

# How vulnerable is freshwater biodiversity to climate change?



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## How vulnerable is freshwater biodiversity to climate change?

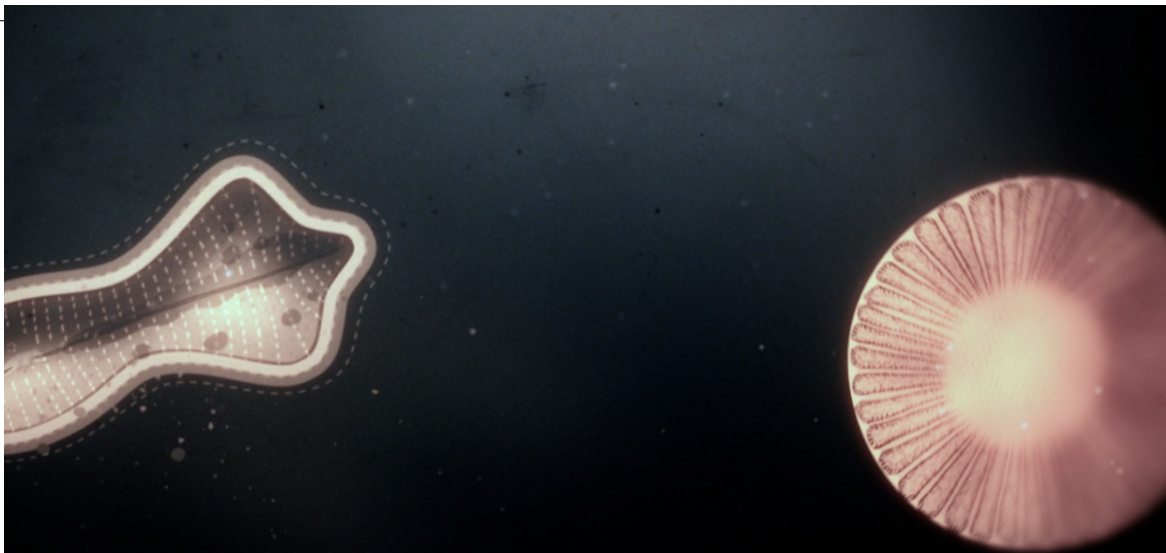
BioFresh is developing an interactive Climate Vulnerability Index that will enable scientists, policy makers and freshwater managers to map climate vulnerability for the freshwater species that they are interested in. Contact [jon.david@ouce.ox.ac.uk](mailto:jon.david@ouce.ox.ac.uk)



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**What is the link between freshwater biodiversity and ecosystem services?**

## What is the link between freshwater biodiversity and ecosystem services?

BioFresh scientists are working to provide an answer. The relationship between freshwater biodiversity and the services and benefits provided by freshwaters may be one of the most difficult to examine and understand in ecosystem science. The risk is that if clear linkages are not shown the importance of freshwater biodiversity conservation and management may be down played within the new ecosystem services policy frame.

Contact: [biofresh@freshwaterbiodiversity.com](mailto:biofresh@freshwaterbiodiversity.com)

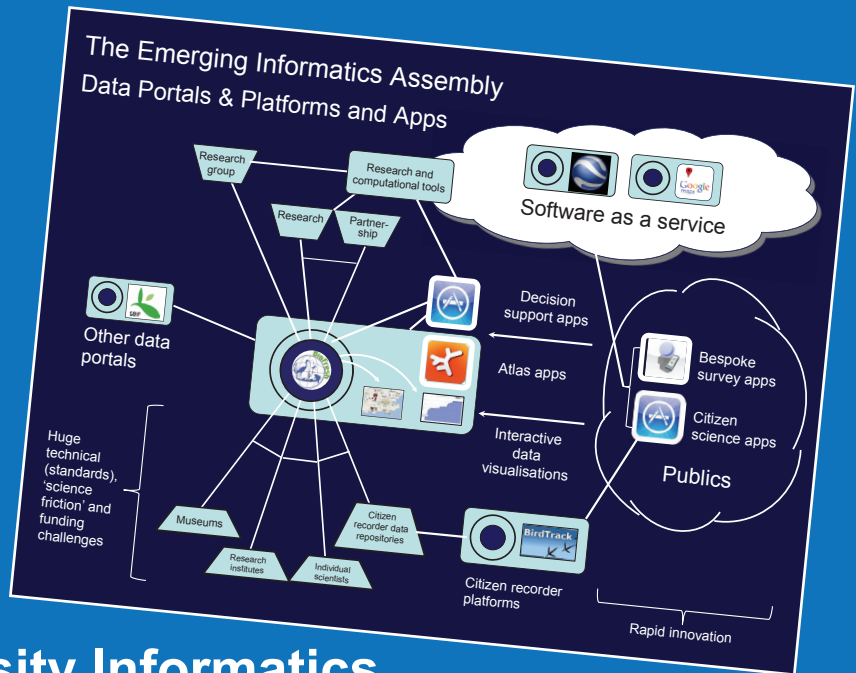


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## The Emerging Informatics Assembly Data Portals & Platforms and Apps



# Is Biodiversity Informatics poised to be a game changer?




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## Is Biodiversity Informatics poised to be a game changer?

BioFresh is constructing a freshwater biodiversity data portal and platform as a contribution to the emerging biodiversity informatics ecosystem. This data infrastructure will support 'bigger' science, evidence-based decision making and new forms of citizen engagement with data. Contact [data@freshwaterbiodiversity.eu](mailto:data@freshwaterbiodiversity.eu)



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**What factors explain historic  
and present day patterns of  
freshwater biodiversity?**

Photo: Andreas Hartl



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## What factors explain historic and present day patterns of freshwater biodiversity?

Three hypotheses have consistently emerged as the most powerful for explaining variations in patterns of freshwater biodiversity, namely species-area, species-energy and history. The BioFresh scientific partnership is quantifying each hypothesis to predict changes in freshwater biodiversity across taxonomic groups and across scales. Contact [freshwaterbiodiversity@igb-berlin.de](mailto:freshwaterbiodiversity@igb-berlin.de)



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**Are established  
conservation planning  
frameworks appropriate for  
freshwater biodiversity?**

Photo: Núria Bonada



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Are established conservation planning frameworks appropriate for freshwater biodiversity?

BioFresh has established that the answer to this question is No.  
We have developed a new Key Biodiversity Area criteria specific for  
freshwater biodiversity and applied these to Africa.  
Contact [freshwaterbiodiversity@igb-berlin.de](mailto:freshwaterbiodiversity@igb-berlin.de)



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A photograph of a stream with a large pile of fallen autumn leaves and sticks floating in the water. The leaves are in various shades of yellow, orange, and brown. The water is dark and rippling. The text "Are we capable of policies that frame water as both a resource for humanity and a medium for life?" is overlaid in white at the bottom of the image.

**Are we capable of policies that frame  
water as both a resource for humanity  
and a medium for life?**




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## Are we capable of policies that frame water as both a resource for humanity and a medium for life?

Water is at the top of the policy agenda which is great. However, the policy discourse is currently framed in terms of security and risk, which views water as an inert resource for drinking, irrigation, and use in industrial processes. The relationship between water as an instrumental resource and as the basis for dynamic and diverse ecosystems is not yet understood. BioFresh is assembling the data infrastructure needed to investigate this relationship. In the meantime it would be wise to be prudent and develop policies to manage water as socio-ecological systems. Contact [biofresh@freshwaterbiodiversity.com](mailto:biofresh@freshwaterbiodiversity.com)



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**Should awe and wonder be taken seriously as an ecosystem service?**



Photo: U.S. Fish and Wildlife Service



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Should awe and wonder be taken seriously as an ecosystem service?

Beneath the surface lives a remarkable array of awesome and curious life. Sturgeon are one example but the 18 species are now all classed as critical endangered. Wouldn't it be fantastic if giant sturgeon cruised the world's great rivers again. For more on amazing freshwater biodiversity visit the BioFresh Cabinet of Freshwater Curiosities: [www.cabinetoffreshwatercuriosities.com](http://www.cabinetoffreshwatercuriosities.com).



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# BioFresh



BioFresh is an EU-funded international project that 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. BioFresh integrates the freshwater biodiversity competencies and expertise of 19 research institutions. We offer a press kit, with range of information and resources about BioFresh which can be downloaded from [www.freshwaterbiodiversity.eu](http://www.freshwaterbiodiversity.eu).



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