

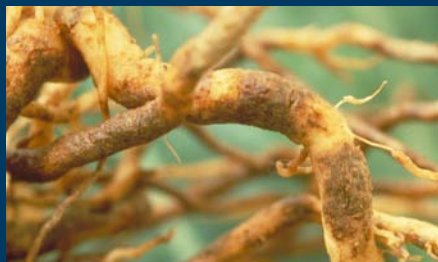


Cooperation and shared strategies for biodiversity research programmes in Europe

Newsletter - November 2012 -



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BiodivERsA is the network of national funding agencies in Europe that aims at building a dynamic platform for encouraging excellent and policy-relevant biodiversity research at a pan-European scale. It is now launching annual calls for proposals on prioritised topics that correspond to the most pressing strategic issues that biodiversity and ecosystem services currently face, with budgets of approximately €8-9M per call. After a first European joint call in 2008, BiodivERsA launched three additional calls over the past three years. November 1, 2012, the network launched **its fourth joint call on “Invasive Species and Biological Invasions”**, which was identified as a very hot topic requiring the support of pan-European and cross-disciplinary projects. The announcement of the call is presented in page 3. The provisional budget for this call is close to 8M€ and 10 countries are participating. The launch of this fourth call demonstrates the willingness of BiodivERsA partners to offer recurrent and substantial funding for biodiversity research projects despite a difficult financial context. Following the usual turnover in BiodivERsA calls management, the secretariat of this call is ensured this time by the Research Council of Norway (RCN) (see profile, p.8).

This newsletter also presents **the 9 projects funded under our 2011-2012 joint call on “Biodiversity Dynamics: Developing Scenarios, Identifying Tipping Points and Improving Resilience”**.

These projects often use an interdisciplinary approach, combining biological sciences, modelling, and earth sciences with sociology, economics, policy and management sciences, to achieve scientific excellence and policy relevance. In parallel, the projects leaders have planned various initiatives to mobilise stakeholders and to facilitate the interactions with policy makers. The projects will take into account societies’ expectations, with a clear European added value. As with other BiodivERsA joint calls, the results will be analysed and illustrated in a specific brochure, to be released in early 2013, including statistics, and a presentation of the funded projects.

I am very happy to **welcome two new agencies** which have joined the BiodivERsA network during the summer, with the status of observers: The National Science Centre of Poland (NCN), coming from a European country that was not yet represented in the consortium; and the French National Agency for Water and Aquatic Environments (Onema). Actually, Onema (see profile p.9)

participates in the current joint call on “Invasive Species and Biological Invasions” as a full member of the call steering committee. Their integration has been facilitated by a smooth-running consultation procedure with the BiodivERsA partners, demonstrating BiodivERsA’s ability to ensure its extension with efficiency and flexibility.

BiodivERsA members are proud of their efficient investment in BiodivERsA calls and other activities. Our network promotes cross-border cooperations and funds excellent research projects in terms of science and societal relevance, thus providing hands-on solutions for tackling biodiversity loss and ecosystem degradation at the European level. As a result of its regular commitment and the development of a strategic and multi-annual vision of priorities for this research area, **the network is now coming close to its objective of reaching 45 M€ to support pan-European biodiversity research on priority topics over the 2008-2014 period**: a very good start towards a significant integration of national research programmes and skills !

I wish you all an interesting and inspiring read!

Xavier Le Roux
Coordinator of BiodivERsA

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2012-2013 Call for Proposals on «Invasive Species and Biological Invasions»

Altogether, 10 countries have confirmed their participation in this transnational programme: Austria, Belgium, Bulgaria, France, Germany, Lithuania, Norway, Portugal, Sweden and Turkey. **The total provisional amount of the call is close to 8 M€.**

Scientific teams from these countries are invited to form transnational research consortia with a total of at least 3 different countries participating in the call, and to submit proposals before the **13th of February 2013**. Nevertheless, a mandatory pre-registration of the projects (title, summary, consortium and preliminary budget figures) is required by the **14th of December 2012**.

The call will address the five following, non-exclusive themes:

- 1) **Demonstrating and characterising the impacts of biological invaders**
- 2) **Understanding mechanisms of biological invasions and levers for mitigating and/or reversing the impacts of biological invaders**
- 3) **Evaluating the interactions between invasions and other global environmental changes**
- 4) **Biological invasions and public perceptions**
- 5) **Biological invasions and adaptation**

The research proposals will be evaluated against criteria of scientific excellence and policy relevance. It is also expected that the European scope of the

projects will provide a clearly identified added value to the research carried out.

The budget available by each participating agency/country is provided online at www.biodiversa.org, as well as a FAQ, a partner search tool and the applicant form for indicative purposes only. An EPSS will be available for the full application submission at a later stage.

As national eligibility rules apply to this pan-European call, the potential applicants should consult relevant documents and contact their National Contact Point for more information (links to documents and contact details are available on the BiodivERsA website).

For a full description of the call for proposals and how to apply, please see our website at <http://www.biodiversa.org>

- **BiodivERsA 2012-2013 Call Secretariat:**
Research Council of Norway
Per Backe Hansen
E-mail: pbh@rcn.no
Phone: +47 22 03 73 03
- **National Contact Points information is available at www.biodiversa.org/411**



BiodivERsA 2011- 2012 Call: Summaries of the funded projects

9 research projects have been funded under the BiodivERsA 2011-2012 joint call on “Biodiversity Dynamics: Developing Scenarios, Identifying Tipping Points and Improving Resilience” for a total funding amount of 8.8M€ among 10 countries.

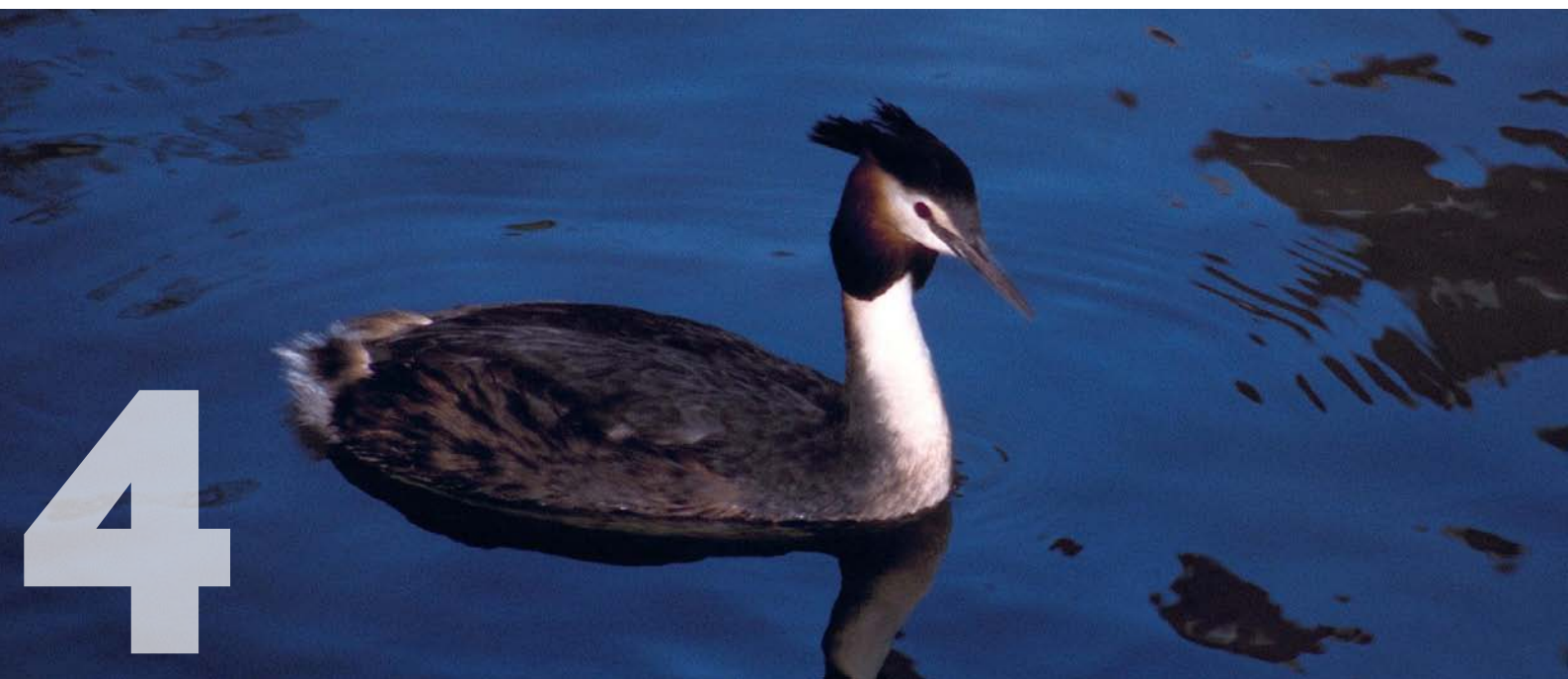
Below are abstracts of projects’ aim and ambition. Further information is available on the BiodivERsA website: www.biodiversa.org

EC21C **European Conservation for the 21st Century**

Coordinated by a scientist from Portugal, the EC21C project involves teams from France, Germany, Portugal and Sweden who undertake to analyse and model species responses to global change. They will build, test and apply across Europe a framework for the integration of species-level forecasts into ecosystem resilience and tipping point forecasts. This process links species distribution models, species-based dynamic vegetation models and forest gap models for a wide range of plant and animal taxa. The potential for integrating these forecasts into adaptive governance will be examined using the Green Infrastructure approach, addressing management capacities, priorities and implementation at local, regional and European scales. A participatory approach involving stakeholders and ecological modellers will be used to develop scenarios for conservation decision-support as well as recommendations for European policy making.

CoForTips **Congo basin forests: tipping points for biodiversity conservation and resilience of forested social and ecological systems**

CoForTips brings together teams of researchers from Austria, Belgium and France with a French coordination. Forests of Congo Basin have been chosen as fields of study for their exceptional biodiversity, providing critical ecosystem services and supporting the livelihood of vulnerable communities, while they are under the pressure of global changes. The purpose of CoForTips is to foster better management of the Congo Basin forests through a better understanding of the biodiversity dynamics and the resilience of forested socio-ecological systems and the construction of scenarios of biodiversity. The results will be of interest to the regional partners but also to the European Union, as European countries are involved in many regional activities and programs including forestry, logging, conservation and sustainable development.



BiodivERsA 2011-2012 Call projects

BUFFER

Partially protected areas as buffers to increase the linked social-ecological resilience

The BUFFER project mobilises teams from France, Norway, Portugal and Sweden, and is coordinated by a French researcher. They will explore the adaptability and transformability of coastal zones, which have crucial role in the economic, social and political development of many countries, but are experiencing high rates of pressures.

In a context where European countries develop common agreements to protect their coastlines, the BUFFER teams assume that Partially Protected Areas can increase the social and ecological resilience of coastal ecosystems. Using various marine and freshwater study cases, they expect to identify the drivers of resilience in PPAs in order to adapt derived goods and services necessary for human welfare in a context of pressures. The final goal of the researchers is the identification and integration of indicators of coupled social-ecological resilience that can be used as tools for decision-making within the framework of better governance of policies and management of multiple uses in coastal areas.

FISHCON

Biodiversity scenarios for fragmented landscapes; freshwater connectivity and the future of fish diversity

Research teams from Germany, Norway and Sweden, coordinated by a Norwegian scientist are involved in this project. They will investigate the impact of management practices on future scenarios of freshwater fishes. The numerous essential ecosystem goods and services provided by freshwater ecosystems and their notable limited connectivity make it a relevant environment for the project. Considering that the connectivity of a system can largely determine its resilience to environmental changes, this study will focus on the impact of anthropogenic connectivity modifications on freshwater ecosystems in combination with impacts of other environmental changes. The researchers will build integrated scenarios for key biodiversity indicators used in Environmental legislation and will explicitly link present-day management of habitat to plausible trajectories of biodiversity.

«... to explicitly link present-day management of habitat to plausible trajectories of biodiversity.»

LIMNOTIP

Biodiversity dynamics and tipping points in our future freshwater ecosystems

Coordinated by a Swedish scientist, the project brings together research teams from Austria, Germany, Norway and Sweden, covering a broad panel of disciplines including biology, ecotoxicology, management sciences, economics, and mathematics. This project aims at studying freshwater ecosystems and the impacts of human activities on their evolution. Despite their major importance as natural habitats and sources of services, freshwater ecosystems have been heavily affected by human activities during the last century. LIMNOTIP will improve our knowledge on the mechanisms behind regime shifts in freshwater ecosystems, and on the circumstances that trigger them. This study advances research on eutrophication that causes abrupt regime shift in freshwaters, a phenomenon that becomes increasingly problematic. The research outputs will be translated into decision support tools for decision makers at different scales in Europe.

BiodivERsA 2011-2012 Call projects

TipTree

Scenarios for forest biodiversity dynamics under global change in Europe: identifying micro-evolutionary scale tipping points

The project is led by a French coordinator, with research teams from France, Germany and Sweden, to study the impact of global change on trees genetic adaptation and diversity. Forests are a major reservoir of biodiversity and trees directly impact the diversity and functioning of forest communities. Predicting the response of trees to ongoing global change is thus a critical issue. The main goal of TipTree is to identify tipping points in the demographic and micro-evolutionary dynamics of tree populations, and to assess how human actions interfere in the adjustment between the rate of evolution and the velocity of global change. This study will provide scenarios of ecosystem services and decision support for management at local and regional scale.

SIGNAL

European gradients of resilience in the face of climate extremes

Research teams from Belgium, Bulgaria, France and Germany, coordinated by a German scientist will study the effects of extreme drought on biodiversity and ecosystem functions. Their investigation focuses on the mechanisms of resilience in eight grassland sites across Europe, using three research directions: biodiversity experiments, climate impact research and biological invasion research. SIGNAL results will provide experimental evidence on mechanisms of resilience in grasslands across European gradients, which may serve to regulate ecosystem services in the face of climate extremes and foster the identification of early warning signals of thresholds of regime shift. The project's outputs will support EU policies and national legislative frameworks by providing highly relevant information about grassland resilience capacity across Europe and indicators of tipping points.



«... to regulate ecosystem services in the face of climate extremes and foster the identification of early warning signals of regime shifts.»

TIPPINGPOND

TIPPING points, biodiversity, resilience and ecosystem services: PONDS as model systems

Small inland waters are very important for regional biodiversity while they may shift from clearwater to turbid state because of eutrophication or increase of temperature. The Belgium coordinator of this project has mobilised research teams from Belgium, France, Germany and Sweden to study tipping points and early warning signs for regime shift in ponds, which are highly vulnerable to disturbance. The study will examine extant biodiversity and resilience to disturbance for these ecosystems, and early warning signs of regime shifts that may affect irremediably ecosystem services. The project will also rely on a range of stakeholders involved in inland waters including policy makers, nature conservation organisations, pond managers and owners, for whom the research outputs will be highly relevant.

BiodivERsA 2011-2012 Call projects

REGARDS

REsilience of marginal GrAsslands and biodiveRsiTy management Decision Support

The project involves research teams from Austria, Belgium, France, Germany and Norway, and is coordinated by a French researcher. European marginal grasslands are biodiversity hot spots owing to ecological constraints, biophysical heterogeneity, and centuries of non-intensive agriculture. Currently it is not clear whether these unique systems are vulnerable to ongoing environmental, socio-economic and political changes, or if they have developed a high resilience. REGARDS aims to unravel the mechanisms underpinning resilience of marginal grassland systems to global environmental and social change. The methodology combines various approaches like manipulations of plant functional diversity, analyses of soil microbial diversity and the assessment of multi-level governance structures and programs. Finally, the researchers will use a participative scenario-based approach with key stakeholders and decision makers to foster knowledge building and to enhance socio-ecological resilience from farm to regional level.

«... to unravel the mechanisms underpinning resilience of marginal grassland systems to global environmental and social changes.»



BiodivERsA partner profile



The Research Council (RCN) is Norway's official body for development and implementation of the national research strategy. The RCN is responsible for enhancing Norway's knowledge base and for promoting basic and applied research and innovation in order to help meet research needs within society.

RCN has three central areas of focus:

- **It serves as an advisory body on research policy issues.**
- **It facilitates the translation of national research policy objectives into action.**
- **It serves as a meeting place for researchers, funders and users of research findings, as well as for stakeholders affiliated with the world of research.**

Approximately one third of Norway's public sector research investment is channeled through the RCN. The remainder is transferred directly from the ministries to the relevant research institutions. In 2012, the RCN total budget amounts to NOK 7,4 billion (approximately 1,0 billion Euros). The Ministries of Education and Research and Trade and Industry are the most important contributors to the RCN budget.

Ecosystem and biodiversity research is carried out to a large extent through the Council's strategic research programmes Environment 2015, NORKLIMA (Climate change and impacts in Norway) and Oceans and the Coastal Areas. However, also other activities contribute significantly, and the total annual budget to this research area amounts to approximately NOK 240 million (a little more than 30 million Euros). BiodivERsA2 is affiliated with Environment 2015.

The RCN seeks to enhance international cooperation in areas that promote higher quality and greater innovation capacity in Norwegian research, reinforce R&D areas of national importance, and strengthen Norway's role as a global partner. Norway participates actively in efforts to establish Europe as a world-leading region for research and innovation, as the European Research Area/ERA. Activities are focused on mobilizing the potential synergies of increased coordination of and coherence between national and international research activities, and attracting top-notch researchers and funding from abroad by promoting greater scientific merit, implementing measures to facilitate researcher mobility and gradually opening up national research programmes to participation from abroad. This is the Council's background for its current participation in about 20 FP7 ERA-nets, as well as in all the 10 launched Joint Programming Initiatives (JPIs). RCN also participates in research collaboration bilaterally with a number of countries across the globe.

According to the BiodivERsA work programme, RCN is responsible for managing the Call Secretariat for the BiodivERsA third call (2012-2013) on 'Invasive Species and Biological Invasions'. The task will be carried out in cooperation with the BiodivERsA Secretariat and Coordinator, the call's National Contact Points, the Call Steering Committee and the Evaluation Committee. The RCN will take into consideration lessons learned from the previous calls, and will continue using the same Estonian developed electronic proposal submission system (EPSS) as before. There will be appointed an Evaluation Committee to match the proposal received, and each proposal will be reviewed by a number of independent external experts both for its scientific contents and its policy impact. The RCN will make all efforts to carry out the task efficiently and in good compliance with the Memorandum of Understanding developed by BiodivERsA partners.



Eli Ragna Taerum
Senior Adviser



Per Backe Hansen
Programme Coordinator

BiodivERsA observer profile

Established in April 2007, Onema is a national agency active in the field of environmental French public service. It operates under the supervision of the ministry in charge of ecology and sustainable development.

Onema organises and produces high-level science and technology advice to assist in formulating, implementing and evaluating public water policy. It aims to contribute to overall and sustainable management of water resources and aquatic ecosystems, with a view to restoring water quality and reaching the good chemical and ecological status by 2015 set by the European Water framework directive.

More particularly, Onema's four major missions are:

- 1. Mobilise research on the issues of sustainable management of water and aquatic environments**
- 2. Gain knowledge on the status and uses of water and aquatic environments**
- 3. Protect and monitor aquatic environments**
- 4. Technical support for territorial management of water and restoration of environments**

The staff (over 900) operates with an annual budget of 125 million euros (drawn from the water fees collected by the Water Agencies).

Onema acts as a 'ways and means' agency in that it stimulates French public research, sets priorities for research on water and ecosystems, builds partnerships with research organizations and funds research targeting operational results for managers and policy makers. With the necessary scientific and technical personnel to direct the research, it devotes a significant part of its budget (12%) to R&D work. To achieve the general aim of protecting and restoring aquatic environments and biodiversity, a wide array of research themes and disciplines is covered. They range from specific biodiversity issues, such as ecological status assessment, species management or ecosystem services, to the pressures carried upon aquatic ecosystems. Research disciplines involved include ecology, geomorphology, hydrology, chemistry, economy and social sciences.

In parallel to its national missions, Onema is also present internationally and above all in the

European scene. This presence is mainly due to its commitment for sustainable management of water resources and related environments in line with major environmental global challenges (such as adaptation to climate change or halting the loss of biodiversity) and European policies for water and aquatic environment.

These activities include:

- . Common implementation of European policies for water (e.g. CIS of the Water Framework Directive and parent directives...)
- . Organization of scientific and technical support for the formulation/implementation/evaluation of EU water policies, including standardization aspects or research funding coordination (ERAnet IWRM.net; JPI Water)
- . Management of information about water resources, uses and aquatic environments, such as the Water Information System for Europe (WISE)

Issues such as biodiversity or water that integrate a wide scope of human activities have to be addressed in a cross-cutting manner: relying on interdisciplinary

research, implementing transboundary cooperation and articulating sectoral policies are key success factors. In particular, working out synergies between water and biodiversity research and policy is essential to achieving their respective goals. This is especially true for invasive species, an important threat to biodiversity that ignores borders, whether between water and land or between countries.

The alliance of scientific excellence and policy relevance as well as the emulation and exchanges between European member states created by BiodivERsA offer a high-quality platform to achieve Onema's research objectives. In August 2012, Onema has thus decided to become an observer part of the BiodivERsA consortium, and also to become a full participant of the BiodivERsA 2012-2013 joint call on 'Invasive Species and Biological Invasions'.

● www.onema.fr



Upcoming activities

Upcoming workshops and events:

- Presentation of BiodivERsA at the British Ecological Society annual meeting, 18 - 20 December 2012, Birmingham, UK
- Workshop on alternative models for sustained cooperation, early 2013
- Strategic foresight workshop to identify emerging issues and stimulate scientific breakthroughs, early 2013
- Stakeholder engagement workshop: To gather experience on stakeholder engagement from BiodivERsA funded projects and to develop guidance, 23-24 April 2013, UK

Upcoming activities for the next joint call:

- PRE-REGISTRATION OF PROPOSALS for the 2012-2013 joint call on 'Invasive Species and Biological Invasions' until 14 DECEMBER 2012
- Final submission of proposals (call 2012-2013) Deadline: 13 February 2013

Upcoming publications

- Leaflet presenting the BiodivERsA database for European and national biodiversity research : programs, projects and funding. The leaflet will include analyses profiling research funding in this domain
- Brochure on BiodivERsA 2011-2012 funded projects (through the call on 'Biodiversity Dynamics: Developing Scenarios, Identifying Tipping Points and Improving Resilience')

BiodivERsA partners

FRB, France (Coordinator) - FWF, Austria - BeISPO, Belgium - BNSF, Bulgaria - ETAG, Estonia - ANR, France - MEDDE, France - ONEMA (observer), France - DFG, Germany - PT-DLR, Germany - VM, Hungary - RCL, Lithuania - NWO, The Netherlands - RCN, Norway - NCN (observer), Poland - FCT, Portugal - MINECO, Spain - FORMAS, Sweden - SEPA, Sweden - MFAL, Turkey - DEFRA, UK - JNCC, UK - NERC, UK.

Contributors: Hilde Eggermont, Per Backe Hansen, Claire Fréour, Frédéric Lemaître, Xavier Le Roux, Elisabeth Paymal, Nirmala Seon-Massin

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For more information:

Coordinator

Xavier Le Roux

Fondation pour la Recherche sur la Biodiversité

Xavier.leroux@fondationbiodiversite.fr

Ph.: +33 (0) 6 31 80 38 20

Secretariat

Frédéric Lemaître (Executive Manager)

Frederic.lemaître@fondationbiodiversite.fr

Ph.: +33 (0) 1 80 05 89 37

Claire Freour (Management Assistant)

Claire.freour@fondationbiodiversite.fr

Ph.: +33 (0) 1 80 05 89 36

Fondation pour la Recherche sur la Biodiversité

195, rue Saint Jacques

75005 Paris, France

