**2006 WORK PLAN FOR THE INVASIVES INFORMATION NETWORK (I3N) OF THE
INTER-AMERICAN BIODIVERSITY INFORMATION NETWORK (IABIN)**

Submitted to OAS by USGS/BIO[1], 5 May 2006

I. INTRODUCTION TO I3N

A growing number of plants, animals, and pathogens are becoming invasive in natural areas, inland waters, oceans, croplands, and rangelands. These invasive alien species (IAS) pose increasing risks to human health, native species, ecosystems, and natural resource production. They have significant and documented costs to national economies and are second only to habitat destruction as a cause of loss of biodiversity. The response to invasive threats to wider biodiversity has been very limited. A key obstacle is the absence of tools and commonly adopted systems for documenting current invasions, predicting new invasion sites, and preventing invasions. All such tasks are vital to the protection of biological diversity and mitigating economic impacts in all countries. Prediction of and rapid response to invasive species requires ready access to invasive species information from many countries. Access to international information can help in the search of generalized patterns in the invasion process and it is important for each country to systematize data and understand what species and problems are already present, as well as risks and prevention measures for avoiding new or repeated introductions.

Internet-accessible information systems can provide crucial resources for the early detection, eradication, and containment of IAS, which is most possible for newly introduced species. The exchange of information across national borders is key to the detection and management of this threat. Interoperable national and sub-national databases provide the building blocks for information exchange.

I.A. Background on I3N

Initiated in early 2001 by the United States Geological Survey (USGS)[2], the IABIN Invasives Information Network (I3N)[3] is now composed of 14 countries covering most of the terrestrial area of the Western Hemisphere[4]. At its 3rd Council Meeting, held in Cancún, Mexico in August 2003, the Inter-American Biodiversity Information Network (IABIN)[5] reaffirmed the key role of I3N and recognized it as the Invasive Species Thematic Network (TN) for the whole Network. The I3N is the first of 6 IABIN TNs to be established and the only one in operation as of December 2005. The USGS is the Coordinating Institution (CI) for the implementation of this TN. I3N is recognized by the CBD, and the work of the I3N will support Decision VI/23[6] (Alien species that threaten ecosystems, habitats or species) of the CBD Conference of Parties (COP). I3N has been recognized by the Global Invasive Species Programme (GISP) as an important initiative to be supported.

During the implementation of the 5-year IABIN Global Environment Facility (GEF) Project the main goal of the I3N is to expand the network to welcome new countries as members and increase the usability, content, and value of this TN. By the end of the 5 years, expected products for a GEF total investment of US$ 200,000 under Component 1 of the Invasive Species TN are the following, as defined in the Project Implementation Plan (PIP)[7] for the IABIN GEF Project: standards adopted, value-added products developed, multilingual search and retrieval tools developed, multilingual data entry tools developed, training materials for the data entry tools, Thematic Network (TN) operating. By the end of the 5 years, expected products for a GEF total investment of US$ 280,000 under Component 2 of the Invasive Species TN, as defined in the Project Implementation Plan (PIP) for the IABIN GEF Project, are as follows: to deliver training on the use of data creation tools, provide grants to institutions with high-quality data to support efforts to make data available through I3N, and to provide for quality control. Tables II and III show the current and proposed GEF funding allocation for each component.

---

[1] Andrea Grosse, I3N Project Manager, USGS- National Program Office, 12201 Sunrise Valley Drive, Mail Stop 302, Reston, VA 20192. Telephone 703.648.4342; Fax 703.648.4224; E-mail: agrosse@usgs.gov

[2] If you are reading the electronic version of this document, click on the blue text to access the Internet link directly. If you are reading the hardcopy, the URLs are given as footnotes. For this link, the URL is http://www.usgs.gov

[3] http://www.iabin-us.org/projects/I3N/I3N_project.html

[4] See http://www.iabin-us.org/projects/I3N/leads.html for a list of I3N National Leads.

[5] Responding to the importance in the Americas of protection of biodiversity, the Inter-American Biodiversity Information Network (IABIN) was officially mandated at the Summit of the Americas on Sustainable Development, convened by the Organization of American States in Santa Cruz de la Sierra, Bolivia, in December 1996. IABIN is an Internet-based forum for technical and scientific cooperation that seeks to promote greater coordination among Western Hemisphere countries in the collection, sharing, and use of biodiversity information relevant to decision-making and education. See http://www.iabin.net

[6] Paragraph 22 of Decision VI/23: The COP "Also welcomes the "I3N" (Inter-American Biodiversity Information Network (IABIN) Invasives Information Network) initiative on invasive alien species, and calls on the Global Environment Facility, Parties, Governments and relevant organizations to support and participate in these initiatives" (http://www.biodiv.org/decisions/default.aspx?m=COP-06&id=7197&lg=0). [The following note refers to the CBD process, not to I3N: One representative entered a formal objection during the process leading to the adoption of this decision and underlined that he did not believe that the Conference of the Parties could legitimately adopt a motion or a text with a formal objection in place. A few representatives expressed reservations regarding the procedure leading to the adoption of this decision (see UNEP/CBD/COP/6/20, paras. 294-324).]

[7] http://www.iabin.net/binary_docs/pip_v85_eng.pdf

I.B. Objectives of I3N

I3N, the IABIN Invasives Information Network, aims to integrate and provide access to IAS information from Western Hemisphere countries, using the Internet and other tools, to support the detection and management of IAS. I3N provides informatics tools, training on the use of data entry tools, and direct Web access to information. Specifically, I3N provides tools to provide Web access to existing but previously scattered and inaccessible databases so as to facilitate IAS information exchange and management. I3N is an open, self-sustaining network where users can find quality IAS information easily and quickly. Its objectives are to encourage the creation and standardization of national and sub-national IAS databases, promote their interoperability to provide direct access to databases that are currently scattered and inaccessible, and create value-added products.

In accordance with the IABIN principles, I3N seeks to improve the accessibility, completeness, and interoperability of IAS databases, and promote standards for data exchange and shared vocabularies within the IAS field. The I3N will pursue and develop partnerships with organizations and initiatives, including those in each participant nation, with the cooperation and leadership of National Focal Points (NFPs). I3N will continue to encourage and provide training for stakeholders that will provide guidance on the use and sharing of IAS information with other IABIN participants and with the larger biodiversity community. Additional tools and services will be added over the course of the IABIN GEF Project.

I.C. Status of I3N

I3N was the first IABIN Thematic Network to be established, and continues to be the model for the other TNs. I3N is an Internet-based resource and an institutional and human network where the countries of the Americas can come together to facilitate development and sharing of IAS information. I3N consists of Web-accessible, national catalogs and databases of IAS data and metadata. Tools at the disposal of the network include a cataloging and data output template known as the I3N Database on Invasive Alien Species; a listserv; and an extensive bilingual Web site that contains, among other services, a repository for data submitted by those participants not able to serve their own, a tools page, a search engine, instructions on creating Extensible Markup Language (XML) and on serving data on the internet, fact sheets, contact information, sample XML output, direct access to products created by collaborators, and official I3N documents.

Major accomplishments during 2005 include:
- An interim Technical Working Group was established and convened.
- The status and progress of I3N was presented to the IABIN Council, meeting in Panama.
- The 2005 work plan was developed and accepted.
- The cataloging and data output template known as the I3N Database on IAS, including the associated XML output function, was completed and tested
- Two I3N Tools Representatives were identified and began distributing the I3N Database.
- A training module was tested in an international scientific conference and the resulting 3-day workshop module was implemented in two countries. Lessons learned will be incorporated into future workshops.
- Two new countries joined I3N: Colombia and Uruguay.
- The capacity of an existing I3N participant, Dominican Republic, was strengthened.
- I3N-USA completed an updated Web page (http://www.iabin-us.org/projects/i3n/i3n_products_after_pilot/products_usa.html) that contains data available to I3N users.
- A content-building grant Request For Proposals was developed and published in early 2006.
- A concept paper regarding the roles and relationships between I3N stakeholders was drafted in 2005, to be reviewed by key stakeholders in 2006.
- A contract was let for developing I3N materials, a toolkit, and a logo.
- A contract was let for identifying capacity building needs and developing a capacity building plan.
- The I3N Web site was updated and maintained with key information and a complete Web site redesign was initiated, for completion in 2006.
- The I3N community was kept informed via the Web site and the I3N listserv with regular postings and announcements.
- The I3N Listserv and search engine were maintained.
- I3N posters and the fact sheet were updated and presented at international meetings.
- New I3N fact sheet development was initiated, for completion in 2006.
- The 2006 work plan was drafted and will be reviewed by key stakeholders in early 2006.
- I3N was represented at various international meetings.

I.D. Key Stakeholders in I3N

This section briefly describes key stakeholders. A white paper to be completed this year by the CI, in collaboration with the Secretariat and Technical Working Group, will describe the relationships among these.

National Leads. Each country participating in I3N has an individual leading its efforts, such as coordinating with their country's IABIN Focal Point and data providers. The contact information for each National Lead is available at http://www.iabin-us.org/projects/I3N/leads.html.

Data providers. Data providers are organizations and individuals at the country level who contribute data either directly to I3N, to be accessed through IABIN portal and through I3N portal or indirectly through the National Leads. Ideally, each data provider owns, serves and maintains its data.

I3N Technical Working Group. An interim I3N Technical Working Group (TWG), chaired by the USGS Biological Informatics Office, was convened to address content, metadata, standards, capacity building, and other issues relevant to the I3N TN. The first meeting was held April 5th and 7th, 2005 in Panama City, Panama. In 2006, the interim TWG will be disbanded and a permanent TWG will be established by the CI. An initial meeting will be held, either as a teleconference or in conjunction with an IABIN-related meeting.

Tools Representatives. Individuals active in I3N, selected by the CI, that distribute the I3N tools, support and train users, and evaluate user feedback. The first two were selected in 2005 and are the I3N National Leads for Argentina and Brazil.

IABIN Secretariat. The IABIN Secretariat collaborates with the Coordinating Institution in various aspects of I3N, especially with regard to activities that will integrate the data from all TNs. The Secretariat develops guidelines (e.g. for Web site development, indicator measurement, coordination among other TNs, data quality, and intellectual property rights), and promotes active participation of IABIN partners, particularly those at country level. The IABIN Content Manager, one of the Secretariat staff members, identifies potential data providers for all TNs and cultivates relationships with them. The IABIN Content Manager also administers the data content grants for all TNs. The IABIN Secretariat holds primary responsibility for coordinating and organizing the IABIN overall network and in cooperation with the General Secretariat of the Organization of American States (GS/OAS)[8], is implementing the IABIN GEF Project.

Coordinating Institution (CI). The United States Geological Survey's Biological Informatics Office (USGS/BIO) coordinates I3N in close collaboration with the IABIN Secretariat. For all those activities funded by the IABIN GEF Project, the CI works with the IABIN Secretariat to ensure that proper documentation is submitted to the OAS and World Bank[9] in a timely fashion, and in compliance with OAS and World Bank requirements. USGS/BIO and its partners in the National Biological Information Infrastructure (NBII)[10] have made major investments to increase the amount of publicly available biological information on IAS and international initiatives. I3N was initiated by the United States to support international IAS activities. The USGS/BIO, which also coordinates the NBII, obtained and managed U.S. State Department[11] funds for the now completed I3N pilot project. The USGS also organized and funded the first two meetings of I3N participants, supported the development of the I3N Cataloguer, I3N Database on IAS, XML schema, Web template, and created the I3N Web site[12]. The USGS continues to manage and host the I3N Web site and the I3N listserv. The NBII funds I3N-related activities by developing the NBII Invasive Species Information Node (ISIN) [13], leading the Global Invasive Species Information Network (GISIN), and Global Invasive Species Programme (GISP) activities, providing infrastructure/software development support, coordinating workshops, furthering agreement on and promulgation of protocols and standards, and providing technical assistance to NBII partners.

NBII Invasive Species Information Node (ISIN). The ISIN is a data management portal for information pertaining to the identification, description, early detection, rapid assessment, management, and control of invasive species. The ISIN Web site provides Internet access to information resources on potentially harmful IAS throughout the United States and elsewhere. This increased accessibility of data from all reliable sources allows different information types to be combined and compared, which permits improved management of IAS, and better identification and conservation of vulnerable habitats and biodiversity. Sources of data include: international partners, other NBII nodes, agencies and non-government organizations, state and local partners, museums and taxonomic experts, educational institutions, and the public. In addition, ISIN closely partners with the National Institute of Invasive Species Science[14], a virtual institute of data-sharing partners based in the USGS Fort Collins

---

[8] http://www.oas.org/
[9] http://www.worldbank.org/
[10] http://www.nbii.gov/
[11] http://www.state.gov/
[12] http://www.iabin-us.org/projects/I3N/I3N_project.html
[13] http://invasivespecies.nbii.gov/
[14] http://www.niiss.org

Science Center, and with the USGS Nonindigenous Aquatic Species database[15], a nation-wide clearinghouse of non-native aquatic species information based in the USGS Florida Integrated Science Center. ISIN also collaborates with the Invasive Species Science Program[16] of the USGS Biological Resources Discipline, which provides management-oriented research and delivers information needed to prevent, detect, control, and eradicate IAS, and to restore impaired ecosystems.

US DOI National Invasive Species Council. The United States Department of the Interior (DOI) co-chairs the National Invasive Species Council[17], and the USGS (a bureau of the DOI) plays a significant role in implementing the National Invasive Species Management Plan, called for in the Presidential Executive Order 13112 on Invasive Species.

Global Invasive Species Information Network (GISIN). **The** GISIN resulted from a series of meetings and workshops[18] conducted from 2001 to 2004 to formalize efforts to share invasive alien species (IAS) information in a readily accessible form throughout the globe. Participants recognized that there was no central location or "portal" to which managers and scientists could turn for efficient retrieval of relevant information on IAS taxonomy, prevention, and management, or a site where they could post their regional information to help increase IAS awareness and capacity building regionally and internationally. In April, 2004, the NBII convened a workshop to implement the GISIN. The Proceedings of the Experts Meeting on Implementation of GISIN are available on the GISIN Web site[19]. In 2006, in conjunction with the Secretariat of the Convention on Biological diversity and the Global Biodiversity Information Facility, GISIN held a second workshop to initiate the global sharing of IAS checklist information, and two I3N country leads participated.

The Global Invasive Species Programme (GISP). GISP was established in 1997 to address global threats caused by IAS and provide an international perspective in the development of information and management strategies for IAS. The ISIN and other NBII nodes including the NBII California Information Node and the NBII Pacific Basin Information Node are working with GISP to implement recommended strategies for sharing invasive species information.

National Focal Points. Each country participating in IABIN has a National Focal Point (NFP) who leads national efforts. The contact information for each NFP is available at http://www.iabin.net/english/governance/nfp.shtml.

IABIN Council and Executive Committee. IABIN operates through a membership council. The Council is policy focused and has the authority to make decisions and take action on behalf of IABIN. The IABIN Council consists of one officially appointed National Focal Point (NFP) from each member country of the Americas in addition to representatives from intergovernmental and non-governmental organizations and initiatives addressing biodiversity informatics issues. The IABIN Council, in turn, is represented intersessionally by the IABIN Executive Committee (IEC), a group of eight members elected from among the official IABIN NFPs plus one elected representative from an inter- or non-governmental organization. It guides the operations of IABIN and executes the policy decisions of the Council.

The Organization of American States (OAS). The General Secretariat of the Organization of American States (GS/OAS), as the Executing Agency for the IABIN GEF Project, is responsible for compliance with World Bank procurement and disbursement procedures. The GS/OAS, through its Department of Sustainable Development (DSD) is providing support for procurement, legal, and financial management activities, and working closely with the IABIN Council.

Other Thematic Networks. IABIN is implementing six Thematic Networks: I3N, Specimens, Species, Pollinators, Protected Areas and Ecosystems. As the other TNs are established, I3N will encourage regular communication, collaboration, and joint working group meetings, to facilitate proper integration of the TNs. The I3N CI, with support from the IABIN Secretariat, will work with the CIs of other TNs to identify their needs related to IAS and opportunities for mutual support among the TNs.

II. ACTIVITIES PLANNED FOR 2006

This Work Plan includes both GEF and non-GEF funded activities. It describes the activities of I3N for 2006 as delineated in the sections of the Project Implementation Plan (PIP) for I3N, as well as the activities not funded by the IABIN GEF Project. This Plan was developed by USGS/BIO (the Coordinating Institution for I3N) with significant input from the I3N Technical Working Group and the IABIN Secretariat.

Table I lays out the activities by trimester. Tables II and III show the funding associated with the implementation of I3N under

---

[15] http://nas.er.usgs.gov/

[16] http://biology.usgs.gov/invasive/index.htm

[17] http://www.invasivespeciesinfo.gov/council/main.shtml

[18] Such workshops were funded primarily by the United States Department of State, with additional support from the United States Agency for International Development (USAID), the World Conservation Union (IUCN), and the Global Invasive Species Programme (GISP).

[19] http://www.gisinetwork.org

Components 1 and 2 of the IABIN GEF Project for 2006, according to the Annual Operating Plan of IABIN.

Table I: Schedule for 2006 Activities

Activity	Trimester 1 Jan - Mar	Trimester 2 Apr - Jun	Trimester 3 Jul – Sept	Trimester 4 Oct - Dec
Component 1				
Tools and Standards				
Establish permanent Technical Working Group			X	
Meeting of Technical Working Group			X	
Tools dissemination	X	X	X	X
Support to tool users	X	X	X	X
Update search and retrieval tools				X
Collaboration and Communications				
Document on I3N relationships			X	
Coordination with Data Content Manager	X	X	X	X
Coordination with TN Coordinator	X	X	X	X
I3N Web site upgrade			X	X
I3N Web site translations (Spanish, Portuguese)				X
Participation in meetings	X	X	X	X
Promotion Materials disseminated	X	X	X	X
Develop value added products				
TBD in 2006[20]				
Maintenance and Operation				
I3N Coordination	X	X	X	X
I3N Web site maintenance	X	X	X	X
Component 2				
Capacity Building				
Assess needs		X		
Elaborate a Capacity Building Plan			X	
Deliver Training Workshops (at least 3)			X	X
Global networking and information dissemination	X	X	X	X
Matching Grants				
Publish RFP for Matching Grants	X		X	
Award Matching Grants		X		X
Quality Control				
Policy proposed				X

Table II: I3N Allocation for 2006 under Component 1 (US$)

ACTIVITY	ESTIMATED OUTPUTS		
	DESCRIPTION	UNITS	TOTAL
3154 -- Meeting of the technical working group	2nd TWG face-to-face meeting	1 meeting	$15,000
2151 -- Develop data entry tools and training	I3N Capacity Building	1 contract	$3,000
2152 -- Search and and retrieval tools	Central website update	1 contract	$10,000
	Central website translation to Spanish and Portuguese	2 contracts	$5,000
2153 -- Value added tools	Tool support, enhancement, and maintenance	2 contracts	$8,000
	Promote development of standards for invasive species	3 contracts	$15,000
3425 -- Outreach meetings and events	Promotion and outreach: travel to meetings, development and translation of presentations/posters/materials	5 presentations/posters given at int'l meetings	$12,000
TOTAL			**$68,000.00**

---

[20] Activities under this category scheduled for a subsequent year of the GEF Project

Table III: I3N Allocation for 2006 under Component 2 (US$)

ACTIVITY	ESTIMATED OUTPUTS		
	DESCRIPTION	UNITS	TOTAL
Training sessions on the use of data creation tools	Improve the availability of critical invasive data and metadata	3 training workshops on informatics tools delivered	$24,000.00
		1 consultant	$8,000.00
		1 consultant	$5,500.00
Providing Grants to institutions	Invasive Species data available through the network	8 content-building grants	$80,000.00
TOTAL			$117,500.00

II.A. Activities under Component 1 of PIP

II.A.1. Tools and Standards

Under this category, activities will be carried out to expand standards and content, and support data/metadata input, output, conversion, search, and serving tools.

I3N Technical Working Group (TWG)

An interim I3N Technical Working Group (TWG), chaired by the USGS/BIO, was convened in 2005 to address content, metadata, standards, capacity building, and other issues relevant to the Invasive Species TN. The Terms of Reference (TOR) for the interim TWG, specifying its objectives, structure, and functions, can be found in Annex 2. A preparatory meeting to help establish the interim TWG took place on February 21st, 2005 in Reston, VA. The first official meeting of the interim TWG took place during the 4th IABIN Council Meeting, in Panama, on April 5th and 7th, 2005. Andrea Grosse was Chair and moderator; Elizabeth Sellers and Yabanex Batista were the rapporteurs. The agenda included discussions of the role of TWG members, I3N status report, plenary presentation on I3N and I3N posters, the draft I3N Work Plan for 2005, the draft Terms of Reference under the I3N Work Plan, upcoming meetings and workshops in which TWG members are planning to participate, I3N logo, and action items. Members of the interim TWG include: Rita Besana (*ex oficio* member), Dayne Buddo (represented by Dionne Newell at this meeting), Andrea Grosse (chair), Mary Klein, Patricia Koleff (represented by Hesiquio Benítez), Boris Ramírez (*ex oficio* member), Annie Simpson, Richard Smith, Sergio Zalba, and Silvia Ziller.

In 2006, the interim TWG will be disbanded and a permanent TWG will be established by the CI. An initial meeting will be held, either as a teleconference or in conjunction with an IABIN-related meeting. (See Section II.A.3.)

Expected 2006 Output: Establishment of TWG and selection of members. Initial meeting.

Standards

The standards currently used by the I3N are the Integrated Taxonomic Information System (ITIS) (for taxonomy), several controlled vocabulary lists developed by I3N, and Dublin Core (for metadata on resources found on the Web), in addition to the general IABIN standards set by the IABIN Council at its 4th meeting in Panama. National classifications will be adopted for habitats/ecosystems.

The I3N Database on Invasive Alien Species, available in Spanish, English, and Portuguese versions, provides data entry forms for cataloguing invasive species information, including descriptions of species, habitats, occurrences (or invasion events), projects, experts, and references, and follows the recommendations of the IABIN Standards and Protocols working group. The interoperability of the records in the database is maintained through the use of controlled vocabularies in Spanish, English, and Portuguese that were developed by I3N. The database provides data entry fields for georeferenced data. References are cataloged in the database using fields from the Dublin Core bibliographic metadata standard with modifications. The database also incorporates the Integrated Taxonomic Information System (ITIS) as a taxonomic standard. Information can be exported from the database in Extensible Markup Language (XML)-tagged text files or Portable Document Format (PDF) files that can be posted to a Web server. The XML tags generated by the database are based on the Dublin Core Metadata Standard as adapted through consultations with invasive species experts.

The I3N will continue to investigate, review, adapt, and promote the use of standards, such as those recommended by the Clearing House Mechanism GRULAC (Spanish acronym for Latin American and Caribbean group of countries) at its 2005

meeting in Brazil and by the GISIN at its technical meeting in Morocco in February 2006. I3N funds were used to send an I3N Tools Representative and I3N Lead to the GISIN meeting to help harmonize I3N and GISIN standards, start to disseminate I3N tools to Asia via a training session, and to have I3N presence on the GISIN steering committee.

Expected 2006 Output: Participation in external experts meetings to encourage mutual compatibility, where appropriate.

Tools

Various multilingual tools have been developed over the years and made freely available to collect and share invasive species data. In 2005, funded by USGS/BIO, I3N National Leads from Argentina and Brazil (Universidad Nacional del Sur and the Horus Institute for Environmental Conservation and Development, respectively) worked with USGS/BIO in the development of a data input/output tool and database template, the I3N Database on Invasive Alien Species. The tool is available to the public in Spanish, Portuguese, and English, and is intended to serve globally as a model for managing information on IAS that enables efficient communication and information exchange among countries. This and other I3N tools will give organizations a head-start in creating their invasive species datasets, serving them on the Web, and ensure database interoperability by defining a minimum content standard. The I3N Database on Invasive Alien Species is a template developed from the database that was built initially by Universidad del Sur as an I3N project in 2002 with USGS support. A data export function enables standard output (such as fact sheets) from the database, in either XML or Portable Document Format that can be easily used by others. This function was designed based on a schema developed by the I3N Tools Representative Sergio Zalba, with contributions from GISP, the IUCN Global Invasive Species Database, Instituto Horus, and the Hawaiian Ecosystems at Risk initiative. (An XML schema is useful to an organization that wants to create its own tool but standardize its data to I3N.) Trilingual user manuals explain how to use the database template.

In 2005, a customized I3N database template (with country-specific vocabulary for habitat and political subdivision) was delivered to Dominican Republic, Uruguay, and Venezuela. Interest in the tools has been spreading beyond IABIN via GISIN and the work of the I3N Tools Representatives. For example, during COP 8 (March 2006), four African countries requested copies of the database: Ghana, Gambia, Ethiopia, and Seychelles. During the February GISIN meeting, Asian and Moroccan colleagues were trained in use of the database.

In 2006, a country-focused Web template, based on the I3N-Argentina Web interface to the database, will be completed; this will enable other countries to replicate this tool that serves data via the Internet in a user-friendly way. Feedback will be gathered from users in 2006 by the I3N Tools Representatives, to improve future versions of the I3N database template and provide ideas for development of new tools. The TWG will explore the feasibility of adapting existing tools from other fora, such as a tool for gathering information from amateur birders and for cataloguing Web resources. The current central I3N Web interface will be discussed and evaluated by USGS/BIO, the Secretariat and the TWG.

Expected 2006 Output: Country-based Web template created. Feedback analyzed on the I3N Database on Invasive Alien Species, XML schema, manuals, and Web template. Central I3N Web interface evaluated.

II.A.2. Collaboration and Communication

Activities under this section will promote addition of new stakeholders and data providers to I3N.

I3N relationships with other stakeholders. As the first functioning TN, the I3N has an important role in the IABIN as a model for the other TNs. Defining the relationship between the TN and others within the IABIN community will help other TNs as they become established. USGS/BIO is leading the writing of a document defining roles and responsibilities of National Leads, and relationships with IABIN Focal Points and other stakeholders, based on IABIN Council recommendations and documents, as well as input from the IABIN Secretariat and others. Writing began in 2005; stakeholders will review the document in 2006. Synergy with other supra-national networks, such as The Nature Conservancy (TNC) South America Invasives Program and the Global Invasive Species Information Network, will be sought.

Expected 2006 Output: Document describing relationships.

I3N Web site. The I3N Web site[21] was first created in 2001 and has been updated periodically since then. The last major update occurred in late 2005. During the last 5 years it has served as the public face of the network and main repository of documents related to the I3N. During 2006 the Web site will be redesigned and updated to reflect new developments. Key pages will be translated into Spanish and Portuguese. A search and retrieval function, developed and maintained for I3N with USGS funding, will be updated with new I3N datasets to be searched.

---

[21] http://www.iabin-us.org/projects/I3N/I3N_project.html

Expected 2006 Output: I3N website and search function updated. Key pages translated into Spanish and Portuguese.

Workshops and meetings. As a way to promote the I3N (and the IABIN in general), the CI, IABIN Secretariat, and I3N National Leads will participate in various events during the year. Below is a list of meetings that I3N members have attended, or are planning to attend, as of February 17, 2006:
- o Ecological Society of America International Conference on Ecology in an Era of Globalization: Challenges and Opportunities for Environmental Scientists in the Americas (Mérida, Mexico, January, 2006). (CI presented talk and poster on I3N and IABIN.)
- o Western Hemisphere Migratory Species Initiative conference (San Jose, Costa Rica, January, 2006). (CI represented I3N and IABIN as model network).
- o Weeds Across Borders (Hermosillo, Mexico, May 2006).
- o GISIN Invasive Species Profile Schema Review (Agadir, Morocco, February, 2006) (Two I3N Leads active on GISIN interim Steering Committee; participated in discussions to help harmonize I3N and GISIN standards; gave training on I3N tools to Moroccan and Malaysian participants, as a start to disseminate I3N tools to Asia.)
- o CBD COP8 (Curitiba, Brazil, March, 2006). (I3N presence at GISP side-event.)
- o Society for Conservation Biology Congress (USA, June 2006)
- o TDWG (Missouri Botanical Gardens, St.Louis, Missouri, USA, October, 2006).

Expected 2006 Output: Promotion of I3N ideas, networking, and information gathered for I3N use.

Promotion Materials. During 2005, several promotional materials for I3N, such as posters, fact sheets, and others were updated or prepared by USGS/BIO. A contract was awarded by GS/OAS in 2005 to develop materials: a logo, a short document to help I3N National Leads in raising awareness on IAS, success stories on how I3N information was used, and a toolkit for Focal Points to promote the use of I3N information in their governments. The deliverables under this contract are expected in early 2006. In 2006, the fact sheets will be updated and translated into Spanish and Portuguese.

Expected 2006 Output: Updated I3N fact sheet (in Portuguese, Spanish, and English). Logo, short document to raise awareness, success stories, toolkit.

II.A.3. Value-added products

Initial discussions have taken place among TWG members, who suggested exploration of possible future products, including GIS data layers for particular species; increased and more complex search capabilities; taxonomic identification keys; fact sheets on particular species; mapping tools; and case studies of impacts and successful control. Six months after the establishment of the new TWG, TWG members will propose a process to identify existing tools of other organizations for possible adaptation and dissemination by the I3N, and will evaluate user and Focal Points' suggestions. (One possibility is adopting a Dublin Core tool, freely available, for I3N National Leads to catalog Web resources.) The TWG will define the primary audiences (e.g., policy makers, protected area managers, IABIN and CHM Focal Points) for different types of I3N information products (e.g., maps, fact sheets) and suggested tools.

Expected 2006 Output: To be determined in 2007.

II.A.4. Maintenance and operations

The TN will be maintained and operated by the TN participants, subject to availability of funds. USGS/BIO provides for the I3N Web site, the I3N search engine, as well as the time for coordination of the TN and the TWG. Progress reports from I3N National Leads will be available for review at the IEC/CI meeting in June. The Leads will maintain and update their respective national databases and Web sites. Other responsibilities of I3N National Leads and Data Providers are defined in a concept paper, as described above.

Expected 2006 Output: Continued maintenance and operation of I3N Web site, search engine, and coordination of TN and TWG by USGS/BIO. Maintenance and operation of national efforts by I3N National Leads and Data Providers.

II.B. Activities under Component 2 of PIP

Grants and capacity building will bring in participants from new countries and encourage active participation by existing I3N members.

II.B.1. Capacity Building and Training

Based on the experience of testing of the tools and identification of gaps in information, an analysis of capacity-building needs of current and potential I3N participants was begun in 2005, which will culminate in a proposed plan for capacity building for years 3-5. This plan will be delivered by the consultant in April 2006. The capacity building plan will be geared towards the adoption of I3N tools for increasing the effectiveness of prevention and control actions, stimulating the adoption of national IAS lists, and on engaging governments on the IAS problem. Special attention will be given to increase awareness among scientific and government professionals, site managers and on-the-ground technicians and producers about the threats posed by biological invasions. Recommendations from the forthcoming capacity building plan will be reviewed by the CI, Secretariat, and TWG and activities implemented when appropriate.

I3N created data gathering and management tools through the project "Enhancing I3N Tools: Data-Base, XML Output, Web Template, and Technical Assistance", which were developed jointly by Universidad Nacional del Sur/I3N Argentina and Instituto Hórus from Brazil and funded by USGS/BIO. These tools are freely available to public or private institutions, in three languages: Portuguese, Spanish, and English.

Capacity-building activities will be enhanced by participation in scientific and technical meetings, training workshops, and production of printed and electronic materials for different audiences. To encourage proper use of I3N tools and aid in their dissemination, I3N provides training workshops on the use and application of I3N informatics tools, as well as providing training on the conceptual background and importance of using these tools and of creating standardized IAS data and metadata (e.g., policy issues and IAS science and management). A 3-day training workshop will be delivered in at least 3 countries.

As stated in the IABIN Project Implementation Plan, one of the goals of IABIN Thematic Networks is to facilitate the inclusion of biodiversity themes in national agendas. I3N is accomplishing this in part through its capacity building activities, such as the I3N workshops. The workshops in 2006 will be improved using the lessons learned in 2005 workshops. The objectives of each workshop, as designed by I3N, are to raise awareness about IAS; to bring together staff from academia, government agencies and NGOs; to facilitate discussion among these groups about local issues through case studies presented by participants; to teach the basic concepts of environmental, policy and management issues; to inculcate the importance of using standardized data and metadata; and to train potential users about I3N tools. An additional element may be added: beginning to compile actual data in a team setting, to reinforce the lessons and kick-start the process. The conceptual background will give future I3N tool users the fundamentals for filtering information and thereby increase the quality of the data.

In 2006, most I3N workshops will be held in South America, in collaboration with the TNC South America Invasives Program. (The TNC South America Invasive Species Programme plans to support key countries over the next two years to help them develop a legal framework for prevention and control systems.) Workshop locations will most likely include Mexico (probably May), Chile (17-19 May), Ecuador (probably June), Paraguay (probably July), Jamaica, Bolivia and Peru. Some workshops will be funded by TNC or a local organization. The workshop in Chile will be carried out with funding obtained through the Chilean Focal Point and TNC South America Invasive Species Programme. Three additional workshops in different South American countries will be held with I3N funding. TNC South America Invasive Species Programme will also be supporting the I3N-Colombia Lead in holding a national workshop to gather information for their database.

The workshops will be geared toward a broad audience that includes national agency personnel from agriculture and natural resources, NGOs, and academia, to encourage individuals to cooperate and work towards real-world, concrete outcomes. Few stakeholders in Latin America and the Caribbean have a background in IAS. During the workshop, instructors will endeavor to identify people who would be most appropriate to adopt the I3N database. Instructors will work in collaboration with a national agency and so enhance opportunities for the I3N database to be implemented. This decreases the chances of the database becoming isolated or remaining a mere academic exercise. Instructors will attempt to work with the National Focal Point to identify a potential I3N National Lead for that country, and they will begin the communication process with the NFP and potential I3N National Leads well in advance of workshop delivery. In this sense, the workshop goes beyond mere training and sets the stage for stakeholder buy-in to enhance the potential for continuity of I3N efforts in the country. Ultimately, the goal of the workshops is to integrate the I3N database into policy processes. The physical presence of the instructors can be a key in establishing or reinvigorating I3N activities in a country, as the experiences in the Dominican Republic and Uruguay showed. Final reports from the Dominican Republic and Uruguay workshops can be obtained from the I3N Manager.

Expected 2006 Output: Analysis of capacity-building needs of current/potential I3N institutions. Development of proposed Capacity Building Plan. Delivery of workshops in at least 3 countries.

<u>II.B.2. Matching Grants</u>

In every remaining year of the IABIN GEF Project, grants will be awarded to support institutional efforts to make data available through the I3N. A call for proposals for I3N content building (including criteria on how to select such institutions) was prepared in 2005 by the IABIN Secretariat in collaboration with USGS/BIO, and was published by the IABIN Secretariat in January 2006 on IABIN's Web site and I3N listserv. A selection committee, composed of USGS/BIO, Secretariat, and OAS staff, will evaluate the proposals. The selected institutions will sign an agreement ("IABIN Subproject Agreement") with the GS/OAS. It is expected that 8 – 10 grants of $10K each will be awarded in 2006. The Secretariat will work with the CI in compiling metrics needed to comply with IABIN project logframe.

Expected 2006 Output: Award of 8 – 10 grants. Metrics compiled.

<u>II.B.3. Data Quality</u>

Quality of data will be managed by data providers and National Leads. To support their efforts, a data quality policy will be proposed by USGS/BIO that will comply with the IABIN standards policy drafted during the Fourth Council Meeting. USGS/BIO will continue to lead the effort to ensure quality of the I3N Web site and search engine.

Expected 2006 Output: Continued monitoring of Web site and search engine. Data quality policy proposed.