

Indicative List of IABIN Phase II projects

1. (With the US National Aeronautics and Space Administration) Creation of a pilot “model web” composed of existing, loosely coupled models that developers have retrofitted for interoperability and that communicate using web services, as a path towards the development of a modeling infrastructure to help predict and assess change and answer "what if" questions in complex systems.
2. (With the Pan American Health Organization, PAHO), a pilot decision support tool to predict disease emergence due to ecological and climatic change.
3. Invasive species learning network -- an expert system for the rapid identification of species for use in trade regulation by customs and wildlife authorities, together with social networking tools to facilitate cooperation between authorities at multiple ports and between countries. This could be piloted in the Caribbean, or in central America where new “Panamax” ports are under construction.
4. A participatory mapping process (possibly with the Caribbean Community Climate Change Centre) to digitize data on economically and biologically significant natural resources in the islands of the insular Caribbean, and to combine with extant data sources to create a Caribbean Atlas of Climate Adaptation for use in the development of climate adaptation strategies at very fine scales, including at the community level.
5. Integration of tools developed for the US LANDFIRE program (www.landfire.gov) with IABIN data using the DataBasin software and climate models to predict changes in wildfire risk in the Americas and potential impacts on biodiversity as a result of climate change. The project will model fire behavior, risk under climate change scenarios and identify sites/ecological assemblages/species at risk for which new fire management strategies are indicated. Provide decision support for development (e.g., placement of roads, settlements to avoid ecosystem fragmentation where fire and habitat conversion are risk factors).
6. (With the Food and Agriculture Organization of the UN) A project to evaluate the role of ecosystem services in food production, building upon the important work on pollinators undertaken under the aegis of IABIN, producing a hybrid eco-agricultural knowledge base and resulting in improved understanding of the factors associated with sustainable agricultural production and improved capacity for food security.
7. A “Red List” of unsustainable ecosystems to serve as an early warning system for biodiversity and livelihood impacts. IABIN would develop and measure indicators of ecosystem integrity and track trends against a selected baseline, with a view to identifying ecosystems with low integrity and those trending towards collapse. Potential partners would include UNEP/WCMC and the Society for Conservation Biology.
8. An “observatory” on IIRSA, to facilitate and support the assessment of cascading socioeconomic and ecological impacts from the development of the network of multimodal trade and transportation corridors and hubs throughout South America. The

project would provide data, tools, and training to assess environmental and social impacts of IIRSA's matrix of infrastructure development projects.

9. A "Google" of parks and protected areas data in the Americas (in partnership with UNEP-WCMC, and possibly, Google) to collect all possible data and information concerning parks and protected areas, including unpublished and grey literature, and to create a social network of the users of the data to build a more solid knowledge-network to address the problems of protected areas during a time of rapid change.
10. An expert system to assist national focal points for the 3 major global environmental conventions, plus relevant regional conventions, to prepare national reports drawing upon IABIN hosted data.
11. Catalog of ecosystem services – IABIN to undertake a comprehensive survey of ecosystem services in the IABIN area (building on Reefix) and produce a database of services linked to biodiversity and ecosystems. To the extent possible IABIN should seek to quantify the value of services. Potential partners include UNDP and the Katoomba Group.
12. Protected Areas system design for climate change. IABIN will model biodiversity, ecosystem change under climate scenarios and compare protection with expected disposition of resources. The project will propose adjustments to national protected area systems to maximize protection to ecosystem services and biodiversity.
13. IABIN Institute -- Through a strategic alliance with academic and research institutions throughout the region, IABIN will develop a modular distance-learning program for bioinformatics and biodiversity policy. A pilot program of five years duration will produce a Spanish language professional certification program. After evaluation of this program, modules will be converted into Portuguese, English and French, and a plan, to be funded separately, will be developed for a distance learning Masters Degree in bioinformatics and biodiversity policy. In the pilot phase, 100 students will be admitted to the certificate program, and a graduation rate of 85% will be expected.
14. Comprehensive assessment of land use/land cover in the Americas. IABIN would undertake a comprehensive land cover assessment for the IABIN region to a) provide an assessment of land use and land cover, for use in REDD programs, and b) provide monitoring capacity for REDD. Potential partners include FAO and GOF/GOLD.