planning and execution of internationally funded projects for use and conservation of biodiversity,

Promote development of multinational partnerships facilitated by IABIN involving access to biodiversity information within the Americas.

Note: NFPs can promote many of these activities, but cannot ensure their implementation.

**Action items:**
The Secretariat will incorporate approved Roles of Focal Points to the background paper previously prepared, as well as suggestions to integrate, group and edit roles that are similar in nature or perhaps group them by themes. In the new paper the role Focal Points have in guiding the development of Thematic Networks will be emphasized. This new version will be sent by the Secretariat to all participants and will be posted in IABIN website.

- **IABIN Initial Standards and Protocols.** Mr. Boris Ramirez, IABIN Thematic Network Coordinator, prepared and presented this paper (see power point presentation). Members of the discussion group were Elizabeth Sellers (USA), Aracely Chavez (Nicaragua), Donna Roy (USA), Mike Frame (USA), Erick Mata (Costa Rica), Beatriz Torrez (GBIF), Andrea Grosse (USA), Douglas Graham (World Bank), Vanderlei Perez Canhos (CRIA).

- **Decision:**

Proposals made by the working group were accepted at the plenary. It was pointed out though, that perhaps the text referring to intellectual property rights should be re-drafted. After some consultations, Mr. Ramirez presented the new text and it was agreed upon (Annex 9).

- **Monitoring and Evaluation.** Mr. Richard Huber, OAS, prepared and presented this paper in coordination with Rita Besana (see Appendix 1). Mr. Alberto Yanosky, Guyra Paraguay, made the working group presentation to the plenary. Members of the discussion group were Darío Luque (Panamá), Octavio Carasquilla (Panamá), Antonio Matamoros (Ecuador), Braulio Dias (Brasil), Maria E. Bondanza (Argentina), Ruth Cartagena (Bolivia), Jack Hill (International Bioinformatics Foundation), and Alberto Yanosky (Guyra Paraguay).

Participants stressed the requirement to be able to measure changes, and in order to do this baseline data are critical and must be gathered. They also asked how achievement of indicators is to be measured, where is the information going to be obtained, and how much will this cost to analyze and present?
Participants emphasized that the monitoring system needs to include performance indicators that are cost-effective and easy to measure. Also, need to identify who is responsible for carrying out activities and who will measure them, and how often this monitoring will take place, etc.

It was pointed out that monitoring visits to the IABIN website is important, but it is not enough for monitoring use of information. Use indicators should be defined. Related to this, it was noted that before having data use indicators IABIN should define data gathering indicators (if data is not available thru IABIN, data use indicators would have limited value).

The need to further define the capacity building section of the indicators was pointed out. There are different types of capacity building and these should be detailed. Geographical distribution of capacity building should be kept in mind. The impact of capacities installed in the countries should be cited as success, as in the case of the DGF project.

**Decision:**

The Secretariat asked participants to send more detailed comments on this matter, as this is a very important issue and IABIN should be comfortable with the compromise these indicators represent. The Secretariat also recommended the creation of a Working Group to go more in depth in this topic. In addition, some suggestions were made by Alberto Yanosky. An updated report of project execution by indicators is presented in Appendix 1.1.

- **Proposal for the Establishment of an IABIN Forum.** Mr. Douglas Graham from the World Bank gave a talk and distributed a handout on the idea to establish an IABIN Biodiversity Strategy and Development Forum.

He summarized his proposal as follows:

- Have an annual Biodiversity Development Forum in conjunction with IABIN Council meetings. This activity would be held the day prior to IABIN Council meetings, with the idea of involving a wider audience in IABIN.
- Annual forum: related to biodiversity issues and development, not only on bioinformatics.
- This would allow to reach out to new audiences who are interested in broader issues of biodiversity and how information is important to decision making in the Americas.
- Would allow the introduction of concept of biological informatics and why information is important.
- Forum could be related to biodiversity and trade (even though controversial).
- Have identified 10-15 possible themes. Will send background paper to Iván Valdespino.
This forum would go beyond mandate of IABIN and would reach out to new groups of people.
Could be sponsored by IABIN, City of Knowledge, and World Bank.

Participants expressed interest for the idea of the Forum as it would improve the caliber and level of scientific discussion at IABIN, but advised it should avoid bringing up issues that are too controversial. It was suggested that the Forum should include potential donors and that a good planning process to carry it out be undertaken.

Some participants expressed the need to review the matter further, particularly the issue of funding for the Forum through resources other than IABIN’s, perhaps with co-financing or targeted fundraising efforts and the possibility of implementing it on a trial basis.

**Decision:**

A final decision on this proposal was deferred for further consultation. Douglas Graham will send the Secretariat a background paper of the proposed Forum to be distributed to Council members to initiate a consultation period in order to reach a final decision prior to the next Council Meeting, when, ideally the Forum should take place.

- **Sustainability.** Mr. Iván Valdespino gave a power point presentation on the long-term technical and financial sustainability of IABIN based on the Project Implementation Plan (PIP) established ideas and on a preliminary fundraising strategy developed by the Secretariat.

  The Secretariat will facilitate the preparation of strategic plans, manage documents and facilitate access to the essential information of the organization. The Secretariat is re-designing the web page in order to make it more dynamic and logical and to increase the number of monthly visits by making it more user-friendly.

Microsoft Panama donated some software to the Secretariat. This is worth mentioning due to the ease and speed to get this donation.

A key function of the Secretariat will be to capture funds and other resources for the activities of the network.

The Secretariat proposes a strategic and wide scheme for fundraising for IABIN, so that it would be focused but flexible and based on:

- Funding strategy for IABIN should be a mix of activities, developed in conjunction with participating countries
- Direct fundraising efforts at different types of funding sources:
  - Private foundations (e.g., Moore Foundation, Macarthur Foundation)
• Government agencies (USAID, National Science Foundation International Competition, CIDA, SIDA, Agencia de Cooperación Española,)
• Bilateral cooperation: AECI, USAID, JICA
• Multilateral cooperation: European Union, World Bank (Dutch Funds, DGF), IADB, CAF,
• Partner organizations
• Private sector (i.e., corporate sponsorship)
✓ Develop fundraising partnerships with similar initiatives, organizations, and programs
✓ Establish a fundraising team:
  • IEC
  • Secretariat
  • OAS
  • CoK
  • Fundraising Professionals to seek and acquire support to: capitalize an endowment (using associated interest for fund development)

It was highlighted the need to obtain legal status for IABIN so that it can receive grants. It was also pointed out that it would be a good idea to create an IABIN Foundation in order to qualify for certain kinds of financing.

The Secretariat will function as the nucleus in the effort to prepare proposals for fundraising. It was also explained that this fundraising effort will be carried out by current Secretariat personnel, but that it will require the collaboration of National Focal Points through the Council, the IABIN Executive Committee (IEC), OAS and the World Bank, as well as of other partners such as City of Knowledge and GBIF, for example.

In addition, a criterion to prepare proposals and to go after funding sources is that the funds would affect the greatest number of countries. It was recognized that this is a difficult criterion to meet in all cases and for that reason smaller scale donations would not be ignored.

Some participants commended the proposed fundraising vision presented but advised that: a) this efforts should be constant, b) there is the need to raise the initial target number of two proposals written and submitted during the first year to more than that, c) there should be an involvement of National Focal Points in the whole fundraising efforts, particularly at the national level, d) attention has to be paid to deadlines for submittal of proposals, e) proposals should be written annually, f) in addition to the possible funding sources outlined, individuals should be targeted in this fundraising efforts given the current increment in their contribution to global philanthropy, and g) proposal with a regional theme should be geared to regional donors.

Participants also pointed out that fundraising effort should be guided according to priorities and that some of the most pressing ones were to strengthen the Secretariat, to strengthen the network, to focus on a product that we can “market” to ensure more funding. This report should be disseminated to everyone in the network so that the Focal Points can give their feedback.
**Decision:**

- The Secretariat, with the support of the IEC, was instructed to initiate the proper steps to analyze first the convenience of getting a legal status for IABIN and giving the proper consideration to carry out the necessary steps to achieve it.
- The Secretariat was instructed to fully develop the fundraising strategy and to carry out the initial outlined task to initiate fundraising activities during this year. The Chair of the IEC volunteered one of her staff, Yabanex Batista, to collaborate with the Secretariat in order to devise and to carry out the formal fundraising strategy.

**Project Administration.** Mr. Richard Huber, OAS, gave a summary of activities carried out for project administration. He pointed out that the PIP was approved by the IABIN council and is posted on IABIN website ([www.iabin.net](http://www.iabin.net)) on its 8.5 version. It includes details of the project timeframe, log frame, and procurement process. The legal agreement was signed between the World Bank and the OAS on July 15, 2004 and the project was declared effective during the last quarter of that year. Now the project can be implemented and the resources mobilized to finance activities included on the PIP. In this area a co-financing virtual questionnaire or form will be designed by OAS in order to track financial contributions from those organizations that submitted letters of support to the project. This form will include a statement with instructions on how to fill it out. The answering and submittal of the form will be required on a 6-monthly basis. If the online version fails, then it will need to be faxed. There is at least one organization in every country that has a formal agreement with IABIN who will need to fill out the reports.

The OAS has the overall responsibility of project administration, including compliance with World Bank procurement and disbursement procedures, as well as reporting on monitoring financial and technical project execution. The latter activity should be carried out in close collaboration with the IABIN Council.

Mr. Huber explained that the process to select the Coordinating Institutions (CIs) for IABIN Thematic Networks (catalog, species, specimens, ecosystems, pollinators, protected areas), is underway.

Mr. Huber advanced that the process to solicit Letters of Interest (LoI) to choose the CI for the Protect Areas TN was already finished and that only one proposal was received. A formal proposal has already been requested and it is due May 23, 2005. For the other TN’s (species, specimens, ecosystems, and pollinators) the Terms of Reference (TORs) were approved by World Bank and are posted on the international UN posting service, and simultaneously on IABIN.net. The deadline to submit LoI is April 15, 2005. Those institutions that wish to submit LoI should do so before the closing date and submissions ought to be accompanied by a brief description of what their professional capabilities are, up to a maximum of 2-3 pages.
A Selection Committee will be formed by members of the OAS, the Secretariat and the IEC.

Those institutions or consortia on the short list will then be invited to prepare a detailed proposal. One requirement is that the CI has to provide 2 dollars to every 1 dollar provided by GEF as co-financing. They also need to describe in a detailed way that they understand the thematic network, that they can successfully handle data, metadata, tools, and produce other value-added products.

If a consortium wants to be a coordinating network, they must adhere to IABIN standards and protocols, or they will be disqualified.

Some participants questioned the fact that the process to choose the CI for the Protect Areas TN had only one EoI and wondered if this was not due to the lack of proper advertisement and the need to extend further the original deadline. Following on this remarks, many of the participants requested the process to send EoI for the remaining TN’s be extended. The OAS and the World Bank agreed to review the matter with procurement specialist at the World Bank and to let all participants know if an extension could be granted for the submittal of EoI as requested.

- **Updates on Countries and Initiatives.** Several of the National Focal Points attending the meeting gave presentation on up to date bioinformatics initiatives in their respective countries. Presentations were also given by most of the partner organizations and bioinformatics initiatives present at the meeting. These country, organizations and partner initiatives bioinformatics presentations are compiled in Annex 10.

- **Added Value Among Initiatives.** Ms. Gladys Cotter gave a presentation to highlight the synergistic role between different bioinformatics initiatives with which IABIN has a partnership. She pointed out also the different levels of complementarities among these initiatives and that,

  The needs are the same:
  - Biodiversity conservation requires timely, accurate and scientifically credible information
  - Information relevant to biodiversity conservation efforts extends beyond national borders.

  The principles are generally the same:
  - Internet based and distributed
  - Open participation
  - Data ownership remains with data provider
  - Intellectual property rights are respected
  - Outreach and capacity building is integral in biodiversity

  She enumerated a number of IABIN themes supporting the Global Biodiversity Information Facility (GBIF) and Clearing-House Mechanism (CHM):
Invasives: IABIN & CHM
Pollinators: IABIN & CHM
Specimens: IABIN & GBIF
Species: IABIN & GBIF
Ecosystems: IABIN & CHM

Ms. Cotter presented the table below to explain the roles of IABIN FP, GBIF Node Managers and CHM NFPs:

<table>
<thead>
<tr>
<th>Role in Biodiversity Information</th>
<th>IABIN</th>
<th>GBIF</th>
<th>CHM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Serve as National Liaison In Biodiversity Information.</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Participate actively in the formulation and implementation of strategies, plans and activities.</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Stimulate national and sub-national level involvement in activities through appropriate consultation mechanism.</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Promote sharing of biodiversity data under a common set of standards.</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Represent their government/organization’s perspective on technical issues.</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Identify funding and partnership opportunities for the development of biodiversity information.</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Identify new project ideas and priorities for their countries.</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Promote collaboration with other national, regional, and international initiatives.</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Keep participating organizations informed and disseminate activities and results.</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Promote sharing of biodiversity data under a common set of standards.</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Provide Information from National State of Biodiversity reports</td>
<td></td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>
Host/participate in workshops, and other capacity building activities. | ✓ | ✓ | ✓  
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Establish and maintain a Website/Node</td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>

IABIN has a Complementary Relationship to the Clearinghouse Mechanism:

<table>
<thead>
<tr>
<th>CHM</th>
<th>IABIN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Convention on Biodiversity</td>
<td>Inter-American summits</td>
</tr>
<tr>
<td>World-wide</td>
<td>Inter-American</td>
</tr>
<tr>
<td>Information, building, BD training</td>
<td>Information focus</td>
</tr>
<tr>
<td>From policy to science</td>
<td>Science and technology</td>
</tr>
</tbody>
</table>

- **Next Steps.** The meeting was concluded with a review of the decisions and action items arising from the Council deliberations. The participants agreed to continue discussions, particularly about the idea to establish an IABIN Biodiversity Strategy and Development Forum, the project’s monitoring and evaluation log frame.

**LIST OF ANNEXES**
- Annex 1: Participants list
- Annex 2: Agenda
- Annex 3: Meeting pictures
- Annex 4: Media coverage of the meeting
- Annex 5: Powerpoint presentation on IABIN overview and background
- Annex 6: Nominations committee final report
- Annex 7: Powerpoint presentations of background papers
- Annex 8: Recommendations made by Council to the IABIN participant paper
- Annex 9: Modified version of the standards and protocols paper
- Annex 10: Compiled notes of the updates on countries and initiatives

[Fourth IABIN Council Meeting report v.3, Secretariat / 29 Jul 2005]
ANNEX 1: Participant List
<table>
<thead>
<tr>
<th>Country</th>
<th>Name</th>
<th>Position</th>
<th>Organization</th>
<th>Address</th>
<th>City</th>
<th>Phone #</th>
<th>Fax #</th>
<th>email</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Argentina</td>
<td>María E. Bondanza</td>
<td>Embajadora, Ministerio de Relaciones Exteriores</td>
<td>Comercio Internacional y Culto, Esmeralda 1212 Piso 14, 1007 Buenos Aires - reo</td>
<td>Buenos Aires</td>
<td>54-11-4819-7413 / 54-11-4819-7414</td>
<td>54-11-4819-7413</td>
<td><a href="mailto:met@mrecic.gov.ar">met@mrecic.gov.ar</a> / <a href="mailto:gzc@mrecic.gov.ar">gzc@mrecic.gov.ar</a> /</td>
</tr>
<tr>
<td>2</td>
<td>Bahamas</td>
<td>Deon Stewart</td>
<td>Environmental Officer, Ministry of Health and the Environment</td>
<td>Nassau Court, Bay Street, PO BOX N83730</td>
<td>Nassau</td>
<td>242-322-4546</td>
<td>242-326-3509</td>
<td><a href="mailto:dstewart@best.bs">dstewart@best.bs</a> / <a href="mailto:bestnbs@hotmail.com">bestnbs@hotmail.com</a></td>
</tr>
<tr>
<td>3</td>
<td>Barbados</td>
<td>Shontelle Wellington</td>
<td>Field Assistant, Ministry of Housing, Lands &amp; Environment</td>
<td>First Floor S.P. Musson Building Hincks Street</td>
<td>Bridgetown St. Michael</td>
<td>(246) 467-5700</td>
<td>(246) 437-8859</td>
<td><a href="mailto:envirobdoes@gob.bb">envirobdoes@gob.bb</a> / <a href="mailto:w_shontelle@yahoo.co.uk">w_shontelle@yahoo.co.uk</a></td>
</tr>
<tr>
<td>4</td>
<td>Belize</td>
<td>Ivis Chan</td>
<td>Forest Officer, Ministry of Natural Resources and Environment</td>
<td>23/25 Unity Boulevard</td>
<td>Belmopan</td>
<td>501-822-1524</td>
<td>501-822-1523</td>
<td><a href="mailto:biodiversity@mnrei.gov.bz">biodiversity@mnrei.gov.bz</a></td>
</tr>
<tr>
<td>5</td>
<td>Bolivia</td>
<td>Ruth Pamela Cartagena Ticona</td>
<td>Jefa, Unidad de Recursos Genéticos, Dirección General de Biodiversidad, Viceministro de Recursos Naturales y Medio Ambiente</td>
<td>Ave. Mariscal Santa Cruz, No. 1092, La Paz, Bolivia</td>
<td>La Paz</td>
<td>(591) 2-231-7242</td>
<td>(591) 2-231-0966</td>
<td><a href="mailto:urgdgb@mds.gov.bo">urgdgb@mds.gov.bo</a> / <a href="mailto:pcartagena@mds.gov.bo">pcartagena@mds.gov.bo</a></td>
</tr>
<tr>
<td>6</td>
<td>Brazil</td>
<td>Braulio Dias</td>
<td>Gerente de la Conservacion de la Biodiversidad</td>
<td>Ministerio do Medio Ambiente</td>
<td>Brasilia</td>
<td>00 (55-61) 4009-9555</td>
<td>(5561) 4009-9587 / (5561) 4009-9593</td>
<td><a href="mailto:bfsdias@terra.com.br">bfsdias@terra.com.br</a> / <a href="mailto:braulio.dias@mma.gov.br">braulio.dias@mma.gov.br</a></td>
</tr>
<tr>
<td>7</td>
<td>Chile</td>
<td>Karin Molt González</td>
<td>Encargada Unidad de Informacion Ambiental</td>
<td>Departamento de Proteccion de los Recursos Naturales CONAMA</td>
<td>Santiago de Chile</td>
<td>56-2-240-5695</td>
<td>2-241-1803</td>
<td><a href="mailto:kmolt@conama.cl">kmolt@conama.cl</a></td>
</tr>
<tr>
<td>8</td>
<td>Costa Rica</td>
<td>Francisco J. González Salas</td>
<td>Gerente Planificación SINAC-MINAE, Ministerio del Medio Ambiente y Energia (MINAE)</td>
<td>Av. L4 Scen Trecho 2, Norte Bloco &quot;H&quot; Campus do Ibama 70818-900</td>
<td>San Jose</td>
<td>506-283-8004</td>
<td>506-283-7343</td>
<td><a href="mailto:francisco.gonzalez@sinac.go.cr">francisco.gonzalez@sinac.go.cr</a></td>
</tr>
<tr>
<td>9</td>
<td>Ecuador</td>
<td>Antonio Matamoros</td>
<td>Cordinador Estrategia Nacional de Biodiversidad</td>
<td>Ministerio del Ambiente - Dirección Nacional de Biodiversidad</td>
<td>Quito</td>
<td>593-2-250-8337 / 593-2-22465408</td>
<td>2-565-809</td>
<td><a href="mailto:antonio@ambiente.gov.ec">antonio@ambiente.gov.ec</a> / <a href="mailto:magnoantonio@hotmail.com">magnoantonio@hotmail.com</a></td>
</tr>
<tr>
<td>Country</td>
<td>Name</td>
<td>Position</td>
<td>Organization</td>
<td>Address</td>
<td>City</td>
<td>Phone #</td>
<td>Fax #</td>
<td>email</td>
</tr>
<tr>
<td>--------------</td>
<td>-----------------------------</td>
<td>------------------------------------------</td>
<td>------------------------------------------------------------------------------</td>
<td>-------------------------------------------------------------------------</td>
<td>-----------------</td>
<td>--------------------------</td>
<td>------------------------</td>
<td>------------------------------------------------</td>
</tr>
<tr>
<td>USA</td>
<td>Gladys Cotter</td>
<td>Associate Chief Biologist for Information</td>
<td>USGS</td>
<td>U.S. Geological Survey 12201 Sunrise Valley Dr., Reston VA 20192, USA</td>
<td>Reston, VA</td>
<td>(703) 648-4182</td>
<td>(703) 648-4280</td>
<td><a href="mailto:gladys_cotter@usgs.gov">gladys_cotter@usgs.gov</a></td>
</tr>
<tr>
<td>El Salvador</td>
<td>Jorge Ernesto Quezada Diaz</td>
<td>Gerente de Recursos Biologicos</td>
<td>Ministerio de Medio Ambiente y Recursos Naturales</td>
<td>Kilómetro 5 1/2 Carretera a Santa Tecla, Calle y Colonía las Mercedes, Edificio MARN (Instalaciones del ISTA)</td>
<td>San Salvador</td>
<td>(503) 224-6926 / (503) 224-6653</td>
<td>(503) 224-6926 / (503) 224-6653</td>
<td><a href="mailto:quezada@marn.gob.sv">quezada@marn.gob.sv</a> / <a href="mailto:jordiguebu@hotmail.com">jordiguebu@hotmail.com</a> / <a href="mailto:quezada@marn.gob.sv">quezada@marn.gob.sv</a></td>
</tr>
<tr>
<td>Guatemala</td>
<td>Fernando García-Barrios</td>
<td>Director</td>
<td>Oficina Técnica de Biodiversidad - OTEC Biodiversidad - Ministerio de Medio Ambiente y Recursos Naturales</td>
<td>5a. Avenida 6-06 Zona 1, Edif. IPM, Nivel 7</td>
<td>Ciudad de Guatemala</td>
<td>Work (502) 2238-0000 / (502) 6634-4691</td>
<td>(502) 2253-4114</td>
<td><a href="mailto:otecbio@conap.gob.gt">otecbio@conap.gob.gt</a></td>
</tr>
<tr>
<td>Haiti</td>
<td>Dimitri Norris</td>
<td>Chief of Service Biodiversity</td>
<td>Ministry of Environment</td>
<td>10-16 East Street</td>
<td>Kingston</td>
<td>876-948-8116 / 876-922-0621-6</td>
<td>876-922-1147</td>
<td><a href="mailto:zoology.nhd@cwmjamaica.com">zoology.nhd@cwmjamaica.com</a></td>
</tr>
<tr>
<td>Jamaica</td>
<td>Dionne Newell</td>
<td>Senior Research Officer</td>
<td>Institute of Jamaica</td>
<td></td>
<td></td>
<td>876-948-8116 / 876-922-0621-6</td>
<td>876-922-1147</td>
<td></td>
</tr>
<tr>
<td>Nicaragua</td>
<td>Aracely Chávez</td>
<td>Coordinadora de la plataforma Tecnológica del Sinia-Marena</td>
<td>Ministerio del Ambiente y los Recursos Naturales (MARENA), Sistema Nacional de Información Ambiental (SINIA)</td>
<td>Km 12 1/2 Carretera Norte</td>
<td>Managua</td>
<td>505-233-1623 / 263-2864</td>
<td>505-233-1623</td>
<td><a href="mailto:achavez@sinia.net.ni">achavez@sinia.net.ni</a></td>
</tr>
<tr>
<td>Panamá</td>
<td>Dario Luque</td>
<td>Principal (Biodiversidad)</td>
<td>Dirección Nacional de Patrimonio Natural, Autoridad Nacional del Ambiente (ANAM)</td>
<td>Aibrook, Edif 804 Panamá, apdo. C, zona 0843, Balboa, Ancón</td>
<td>Ciudad de Panamá</td>
<td>(507) 315-0655 ext. 3304, 3305</td>
<td>(507) 315-0573</td>
<td><a href="mailto:d.luque@anam.gob.pa">d.luque@anam.gob.pa</a></td>
</tr>
<tr>
<td>Paraguay</td>
<td>Nélida Rivarola</td>
<td>Directora, Centro de Datos para la Conservación</td>
<td>Dirección General de Gestión Ambiental Secretaría del Ambiente (SEAM)</td>
<td>Avenida Madame Lynch 3500 c/ Reservista de la Guerra del Chaco</td>
<td>Asuncion</td>
<td>595-21-615-812</td>
<td>595-21-615-812</td>
<td><a href="mailto:odc@seam.gov.py">odc@seam.gov.py</a> / <a href="mailto:nelidarivarola@hotmail.com">nelidarivarola@hotmail.com</a></td>
</tr>
<tr>
<td>Perú</td>
<td>Maria Luisa del Río Mispireta</td>
<td>Jefa de la Unidad de Biodiversidad y BioSeguridad del CONAM</td>
<td>Consejo Nacional del Ambiente - CONAM</td>
<td>Avenida Guardia Civil # 205, Som Boya, Lima, Perú</td>
<td>Lima</td>
<td>51-(1) 2255370 anexo 279</td>
<td>51-1-2255369</td>
<td><a href="mailto:mdelrio@conam.gob.pe">mdelrio@conam.gob.pe</a></td>
</tr>
<tr>
<td>St. Lucia</td>
<td>Martin Satney</td>
<td>Permanent Secretary</td>
<td>Ministry of Agriculture, Forest &amp; Fisheries</td>
<td>Sir Stanislaus James Bldg. 5 Floor, Waterfront</td>
<td>Castries</td>
<td>758-468-4103</td>
<td>758-453-6314</td>
<td><a href="mailto:ps@slumaffe.org">ps@slumaffe.org</a></td>
</tr>
<tr>
<td>Country</td>
<td>Name</td>
<td>Position</td>
<td>Organization</td>
<td>Address</td>
<td>City</td>
<td>Phone #</td>
<td>Fax #</td>
<td>email</td>
</tr>
<tr>
<td>------------------</td>
<td>--------------------</td>
<td>-------------------------------</td>
<td>-------------------------------------------------------------------------------</td>
<td>--------------------------------------</td>
<td>-----------------</td>
<td>------------------</td>
<td>-------------------</td>
<td>--------------------------------</td>
</tr>
<tr>
<td>Trinidad &amp; Tobago</td>
<td>Risha Alleyne</td>
<td>Technical Officer</td>
<td>Environmental Management Authority</td>
<td>8 Elizabeth St. St. Clair, Port of Spain</td>
<td>Port of Spain</td>
<td>868-628-8042</td>
<td>628-9122</td>
<td><a href="mailto:ralleyne@ema.co.tt">ralleyne@ema.co.tt</a></td>
</tr>
<tr>
<td>Uruguay</td>
<td>Ana Aber</td>
<td>Punto Focal IABIN</td>
<td>Ministerio de Vivienda Ordenamiento Territorial y Medio Ambiente</td>
<td>Rincon 422, 3er Piso.</td>
<td>Montevideo</td>
<td>(5982) 917-0710</td>
<td>608-7202</td>
<td><a href="mailto:aaber@adinet.com.uy">aaber@adinet.com.uy</a></td>
</tr>
<tr>
<td>USA</td>
<td>Álvaro Espinel</td>
<td>Consultant</td>
<td>Organization of American States</td>
<td>1889 F Street</td>
<td>Washington DC</td>
<td>(301) 962-8616</td>
<td>628-9122</td>
<td>alvaroespinel.comcast.net</td>
</tr>
<tr>
<td>USA</td>
<td>Richard Huber</td>
<td>Principal Environment Specialist</td>
<td>Organization of American States</td>
<td>1889 F Street</td>
<td>Washington DC</td>
<td>(202) 458-3227</td>
<td>628-9122</td>
<td><a href="mailto:rhuber@oas.org">rhuber@oas.org</a></td>
</tr>
<tr>
<td>Argentina</td>
<td>Sergio M. Zalba</td>
<td>Professor-Researcher</td>
<td>Estudios en Conservación y Manejo Departamento de Biología, Bioquímica y Farmacia Universidad Nacional del Sur San Juan 670</td>
<td>San Juan 670</td>
<td>Bahia Blanca</td>
<td>0291-4595100 Int.</td>
<td>628-9122</td>
<td><a href="mailto:szalba@criba.edu.ar">szalba@criba.edu.ar</a></td>
</tr>
<tr>
<td>Costa Rica</td>
<td>Erick Mata</td>
<td>Director Adjunto</td>
<td>INBIO</td>
<td>Apartado Postal 22-3100</td>
<td>San Juan</td>
<td>0291-4595100</td>
<td>628-9122</td>
<td><a href="mailto:emata@inbio.ac.cr">emata@inbio.ac.cr</a></td>
</tr>
<tr>
<td>USA</td>
<td>Annie Simpson</td>
<td>Invasive Species Theme Coordinator</td>
<td>National Biological Information Infrastructure Invasive Species Theme Coordinator</td>
<td>U.S. Geological Survey, MS 302, 12201 Sunrise Valley Drive</td>
<td>Reston, VA</td>
<td>703-648-4281</td>
<td>628-9122</td>
<td><a href="mailto:asimpson@usgs.gov">asimpson@usgs.gov</a></td>
</tr>
<tr>
<td>USA</td>
<td>Elisabeth Sellers</td>
<td>Assistant Coordinator Invasive Species Theme Coordinator</td>
<td>National Biological Information Infrastructure Invasive Species Theme Coordinator</td>
<td>U.S. Geological Survey, MS 302, 12201 Sunrise Valley Drive</td>
<td>Reston, VA</td>
<td>703-648-4385</td>
<td>628-9122</td>
<td><a href="mailto:esellers@usgs.gov">esellers@usgs.gov</a></td>
</tr>
<tr>
<td>Brazil</td>
<td>Silvia Ziller</td>
<td>Directora Ejecutiva</td>
<td>Instituto Hórus de Desenvolvimento e Conservación Ambiental</td>
<td>Rua Dr. Manoel Pedro, 495 / 906 Cabral.</td>
<td>Curitiba - PR 90.035-030 Brasil</td>
<td>44 (0)1491-829036</td>
<td>44 (0)1491-829082</td>
<td><a href="mailto:sziller@institutohorus.org.br">sziller@institutohorus.org.br</a></td>
</tr>
<tr>
<td>UK</td>
<td>Richard Smith</td>
<td>Director</td>
<td>BioNET-INTERNATIONAL: the Global Network for Taxonomy Technical Secretariat.</td>
<td>Bakeham Lane Egham Surrey TW20 9TY</td>
<td>Egham, Surrey</td>
<td>44 (0)1491-829036</td>
<td>44 (0)1491-829082</td>
<td><a href="mailto:rsmith@bionet-intl.org">rsmith@bionet-intl.org</a></td>
</tr>
<tr>
<td>USA</td>
<td>Andrea Grosse</td>
<td>International Biological Informatics Projects Manager</td>
<td>USGS</td>
<td>U.S. Geological Survey 12201 Sunrise Valley Dr., Reston VA 20192, USA</td>
<td>Reston, VA</td>
<td>703 648 4342</td>
<td>628-9122</td>
<td><a href="mailto:agrosse@usgs.gov">agrosse@usgs.gov</a></td>
</tr>
<tr>
<td>USA</td>
<td>Donna Roy</td>
<td>IT/GIS Project Manager</td>
<td>USGS</td>
<td>12201 Sunrise Valley Dr. MS302</td>
<td>Reston, VA</td>
<td>703-648-4209</td>
<td>628-9122</td>
<td><a href="mailto:droy@usgs.gov">droy@usgs.gov</a></td>
</tr>
<tr>
<td>Country</td>
<td>Name</td>
<td>Position</td>
<td>Organization</td>
<td>Address</td>
<td>City</td>
<td>Phone #</td>
<td>Fax #</td>
<td>email</td>
</tr>
<tr>
<td>---------</td>
<td>--------------------</td>
<td>----------------------------------------------</td>
<td>---------------------------------------</td>
<td>----------------------------------------------</td>
<td>------------------</td>
<td>----------------</td>
<td>----------------</td>
<td>------------------------</td>
</tr>
<tr>
<td>USA</td>
<td>Mike Frame</td>
<td>NBII Technology Manager</td>
<td>USGS</td>
<td>U.S. Geological Survey 12201 Sunrise Valley Dr., Reston VA 20192, USA</td>
<td>Reston, VA</td>
<td>(703) 648-4164</td>
<td>(703) - 648-4280</td>
<td><a href="mailto:mike_frame@usgs.gov">mike_frame@usgs.gov</a></td>
</tr>
<tr>
<td>USA</td>
<td>Yabanex Batista</td>
<td>International Program</td>
<td>USGS</td>
<td>Survey 12201 Sunrise Valley Dr., Reston VA 20192, USA</td>
<td>Reston, VA</td>
<td>(703) 648-4084</td>
<td>(703) 648-4098</td>
<td><a href="mailto:ybatista@usgs.gov">ybatista@usgs.gov</a></td>
</tr>
<tr>
<td>USA</td>
<td>Jacqueline M. Klaver</td>
<td>Executive Secretary USA National Section/ PAIGH, Senior Scientist</td>
<td>PAIGH / USGS, EROS Data Center</td>
<td>National Center for Earth Resources Observation and Science</td>
<td>Sioux Falls, South Dakota</td>
<td>605-594-6961</td>
<td>605-594-6529</td>
<td><a href="mailto:jklaver@usgs.gov">jklaver@usgs.gov</a></td>
</tr>
<tr>
<td>USA</td>
<td>Beatriz Torres</td>
<td>Senior Programme Officer for Outreach and Capacity Building (OCB)</td>
<td>Global Biodiversity Information Facility (GBIF)</td>
<td>Universitetsparken 15, DK-2100, Copenhagen</td>
<td>45 35 32 14 74</td>
<td>45 35 32 14 80</td>
<td><a href="mailto:btorres@gbif.org">btorres@gbif.org</a></td>
<td></td>
</tr>
<tr>
<td>USA</td>
<td>Juan Pablo Arce</td>
<td>Director Latin America and Caribbean</td>
<td>Natureserve</td>
<td>1101 Wilson Boulevard, 15 Floor Arlington, VA</td>
<td>703-908-1853</td>
<td>703-9081917</td>
<td><a href="mailto:juanpablo_arce@natureserve.org">juanpablo_arce@natureserve.org</a></td>
<td></td>
</tr>
<tr>
<td>USA</td>
<td>John Hill</td>
<td>Director, World Data Center for Biodiversity and Ecology</td>
<td>USA/ USGS</td>
<td>The Woodlands, TX 77381</td>
<td>281-292-2797</td>
<td>281-292-2797</td>
<td><a href="mailto:jhill@usgs.gov">jhill@usgs.gov</a></td>
<td></td>
</tr>
<tr>
<td>USA</td>
<td>Mary Klein</td>
<td>Network Operations Vice President</td>
<td>Natureserve</td>
<td>1101 Wilson Boulevard, 15 Floor Arlington, VA</td>
<td>709)908-1850</td>
<td>703-908-1850</td>
<td><a href="mailto:mary_klain@natureserve.org">mary_klain@natureserve.org</a></td>
<td></td>
</tr>
<tr>
<td>USA</td>
<td>Bonnie C. Carroll</td>
<td>President</td>
<td>International Information Biodiversity Foundata / Associates, Inc</td>
<td>P.O. Box 4219 Oak Ridge, TN 37831</td>
<td>New York</td>
<td>865-298-1220</td>
<td>865-481-0390</td>
<td><a href="mailto:bcarroll@iiaweb.com">bcarroll@iiaweb.com</a></td>
</tr>
<tr>
<td>Panama</td>
<td>Mathew Roth</td>
<td>Jefe Adjunto, Seccion Economica</td>
<td>US Embassy in Panama</td>
<td>Avenida Balboa Panama</td>
<td>50-7-207-7237</td>
<td><a href="mailto:RothMP@state.gov">RothMP@state.gov</a></td>
<td></td>
<td></td>
</tr>
<tr>
<td>USA</td>
<td>Carolina Peña</td>
<td>Office for Sustainable Development and Environment</td>
<td>Organization of American States</td>
<td>1889 F Street Washington DC</td>
<td>(202) 458-6865</td>
<td>(202) 458-3560</td>
<td><a href="mailto:opena@oas.org">opena@oas.org</a></td>
<td></td>
</tr>
<tr>
<td>Paraguay</td>
<td>Alberto Yanosky</td>
<td>Director de Guayra Paraguay</td>
<td>Chair of Americas Regional Comitte for BirdLife Int.</td>
<td>Cnel Rafel Franco 381</td>
<td>Asuncion</td>
<td>595-21-227777</td>
<td>595-981-959175</td>
<td><a href="mailto:ayanosky@guayra.org.py">ayanosky@guayra.org.py</a></td>
</tr>
<tr>
<td>Germany</td>
<td>Christoph Hauser</td>
<td>Chair, Goventrity Board</td>
<td>Global Biodiversity Information Facility (GBIF)</td>
<td>Rosenstein 70191 Streetgost</td>
<td>49-711-89836-223</td>
<td>49-711-8936-100</td>
<td><a href="mailto:chaeuser@gmx.de">chaeuser@gmx.de</a></td>
<td></td>
</tr>
<tr>
<td>USA</td>
<td>Vivian Nolan</td>
<td>Senior Biodiversity Scientist</td>
<td>IABIN / ITIS / NBII</td>
<td>USGS 12201 Sunrise Vallec Drive Reston, VA</td>
<td>(703) 648-4258</td>
<td>703-648-4039</td>
<td><a href="mailto:vnolan@usgs.gov">vnolan@usgs.gov</a></td>
<td></td>
</tr>
<tr>
<td>USA</td>
<td>Vincent Abreu</td>
<td>Coordinador Proyecto DGF</td>
<td>IABIN / DGF</td>
<td>2455 Hayward Ann Arbor, MI, USA</td>
<td>734-9360502</td>
<td><a href="mailto:abreu@umich.edu">abreu@umich.edu</a></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Country</td>
<td>Name</td>
<td>Position</td>
<td>Organization</td>
<td>Address</td>
<td>City</td>
<td>Phone #</td>
<td>Fax #</td>
</tr>
<tr>
<td>---</td>
<td>---------</td>
<td>---------------</td>
<td>---------------------</td>
<td>--------------------------------------------------</td>
<td>----------------------------------------------</td>
<td>-------------------</td>
<td>-------------</td>
<td>--------------</td>
</tr>
<tr>
<td>47</td>
<td>USA</td>
<td>Douglas Graham</td>
<td>Senior Biodiversity Specialist</td>
<td>Latin America and Caribbean Region /World Bank</td>
<td>1818 H Street, NW, Washington, DC 20433</td>
<td>202-473-6667</td>
<td>202-522-0262</td>
<td><a href="mailto:dgraham@worldbank.org">dgraham@worldbank.org</a></td>
</tr>
<tr>
<td>48</td>
<td>USA</td>
<td>Leonard Hirsch</td>
<td>Senior Policy Advisor</td>
<td>Smithsonian Institution</td>
<td>1100 Jefferson Drive SW, Suite 3123, MRC 705 PO Box 37012, Washington DC, 20013-7012</td>
<td>(202) 633-4788</td>
<td>(202) 312-2888</td>
<td><a href="mailto:lhirsch@si.edu">lhirsch@si.edu</a></td>
</tr>
<tr>
<td>49</td>
<td>Brasil</td>
<td>Vanderlei Perez Canhos</td>
<td>Director Presidente</td>
<td>Centro de Referencia en Información Ambiental</td>
<td>Av. Romeu Tórtima, 388 Barao Geraldo 13084-520 campinas sp., Campinas</td>
<td>19-3288-0466</td>
<td>19-3249-0960</td>
<td><a href="mailto:vcanhos@cria.org.br">vcanhos@cria.org.br</a></td>
</tr>
</tbody>
</table>
ANNEX 2: Agenda
4th IABIN COUNCIL MEETING

AGENDA

Tuesday, April 5

Participants arrive and registration

Tuesday, April 5; 5:00 – 9:00 p.m. - I3N Thematic Working Group (Close meeting, members only)

Wednesday, April 6; 8:00 – 8:30 a.m. Focal Points Registration

Wednesday, April 6; 8:30 – 9:00 a.m. Guests Registration

Wednesday, April 6, 9:00 a.m.

1 Opening of the Meeting

Wednesday, April 6 ----- Coffee Break

2 Organization Matters
   2.1 Introduction and Adoption of Agenda (G. Cotter, IABIN Council Chair)
   2.2 IABIN overview and background (I. Valdespino, IABIN Secretariat Director)
   2.3 IEC Nominating committee report
   2.4 Report on IABIN Secretariat (I. Valdespino, IABIN Secretariat Director)

3 Concept of IABIN participant (R. Besana, IABIN Data Content Manager)

4 Roles of Focal Points (I. Valdespino IABIN Secretariat Director)

5 IABIN initial standards and protocols (B. Ramírez, IABIN Thematic Networks Coordinator)

6 Forum: discuss concept, next steps (D. Graham, World Bank)

Wednesday, April 6, 12:30 – 1:30 p.m. ----- Lunch
7 Countries Presentation on Bioinformatics
   7.1 Brazil
   7.2 Peru
   7.3 Suriname
   7.4 United States

8 I3N Status (A. Grosse, USGS)
9 INBIO – Smithsonian plant barcoding project (E. Mata, INBIO)

Wednesday, April 6 ----- Coffee Break

10 Conservation Commons (B. Torres, GBIF)
11 Initiatives with which IABIN has MOUs: CHM, GBIF (G. Cotter, IABIN Council Chair)
12 Selection of ad-hoc technical committees to discuss the proposals and make recommendations (I. Valdespino, IABIN Secretariat Director)

Wednesday 6; 5:30 – 6:00 p.m. Poster Setup

Wednesday 6; 6:00 p.m. Transportation to and tour of City of Knowledge

Wednesday 6; 7:00 – 9:00 p.m. SECRETARIAT OFFICE INAUGURATION

Thursday, April 7, 2005 8:30 a.m.

13 Poster session inauguration

14 IABIN activities not funded by GEF
   14.1 Summary of Nippon Koei studies for IABIN (K. Tyne, UNEP - WCMC)
   14.2 Biodiversity database rescue and image library (A. Yanosky, Guira Paraguay)
   14.3 Protected Areas of the Amazonian Basin metadata information database (A. Espinel, OAS Consultant)
   14.4 Update on Bionet (R. Smith, BIONET)

Thursday, April 7 ----- Coffee Break

15 Countries Presentation on Bioinformatics
   15.1 Argentina
   15.2 Chile
   15.3 Nicaragua
   15.4 Uruguay

Thursday, April 7; 12:00 – 1:00 p.m. ----- Lunch

16 Break out sessions by background papers
   • Roles of Focal Points
   • Concept of IABIN participant
IABIN initial standards and protocols
Forum
Monitoring and Evaluation of the IABIN – GEF project

Thursday, 7; 5:00 – 8:00 p.m. - I3N Thematic Working Group (Close meeting, members only)

Friday, April 8, 2005 8:00 a.m.

17 Reports back to plenary from break-out sessions

Friday, April 8 ----- Coffee Break

18 Status of IABIN-GEF project
18.1 Actual Status and 2005 Work Plan (I. Valdespino, IABIN Secretariat Director)
18.2 Component 1: Catalog and Thematic Networks (B. Ramirez, IABIN Thematic Network Coordinator)
18.3 Component 2: Data Content Creation (R. Besana, IABIN Data Content Manager)

Friday, April 8; 12:30 – 1:30 p.m. ----- Lunch

18.4 Component 3: Tools for Decision Making (I. Valdespino, IABIN Secretariat Director)
18.4.1 IABIN – DGF Project (V. Abreu, CdS Consultant)
18.5 Component 4:
18.5.1 Sustainability fo IABIN (I. Valdespino, IABIN Secretariat Director)
18.5.2 International Bioinformatics Foundation (B. Carroll, International Associates Inc. / J. Hill)

Friday, April 8 ----- Coffee Break

18.6 Component 5:
18.6.1 Administration (R. Huber, OAS)
18.6.2 Tracking Co-Financing (R. Huber, OAS)
18.6.3 Monitoring Strategy (R. Huber, OAS)

19 IEC Election
20 Meeting Closure

Saturday, April 9: Field Trip
Saturday, April 9: Participant depart
Sunday, April 10: Participant depart
ANNEX 3: Meeting pictures

Fig. 1. Mr. Juan Carlos Navarro (Mayor of Panama City) welcomed all on behalf of all the citizens of Panama City.

Fig. 2. Ms. Gladys Cotter, IABIN Council Chair, joined in welcoming all meeting participants, and thanked CoK and ANAM in being instrumental for the establishment of the IABIN Secretariat in Panama.

Figs. 3-4. Forty-nine participants from 25 countries attended the public opening of the meeting; most of them actively participated during scheduled sessions.
Figs. 5-6. National Focal Points and other participants during meeting presentations and deliberations.

Annex 3. Meeting Activities (continues).

Figs. 7-8. Presentation of IABIN Connectivity Program.

Fig. 9. I3N Technical Working Group.

Fig-10. Participants conducting small size group meetings.
Fig. 13. Gladys Cotter, Chair of IABIN Council and IEC, presents Dr. Jorge Arosemena, Executive Director of City of Knowledge, with a recognition award for his institution support to the establishment of IABIN Secretariat offices in Panama.

Fig. 14. Secretariat offices located at the 2nd floor of Bldg. 801 at City of Knowledge, Clayton, Panama.
ANNEX 4: Media coverage of the meeting
Se reunirán especialistas en biodiversidad

PANAMA, 3 (EFE). Especialistas de 34 países de América se congregarán en Panamá a partir del próximo miércoles para la cuarta reunión del Consejo de la Red Inter-Americana de Información sobre Biodiversidad (IABIN por sus siglas en inglés).

Un comunicado del IABIN distribuido hoy precisa que a la cita asistirán “autores continentales en materia de medio ambiente, así como investigadores, académicos y altos representantes de organismos no gubernamentales vinculados a la conservación de la flora y fauna de América”.

IABIN es una iniciativa creada por los países miembros de la Organización de Estados Americanos (OEA), en la Cumbre de las Américas sobre Desarrollo Sostenible, efectuada en diciembre de 1996 en Bolivia, con el objetivo de promover el desarrollo sostenible, la conservación y el manejo adecuado de la biodiversidad biológica del continente americano.

El encuentro, que concluirá el viernes próximo, también servirá para formalizar la instalación de la secretaría de la red, así como su base de datos, en Panamá, específicamente en la ciudad del Saber, a orillas del Canal interoceánico, informó el director ejecutivo del organismo, Iván Valdés pino.

Valdés pino adelantó que entre los asuntos que abordarán los especialistas se encuentra la revisión de los avances alcanzados por la red en los últimos años, de los que se destaca la creación de protocolos y estándares de uso continental.

También, la conformación de grupos de trabajo para el análisis de especies invasoras, ya que estas representan una amenaza económica y sanitaria a actividades productivas, como la agricultura y la ganadería.

“La información que administra la red nos permite conocer, por ejemplo, cuántas especies de plantas realmente existen y cuál es su estado de conservación, así como qué tipo de medidas tendrán que adoptar los países para conservarlas y a la vez poder aprovecharlas en el desarrollo sostenible de cada nación y de la región en general”, explicó Valdés pino.
A8  LUNES, 4 DE ABRIL DE 2005

LA ESTRELLA DE PANAMA

SE REUNIRÁN AUTORIDADES Y ESPECIALISTAS DEL CONTINENTE

Instalan en Panamá Red Inter-Americana sobre Biodiversidad

Participarán representantes de 34 países, se formalizará la instalación de la Secretaría de la Red

Autoridades continentales en materia de medio ambiente, así como investigadores, académicos y altos representantes de organismos no gubernamentales, vinculados a la conservación de la flora y fauna de las Américas se reunirán esta semana en Panamá con motivo de la cuarta reunión del Consejo de la Red Inter-Americana sobre Biodiversidad (IABIN por sus siglas en inglés).

IABIN es una iniciativa creada por los países miembros de la Organización de Estados Americanos (OEA) en la Cumbre de las Américas sobre Desarrollo Sostenible, efectuada en diciembre de 1996 en Bolivia, con el objetivo de promover el desarrollo sostenible, la conservación y el manejo adecuado de la diversidad biológica del continente americano.

El evento, que contará con representantes de los 34 países que integran el continente, también será propicio para formalizar la instalación de la Secretaría de la Red, así como su base de datos, en la República de Panamá, específicamente en la Ciudad del Saber. Informó el director ejecutivo del organismo, Dr. Iván Valdés. 

Valdés afirmó que entre los temas que abordarán los especialistas se encuentra la revisión de los avances alcanzados por la Red en los últimos años, de los que se destaca la creación de protocolos y estándares de uso continental, así como la conformación de grupos de trabajo para el análisis de especies invasoras, y que estas representan una amenaza económica y/o sanitaria a actividades productivas como la ganadería y la agricultura.

La información que administra la Red nos permite conocer, por ejemplo, cuántas especies de plantas realmente existen y cuál es su estado de conservación, así como qué tipo de medidas tendrán que adoptar los países para conservarlas y a la vez poder aprovecharlas en el desarrollo sostenible de cada nación y de la región en general, explicó Valdés.

El director ejecutivo del organismo señaló que el mayor apoyo de IABIN es hacer accesible a través del Internet información precisa, actualizada y veraz, sobre el estado de la biodiversidad del continente "para que sea utilizada por los gobiernos y todos los actores que están involucrados en la toma de decisiones sobre desarrollo y en particular sobre la conservación del patrimonio biológico", resaltó Valdés. 

Durante el encuentro, al que también asistirán representantes del Banco Mundial y la OEA, se contará con la participación de especialistas en bioinformática, bioinformática geoespacial (uso de información satelital) y economía ambiental.

El Dr. Valdés dijo que en este encuentro, panameño y hasta hace poco directivo del Proyecto Corredor Biológico Mesoaméricano del Atlántico Panameño (también financiado por el Banco Mundial), destacó que la instalación de la secretaría de IABIN en Panamá, además de contribuir al posicionamiento de la Ciudad del Saber como un hub de información para la gestión del conocimiento, reforzará la importancia del país como pionero biológico del continente y su liderazgo en temas ambientales.
Red permitirá elaborar inventario sobre biodiversidad en América

OMARA DE LION WATSON
omara.deleon@epasa.com

El "mama del medio ambiente, relacionado con especies en peligro, tanto de la flora como la fauna en la región interamericana, será más conocido y controlado. Ayer se anunció en Panamá la Red Interamericana sobre Biodiversidad.

Gladys Cotter, presidenta del Consejo de la Red Interamericana de Información (IAEIN) por sus siglas en inglés, dijo al Panamá América que la red permitirá cuedar especies, no sólo en cada país, en las zonas fronterizas y en toda la región.

La red, integrada por 34 naciones, estará ubicada en la Ciudad del Saber. Tendrá el apoyo del Banco Mundial. Según Iván Valdés, director de la Ciudad del Saber, los especialistas revisarán los avances de la red en los últimos años.

Entre ellos se destacan los protocolos y estándares de uso contencioso y la formación de grupos de trabajo para el análisis de especies invasoras, ya que de ellas puede ser una amenaza para las actividades productivas como la agricultura y la ganadería.

Para Ligia Castro, administradora de la Autoridad Nacional del Ambiente, la información de la red permitirá conocer cuántas especies de plantas existen y cuál es su estado de conservación. También las medidas que tendrán que adoptar los países para conservarlas y para aprovecharlas en el desarrollo sostenible de cada uno.

Sobre la situación en Perú, dijo que aunque la falta de controlado, han surgido algunos violadores, que la prohibición, establecida, por lo que serán sancionados severamente.
Más de un centenar de técnicos en medio ambiente de América pusieron en marcha en Panamá una Red Interamericana sobre Biodiversidad, que funcionará en la antigua base militar de Clayton.

La sede de la Red contará con un banco de datos sobre el estado de la flora y fauna del continente y mantendrá al día los inventarios sobre las especies que pueblan América.

La Autoridad del Canal de Panamá (ACP) lleva a cabo una especie de inventario de la flora y fauna que habita en la cuenca hidrográfica, para garantizar el agua y la calidad de vida del 2005 al 2025.

El director ejecutivo de la Red, Iván Valdespino, dijo que la información que administrará la Red "nos permitirá conocer, por ejemplo, cuántas especies de plantas existen realmente y cuál es su estado de conservación, así como qué tipo de medidas tendrán que adoptar los países para conservarlas".

Añadió que uno de los mayores aportes de la Red es hacer accesible por medio de internet información precisa, actualizada y veraz sobre el estado de la biodiversidad del continente, para que sea usada por los gobiernos y todos los interesados en este campo.

La Red fue creada tras una reunión a la que asistieron 200 delegados América.
ANNEX 5: Powerpoint presentation on IABIN overview and background
DESCRIPCIÓN Y ANTECEDENTES DE IABIN

IV REUNIÓN DEL CONSEJO
6 de abril, 2005
Panamá
República de Panamá
(Tomado de Grosse, USGS, 2004)

Antecedentes

- 34 gobiernos nacionales
- Universidades, organizaciones no gubernamentales e intergubernamentales, museos, herbarios, sector privado

Antecedentes
Cumbre de las Américas: Mandato

Foro basado en Internet para la colaboración científica y técnica para la colección, intercambio y uso de la información sobre la biodiversidad en la toma de decisiones y educación

Estructura de gobernación

- Consejo IABIN
- Puntos focales oficiales (34 países)
- Representantes IGO (CHM, GBIF)
- Representantes ONG
- Comité Ejecutivo de IABIN
- 8 países + 1 IGO/NGO
- Equipo de planificación

Metas de IABIN

- Integrar información de todas las naciones
- Proporcionar acceso fácil
- Mejorar capacidad en informática
- Llenar vacíos de información
- Facilitar incorporación de información a redes globales

Promoviendo interoperabilidad

- Selección de estándares:
  - Protocolos de intercambio
  - Formatos de registros
  - Vocabularios controlados
- Alentar adopción de estándares
- Compartir herramientas, metodologías, experiencia
Principios de IABIN

- Datos controlados por propietario
- Respeto por la propiedad intelectual
- Acceso gratis y universal
- Colaboración e inclusión
- Orientado hacia la ciencia y desarrollo sostenible
- Basado en iniciativas nacionales

Red manejada, voluntaria, diversa, distribuida

Basada en iniciativas nacionales

Conecta las redes nacionales a otras en el hemisferio

Nexos con GBIF

- Miembro asociado de GBIF
- Participantes de IABIN lideraron los primeros subcomités de ciencia de GBIF
- 8 países IABIN son miembros de GBIF
- IABIN creará un nodo GBIF para el resto de los países

Nexos con CHM

- Memorando de Entendimiento
- IABIN apoya implementación de CHM en el hemisferio
- Punto Focal IABIN eo Punto Focal CHM
- Representante de IABIN en el "CHM Informal Advisory Committee"
- Reunión conjunta: CHM GRULAC e IABIN

Colaboración alienta la complementariedad

Proyecto de Implementación

- Interoperabilidad y Acceso a Datos
- Elaboración de un Servicio de Catálogo
- Desarrollo de 6 Redes Temáticas
- Creación de los contenidos de los datos (apoyo a proveedores de datos)
- Proporciona fondos, herramientas, entrenamiento
- Desarrollo de herramientas para mejorar la utilización de datos e información en el proceso de toma de decisiones
- Sostenibilidad
- Administración

Relación Institucional

- IABIN Networking Group (ING)
- Proyecto de Implementación
- Proyecto de Implementación en el CED (Centro de Estudios y Desarrollo)
- GBIF
- Proyecto de Implementación en el CED (Centro de Estudios y Desarrollo)
- nested network (N)
IABIN Council
- Represented by 34 National Focal Points
- Exercising Committee (EC)
- GEF/World Bank Financier and Implementing Agent

IABIN Policy
- Annual Council meetings
- Promote and support IABIN within countries
- Represent IABIN Council
- Operationalize IABIN policy and oversee the Project
- GEF funds

“Building IABIN Project”
- WB disburse funds to the Executing Agency
- WB oversees technical and administrative implementation of the Project

IABIN Secretariat
- OAS
- Executing Agency & Recipient
- Supports IABIN Council and EC
- Supports IABIN Focal Points
- Day-to-day implementation of the Project
- Coordinate partners and networks
- Liaise with Global players such as CBD-CHM and GBIF
- Executes the Project in coordination with IABIN Secretariat
- Reports to WB and to EC

Coordinating Institutions of Thematic Networks
- Develop and lead Thematic Networks (specimens, species, ecosystems, invasives, pollinators, protected areas)
- Coordinate technology transfer on a regional basis and facilitate the inclusion of biodiversity themes in national agendas
- Access information, build capacity for information sharing and exchange

Data Providers
- Digitize relevant data held in non-electronic forms based on IABIN standards and formats

Biodiversity Information Users
- Redes Temáticas iniciales
- Herramientas actuales
- Proyecto piloto
- Colaboración en I3N

Herramientas actuales
- Catálogo de fuentes de información en Latinoamérica y el Caribe en 3 idiomas
- Sitio Web de catalogación y buscar recursos en el Web: “NBII Web Resources tool”
- BioInventory Builder
- Herramientas para I3N
- Development Gateway
- Sitios Web: internacional, EE. UU., general y nacionales de I3N

Proyecto piloto I3N
- Catálogos
- Listas de especies
- Conjuntos de datos
- Proyectos
- Especialistas
- Accessible en Web
- Distribuida
- Propiedad local
- Integrada
- Estándares comunes
- Punto único de entrada
- Búsqueda a través de todos los catálogos

Colaboración en I3N
- 16+ instituciones locales
- Global Invasive Species Information Network (GISIN)
- IUCN Invasive Species Specialist Group
- Global Invasive Species Database
- Global Invasive Species Program

Redes Temáticas iniciales
- Especímenes
- Especies
- Ecosistemas
- Especies Invasivas
- Polinizadores
- Áreas Protegidas

**Servicios y herramientas**

- Acceso desde entrada única
- Búsqueda general
- Herramientas para la creación de registros estándarizados en formato aceptado
- Dublin Core Metadata Standard
- Inventarios de servicios gráficos
- Sitio web bilingüe
- Repositorios para datos, instrucciones, documentos publicitarios
- Comunidad virtual en portal de NBII
- Lista electrónica

---

**Actividades actuales de I3N**

- Expansión de base de datos modelo y mejora de herramientas
  - ÓNG Brasileira, universidad Argentina
- Global Invasive Species Information Network
- Aumentar capacidad, herramientas

---

**Servicios futuros**

- SIG para especies, herramientas para identificación taxonómica, perfiles de especies por región, mapas, búsquedas refinadas, estudios de caso sobre impactos y control, entrenamiento, más!

---

**Novedades**

- Secretaría: director, coordinador de redes temáticas, administrador de contenido de datos
  - Director = Dic, 2004; Otros = Ene, 2005.
  - Secretaría Funcional a partir de finales de Enero de 2005
- Nominaciones para nuevo presidente, vicepresidente y tercer miembro del IEC
- Proyecto IABIN DGF: creación de nexos entre datos biológicos y geoespaciales: desarrollo de herramientas para el uso de información en proyectos de desarrollo
- Red Temática para áreas protegidas se empieza a definir: reunión liderada por OEA, Nov 1, 2004
- Mejora de interfase español/portugués de BIOBOT; disponible en IABIN-US y IABIN.net
- Proyectos de imágenes de LAC con ÓNG Ecuatoriana/EE.UU, Ministerio del Ambiente en Nicaragua, ÓNG Paraguaya
- Propuesta para traducir parte del NBII Biocomplexity Thesaurus
- Colaboraciones paraguayas trabajando en mini-tesauro para imágenes

---

**Bienvenidos a la IV Reunión del Consejo IABIN**

6-9 abril 2005, Panamá

¡Disfrute su estadía!

---

**Secretariát**

Iván Valdespino, Executive Director
Rita Besana, Data Content Manager
Boris Ramírez, Thematic Networks Coord.

iabinespino@iabin.net
rbesana@iabin.net
bramirez@iabin.net

Ciudad del Saber, Edificio 801, Clayton, República de Panamá

**QUESTIONS OR COMMENTS**

**PREGUNTAS O COMENTARIOS**
ANNEX 6: Nominations committee final report
Informe Final

Este documento informa los resultados del proceso iniciado en Setiembre del 2004, de convocatoria de propuesta de un nuevo miembro del IEC IABIN y de nominación de postulaciones a los cargos de Presidente y Vice-Presidente del mismo. Como resultado de la convocatoria se recibieron 6 propuestas, que consideran las nominaciones de la Sra. Gladys Cotter de USA (cuatro nominaciones) y del Sr. Braulio Ferreira de Souza de Brasil para la Presidencia (una nominación), de la Sra. Karin Molt Gonzalez de Chile (2 nominaciones) y de la Sra. Ana Aber de Uruguay para la Vice-Presidencia (1 nominación), de la Sra. Ana Aber de Uruguay (2 nominaciones) y de la Sra. Karin Molt Gonzalez de Chile como nuevo miembro del Consejo (1 nominación).

En conformidad con el Reglamento de la Red Interamericana de Información sobre Biodiversidad IABIN (http://www.iabin.net/english/governance/procedure.shtml), el Consejo de Gobierno de IABIN convocó con fecha 18 de agosto del 2004, la participación voluntaria de 3 miembros representativos de la iniciativa IABIN para integrar un Comité de Nominaciones para la elección de un nuevo miembro del Consejo de Gobierno y de nuevos representantes para los cargos de Presidencia y Vice-Presidencia. Los representantes invitados fueron la Dra. Ana Aber, de la Dirección Nacional de Medio Ambiente (MVOTMA) de Uruguay, el Dr. Erick Mata, del Instituto Nacional de Biodiversidad (INBio) de Costa Rica y el Dr. (C) Antonio W. Salas, ex-Consultor de la iniciativa IABIN de la Subregión Andina, Perú (anexo 1).

Los 3 representantes invitados aceptaron la nominación e iniciaron las coordinaciones correspondientes para el desempeño de sus funciones, que incluían el lanzamiento de la convocatoria, la recepción de propuestas y absolución de consultas y la elaboración de los informes correspondientes.

La Convocatoria de Nominaciones fue lanzada el 2 de Setiembre del 2004 usando el servidor de correos de IABIN (iabinfriends@monarch.cr.usgs.gov) con un mensaje de Gladys Coter, actual Presidenta de IABIN (Anexo 2). La convocatoria establecía el 30 de octubre como fecha final de presentación de propuestas.

A pesar de recibir consultas de varios de los representantes miembros de IABIN, esta primera convocatoria no permitió contar con ninguna propuesta. Tomando en cuenta las varias posibles razones existentes para explicar este resultado, los miembros del Comité de Nominaciones, en coordinación con la Presidenta del Consejo de Gobierno de IABIN, acordamos realizar una ampliación de la convocatoria, la que sería dada a difusión después de las fiestas de fin de año de Navidad y Año Nuevo.
Informe Final Candidaturas al IABIN IEC

La ampliación de esta convocatoria fue dada a difusión el 02 de enero del 2005 (Anexo 3), estableciendo como fecha final de presentación de solicitudes el 31 de enero próximo. En este segundo período se recibieron propuestas de dos representantes, a los que se les solicitó el reenvío de la propuesta con la inclusión de información de respaldo adicional (incluido un CV extenso o resumido) y la conformidad de aceptación del nominado.

Como resultado de esta ampliación se recibieron 3 propuestas formales (anexos 4-7):


2. Propuesta del 05 de febrero del 2005 del Dr. A. Alberto Yanosky F. de Paraguay, proponiendo la candidatura de la Sra. Ana Aber de Uruguay como nuevo miembro del Consejo de Gobierno.


Posteriormente, en el interés de ampliar las oportunidades de presentación de nuevas propuestas por los delegados de la red, se consideró la apertura de una segunda ampliación con fecha límite del 25 de marzo (Anexo 10). Como resultado de esta tercera ampliación se concretaron las siguientes propuestas:


2. Propuesta del 16 de marzo (reenviada) del Dr. Yanosky de Paraguay, proponiendo la candidatura de la Sra. Gladys Cotter de USA para la Presidencia (Anexo 12).


En conclusión, los candidatos propuestos son:

Informe Final Candidaturas al IABIN IEC

Vice-Presidencia: Sra. Karin Molt González de la Unidad de Información Ambiental de CONAMA de Chile (2 propuestas) y Sra. Ana Aber de la Dirección Nacional de Medio Ambiente (MVOTMA), Uruguay (1 propuesta).

Nuevo miembro del Consejo: Sra. Ana Aber de la Dirección Nacional de Medio Ambiente (MVOTMA) de Uruguay (2 propuestas) y Sra. Karin Molt González de la Unidad de Información Ambiental de CONAMA de Chile (1 propuesta).

Los miembros del Comité de Nominaciones estamos actualmente reuniendo información sobre los representantes designados para su debida presentación durante la próxima reunión del Consejo de IABIN.

Miércoles 30 de Marzo del 2005.

Comité de Nominaciones

Dra. Ana Aber  
Asesoría de Asuntos Ambientales Internacionales  
Dirección Nacional de Medio Ambiente (MVOTMA)  
Rincón 422 Piso 3  
Montevideo, Uruguay  
Tel: (5982) 917 07 10 extensión 4302/4304  
Fax: (5982) 917 07 10 extensión 4321  
aaber@adinet.com.uy

Dr. Erick Mata  
Director Adjunto  
Bioinformática  
Instituto Nacional de Biodiversidad (INBio), Costa Rica  
Tel: (506) 507 8161  
Fax: (506) 507 8247  
emata@inbio.ac.cr

Dr. Antonio W. Salas  
Jr. Moreno Alcalá 241, Lima 41, Perú  
Tel.: 51(1)346-1923  
Cel.: 51(1)98-757523  
Fax: 51(1)346-0767  
awsalas@terra.com.pe
ANNEX 7: Powerpoint presentations of background papers
Categories of IABIN Participation

Discussion Paper

April 6, 2005
Panamá
República de Panamá
Introduce document that will be the basis for discussion and recommendations by the IABIN Council regarding IABIN participation categories, definitions, their roles and responsibilities.
Terms Used in IABIN Documents

- Focal Point
- Member
- Cooperator
- Participant
- Node
- Data and information processors, network infrastructure developers
- Technical member
- Hub
- Co-financing institutions
- The IABIN Executive Committee
- Council Member vs. Council Meeting Attendee
- Consensus vs. Voting
- Organizations that provide financial support
USE OF TERMS AND DISCUSSION POINTS

MEMBER
✓ Used to refer to Council Members (Focal Points and institutions or agencies who sign agreement)

POINTS FOR DISCUSSION
✓ How an organization, center, institution, or initiative of hemispheric or international scope will be accepted into the IABIN Council
✓ Whether these above, once accepted to the IABIN Council, will have vote or only voice.
USE OF TERMS AND DISCUSSION POINTS

COOPERATOR
- Used to refer to international and hemispheric NGOs, intergovernmental organizations and sub-regional, regional and global initiatives, who may be data providers or not

POINTS FOR DISCUSSION
- Adopting the name “International Cooperating Institution” to identify international and hemispheric NGOs and other agencies that contribute biodiversity information to IABIN
- The main role of these above
- Whether International Cooperating Institutions, once accepted to IABIN Council, will have vote or only voice
USE OF TERMS AND DISCUSSION POINTS

PARTICIPANT
✓ Used to encompass almost anyone

POINTS FOR DISCUSSION
✓ Continue to use broadly the term participant for both individuals and organizations

NODE
✓ Describes a national data provider. It is not clear if a node can also be a member

POINTS FOR DISCUSSION
✓ Deletion of the phrase “where the node is located” from the Rules of Procedure
✓ Replacing “Node” with “National Cooperating Institution”
USE OF TERMS AND DISCUSSION POINTS

DATA AND INFORMATION PROCESSORS, NETWORK INFRASTRUCTURE DEVELOPERS
✓ Self explanatory

POINTS FOR DISCUSSION
✓ These should be only institutions, organizations or agencies, not individuals
✓ Replacing “Data and Information Processor” and “Network Infrastructure Developer” both with “National Cooperating Institution”

TECHNICAL MEMBER
✓ Describes the individuals who make up the Technical Working Groups who, according to RoP, do not need to belong to any organization associated with IABIN

POINTS FOR DISCUSSION
✓ Whether a member of a TWG must be a participant in IABIN
✓ Replace the term “Technical Member” with “Technical Contributor”
USE OF TERMS AND DISCUSSION POINTS

HUB
✓ Used as a synonym to the term Secretariat

POINTS FOR DISCUSSION
✓ Adopt the term Secretariat and use it consistently, deleting the term Hub

CO-FINANCING INSTITUTION
✓ Refers to the organizations that pledged funds to IABIN during the development of the GEF project

POINTS FOR DISCUSSION
✓ Maintain the term Co-financing Institution to refer to these organizations, to distinguish them as funding partners of IABIN
IABIN EXECUTIVE COMMITTEE
✓ Rules of Procedure do not say whether only voting Council Members can be elected to the IEC

POINTS FOR DISCUSSION
✓ Whether voting and non-voting Council members can be elected to IEC

CONSENSUS vs. VOTING
✓ To date, all decisions have been by consensus. RoP say that when voting, decisions will be made by a majority of two thirds

POINTS FOR DISCUSSION
✓ Whether all Council Members are required to vote in order to make a decision or if only those present at the meeting.
COUNCIL MEMBER vs. COUNCIL MEETING ATTENDEE

- Focal Point is the Council Member. Can designate an alternate if unable to attend a Council Meeting

POINTS FOR DISCUSSION

- Whether the Alternate is, in effect, the Focal Point for all intents and purposes when participating in a Council Meeting
- Whether the Council Members other than Focal Points, will also designate an alternate and this alternate will have the same roles and responsibilities as the designated person when attending meetings
- Members of a country’s delegation, other than the Focal Point, will be able to present their opinions and contribute to any plenary discussion but will have no vote
USE OF TERMS AND DISCUSSION POINTS

OTHER ORGANIZATIONS AND INDIVIDUALS WHO PROVIDE FINANCIAL SUPPORT

- There is no term to describe donors other than co-financing institutions.

POINTS FOR DISCUSSION

- Adding the terms “Benefactor” for individuals, and “Financing Organization” for institutions who donate to IABIN.
- Donors are not to be themselves members of the council but they could form a group and designate a representative to the Council who would have voice but no vote.
An ad-hoc committee or break out group will be designated this afternoon to discuss the points in the document and make recommendations.

Each IABIN Focal Point and other Council Members, as well as other interested IABIN participants would have read the document.

Present your recommendations and comments to the members of the ad-hoc committee.

Ad-hoc committee will meet on Thursday afternoon to discuss document and will present their recommendations to the plenary on Friday morning.
Secretariat
Iván Valdespino, Executive Director
Rita Besana, Data Content Manager
Boris Ramírez, Thematic Networks Coord.

iivaldespino@iabin.net
rbesana@iabin.net
bramirez@iabin.net

Ciudad del Saber, Edificio 801, Clayton, República de Panamá

QUESTIONS OR COMMENTS

PREGUNTAS
O
COMENTARIOS
Antecedentes

✓ Es una iniciativa creada a partir de la Cumbre de las Américas sobre Desarrollo sostenible (Santa Cruz de la Sierra, 1996)

Foro basado en Internet para la colaboración científica y técnica para la colección, intercambio y uso de la información sobre la biodiversidad en la toma de decisiones y educación

✓ Participación de 34 gobiernos, universidades, organizaciones no gubernamentales e intergubernamentales, museos, herbarios, sector privado

✓ IABIN debe ser un mecanismo de unión entre instituciones y recursos de bioinformática, de tal manera que incentive su funcionamiento eficiente y efectivo, facilitando, entre si, el intercambio de información a un nivel hemisférico
“Reglas y Procedimientos” para garantizar y normar la participación de los países y de la amplia gama de socios no-gubernamentales se establecen en la primera reunión del Consejo de IABIN (Miami, 13-14 diciembre de 1999)

Se establece una estructura de gobernanza para IABIN basada en cuatro componentes:

- **Anfitrión Diplomático**: Organización de los Estados Americanos (OEA)
- **Puntos Focales (PF´s) Nacionales**
- **Consejo de IABIN**
- **Comité Ejecutivo de IABIN**

En general, IABIN is dirigida por el Consejo, el que representa el máximo organo para la toma de decisiones dentro de la red.
El Consejo de IABIN está compuesto por los PF´s oficiales de los países americanos junto con representantes de organizaciones intergubernamentales, no-gubernamentales y de iniciativas relacionadas con bioinformática.

Entre reuniones del Consejo de IABIN, éste es representado por el Comité Ejecutivo (CEI), el que está formado por ocho miembros elegidos entre los PF´s más un representante electo de las organizaciones intergubernamentales, no-gubernamentales.
PF´s de IABIN y sus Funciones

La estructura de los PF´s es la base de la participación de los países dentro de IABIN. Las siguientes funciones se les han asignado:

1. Vínculo nacional para todo los aspectos relacionados con IABIN,
2. Establecer los mecanismos de consulta necesarios para estimular la participación nacional y subnacional en las actividades de IABIN,
3. Incentivar la participación de las fuentes locales de datos originales (e.g., museos, herbaria) incluyendo la posible formación de redes de información nacional,
4. Representar el punto de vista de sus gobiernos en los aspectos técnicos de la red,
PF’s de IABIN y sus Funciones

5. Buscar fondos para el desarrollo de información sobre biodiversidad y de IABIN,

6. Identificar nuevas ideas y prioridades de proyectos para sus países,

7. Informarse de las actividades de IABIN dentro de sus países y actuar como un repositorio y distribuidor de tal información,

8. Promover la colaboración entre IABIN y iniciativas nacionales y transnacionales,

9. Actuar como un vínculo de comunicación primario para la red, al mantener a las organizaciones participantes informadas acerca de los intereses y actividades de IABIN.
Funciones adicionales de los PF´s en el proyecto IABIN-GEF

- Dar seguimiento al co-financiamiento de las instituciones participantes,

- Distribuir y recopilar los formularios de co-financiamiento del proyecto, de acuerdo a las diferentes categorías de gastos,

- Remitir al Director de la Secretaria de IABIN la información del co-financiamiento.
Funciones adicionales de los PF´s en el proyecto IABIN-GEF

Participación en:

- Proceso de planificación de las Instituciones Coordinadoras (IC´s) para el establecimiento de las Redes Temáticas (RT´s),
- Facilitar las actividades del país para el desarrollo de las RT´s,
- Facilitar y coordinar dentro del país las actividades planificadas para incorporar estándares dentro de IABIN para la ejecución del Programa de Desarrollo de Datos,
- Facilitar la creación de datos y metadatos dentro de los países y velar por la calidad de éstos,
Funciones adicionales de los PF´s en el proyecto IABIN-GEF

- Incentivar a los generadores nacionales de datos con alta calidad para que los hagan disponibles a través de IABIN, mediante los apoyos financieros previstos en el componente 2 del proyecto.
- Desarrollar herramientas con valor agregado para el proceso de toma de decisiones.
- Colaborar en los esfuerzos para establecer la sostenibilidad técnica y financiera de IABIN.
- Promover la utilización de la información o recursos generados por IABIN para el establecimiento y adopción, por parte de los países, de políticas positivas en materia ambiental.
Funciones adicionales de los PF´s en el proyecto IABIN-GEF

- Promover la utilización por parte de los países de la información o recursos generados por IABIN para crear mecanismos de seguimiento para la conservación de biodiversidad,

- Promover la utilización por parte de los países de la información o recursos generados por IABIN para la planificación y ejecución de proyectos con fondos internacionales para el uso y conservación de la biodiversidad,

- Desarrollar una colaboración multinacional, facilitada por IABIN, para el acceso e intercambio de información sobre biodiversidad en el continente americano.
Las funciones asignadas a los PF´s, mediante las Reglas y Procedimientos de IABIN, han sido expandidas para incluir responsabilidades ligadas al logro de los objetivos específicos del proyecto IABIN-GEF, a través de la ejecución de actividades específicas dentro de los países.
Recomendaciones del Secretariado

- Las nuevas funciones propuestas deben ser analizadas, entendidas y aceptadas o modificadas, mediante un grupo temático de trabajo que establezca recomendaciones para adopción del pleno del Consejo.

- El Marco Lógico del proyecto IABIN-GEF debe ser revisado por los PF’s para hacer recomendaciones sobre la forma en que se pueden lograr los resultados que dependen de las acciones nacionales (incluyendo presupuestos y responsables).

- Se propone que exista un mecanismo de confirmación anual o bianual de los PF’s (entidades o personas) para mantener una activa comunicación y apoyar la ejecución del proyecto dentro de los países.
Secretariat
Iván Valdespino, Executive Director
Rita Besana, Data Content Manager
Boris Ramírez, Thematic Networks Coord.
ivaldespino@iabin.net
rbesana@iabin.net
bramirez@iabin.net

Ciudad del Saber, Edificio 801, Clayton, República de Panamá

QUESTIONS OR COMMENTS

PREGUNTAS O COMENTARIOS
Objective

Adopt the initial/basic standards and protocols that would envisaged connectivity and interoperability of IABIN
BACKGROUND

- Initially proposed at the 3rd. IABIN Council Meeting, Cancún – 2003

Steps taken:
- Analyze Other Networks (Regional, Global)
- Analyze Actual Technologies
- Analyze Future Technologies
- Analyze Others experiences (in Biological Networks and other areas)

- Define Standards Guiding Principles in the PIP (Project Implementation Plan)
Standards Guiding Principles

- Access to all data
- Open and non-proprietary
- Compatibility with emerging standards from the regional, global and other networks
- Minimization of technology restrictions
- Phase, incremental development
- Scalability
- Local Language queries
- Shared expertise and capabilities
- Respect for Intellectual Property Rights
- Extensibility and backward compatibility
- Minimization of cost.
Areas where IABIN needs Standards

- System Architecture
  - Z39.50
  - Web Services
- Data Transport
  - HTTP over TCP-IP
- Presentation Language
  - HTML
- Data Encoding
  - XML
Areas where IABIN needs Standards

- System Access Protocols
  - SOAP
  - DiGIR
- System Interface Descriptions
  - WSDL
- Registry Services
  - UDDI
Areas where IABIN needs Standards

✓ Metadata Formats
  • Bibliographic Data
    • Dublin Core
  • Specimen Collections and Observations
    • Darwin Core
    • ABCD Schema
  • Spatial Data
    • CSDGM (ISO 19115)
  • General Biological Resources
    • CSDGM with Bio Profile
  • Other Data Themes
    • Process that involves the major players within the theme of interest.
Areas where IABIN needs Standards

✓ Geoprocessing
   ? From the Open GIS Consortium

✓ Document Formats
   ? HTML
   ? PDF
   ? ASCII (Plain text)
An ad-hoc committee or break out group will be designated this afternoon to discuss the points in the document and make recommendations.

Each IABIN Focal Point and other Council Members, as well as other interested IABIN participants would have read the document.

Present your recommendations and comments to the members of the ad-hoc committee.

Ad-hoc committee will meet on Thursday afternoon to discuss document and will present their recommendations to the plenary on Friday morning.
ANNEX 8: Recommendations made by Council to the IABIN participant paper
The ad hoc group recommended to add the term IABIN friend to refer to any individual interested in IABIN who subscribes to IABINfriends.

PARTICIPATION CATEGORIES: THEIR ROLES AND RESPONSIBILITIES

Member

The term member is used to refer to Council members. These include the National Focal Points (NFPs). In addition to National Focal Points other bodies are also part of the Council (see original paper for more information).

Recommendations:

- The term Member will be used only to describe the members of the Council, which are the OAS-designated Focal Points and other invited organizations. It could be further divided into Voting Member and Associate Member.
- Any organization, center, institution or initiative of international scope accepted to IABIN Council will have voice but no vote in the IABIN Council (and will be called an Associate Member).

COOPERATOR, PARTICIPANT, NODE, DATA AND INFORMATION PROCESSOR AND NETWORK INFRASTRUCTURE DEVELOPER
Recommendations:

Integrate sections 2.3 (Cooperator), 2.4 (Participant), 2.5 (Node) and 2.6 (Data and information processors, network infrastructure developers) into Partners and use this term consistently. A Partner may become a Council Member following the IABIN Rules of Procedure and criteria to become a member.

Technical Member

The term technical member describes the individuals who make up the Technical Working Groups who, according to IABIN Rules of Procedure, do not need to belong to any organization associated with IABIN:

Recommendations:

- Replace the term “Technical Member” with “Technical Contributor”.
- Modify the phrase in the Rules of Procedure “...and need not be associated with an IABIN member. Delete “member”, and add “partner or friend”.

Hub

The term Hub is used throughout IABIN documents, including the GEF Project Implementation Plan, as a synonym to the term Secretariat, and this is confusing.

Recommendation:

- Adopt the term Secretariat and use it consistently, deleting the term Hub

Co-Financing Institutions

Recommendation:

- The term Co-financing Institutions would only be used under the framework of the GEF Project to refer to those organizations and institutions that have pledged in-kind and/or monetary contributions to IABIN under the GEF Project.

Council Member vs. Council Meeting Attendee, the IEC, Consensus vs. voting

Recommendation:

- Only Focal Points, who represent the countries, have vote in the IABIN Council. This criteria applies also to the IEC.
- Admission to the IABIN Council of organizations, centers, institutions, etc. will be decided by consensus of the voting members.
• Whenever possible all decision should be reached by consensus. Voting should be a last resort in the event that consensus can not be reached.

• The voting process as stated in the Rules of Procedure is maintained.

Other Organizations that provide financial support.

Recommendation:

• All institution, organizations, governments or individuals that contribute financially or in-kind support would be named Donor
ANNEX 9: Modified version of the standards and protocols paper
Initial/Basic Standards and Protocols for IABIN
Prepared by Boris Ramirez, IABIN Secretariat

1 PURPOSE

This document makes recommendations on a basic set of data standards and communications protocols that would enable the envisaged connectivity and interoperability of IABIN. These standards are an initial set and IABIN’s protocols and standards will always be subject to evolution and constant review by IABIN Technical Working Group.

2 BACKGROUND

IABIN has adopted 11 guiding principles for interoperability formats, standards and protocols:

1. Seamless access to all types of IABIN data and information regardless of where it resides and interoperable with CBD-CHM, GBIF and other networks;
2. Open, widely supported, non-proprietary standards;
3. Compatibility with emerging standards of key regional, global and national biological information networks;
4. Minimization of technology restrictions imposed by the network architecture;
5. Phased, incremental development;
6. Scalability, so that standards will be usable and applicable at different network scales: global, regional and national;
7. Inclusion (e.g. facilitate local-language queries) in the design of applications;
8. Expertise and capabilities are shared throughout the network;
9. Respect for Intellectual Property Rights, Traditional Knowledge Rights and rules for access and benefit sharing of Genetic Resources in accordance with the CBD principles and guidelines, and national legislations;
10. Future extensibility and backward compatibility;
11. Minimization of cost while ensuring reliable user services.

3 JUSTIFICATION AND PROPOSALS

System architecture adopted by IABIN will base on flexible, widely support software standards in web-based software development, and have an inherent capability to support the requirements for a distributed system. IABIN System architecture will be applied to the IABIN Gateway and to the design of Project Network accessed by the Gateway. The intent is to minimize the number of technology restrictions that are imposed on data providers while establishing a limited number of standards that ensure interoperability.
The following eleven areas have been suggested in IABIN documents which areas where IABIN have to adopt a standard and now need to be formally adopted.

1. System Architectures
2. Data Transport
3. Presentation Language
4. Data Encoding
5. System Access Protocols
6. System Interface Descriptions
7. Registry Services
8. Metadata Formats
9. Geospatial Interoperability
10. Document Formats
11. Graphic Formats

3.1 System Architectures

IABIN is envisioned as a distributed system in which the IABIN partners play a key role in the development and maintenance of the information that constitutes the network, while the IABIN Secretariat plays the role of facilitator. In most cases, data providers will store and maintain source data, and be responsible for releasing only data that they wish to. Architectures supported by IABIN should be based on flexible, open software standards in web-based software development, and have an inherent capability to support the requirements for a distributed system. Moreover, the IABIN endorsed system architectures should also be designed to support component-based software development methodologies that allow different groups to develop system components independently. The following are the architectural alternatives:

**z39.50**

z39.50 is a mature information retrieval standard which has been particularly popular within the library community. It has particular relevance to biodiversity informatics since it has been the foundation for the development of The Species Analyst project.

The complexity and relative obscurity of the protocol limits its suitability as a foundation for use by IABIN. The Species Analyst network is also moving away from it in the near future. Continuing activities to fuse z39.50 with XML (see page 4, Data Encoding, for explanation on XML) may however lead to its more natural inclusion within a web services architecture.

**Web Services**

A Web Services model is currently the architecture of choice for development of truly global networks of heterogeneous data providers. It offers the greatest degree of technological separation between different providers because all
communications between systems are based on XML document exchanges. This provides a highly flexible model with good support for multiple languages. This model is being rapidly adopted as the standard both within the general e-Business and e-Commerce communities, but also within the biological informatics community. As an example, GBIF has adopted this architecture to support its global network.

Proposal

Given the system architectures options available, IABIN adopts the Web Services network architecture, but IABIN will also provide support to Z39.50 based network architectures.

3.2 Data Transport

HTTP over TCP-IP

HyperText Transfer Protocol (HTTP) is the standard protocol that enables users with Web browsers to access HTML documents and external media. Transmission Control Protocol/Internet Protocol (TCP/IP) is the ISO standardized suite of network protocols that enables information systems to link to other information systems on the Internet, regardless of their computer platform. TCP and IP are two software communication standards used to allow multiple computers to talk to each other in an error-free fashion.

As the foundational technologies of the Internet, TCP/IP and HTTP are the only logical choice for a globally accessible data transport.

Proposal

IABIN adopts the HTTP over TCP/IP communication standard for data transport.

3.3 Presentation Language

HyperText Markup Language (HTML)

HyperText Markup Language (HTML), is a markup language used to create documents for World Wide Web applications. HTML has evolved to emphasize design and appearance rather than the representation of document structure and data elements. HTML 4 is the presentation language most widely used to develop web pages.

Extensible HyperText Markup Language (XHTML)

Extensible HyperText Markup Language (XHTML), is a extension of HTML 4 using rules of XML (see next section). It is a hybrid between HTML and
XML. This language allows describing data in XML format. Not all browser support XML so XHTML provides an intermediary solution and can be interpreted by XML and HTML browsers.

Proposal

IABIN adopts HTML 4 and XHTML as its presentation language. The use of metatags within the HTML document is recommended to support with search engines visibility and display.

3.4 Data Encoding

The eXtensible Markup Language (XML) provides a clear foundation for improved interoperability and data transfer within the Web Services architecture. XML is a platform independent language for exchanging and validating data between heterogeneous systems. It provides good support for multilingual data exchange and is well-supported by freely-available cross-platform tools in a wide variety of programming languages. Direct support for XML is appearing steadily in database management software and other key tools. GBIF has also adopted XML as its standard for data encoding.

Proposal

IABIN adopts XML as its standard for data encoding.

3.5 System Access Protocols

The Simple Object Access Protocol (SOAP) is an open standard with wide acceptance in the software development community. SOAP is an XML-based lightweight protocol designed for exchange of information in a decentralized, distributed environment and is ideal for exchanging messages between different computer systems. SOAP can be used to implement cross-platform messages between different systems. Such messages typically form a request for the target system to perform some task. SOAP manages the definition and exchange of parameters as part of the request. The protocol also handles the return of response data back to the requestor. SOAP can potentially be used in combination with a variety of other protocols; however, it is typically used in combination with HTTP and the HTTP Extension Framework.
Distributed Generic Information Retrieval (DiGIR)

DiGIR (Distributed Generic Information Retrieval) is an access protocol initiative adopted by the TDWG/CODATA Biological Collections Data Subgroup, and is managed as an open source project ([http://digir.sourceforge.net/](http://digir.sourceforge.net/)). DiGIR seeks to use XML documents to define and handle federated search requests based on any chosen data exchange schema. It is in use today by projects such as MaNIS (Mammal Network Information System) to exchange specimen and observation data in the Darwin Core metadata format (see below for an explanation on this under Metadata formats). Although its roots are in the biological informatics, the DiGIR protocol can be used with other data formats to develop networks for other applications.

SOAP is expected to continue achieving broad acceptance within the general software development community. DiGIR is expected to develop a significant following within the biological informatics community and may provide advantages for biological applications. GBIF is supporting both protocols for the development of its network. GBIF has also adopted DiGIR as its standard for its Network and GBIF country nodes.

Proposal

IABIN adopts both the SOAP and DiGIR system access protocols for its distributed networks.

3.6 System Interface Descriptions

Web Services Description Language (WSDL)

Before an external system can utilize a web service, it requires information on how to access and communicate with that service. The Web Services Description Language (WSDL) addresses this need by defining an XML grammar for describing network services as collections of communication endpoints capable of exchanging messages. WSDL allows Web Services interface descriptions to be stored as XML documents for distributed systems and serve as a recipe for automating the details involved in applications communication. Tools or systems can access the XML documents and subsequently understand how to access and utilize the service. GBIF supports WSDL for web service interface descriptions.

Proposal

IABIN adopts WSDL as its system interface standard.
3.7 Registry Services

Universal Description, Discovery and Integration (UDDI)

Registry Services provide a central point to allow users to locate web service providers. Universal Description, Discovery and Integration (UDDI) is one of the more widely accepted Registry Services and is supported by a broad array of software development tools. UDDI creates a standard interoperable platform that enables users and applications to quickly, easily, and dynamically find and use Web services over the Internet. UDDI also allows operational registries to be maintained for different purposes in different contexts. UDDI is a cross-industry effort driven by major platform and software providers, as well as marketplace operators and e-Business leaders within the OASIS standards consortium. GBIF and others networks have adopted UDDI.

Proposal

IABIN adopts UDDI as its Registry Services standard. IABIN will maintain and create its own registry services and each data provider could be registry into IABIN service. This standard will be using for IABIN for exchange information about how to access the data in each node or data supplier.

3.8 Metadata Formats

Metadata means, literally, "data about data." Metadata includes data associated with either an information system or an information object for purposes of description, administration, legal requirements, technical functionality, use and usage, and preservation. The initial metadata formats for IABIN are the following:

Metadata format for Bibliographic Data

**Dublin Core** – Dublin Core is a standard which defines a basic set of metadata elements which may be used to describe digital resources. GBIF also uses Dublin Core. This standard will be using for create bibliographic metadata: publications, images.

Metadata format for Specimen Collections and Observations

**Darwin Core** – The Darwin Core (DwC) is a metadata profile describing the minimum set of standards for search and retrieval of natural history collections and observation databases. It includes only the core data elements that are likely to be available for the vast majority of specimen and observation records. This standard is utilized within both the Species Analyst and REMIB networks, among others. DwC is also a GBIF approved data standard.

**ABCD Schema** – The Access to Biological Collections Data (ABCD) Schema is the product of a joint TDWG and CODATA initiative to develop a standard
for distributed data retrieval from specimen collection databases. The schema supports data exchange for all kingdoms, and for both specimen and observation records. The ABCD Schema is a GBIF approved data standard.

Metadata format for Spatial Data

CSDGM (ISO 19115) – The Content Standard for Digital Geospatial Metadata (CSDGM) was developed by the Federal Geographic Data Committee (FDGC) to provide a common set of terminology and definitions for the documentation of digital geospatial data. The standard was developed by the Federal Geographic Data Committee, an agency in the United States representing a 19-member interagency committee composed of representatives from the Executive Office of the President, Cabinet-level and independent agencies. The FGDC is developing the National Spatial Data Infrastructure (NSDI) in cooperation with organizations from state, local and tribal governments, the academic community, and the private sector. The NSDI encompasses policies, standards, and procedures for organizations to cooperatively produce and share geographic data. The FDGC standard is utilized extensively throughout the Western Hemisphere.

Metadata format for Biological Spatial Data

CSDGM with Bio Profile (NBII) - The purpose of this standard is to provide a user-defined or theme-specific profile of the FGDC Content Standard for Digital Geospatial Metadata to increase its utility for documenting biological resources data and information. This standard supports increased access to and use of biological data among users on a national (and international) basis. It also helps to broaden the understanding and implementation of the FGDC metadata content standard within the biological resources community. This standard also serves as the metadata content standard for the National Biological Information Infrastructure (NBII) and the IABIN catalogue services. More information on this metadata standard is available at: metadata.nbii.gov

Other Data Themes

It is recognized that specific metadata standards will be required for other biological themes supported by IABIN (e.g., species, protected areas, neotropical flora, etc.). In many of these themes, predominant or emerging standards do not exist. As one of its primary functions IABIN will facilitate the development of new standards or adoption of existing standards through consensus building processes that involve the major players within the theme of interest. The first step in this process is to have the IABIN stakeholders identify the priority themes of interest and pertinent players.

Proposal

IABIN adopts the metadata formats above as its standards
3.9 Geospatial Interoperability

The Open GIS Consortium (OGC) is an international industry consortium of 258 companies, government agencies and universities participating in a consensus process to develop publicly available geospatial interoperability specifications. Open interfaces and protocols defined by OpenGIS® Specifications support interoperable solutions that "geo-enable" the Web, wireless and location-based services, and mainstream Information Technology, and empower technology developers to make complex spatial information and services accessible and useful with all kinds of applications.

The most mature and prevalent geospatial interoperability standards are the OGC Web Map Services (WMS), Web Feature Services (WFS), Web Coverage Services (WCS) and the Catalog Web Services (CWS) standards.

Proposal

IABIN adopts the WMS, WFS, WCS, and CWS standards and commits to evaluating the other emerging standards as developed by the OGC.

3.10 Document Formats

The recommended electronic formats for document exchange within the IABIN network are: HTML, PDF, and ASCII (plain text).

3.11 Graphic Formats

The recommended electronic formats for graphic exchange within the IABIN network are the formats recommended with use in a web browser: PNG, JPEG, GIF, SVG and WebCGM. The images will be protected by watermarks technologic.
# Summary of IABIN Basic Standards and Protocols

<table>
<thead>
<tr>
<th>Part of IABIN Data Architecture</th>
<th>Standard or Protocol Adopted</th>
</tr>
</thead>
<tbody>
<tr>
<td>System Architectures</td>
<td>Web Services with support for Z39.50</td>
</tr>
<tr>
<td>Data Transport</td>
<td>HTTP over TCP-IP</td>
</tr>
<tr>
<td>Presentation Language</td>
<td>HTML 4 and XHTML</td>
</tr>
<tr>
<td>Data Encoding</td>
<td>XML</td>
</tr>
<tr>
<td>System Access Protocols</td>
<td>SOAP, DiGIR</td>
</tr>
<tr>
<td>System Interface Descriptions</td>
<td>WSDL</td>
</tr>
<tr>
<td>Registry Services</td>
<td>UDDI</td>
</tr>
<tr>
<td>Metadata:</td>
<td></td>
</tr>
<tr>
<td>o For Bibliographic Data</td>
<td>Dublin Core</td>
</tr>
<tr>
<td>o For Specimen Collections and Observations</td>
<td>Darwin Core and ABCD Schema</td>
</tr>
<tr>
<td>o For Spatial Data</td>
<td>CSDGM (ISO 19115)</td>
</tr>
<tr>
<td>o For Biological Spatial Data</td>
<td>CSDGM with Bio Profile (NBII)</td>
</tr>
<tr>
<td>Geospatial Interoperability</td>
<td>WMS, WFS, WCS and CWS and emerging standards develop by Open GIS Consortium (OGC)</td>
</tr>
<tr>
<td>Document formats</td>
<td>HTML, PDF, and ASCII</td>
</tr>
<tr>
<td>Graphic Formats</td>
<td>PNG, JPEG, GIF, SVG, WebCGM</td>
</tr>
</tbody>
</table>
ANNEX 10: Compiled notes of the updates on countries and initiatives
Country presentations:

1- **Brazil:**
The first workshop for Latin America and the Caribbean took place in Brazil. During the event several initiatives were presented that will be available in the webpage. In addition, several thematic documents were published. It is planned to publish this year the first herbarium on invasive species that will include those species that have an impact on the ecosystems, coastal waters, agriculture and health among others. In addition, the ministry is planning to prepare maps from satellite photographs at a scale 1,250,000. These maps will be available in the webpage.

On the other hand, it is also expected to update the national species list (marine, sweet water, overexploited, plants, etc.

Regarding protected areas, it is envisaged to held a national forum to include the participation of government and civil society, with a wide concept for protection

The pollinators initiative has the participation of government, local communities, universities and NGOs. This initiative contemplates the development of an original catalog that is currently in the web.

Next year, in the city of Curitiba, the COP8 of the CBD will take place, considering the interest of the local people, we will take the opportunity to exhibit posters and other promotional materials during the event..

At present, there are over 60 projects in the webpage, sponsored by the Fundacion Ciencia y Tecnologia, on themes regarding systems analysis and integration of information. The results from standards incorporate important local experiences that contribute to IABIN and that could be replicated in other places in Brazil.

2- **Peru:**
There are 3 elements critical for the success of the initiative of Biodiversity information

1. Elaboration of indicators
2. Financing for capacity
3. Support to the generals.

The Andean Community has taken in consideration the information elements that have to be developed..

For this, there is at present an environmental information system that includes subsystems such as the one on biodiversity based on the CHM and IABIN

The policy of the State groups all institutions working on biodiversity in the country in order to integrate the information in the SINDIB. The national objective for information is:

a. Develop networks
b. Develop interest.

c. Generate information.

There is also SIAMAZONIA that is developing capacity in bioinformatics of cultivated species.

In addition, there is an information system on bio-commerce that offers information on species and other biodiversity elements.

The SINIA works with the CHM node and has a program on specific themes that allow to generate indicators.

The existing conservation network has as its aim to help the community in combating bio-piracy.

3- **Estados Unidos:**

NBII is a federal agency that makes available biological information. It works with all the federal agencies, NGOs, universities and museum collections.

In the last 5 years, it has developed regional nodes, activities to make the data available for decision-making in conservation in areas such as fishing. At present it has provided infrastructure, developed protocols, conducted fundraising, and provides taxonomic information and common technology relative to species.

4- **Status I3N:**

I3N is a pilot project managed for IABIN by USGS which is being implemented in 12 countries. The Project has developed a catalog, standards in methods, lists of species, experts and institutions. The project has a database of I3N and several countries benefit from the project, using the database, the webpage and the system.

At present we are working on a database that includes a diagnostic on the reach of invasive species. This database has 28 fields in different areas such as taxonomy, type of environment, biological characteristics, characteristics of the invasion, region of introduction, effect of the invasion, bibliographies and other.

Plant genetic barcode
Other important activities have been carried out.
Animal genetic barcode.
The consortium organized workshops.

The genetic barcode for animals is similar to the commercial barcode. The estimate of the rapid sequence with few errors, this process is complementary to the system of taxonomic identification.

The Project offers optimistic opportunities for recognizing species since it is based on a proven technology.

We consider that having a portable machine to this effect would have a great impact on the taxonomic and economic activities since it will allow access to information on the species identity.
The consortium has developed training workshops and the CBA has promoted its development.

5- Conservation Commons presentation:
Presenter: Beatriz Torres
<www.conservationcommons.org>

Conservation depends on the logical synthesis of data, information, expertise and technology

3 Principles:
- Principle 1: Open Access
  The Conservation Commons promotes free and open access to data, information and knowledge for conservation purposes.
- Principle 2: Mutual Benefit:
  The Conservation Commons welcomes and encourages participants to both use resources and to contribute data, information and knowledge.
- Principle 3: Rights and Responsibilities:
  Contributors to the Conservation Commons have full right to attribution for any uses of their data, information, or knowledge, and the right to ensure that the original integrity of their contribution to the Commons is preserved. Users of the Conservation Commons are expected to comply, in good faith, with terms of uses specified by contributors and in accordance with these Principles.

Principles are endorsed by many organizations, including the following:
- American Museum of National History
- BirdLife International
- Center for International Forestry Research (CIFOR)
- Centro de Referência em Informação Ambiental (CRIA), Brazil
- Conservation International
- Fauna & Flora International
- Global Biodiversity Information Facility (GBIF)
- Global Invasive Species Database (GISD)
- Invasive Species Specialist Group of SSC
- IUCN - The World Conservation Union
- London Museum of Natural History
- NASA – Earth Science Directorate
- National Commission of Biodiversity, Mexico (CONABIO)
- NatureServe
- PALNet
- Red Hat - Open Source Affairs
- Smithsonian
- Society for Conservation GIS
- Social Insects Specialist Group of SSC
- Species Information Service (SIS)
- South African National Biodiversity Institute (SANBI)
- The Nature Conservancy (TNC)
- TRAFFIC International
- United Nations Development Program (UNDP)
- University of Maryland – Global Land Cover Facility
- UNEP - WCMC
6- Global Biodiversity Information Facility (GBIF)
Presenter: Beatriz Torres

What is GBIF?
- An international megascience project designed to:
  - Make the world’s biodiversity data freely and universally available via the Internet, and especially to
  - Share primary scientific biodiversity data for science, society and a sustainable future

GBIF Established to:
- help deal with the unequal distribution of biodiversity information
- repatriated biodiversity data to countries of origin
- help overcome the digital divide.

Biodiversity and information about it are unevenly distributed.
Everything GBIF does is in partnership with others (eg, IABIN, Species 2000, IT IS, TDWG, MAB, CONABIO, IUCN – Species Information Service)

Tangible benefits for the members:
- Funding opportunities: Seed money awards (DIGIT + ECAT): $ 2.75 mill in the last 2 years.
- Capacity building & Training opportunities (DiGIR, uses of biodiversity data) - > Modeling workshop.
- Mentoring projects (Node-Node support & collaborations are fostered)
- Awards: Ebbe Nielsen (young professionals in biodiversity informatics
- Demo Projects: prototypes and proofs of concept.

Intellectual Property Rights:
- GBIF’s data policy: free and open data access
- Distributed system with proper attribution to data source(s)
- Data use and data sharing agreements in place
- Data ownership and quality resides with the data providers
- GBIF does not impose ownership to the data it serves

Species Information Service (SIS) - A flexible data management tool:
- Basis for sharing biodiversity information from many IUCN sources
- Developed by and is part of IUCN Species Survival Commission
- Relates species to their habitats and ecosystems over time
- Contains up-to-date information
- Globally accessible

WDPA: World Commission of Protected Areas: made up of consortium members

How to Get involved:
- Promote Open Access to information
- Publish results in open access journals
• Endorse the principles
• Get involved in interoperability projects (eg, WDPA, SIS, GBIF, GISD)

IUCN contacted IABIN to become a member of Conservation Commons. Needs to have in-depth discussions regarding use of intellectual property rights.

7- Initiatives With Which IABIN has MOUs: GBIF, CHM
Presenter: Gladys Cotter, IABIN Chair

IABIN: Initiative 31 of the Bolivian Summit Action Plan
1996: Seek to establish an Inter-American Biodiversity Information Network, primarily through the Internet, that will promote compatible means of collection, communication, and exchange of information relevant to decision-making and education on biodiversity conservation, and that builds upon such initiatives as the Clearing-House Mechanism provided for in the United Nations Convention on Biological Diversity, the Man and Biosphere Network (MABNET Americas), and the Biodiversity Conservation Information System (BCIS), an initiative of nine programs of the World Conservation Union (IUCN) and partner organizations.

Bioinformatics Initiatives at various geographic scales:
• Local: includes relationships at universities, labs, GAP, State fish and wildlife agencies
• National/Regional: NBII Regional and Thematic Nodes
• National: NBII, INBIO, CBIN, ABIF, NCBI
• International/Regional: IABIN, PBIF, REMIB, BioNET Loops
• Global: GBIF, CBD/CHM, MAB, GEO, WDC

8- GBIF Overview
Presenter: Christopher Hauser

What is GBIF?
GBIF is an international network of participant data holders dedicated to:
• Making the world’s biodiversity data freely and universally available via the Internet
• Sharing primary scientific biodiversity data to benefit society, science and a sustainable future
• Encourages Open Access to Scientific Information on Biological Diversity
• an international scientific co-operative project based on a multilateral agreement (MoU) between countries, economies and international organizations, dedicated to:
  o establishing an interoperable, distributed network of databases containing scientific biodiversity information
  o with initial focus on species- and specimen-level data,
  o with links to molecular, genetic and ecosystems levels.

GBIF status:
• Started March 2001
• 74 members (46 countries, 28 international organizations)
• 26 countries support GBIF financially (voting participants)
• 20 countries and 28 organizations as Associate Participants (e.g., IABIN, BioNet, IUCN, UNEP)
• As of March 15, 2005, its data portal served 65+ million specimen and observation records from 70+ data providers.
• Portal has more than 600,000 species names provided by more than 25 name providers.

How to join GBIF:
• Find Memorandum of Understanding (MoU) on the GBIF website: www.gbif.org
• Send letter of intent to Chair of the Governing Board
• Sign and send MoU and establish GBIF node
• Arrange payment of annual contribution (for Voting Participation)
• If an individual or institution, participate in GBIF through your country’s node or a node of one of the Associate Participants

9- IABIN and GBIF: Summary of Current Activities
Presenter: Mike Frame

IABIN and GBIF Background:
• IABIN signed MOU to be a GBIF Associate Member in May 2001
• GBIF’s goal is to provide free and universal access to data regarding the world’s biodiversity
• Several IABIN countries have been members of GBIF since its inception
• IABIN participants lead Science Subcommittees
• IABIN supports national membership, but will build a node for non-member data

IABIN Countries & GBIF Participants
• 6 IABIN Countries are GBIF Voting Members and 2 Countries are Associate Members
• 47 Western Hemisphere organizations, involved in IABIN, are serving specimen data through the GBIF portal
  – 20% of total GBIF Data Providers
  – These organizations are serving 24,880,595 specimens
  › 38% of total GBIF specimen collection

IABIN responsibilities under the MOU
• Participate actively in the formulation and implementation of the GBIF Work Program.
• Promote the sharing of biodiversity data in GBIF under a common set of standards.
• Form a node or nodes, accessible via GBIF, that will provide access to biodiversity data.
• as appropriate, make other investments in biodiversity information infrastructure in support of GBIF.
• Contribute to training and capacity development for promoting global access to biodiversity data

Challenges and Considerations:
• Leveraging IABIN & GBIF investments to support both networks goals
  – Standards – maintaining compatibility, when appropriate
  – Tools – reusing existing tools and technologies
  – Training – participating in joint workshops (i.e. DiGIR)
  – Promotion – marketing both networks purpose, capabilities, etc.
• Relationship of IABIN Thematic networks to GBIF
  – Species Network
  – Specimen network
  – Sharing data, tools
  – Quality control and assurance issues

Issues and Considerations that IABIN needs to keep in mind:
• How best to leverage IABIN with GBIF investments (eg, training)
• Promoting various networks and infrastructures being developed
• Relationship of IABIN thematic networks to GBIF and how best to serve data to all the networks.

10- Conservation on Biodiversity Clearinghouse Mechanism (CHM)
Presenter: Bonnie Carroll for Marcos Silva

CHM created pursuant to Article 18, paragraph 3 of the CBD to promote and facilitate scientific and technical cooperation among Parties.

3 major Objectives:
• Scientific and Technical Cooperation (Art. 18)
  – Decision making tools
  – Capacity-building
  – Funding
  – Transfer of technology (Art. 16)
• Information Exchange (Art. 17)
  – Access to existing information
  – Development of new information sources
• Networking
  – Development

Informal advisory committee created to provide feedback and advise to Executive Secretary; also has regional and NGO representation including Pacific interests. IABIN has been a member of formal advisory committee

There are 150 Designated Focal Points.
• 68 with web sites (http://www.biodiv.org/chm/stats.asp)
• LAC has 27 NFPs, 12 web sites
  – Also US and Canada

International Thematic Focal Points, includes:
• Birdlife International
• Global Invasive Species Program (GISP)
• Global Taxonomy Initiative (GTI)
• NatureServe

Focal point may vary how it operates within each country.

Web-based Services provided by CHM:
• Web-site: main information dissemination mechanism
• Search engine based on web crawler
• On-line databases: experts, case studies, projects, national reports analyzer
• On-Line document commenting
• Discussion forums by topic

Interoperability Services:
• Interoperability Services
• CD-ROM (Tool kits)
• Distribution Lists
• Fax Server where no e-mail
• Publications
  – Newsletters
  – Technical series
  – Document Mail-out

New Directions of the CHM
• The CHM, completed its information exchange pilot phase
• Will continue to develop information exchange mechanisms in support of the Convention, programs and cross-cutting issues.
• focusing on capacity building initiatives
• Primary focus is on the promotion of technical and scientific collaboration.
• COP urges the Executive Secretary to convene additional capacity-building workshops at the national, subregional and regional levels (VI/18, paragraph 4).

11- CHM GRULAC Workshop of March 2005
Presenter: Vivian Nolan

Background on Regional CHM Workshop:
• COP decision VII/23: convene regional workshops to allow interaction of international TFPs and NFPs to enhance CHM goal and build capacities at national level.

CHM Workshop Presentations:
• Over 20 Country representatives:
  – Antigua and Barbuda, Argentina, Bahamas, Brazil, Cuba, Bolivia, Chile, Colombia, Costa Rica, Dominica, Ecuador, Grenada, Jamaica, Mexico, Nicaragua, Panama, Paraguay, Peru, Saint Lucia, Saint Vincent and the Grenadines, Trinidad and Tobago, Uruguay
• 2 Intergovernmental Organizations:
  – Global Biodiversity Information Facility (GBIF)
  – Inter-American Biodiversity Information Network (IABIN)
• 3 Non-governmental Organizations:
CHM Workshop Goals:
- Discuss the development and implementation of initiatives by the CHM to promote/facilitate technical & scientific cooperation at national/regional levels within CBD’s program areas and cross-cutting issues, including:
  - 2010 target
  - transfer of technology
  - Article 8(j): traditional knowledge, innovations, and practices
  - invasive alien species
  - Global Taxonomy Initiative
  - coastal and marine biodiversity
  - ecosystem approach

3 Major Discussion Agenda Items (each one of these had invited speakers, discussion, and recommendations that came forth from the discussions):
- The Role of the CHM in Promoting and Facilitating Activities to Assist Parties and Other Governments to Achieve the 2010 Target.
- The Role of the CHM and the Transfer of Technology.
- Development of Activities by the CHM in Support of the Program Areas and Cross-Cutting Issues of the Convention.

Selected Comments from Workshop:
- Everton Viera Vargas, Director General, Department for the Environment and Special Affairs, Ministry of Foreign Relations of Brazil – Stressed the:
  - Importance of the CHM to capacity building, especially with information exchange and tech/scientific collaboration
  - Role of CHM for communication, education, and public awareness
- Marcos Silva, CBD Executive Secretary: invited attendees to identify priority needs to participate in new initiatives under the CHM, especially with regard to technology transfer.
- IABIN rep. Vivian Nolan: discussed IABIN’s work and its willingness to collaborate with CBD CHM and national CHMs.

Selected List of Proposed Recommendations from Agenda Discussion Items:
- CHM should assist in making information on different datasets (other than museum specimen and observational data) available to Parties/countries to facilitate work related to indicators and the 2010 target. *
- Parties in the region should make technical expertise available in support of capacity building initiatives, especially for the organization of technical workshops on new information and Web-based technologies. *
- CBD CHM should develop a db of information resources that could be used in support of work related to indicators.
- Regional CHMs should better articulate the possible uses of its data and information resources, done within the context of communication, education, and public awareness program of the CBD. *
- Parties of the region should follow closely at the international level the development of new protocols and standards. *
CBD CHM should create a directory of information in the region regarding activities related to the 2010 and indicators.

- Parties of the region should adhere to common and open formats, protocols, and standards whenever possible and appropriate, including the use of XML. *
- Develop a metadata registry of available relevant technologies. *
- CBD Secretariat should develop a listserv and a restricted website for GRULAC CHM National Focal Points.
- CHM should support work related to access and benefits sharing within the region, by assisting with the development of a network, including the establishment of an Internet portal to disseminate and share information. *
- **Closer cooperation should be established among different existing initiatives, such as GBIF, ITIS, and IABIN, among others.** *

Note: * = IABIN already doing these activities.

Comments from Audience:
Mexico – indicated that the results of the questionnaire could be very useful to IABIN.
Ecuador – insists in the strengthening of the relationship between IABIN and CHM, in topics such as island biodiversity, genetic resources and others in which IABIN can help GRULAC countries.

### 12- Added Value Among Initiatives

**Presenter: Gladys Cotter**

The Needs are the same:
- Biodiversity conservation requires timely, accurate and scientifically credible information
- Information relevant to biodiversity conservation efforts extends beyond that national borders.

The Principles are Generally the Same:
- Internet based and distributed
- Open participation
- Data ownership remains with data provider
- Intellectual property rights are respected
- Outreach and capacity building is integral in biodiversity

**IABIN Themes Supporting GBIF and CHM:**
- Invasives: IABIN & CHM
- Pollinators: IABIN & CHM
- Specimens: IABIN & GBIF
- Species: IABIN & GBIF
- Ecosystems: IABIN & CHM

**Roles of IABIN FP, GBIF Node Managers and CHM NFPs:**

<table>
<thead>
<tr>
<th>Role in Biodiversity Information</th>
<th>IABIN</th>
<th>GBIF</th>
<th>CHM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Serve as National Liaison In Biodiversity Information.</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Task</td>
<td>CHM</td>
<td>IABIN</td>
<td></td>
</tr>
<tr>
<td>----------------------------------------------------------------------</td>
<td>-----</td>
<td>-------</td>
<td></td>
</tr>
<tr>
<td>Participate actively in the formulation and implementation of strategies, plans and activities.</td>
<td>✓</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Stimulate national and sub-national level involvement in activities through appropriate consultation mechanism.</td>
<td>✓</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Promote sharing of biodiversity data under a common set of standards.</td>
<td>✓</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Represent their government/organization’s perspective on technical issues.</td>
<td>✓</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Identify funding and partnership opportunities for the development of biodiversity information.</td>
<td>✓</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Identify new project ideas and priorities for their countries.</td>
<td>✓</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Promote collaboration with other national, regional, and international initiatives.</td>
<td>✓</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Keep participating organizations informed and disseminate activities and results.</td>
<td>✓</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Promote sharing of biodiversity data under a common set of standards.</td>
<td>✓</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Provide Information from National State of Biodiversity reports</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Host/participate in workshops, and other capacity building activities.</td>
<td>✓</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Establish and maintain a Website/Node</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

IABIN has a Complementary Relationship to the Clearinghouse Mechanism:

<table>
<thead>
<tr>
<th>CHM</th>
<th>IABIN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Convention on Biodiversity</td>
<td>Inter-American summits</td>
</tr>
<tr>
<td>World-wide</td>
<td>Inter-American</td>
</tr>
<tr>
<td>Information, building, BD training</td>
<td>Information focus</td>
</tr>
<tr>
<td>From policy to science</td>
<td>Science and technology</td>
</tr>
</tbody>
</table>
IABIN 4th Council Meeting
Meeting Notes
Day 2: April 7, 2005 (morning session)

IABIN Activities that are not funded by GEF

1- Biodiversity Information of Paraguay
Presenter: Alberto Yanosky

2 initiatives:
1. Creation of a database of vertebrate species and plants
2. Creation of a image library of biodiversity in Paraguay
   - saved in different locations
   - inaccessible to the public
   - not standardized

Goal:
Identify, standardize, and document, and disseminate biological inventories and data.

First step: create capacity-building
- training in bioinformatics: thanks to IABIN, training occurred
- creating of bioinventories
- 30 participants
- 11 national institutions

Results:
- Transformation of the database of Gurya, Paraguay into an accessible format.
- Now, more than 90,000 records of species accessible through the Web.

NBII has a website where you can download images.
Have real-time maps that show changes in ecosystems, fire,

Why to have an image library?
- Pictures are a key tool for conservation

Comments from Audience:
Question regarding using an image for profit – how this is being handled. (Beatriz Torres)
Answer: Complications of sharing data, especially when have to obtain permits. Paraguay shows transparency, that this can be done adequately. Assuring participants that their information will not be used for financial purposes. And if it is going to be used for publishing, that the user needs to obtain permission from copyright, and contact owner of image and request permission first.
2- Protected Areas of the Amazonian Basin Metadata Information Database
Presenter: Alvaro Espinel

Element Types:
- Create and use a metadata that is accepted and that can be used to describe, evaluate, and predict the protected areas.
- Information whose intellectual property rights are protected.

Strategy:
- Tools that capture quality data records that use international standards.
- Support from Focal Points of IABIN
- Direct collection of data

Elements for Protected Areas Standards:
- FGDC spatial standards
- Taxonomy: Darwin Core, (IT IS, SALVIAS, GBIF)
- Spatial elements: EML
- Controlled vocabulary

Protected areas in land have been increasing slightly over time, but not for the marine areas, which has remained very low in terms of protection.

Comments from Audience:
Besides such topics, would like to know what the proposal for multicultural issues is.
Intellectual property rights: very difficult to deal with this in terms of protected areas.

Challenge of incorporating all these territories that involve indigenous populations, especially language barriers.

The various corridors: a very sensitive subject.

Answer:
Portuguese, Spanish, and English. Indigenous languages
Intellectual property rights: follow the rules from each country. For example, certain countries have restrictions on releasing information on protected areas.

Indigenous territories: need to include in discussions with respective players. The philosophy is to use the information that currently exists.
Corridors: still under discussion.

3- Update on BioNet International
Presenter: Richard Smith

BioNet: A highly complementary initiative to IABIN
Background:
- Founded in 1993: to promote taxonomic capacity building for less industrialized countries.
Strategy: tying taxonomy to development, conservation and policy processes for the long-term strengthening of the taxonomic sector
Assists countries with establishment and facilitation of local partnerships for capacity building
Global and regional partnerships via participation/ memberships of IUCN, GBIF, IFS,

External Review in 2004:
- Swiss government commissioned a Review in 2004 (led by IUCN, UNEP, others)
- Conclusions of review:
  - Significant contributions to capacity building
  - Very good value for money
  - Important advocate for taxonomy among policy makers and founders
  - Secretariat should continue
  - LOOPs show that sustainability is possible
  - Potential for growth and diversification.

Objectives:
- LOOPs – Locally Owned and Operated Partnerships
  - Collections – biological and literature
  - Information and information sharing
- A UK USA based Secretariat
  - Building partnerships
  - Advocacy for capacity building in taxonomy
  - Coordinate global network.

Project Implementation Partnerships
- LOOP leadership and coordination roles in wide range of programmes
  - International pollinator initiative (African coordination)
  - Botanical and Zoological network
  - ASEAN Plant Health Network
  - SP-IPM
  - GISIN

BioNET, the CBD, and the Global Taxonomy Initiative:
- GTI: depends on capacity building for success (CBD decision VI/8)
- Parties to the CBD have identified the following GTI roles BioNET can support

Biodiversity and informatics depends on taxonomic expertise.
BioNET tries to complement bioinformatics initiatives and mobilize capacity building

BioNET and IABIN
- Biodiversity informatics and the taxonomic sector are interdependent
- BioNET wants to see solutions to the taxonomic impediment, not to build empires
- IABIN, as GBIF, is a very welcome initiative, one that did not exist when BioNET was conceived
- Informatics needs and potential for action are immense: BioNET wants to partner with IABIN

Status in Americas and Caribbean:
- Founding workshop 2002
Proposal endorsed by several Latin American countries

Coordinating Committee: coordinators from:
- Bolivia
- Columbia
- Peru
- Venezuela

Work plan for BioNET – SDC seed funding ($80K) approved 2004
Some 2004-2005 activities supported by seed funding and other sources
- Training workshop
- Palm group:
- Online keys
- Technical contributions
- Training of Colombian in taxonomy

Work plan for BioNET – SDC seed funding ($80K) approved 2004
Some 2004-2005 activities supported by seed funding and other sources
- Training workshop
- Palm group:
- Online keys
- Technical contributions
- Training of Colombian in taxonomy

Why Taxonomy Matters: available on the Web
Case studies in invasive species
Interested in taxonomic solutions, and supports barcoding to help with this.

Comments from Audience:
Whether BioNET has considered moving coordinator to Panama to maximize synergies with IABIN, and to further a relationship with IABIN by doing this (Douglas Graham)
Answer: BioNET’s responsibility is global and not just Latin America. Currently increasing capacity of Secretariat and support at the regional level, but will explore that possibility.

BioNET and IABIN to be seamless would be good (Richard Huber)
Answer: Strengthening taxonomic sector by connecting it, and not just training, that is why working at the global level with CHM.

4- Support to Building the Inter-American Biodiversity Information Network
(Summary of Nippon Koei studies for IABIN)
Presenter: Kevin Tynes for Jeremy Harrison
Project Basics:

Aim:
- To provide support to the World Bank in completing preparation of GEF project documents, and project development and supervision.

Funds:
- Japanese Consultants Trust Fund available to support World Bank in carrying out aspects of its work.

Background Studies:
- Main part of project: development of 10 background studies intended to brief World Bank staff and their collaborators on key issues.
- Key issues: identified by the World Bank and were intended to draw on experience from outside the region.
- Studies follow a standard format which includes both introduction to the issue and drawing recommendations relevant to IABIN out of the experience in other regions.
- Associated with the background studies are 20 case studies from outside the region thought to be relevant to implementation of IABIN.

Background Studies – Documents:
- Document 1: IABIN in the Context of Key International Programmes and Initiatives in Biodiversity Information Sharing:
  - Provides an overview of IABIN in the context of other key international programmes and initiatives in biodiversity information management.
- Document 2: Biodiversity Information for Decision-Making International Experiences
  - Examines the needs and evolving use of biodiversity information for decision-making and how the experience can assist and inform IABIN.
- Document 3: Linking Biodiversity Information with Non-biological Networks
  - Reviews lessons that IABIN can learn from what has been done elsewhere in linking biodiversity information with socio-economic and other data.
- Document 4: Recommended Standards and Practices for Sharing of GIS-based Information
  - Provides guidance on standards and practices that facilitate exchange and compilation of spatial information amongst a network of institutions.
- Document 5: Role and Use of Biodiversity Indicators at the Regional Level
  - Reviews the potential role and use of indicators at the regional level in the context of both national interests and broader international policy agendas.
- Document 6: National Strategies for Effective Biodiversity Information Management
  - Provides examples of strategies for information management and exchange that facilitate effective use of biodiversity information for national benefit.
- Document 7: Taxonomic Authority Archives, Networks, and Collections
  - Reviews selected taxonomic authority archives and describes key taxonomic databases and electronic reference sources.
- Document 8: International Initiatives in Biodiversity Vocabularies and Thesauri
  - Reviews the international vocabularies and thesauri that may be usefully adapted to facilitate information exchange at the regional level.
• Document 9: Recommendations on Bio-Informatics Standards and Practices for Donor Financed Projects (not available yet)
  o Will help the World Bank to more effectively address biodiversity information management issues in future development projects.
• Document 10:
  a. Review of international initiatives in metadata management
  b. Review of experience in developing interoperable systems for international data management and sharing
  o Reviews 2 additional technical issues important for networking, metadata management, and experience in developing interoperable systems.

Summary Conclusions:
• Background studies provide a range of information relevant to implementation of IABIN, ranging from information policy to information management practice.
• There are 80+ recommendations based on identifying how this information and experience could be applied to help successfully build IABIN.

Summary Conclusions: Overall Approach
• Build on existing strengths: adopting, adapting, and implementing technical standards, reference authority archives, methods and approaches that have been successful elsewhere.
• Focus on supporting regional needs for decision-making: providing information exchange capacity directed at solving identified problems.

Summary Conclusions: Strategies and Policies:
• Focus on issues of mutual concern in the region based on identified information needs.
• Adopt and adapt best practices from other regions.
• Support and facilitate national CBD Clearinghouse-Mechanisms
• Adopt and support indicator frameworks related to existing international processes and targets.
• Clearly identify roles and responsibilities in developing and implementing the network.
• Agree on clear data access policies and procedures based on the needs of all stakeholders.

Summary Conclusions: Reference Archives and Harmonization Tools
• Develop IABIN as a facilitator of information exchange rather than a data repository.
• Facilitate access to taxon-based information held by institutions within the region
• Improve access throughout the region to specialized taxonomic reference archives.
• Consider promoting the use of internationally adopted thesauri and vocabularies.
• Promote development and/or adoption of a map-based ecosystem classification system consistent across the region.

Summary Conclusions: Technical Standards
• Clearly identify and document user needs for information exchange and interoperability services and related applications before choosing and implementing technical standards.
• Always emphasize agreed “open” standards and systems rather than proprietary solutions.
Accompany technical standards with:
- Semantic standards for data content in order to make data integration meaningful
- Policies on data ownership, access, and protection.
- Recognition of the importance of maintaining and sharing metadata.