



CALL FOR PROPOSALS BIODIVMEX / MISTRALS 2013

The Paradox of the Mediterranean basin, a highly forcing environment of exceptional biodiversity: what origin, what reality, what future?

Context, objectives and issues of the call for projects

Background

MISTRALS is a decennial program for systematic observations and research dedicated to the understanding of the Mediterranean Basin environmental process under the planet global changes. From an interdisciplinary analysis conducted over the 2010-2020 decade, the aim is to anticipate the behavior of the system over a century, with the ultimate goal to provide scenarios for the evolution of habitable conditions in this ecoregion, and to recommend mitigation and adaptation measures to optimize them. MISTRALS is an initiative of French research organizations intended to be shared with all the Mediterranean countries, in a process of co-construction open to the aggregation of new themes. MISTRALS has seven thematic programs, which BIODIVMEX dedicated to researches on Mediterranean terrestrial and marine biodiversity.

Objectives

To promote and encourage scientific cooperation, networking, including thematic and partnership between the Mediterranean laboratories working on Mediterranean biodiversity, BIODIVMEX calls for projects. The submitted projects will be carried by a French laboratory and associate a foreign team (preferably South or East Mediterranean basin). Subvention/grant may not exceed € 5,000.

Are eligible projects of creating and facilitating groups working on the general theme developed below namely the Mediterranean paradox. These working groups will provide knowledge and scientific reflections on this topic, prepare and participate in a meeting of general confrontation in early 2014 which will be enhanced by a special issue of an international journal.

Issues

Global changes such as climate change, land use change and the increasing exploitation of natural resources affect the functioning of ecosystems, whether natural or manmade, continental or marine.

The Mediterranean is one of the regions the most threatened by the changes. This has recently led to identify this ecoregion as undergoing a major crisis (biome crisis). However, in terms of biodiversity, the Mediterranean region (sensu lato) is one of 34 hotspots (hotspot) in the

world, based on a strong wealth of plant and animal species and the presence of a very large number of endemic species. In addition to the "outstanding" biodiversity, the Mediterranean environment presents structuring species widespread in terrestrial landscapes e.g. (oaks, pines, scrub, wooded structured elements such as olive agroecosystems) and marine environments (or seagrass *Posidonia* e.g. corals). A large number of "natural" on protected areas around the Mediterranean basin are evidences of this richness. For example, for the two French Mediterranean regions, ten regional parks can be counted, as well as six National Parks and four reserves MAB. In addition, the Mediterranean region, also shows remarkable levels of biodiversity in agro-ecosystems such as old Montados Portugal, ancient olive groves located all around and other agro-forestry-pastoral systems where biodiversity has co-evolved with changing landscapes for several millennia.

The convergence of this remarkable biodiversity with the extent of human pressure corresponds to what we call the "Mediterranean paradox".

Behind this notion, is the idea that for millennia the Mediterranean is under strong human impact, but without proportional effect in terms of loss of species. Thus, despite the disturbance regimes and even degradation of ecosystems, it is difficult, so far, to clearly display a long list of specie losses.

In addition, this situation relates to an area that normally would be affected on the biodiversity plan in relation to its binding bioclimatic characteristics. However, it has long been understood that this "handicap" climate was actually a considerable evolutionary advantage behind the extraordinary Mediterranean biodiversity, including the combination of "climate particularity + habitat diversity" (habitat diversity is mainly related to geomorphology and different types of substrates).

However, it seems that the new forms of human impact (urbanization, agricultural intensification...), as well as climate change are now poised to change this and we went out gradually this Mediterranean paradox even if we can have today a precise inventory of the deterioration of the situation, particularly in terms of missing or actually threatened species.

These causes and consequences have hitherto not been properly evaluated and probably insufficiently discussed in relation to the impact of global changes.

The tender is structured around scientific issues raised by this paradox Mediterranean.

It would be of course to both identify the data and define more precisely the originality of Mediterranean biodiversity but also to propose and develop arguments that would be the most realistic assessment possible of the biodiversity state in the Mediterranean, and by major types of habitats (forests, freshwater lagoon systems, coastline, coastal and deep-sea environments, agro, small islands...). Beyond the census data, it would be useful to push the reasoning to offer real views and take courageous and ambitious positions, in order to have an argued and thoughtful state of the dynamics of Mediterranean biodiversity and changes in the associated processes (functional, scalable) and ecosystem services, with the dual purpose of guiding future researches on the one hand, and prioritize conservation and management on the other.

All of this background work, based on existing data, literature and knowledge of the scientists involved, could be formalized by the publication of a book or a special issue of a leading journal.

Of course, these investigations on ecosystems should be accompanied by a work under the humanities and social sciences to identify changes in the relationship between the organization of human populations and their territories.

The issue of co-evolution of ecosystems and socio-ecological systems and its explanatory power in terms of biodiversity may be at the heart of discussions.

Time scales (short vs. long time) are essential even to consider.

Ultimately, is expected an overall assessment of the issues and new forms of questioning about Mediterranean biodiversity.

2. Terms of the call for projects

The project, supported by a French laboratory, will focus, in a very short period of time (second half 2013) on establishing and operating a working and thinking group involving the North and South of the Mediterranean or Eastern basin on the general theme of the Mediterranean paradox. The tender wishes to encourage (but not exclusively) projects involving at least one team of "hard" sciences and one humanities team. Project leaders should take into account the fact that, at the beginning of 2014, a review meeting will be organized, which will lead to publications.

Documents required to submit applications:

The promoters must write a short essay (maximum 4 pages) in the form of a letter of intent detailing:

- Thematic approach chosen, its context, its relevance to the Mediterranean paradox
- Constitution and relevance of the proposed working group,
- Mode of operation of the working group (animation, coordination, schedule meetings, etc.)
- Financial application, which will be a maximum of 5,000 euros (meeting costs, mission expenses, entertainment),

The deadline for applications is July 26, 2013

Proposals should be sent by mail to Thierry GAUQUELIN:

thierry.gauquelin @ imbe.fr

The applications will be evaluated by the Scientific Council of BIODIVMEX so that the notification of selected projects be effective beginning September 2013.

Administrative information and submission: Thierry Gauquelin, Biodivmex coordinator
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