
From: Carmen Josse [mailto:Carmen_Josse@natureserve.org]
Sent: Monday, July 07, 2008 11:03 AM
To: Huber, Richard; Pena, Carolina
Cc: Vincent J Abreu; Pat Comer
Subject:

Dear Carolina,

In response to your e-mail of June 18th, please find attached our proposal addressing the questions stated in OAS attached letter. I am including also the TNC proposal as it was submitted and approved. Regarding the latter, TNC approved funding the collaborative IABIN proposal. They have made a first payment for 50% of the total and the second allocation will be done after we submit a progress report showing effective advances.

At this point both proposals, the TNC funded and the IABIN funded are tightly interdependent in terms of representing two key components of the tool, the content and the functionality. TNC funding, covering most of the content portion of the tool, and the funding requested to IABIN, covering the development of the functionality.

Please let me know if you need further explanation or detail regarding any of the parts of the proposal.

Best regards,

Carmen

Carmen Josse, Ph.D.
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2008 NatureServe/Conservancy Proposals

Title: Advancing joint roles as Coordinating Institutions for the Inter-American Biodiversity Information network (IABIN) – Ecosystems Thematic Network (ETN)

Summary/Abstract

The project goal is to catalyze collaboration and cooperative data development among ecosystem specialists throughout the Americas through the IABIN ETN. We propose to continue implementing integration of available text, tabular, and mapped information for NatureServe terrestrial ecological systems and TNC freshwater ecological classification *from the US and Latin America* respectively into the IABIN ETN classification framework and geospatial portal. Through this activity, we will also formalize joint coordination of the IABIN ETN between the Conservancy, NatureServe and the Smithsonian Tropical Research Institute - STRI (Panama). During the current GEF funded phase we will be able to implement and test our existing database structure to allow the automatic cross referencing of different terrestrial ecological classifications to the NatureServe Terrestrial Ecological Systems Classification for LAC. Building on this experience, our goal is to integrate the US terrestrial ecological classification and TNC freshwater classification, and secure funding to begin documenting conservation status (Global ranks, IUCN red list proposed criteria) for terrestrial ecological systems across the Americas.

Benefits

This effort has so far enabled new engagement of ecosystem specialists throughout Latin America to form a cohesive scientific community and advance common objectives. We are developing the first web portal for public access to mapped ecosystem data across political jurisdictions in Latin America (<http://geospatial.iabin.net/>), and a classification database containing comprehensive information for all of the terrestrial and freshwater ecosystems of the Americas. It should provide similar information services as the WWF Ecoregions related information resources have provided, but with higher spatial and thematic resolution, local variation and detail, and enhanced analytical tools. Use of these classification standards helps to clarify the ecological similarities among neighboring countries, stimulating more and better coordination on ecosystems conservation and management. The IABIN ETN database was developed based on the multi-level GEOSS ecosystem classification framework and that ensures the comprehensive mapping of the reference classification. As for organizational priorities this project addresses NatureServe's objectives of supporting effective regional and landscape-scale conservation, as well as advancing standards and methods to assess ecosystems conservation status, and strengthening our role as a primary source for this information. As far as addressing Conservancy's goals, this work will help to establish the 2015 Goal baseline to track progress towards having 10% of all major habitat type under effective conservation by 2015. It will also help in the "roll up" of ecoregional assessment data across Mexico, Central America, and the Caribbean by means of providing a standard format reference classification.

Approach

This project will serve two purposes. It will require close coordination between the two organizations in developing datasets, methodology, and analytical tools, and it will allow the two organizations to jointly develop proposals for long term funding, and in doing so, promote a long-term collaboration throughout the Americas. NatureServe has already advanced the development of the IABIN-ETN database for the LAC terrestrial ecosystems and the framework for the Marine classification. In this proposed project, NatureServe will develop the US terrestrial ecosystems database and will advise TNC in developing the Freshwater database. Together we will propose new methods to assign conservation status ranking (e.g., as IUCN red list criteria for ecosystem types), and develop analytical tools to query and access that information. Both organizations will share the responsibility of coordination with STRI, and for developing and submitting the proposal for the long term coordination of the IABIN ETN and the implementation of web served ecosystems information.

Products and Timelines

1. Coordination agreement and workplan for collaborative science and program development among TNC, NatureServe, and STRI
2. Criteria, categories and their definitions, including the classification structure for development of Terrestrial (US) and Freshwater (Americas) Standard Formats and database. End of 4th month.
3. Preparation of existing spatial datasets (maps) with applied classifications in terms of layout, legend and format for use in IABIN ETN geoportal. End of 6th month. First project milestone.
4. First progress report. End of 6th month.
5. New Terrestrial and freshwater classification datasets entered in standard format database. End of 8th month. Second project milestone.
6. Pilot documenting conservation status (Global ranks, IUCN red list proposed criteria) for a selected set of terrestrial ecological systems. End of 8th month.
7. Evaluation of the pilot conservation status documentation and analytical tools. End of 10th month.
8. Second progress report including lessons learned and recommended next steps. End of 10th month.
9. Collaborative proposal sent to potential donors. The proposal goal will be to build on experience gained in making available terrestrial and freshwater ecosystems information, maps, conservation documentation, and developing new query and analytical tools for ecosystem based conservation and management decision making. The goal will be to cover 2-3 years of Network coordination with the new funding. End of 12th month. Third project milestone.

Budget Detail

This grant would provide essential support to establish our relative roles as a coordinating body and facilitate collaborative fundraising for ongoing effort. We anticipate that the IABIN-ETN will continue to grow and strengthen as an enduring institutional network. Therefore, we have not stated a specific 'total amount' of anticipated cost over and above this modest \$50,000 request from the collaboration fund.

- 1) Support coordination and planning activities among NatureServe, TNC, and STRI (\$ 3,000).
- 2) Complete integration of available text, tabular, and mapped information for NatureServe terrestrial ecological systems and TNC freshwater ecological classification *from the US and Latin America* respectively into the IABIN ETN classification framework and geospatial portal (\$41,000).
- 3) Proposal writing and matching resources for new funding to begin documenting conservation status (Global ranks, IUCN red list proposed criteria) for terrestrial ecological systems across the Americas (\$6,000)

	Cost
I. Personnel Costs	\$ 39,951.00
II. Other Direct Costs (includes travel)	\$ 7,346.04
III. Subagreements	\$ -
IV. Indirect Cost @ 36.4%	\$ 2,673.96
V. TOTAL COST	\$ 49,971.00

Required Positions

US Terrestrial Ecologists: with comprehensive knowledge of the composition, structure, environmental settings, dynamics, and distribution of terrestrial ecological systems from a given region of the US and adjacent LAC.

LAC Terrestrial Ecologist: with comprehensive knowledge of the composition, structure, environmental settings, dynamics, and distribution of terrestrial ecological systems of LAC.

Freshwater Ecologist: with a deep familiarity with environmental settings, aquatic dynamics, and distribution of freshwater ecological systems from a given region of LAC.

Database specialist (spatial and tabular): with knowledge of the tabular database design and GIS data management. The existing system includes a series of country-based geospatial data servers.

Fundraising Ideas

Initial funding to establish the ETN was provided from a GEF grant. There are currently a number of GEF funded grants to participating country ecologists for ongoing development of the first phase ETN efforts. The technical and institutional infrastructure in development through the IABIN ETN facilitates collaborative fundraising on the part of international NGOs and host country governments throughout Latin America, the Caribbean, and the US. With stepped-up multi-jurisdictional collaboration in support of ecosystem assessment, planning, management, and monitoring, this network will be increasingly attractive to public and private donors.

Communication:

We will continue engagement with the ecosystem specialists contacted from throughout Latin America. The communications will also target the collaborators gained through the development of the US terrestrial ecosystems and the freshwater ecosystems

classification. At the phase of development of the IABIN ETN database, we consider them as the main users and testers of this endeavor.

Points of Contact

NatureServe: Carmen Josse (Carmen_josse@natureserve.org)

The Nature Conservancy: Maarten Kappelle (mkappelle@tnc.org)

Cost		
I. Personnel Costs	\$ 29,657.00	
II. Other Direct Costs (includes travel)	\$ 7,342.04	
III. Subagreements	\$ -	
IV. Indirect Cost @ 26.4%	\$ 2,872.98	
V. TOTAL COST	\$ 40,972.02	

Required Positions

US Terrestrial Ecologist: with comprehensive knowledge of the composition, structure, environmental setting, dynamics, and distribution of terrestrial ecological systems from a given region of the US and adjacent LAC.

LAC Terrestrial Ecologist: with comprehensive knowledge of the composition, structure, environmental setting, dynamics, and distribution of terrestrial ecological systems of LAC.

Freshwater Ecologist: with a deep familiarity with environmental settings, aquatic dynamics, and distribution of freshwater ecological systems from a given region of LAC.

Database specialist (spatial and tabular): with knowledge of the tabular design and GIS data management. The existing system includes a series of county-based geospatial data servers.

Funding ideas

Initial funding to establish the ETN was provided from a GEF grant. There are currently a number of GEF funded grants to participating country ecologists for ongoing development of the first phase ETN effort. The technical and institutional infrastructure in development through the IABIN ETN facilitates collaborative fundraising on the part of international NGOs and host country governments throughout Latin America, the Caribbean, and the US. With stepped-up multi-jurisdictional collaboration in support of ecosystem assessment, planning, management, and monitoring, this network will be increasingly attractive to public and private donors.

Communication:

We will continue engagement with the ecosystem specialists contacted from throughout Latin America. The communication will also target the collaborators gained through the development of the US terrestrial ecosystems and the freshwater ecosystems.

“Developing the Functionality of the IABIN Ecosystem Thematic Network Database”

Proposal submitted to IABIN in response to the request for
Proposals of Value Added Tools for Decision Making



July 7, 2008

Person of Contact
Carmen Josse
Senior Regional Ecologist
NatureServe
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Project Summary

The project goal is to catalyze collaboration and cooperative data development among ecosystem specialists throughout the Americas through the IABIN Ecosystem Thematic Network (ETN heretofore). We propose to continue implementing integration of available text, tabular, and mapped information for NatureServe terrestrial ecological systems and TNC freshwater ecological classification into the ETN classification framework and geospatial portal to serve the purpose of Hemispheric reference classifications.

The ETN has already implemented the terrestrial and the marine Standard Formats database. Its web interface is being used by countries to enter the national ecosystems data and NatureServe is in the process of uploading its terrestrial ecosystems database of Latin America and the Caribbean to the ETN database to serve as the reference classification. With this progress, additional funding is needed to make sure that the database is not only useful as it is now for data providers, but for users overall and for decision makers seeking information that provides context in a way that they can find out about specific ecosystems in relation with their global distribution, conservation issues, habitat for species, and through text, tabular and mapped outputs.

Approach

We propose to achieve the goal of a fully functional ETN database by carrying out the following activities.

- Test and provide recommendations to make sure that the ETN database structure allow the automatic cross referencing between different terrestrial ecological classifications, by using the reference classification as the common language.
- Work with IABIN programmers to identify the contents and outline of the reports that the database should provide as outputs of different types of queries, and make recommendations for improvement where needed.
- Develop functional links between the existing maps of the reference classifications of ecological systems of US and Latin America and the database entries for each ecosystem type. We will also coordinate with GEOSS in regards with the spatial layers that represent the different levels of the GEOSS framework which are also represented by the different levels of standard attributes included in the Standard Format.
- Building on the experience gained through the development of the IABIN ETN, we will develop a plan to support the sustainability of the ETN in the long term that includes agreements with institutions relevant to the network.
- Organization of two workshops

The counterpart funding will be used primarily to develop the US terrestrial ecosystems standard format, the uploading of the US terrestrial ecological systems classification onto the ETN database, and to begin documenting conservation status (Global ranks, IUCN red list proposed criteria) for a subset of terrestrial ecological systems as a proof of concept to raise additional funding to complete the task across the Americas. Since the freshwater classification for South America and Central America are still in progress (though they will be ready very soon), the development of the freshwater ecosystems standard format and the uploading of the LAC freshwater classification onto the ETN database, will be planned in terms of the timeline of the project as the second main task of the counterpart funding.

Final Product

The final product is a functional database that support comprehensive information about ecosystems of the Americas, facilitates the cross referencing between classifications, provides ecosystems distribution maps at different levels of resolution, informs about conservation status of the ecosystems, and relates subsets of its data to other IABIN thematic network databases, all this through a web interface that is user friendly for both, data providers and information users. Specific products envisioned as a result of this project (including IABIN and counterpart funding) are:

- Terrestrial ecosystems standard format in English and Spanish versions
- Fresh water ecosystems standard format in English
- US and LAC terrestrial ecosystems classification entered as reference classifications in ETN database (English and Spanish respectively)
- Latin American fresh water classification in ETN database
- Maps of US and South American terrestrial ecosystems served over the IABIN ETN geoportal
- Map of South America freshwater ecosystems served over the IABIN ETN geoportal
- Query options with retrievable reports that inform users about
 - Ecosystems diversity by defined geography or related theme (regional, country, ecoregion or biome)
 - Conservation status of ecosystems (a subset of South American ecosystems at this point) linked to distribution maps.
 - Similarity of ecosystems across different geographies and classifications (crosswalks)
 - Links between species and habitat, particularly for plant species, based on level 6 of terrestrial standard format that includes diagnostic plant species of the ecosystem type (could link ETN database with species database)
 - Total distribution range of queried ecosystems as portrayed by maps available over the IABIN geoportal
 - Clickable maps as means of content search

Explanation of functionality and use of Final Product

There is an increasing demand for environmental data that is accurate, current, complete, and linked to or supported by global standards or approaches. This demand is driven both, by increasingly sophisticated analytical approaches from conservation groups and by more strict demands from multilateral agencies and governmental regulators that investors adhere to environmental safeguards to reach a better balance between productive activities and related infrastructure development, and sustainable use of natural resources.

Thus far the ecosystem information available for the Hemisphere is spotty, difficult to find, and non-standard, and for some countries, even the national level information is affected by these problems. The datasets that we are proposing to put together using a set of standards to characterize, cross reference, and obtain mapped products across the Continent will be the best and more detailed ecosystem level information currently available.

With this project we propose to continue developing what could be considered the building blocks of a tool that can become the main or one of the main resources to inform local and country governments, advocacy groups, conservation NGOs, foundations, regional agencies, and landowners to better understand the distribution, condition, and significance of the continent's natural landscapes.

NatureServe has a recognized experience in the development of standards that make possible the collection of data under unified criteria in order to support region wide application of analytical tools and seamless thematic mapping. Currently in a preview mode, LandScope America, is an interactive website that NatureServe and the National Geographic Society plan to release in late 2008 (www.landscape.org/preview/). Its multimedia content allows the exploration of America's places from the user desktop. Its goal is to elicit general public interest in conservation issues, provide specialized users with data, maps and tools to retrieve specific information and enrich the understanding of the national landscape. We envision in the long term a similar, powerful resource to explore, understand, and promote conservation of the natural ecosystems of the Hemisphere.

Tasks to be accomplished with IABIN funding

1. Work with the ETN consultant in charge of developing the standard format database function of crosswalk between different classifications. This task entails coordinating with him about the key classifiers represented in the attributes of the standard format, on which the cross-referencing should be performed to ensure the most accurate crosswalk possible. Entails also reviewing numerous trials to achieve the expected results.

2. Define and provide specifications of the types of queries and content and layout of output reports. Work with ETN programmer to build the required functions in the database, test results and provide recommendations.
3. Work with ETN programmer to define the type of query and mapped output that can be built into the database as a function of hotlinks between database contents and map products in the IABIN geoportal.
4. Organize workshops.
5. Participate in the workshop about the freshwater standard format to be organized by IABIN ETN (IABIN will cover separately all travel costs associated with NatureServe participation in the workshop).
6. Coordinate with TNC to identify specifications needed for the integration of ETN databases with TNC's Effective Conservation Monitoring tool.

Description of Workshops

As part of this project it will be necessary to convene two workshops.

Workshop 1 is related to the development of the US terrestrial ecosystems standard format.

In spite of the important head start that represents the existing terrestrial ecosystem SF, it was generated through consultation and agreement of Latin American experts and therefore it reflects the most widely ecological criteria used in that region. Distinct geographies and ecosystems unique to North America require a similar discussion to ensure a consensus of US ecosystems specialists. Likewise, it will be important to assure that among the ecological attributes considered for this SF, are included those that are currently being used in the development of the GEOSS spatial layers to come up with a comprehensive map of ecosystems footprints across the US.

The goals of this workshop are:

Obtain an agreed upon list of ecological attributes and the classification categories of each of them that will be represented as fields and corresponding drop down menus at the different levels of the Standard Format.

Make sure that the attributes represented in the spatial layers that GEOSS is developing to map ecosystems across the US are included in the SF.

Share with US and Mexican ecosystems specialists, outside of the NatureServe group, the development of the IABIN ETN to disseminate it to a wider audience in North America and stimulate them to become data providers.

Budget: US \$ 8,484.00 for travel expenses of 7 people for a two days workshop.

Workshop 2 will be convened to discuss the approach and criteria to assign global conservation status to ecosystem types*

This workshop will serve to open to a diverse group of ecosystems experts, a discussion that NatureServe ecologists have already started internally about how to assign a global

conservation status rank to an ecosystem type. Factors that have been considered so far are:

- Number of occurrences or total range area
- Number of occurrences or proportion of range area with Good Viability
- Threats (Severity, Scope, and Immediacy)
- Intrinsic Vulnerability (High, Moderate, Low)
- Environmental Specificity (Very narrow, Narrow, Moderate, Broad)

We will take advantage of this workshop to discuss the use of existing comprehensive datasets of terrestrial ecological systems and threats for South America to come up with maps that show the distribution of ecosystems categorized as rare, endemic, widespread, and their levels of current vulnerability.

As a result of this workshop we expect to have an agreed upon methodology and criteria to apply to a subset of ecological systems as a pilot application.

Budget: US\$ 9,372.00 for travel expenses of 6 people for a two days workshop, including international flight fares.

***Alternatively, in order to lower the workshop related travel costs, these concepts can be developed with US examples and vetted through the NatureServe and Heritage Programs network at regional and US national conferences (and over web sessions).**

Team Composition and Task Assignment

Professional Staff				
Name of Staff	Firm	Area of Expertise	Position Assigned	Task Assigned
Carmen Josse	NatureServe	Terrestrial Ecology	Terrestrial Ecologist	Coordination with ETN consultant to develop cross referencing function between terrestrial ecosystems classifications. Specifications of the types of queries and content and layout of output reports. Evaluation of trial versions and recommendations on improvements.
Patrick Comer	NatureServe	Terrestrial Ecology	Terrestrial Ecologist	Coordination with GEOSS about spatial layers for the different levels of the GEOSS framework. Organization of Workshop 2 on conservation ranking of ecosystems
Damian Rybock	NatureServe	GIS Specialist	Spatial datasets manager	Advise and coordination with IABIN programmer on hotlinks between spatial data and standard format.
Kristin Snow	NatureServe	Ecological Information	Database manager	Database content and functionality support.

		Manager		Coordinate with TNC team on the integration of ETN databases with their Effective Conservation Monitoring tool
Shannon Menard	NatureServe	Terrestrial Ecology	Terrestrial Ecologist	Organization of Workshop 1 on US terrestrial ecosystems standard format

Budget

	Total Cost
I. Personnel Costs (incl. OH & benefits)	\$ 47,955.00
II. Other Direct Costs (includes workshops related travel)	\$ 19,774.20
III. Indirect Cost @ 36.4% (on ODC)	\$ 7,197.81
IV. TOTAL COST	\$ 74,927.01