ISSN 1948-6596

news

Bern Convention group of experts on European island biological diversity: an international network to preserve island biodiversity

The Council of Europe (Bern Convention) promoted the first Meeting of a group of Experts on Island Biological Diversity, a meeting hosted by the Government of Canary Islands at Tenerife (1-3 October 2009) and organized by Eladio Fernández-Galiano.

A group of about 30 experts on European Islands discussed during two days the priorities for the conservation of a unique patrimony, the island biotas. The aim of this first meeting was threefold: 1) create a network of experts on island biodiversity; 2) discuss the problems that affect specifically island biodiversity; and 3) identify priorities for action and proposals to the Standing Committee to the Bern Convention.

A report prepared by Jorge Fernández Orueta and presented by Eladio Fernández-Galiano listed the potential lines of work on islands, the most relevant being: the lack of an inventory of European islands (but see the GIN – Global Island Network, http://www.globalislands.net/index.php); need to inventory the island protected areas; assessment of island biodiversity (islands contribute significantly towards global biodiversity; 10 out of the 34 biodiversity hotspots defined by Conservation International are islands); impact of Invasive Alien Species (IAS); impact of climate change; sustainability of medium and small size islands; oil-spills and other seaborne pollution risks; coordination mechanisms for a network of experts.

The presence of representatives of the Governments of Canary Islands, Azores and Madeira in most of the discussions gave some relevance to the event since it could help the implantation of local policies in conservation management

Kate Brown, representing the Convention on Biological Diversity (CBD) presented the Global Island Partnership (GLISPA http://www.cbd.int/island/glispa.shtml) that "assists islands in addressing one of the world's greatest challenges: to conserve and utilize the invaluable island natural resources that support people, cultures, and livelihoods in their island homes around the world". She provided an example of a capacity building network in Pacific islands.

Olivier Tyack and Margarita Astrálaga representing IUCN outlined the reasons of IUCN to cooperate with this Group of Experts on Islands: there is much to conserve; much to learn; and much to save! IUCN will contribute influencing policy and institutions.

Mª Mar G. Villagarcía described the NETBIOME initiative, an European support to biodiversity research on Islands (including Pacific tropical French islands), that will launch in 2010 a call for research projects within the field of tropical and subtropical research on islands.

Experts of several countries presented the problems that affect specifically island biodiversity on Azores, Madeira and Canary Islands (Macaronesia), Balearic Islands, Cyprus, Italian islands, North Atlantic and Baltic islands (Sweden, Norway, United Kingdom), Iceland and Arctic. In most of the cases the main problems are global warming, habitat destruction, pollution and IAS.

José Luis Martín Esquivel (Canary Islands Conservation Bureau) described the impressive biodiversity of Canary Islands and presented the ATLANTIS database, that allows the study of spatial distribution of species in a small scale (500x500 m) in the Macaronesian islands.

Antonio Machado (Observatorio Ambiental Granadilla) from Canary Islands described in detail the main problems that affect specifically island biodiversity, stressing the fact that the red-listing categories of IUCN cannot be applied to islands, a fact that was reinforced by José Luis Martín Esquivel and Paulo Borges (University of Azores, Azorean Biodiversity Group) that called for an international consensus and a complete revision of IUCN red-listing categories creating new evaluation tools for both islands and invertebrates.

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Paulo Borges (University of Azores, Azorean Biodiversity Group), described the Azorean Biodiversity Portal (http://www.azoresbioportal.angra.uac.pt/) and highlighted the importance of science communication for the general public, putting island biodiversity on the web. He also explained the importance of standardized studies and monitoring of island ecosystems using Long Term Ecological Studies (LTER).

Frederico Cardigos (representing the Azorean and Madeiran Governments) affirmed that along the whole processes of governance and nature conservation policies, it is assumed that public perception is of great importance and has a considerable impact on the way politicians react. In addition he presented the plan of the Azorean Government for the management of both terrestrial and marine environments.

António Machado referred that the task is immense and complex, and that as an island decreases in size and its distance to the mainland increases (isolation), its ecological vulnerabilityalso increases, the data is scarcer, and there is insufficient local technical capacity and lack of political commitment.

IAS on Islands were discussed by Juan Luis Rodríguez Luengo (Canary Islands) that presented the TOP100 Macaronesian initiative, Piero Genovesi (Italy) that presented the ISSG (Invasive Species Specialist Group), Lucilla Carnevali that presented the database on IAS in European Islands and Sarah Brunel (EPPO), that talked on Biosecurity in Islands – Using Plant heath instrument to control IAS. Invasive species were considered the most important problem to the conservation of the native island biota and ecosystems.

By the end of the meeting the Priorities for action and Proposals to the Standing Committee of the Bern Convention were discussed under the coordination of Eladio Fernández-Galiano. Suggestions included: EU legislation dedicated to IAS on islands; portfolio of biodiversity on islands; manual of best practices; establishing working groups (climate change; IAS; IUCN criteria revision adapted to islands and invertebrates; communication improvement); for the parties – special attention to natural systems on islands promoting initiatives of biodiversity information gathering.

A major challenge of this group of Experts on Island Biological Diversity is to influence the policy-makers, managers and general public on the importance of putting special resources for the conservation of island biota and ecosystems, maintaining also a sustainable life for island human populations.

The solid experience and knowledge in island ecosystems of most of the experts that participated in this meeting, together with the commitment of local politicians is a strong indicator that the goals of this meeting will be entirely achieved, and that we will create an international network of expertise in island studies.

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update

Decomposing beta diversity

Baselga (2009) proposes a creative analysis to decompose patterns of beta diversity into effects of nestedness and species turnover. This kind of approach moves us closer to distinguishing different mechanisms that can contribute to observed measures of beta diversity. Two additional considerations will help to improve this analysis.

First, more effort should be devoted to carefully exploring the statistical performance of this index with artificial data sets that have specified amounts of randomness and structure. The analyses presented in Figures 2 and 3 are an excellent start, but we need an expanded analysis of different kinds of benchmark matrices to evaluate the potential for Type I errors (incorrectly rejecting a true null hypothesis) and Type II errors (incorrectly accepting a false null hypothesis). These kinds of tests are challenging because they

