



Raising the profile of freshwater biodiversity

Key points

- Freshwater biodiversity is not yet considered a well-established policy issue by many key stakeholders;
- Perception-based work targeting the policy communities is needed to raise the policy profile of freshwater biodiversity;
- Key policy-relevant scientific questions are related to linking biodiversity both to ecosystem functioning and to ecosystem services (e.g. food and maintenance of water quality);
- More work is needed to transfer scientific results underpinning policy-relevant scientific questions to the policy community and other stakeholders. Particular attention should be paid to results related to novel freshwater ecosystems and the value of biodiversity informatics and eco-informatics (e.g. biodiversity data portals and modeling tools).

The BioFresh project

The European Union FP7 BioFresh project is building an integrated and publicly available data portal to provide better access to the existing vast amount of information on freshwater biodiversity. This global portal on the distribution, status and trends of freshwater biodiversity will support the science, policy and conservation of freshwater ecosystems. A key objective is to engage biodiversity policy makers and relevant stakeholders by increasing accessibility to the BioFresh scientific results. BioFresh stakeholders include: Conservation International, Diversitas, Group on Earth Observations, Global Biodiversity Information Facility (GBIF), Global Water System Project (GWSP), UNESCO Institute for Water Education, Wetlands International, and WWF.

Stakeholder survey

In summer 2011, BioFresh project team members from the Ecologic Institute and Oxford University School of Geography and the Environment conducted an online survey with 52 respondents mostly from Europe – primarily from government, international NGOs and universities/research institutes – about the status and policy profile of freshwater biodiversity in policy-making and of various communication channels that link science and policy. The survey gives valuable insights to guide upcoming work in the BioFresh project by providing an effective response to the needs of policy makers and stakeholders.

Survey highlights

Nearly half of the survey respondents stated that freshwater biodiversity is a policy issue, but receives little notice and is therefore not yet well established. Respondents recommended awareness activities including: (1) more information about the value of

“...freshwater biodiversity conservation is in need of increased attention from policymakers – not only for moral or aesthetic reasons – but also for its role in maintaining and enhancing ecosystem services.”

BioFresh partners Dr Paul Jepson and Rob St.John at Oxford University



*This policy brief summarises the findings of a survey on freshwater biodiversity in policy-making conducted by BioFresh, available online at the following link:
http://www.freshwaterbiodiversity.eu/download/BioFresh_Policy_Stakeholder_Survey.pdf*

BioFresh

BioFresh is an EU-funded international project that runs from 2009-2014 (Contract No. 226874). It aims to build a global information platform for scientists and ecosystem managers with access to all available databases describing the distribution, status and trends of global freshwater biodiversity.

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freshwater biodiversity, especially related to ecosystem services; (2) perception-based work targeting the policy community and civil society; (3) an increased integration of freshwater biodiversity in European environmental policies, especially the Water Framework Directive, Common Agriculture Policy and Birds and Habitats Directives.

Survey respondents generally agree that the following scientific questions are highly policy relevant:

- (1) What is the link between freshwater biodiversity, ecosystem processes and ecosystem services?
- (2) How do we assess, map and value freshwater-related ecosystem services?
- (3) How do we incorporate freshwater conservation planning into integrated catchment and water management?
- (4) How will freshwater biodiversity and ecosystems respond to climate change?

The following scientific questions are currently seen as less policy relevant, and therefore, more work is needed to translate their underlying concepts into pertinent policy information:

- (1) How do novel freshwater communities form, is this a common phenomenon and what are the ecological and evolutionary consequences?
- (2) What is the value of biodiversity informatics and eco-informatics (biodiversity data portals) to policy and policy makers?

Novel ecosystem formation is inextricably linked to climate change, with potential significant consequences to the provision of ecosystem services and for conservation management. Therefore, awareness raising and knowledge transfer on the processes, implications and potential mitigation strategies with regard to novel ecosystem formation is likely to remain necessary amongst key policy stakeholders. The response to the question regarding the value of biodiversity informatics and eco-informatics suggests that respondents are not frequent users of biodiversity data portals. Nevertheless, raising awareness of what biodiversity informatics and eco-informatics are, and the value they provide to policy decisions is likely to remain important.

BioFresh: integrating science and policy

The survey finds that preferred methods for receiving scientific information on freshwater biodiversity include face-to-face briefings, policy briefs and conferences/workshops, with less interest in newspapers/magazine articles. Blogs and YouTube-style videos are recommended, with blogs allowing for real time targeted interaction between the scientific and policy/stakeholder communities.

The main objective of the BioFresh project is to enhance science to policy information exchange in a number of ways. The data portal aims to be a key resource for scientists, conservationists and policy makers. The BioFresh blog (<http://biofreshblog.com/>) discusses environmental issues with expert opinion and insight from the BioFresh scientific consortium. It features posts summarising scientific papers published by consortium members as well as recent policy developments. In parallel, the BioFresh project is cataloguing a 'cabinet of freshwater curiosities', a digital collection of the world's most fascinating, bizarre and unique freshwater plants, animals and phenomena, to engage the wider public. An animated video offers a productive and engaging means to raise awareness on the value of freshwater biodiversity among civil society; a second animated video entitled 'Water Lives' about freshwater biodiversity is also available on the BioFresh website.

Source: Anzaldua, G., E. Kampa, I. Turcotte, R. St. John, P. Jepson (2011). *BioFresh online survey on the profile of freshwater biodiversity in policy-making: Evaluation Report*. 31 pp.