



OT-Med: call 2015 for collaborative projects, including post-docs, PhD fellowships and support to scientific events and mobility.

The call 2015 for collaborative projects is intended to encourage collaboration between member laboratories of OT-Med and to boost the excellence of their research on **topics, which have been acknowledged as strategic during the work package meetings** organized in November 2014. Unlike the previous years, only projects matching with the research topics listed below are eligible. Nevertheless, a few small projects proposing innovative avenues in the framework of the general priorities of OT-Med can be considered as eligible. **All projects must be interdisciplinary and must involve several OT-Med partners.** Multi-annual projects including Ph.D. and post-doc fellowships are welcome. The duration of the project must be compatible with the duration of the requested fellowship. We particularly appreciate co-funding (region PACA, ANR, CESAB ...). This call concerns also support to scientific events and mobility fellowships (ingoing and outgoing). Proposals involving national and international actions, including Southern countries, are particularly welcome. A total amount of 170 K€ is assigned to this call in 2015, in addition to a maximum of three PhD theses and two postdocs. For the multi-annual projects, this amount concerns the costs for the first year. The remaining cost being deferred to the 2016 budget.

It is a prerequisite for submission that a draft version of the projects was first presented to the coordinator of the concerned work package (WP), who will check the eligibility of the project and its compatibility with the priorities of the WP. The PI may be requested to modify the project and/or to merge it to another project to reinforce its scientific qualities.

Context

The project OT-Med is a « labex » funded by the French national programme « Investissements d'Avenir » for the period 2012-2019 (<http://www.otmed.fr>). OT-Med has as its objective to study the impacts of environmental change (climate, land use etc.) on ecosystem resources and services, as well as on human society in the Mediterranean Basin. OT-Med intends to create synergies between its participating scientists at all levels. This is being achieved by organising interdisciplinary exchanges in research and education, by promoting interdisciplinary research projects, through an ambitious policy for hosting visiting researchers, postdocs and PhD fellowships, and exchanges with Southern countries, by organising international symposia, summer schools and workshops, by organising scientific, technical and socio-economic databases resulting from research, for both scientists and stakeholders etc.

Research projects: eligible themes

We know that climate change and other anthropogenic drivers are likely to strongly affect Mediterranean socio-ecological systems in the near future. It is therefore necessary to assess the current state of the systems, and their expected dynamics, in order to support policies of mitigation and adaptation. Since the change will affect all aspects of the life of socio-ecosystems (SES), conducting research in separated compartments of science is necessary but also insufficient. More integrative visions are necessary and we have emerging ideas for these. There are still only few studies providing integrated assessment of the evolution of SES that attempt to couple the approaches of social sciences, earth sciences, biosciences, and ecology.

The organization of OT-Med in work packages is practical but, in order to reach the fundamental objectives of OT-Med, we must recognize the necessity to establish bridges between them.

WP1: Understanding and evaluating Mediterranean climatic changes and natural hazards (contacts: Olivier Bellier, bellier@cerege.fr, France van Wambeke, france.van-wambeke@univ-amu.fr)

Among the topics covered by WP1, new research should now push the studies of the natural risks at various system interfaces and also on different time scales. The interfaces between land, sea and atmosphere are particularly vulnerable to global changes, especially in the littoral zone, and in the cities built on the coast. Natural hazards interact and their effects are amplified by various anthropogenic factors such as land use, population densification and economic development. The main approaches and topics are:

- The studies of the natural archives (tree-rings, sediments, ...) to understand long-term processes related to the natural hazards and to the evolution of climate and resources.
- In relation with WP3, studies of risk modeling for the Mediterranean territories, behaviors of populations affected by natural hazards, vulnerability of ecosystems, resilience and the economic impacts, especially in the interface areas.
- The relevance of the site studies for the whole Mediterranean Basin (upscaling) and for a changing world implies a modelling effort in connection with TWP2.

WP2: Impact of climate and anthropogenic changes on Mediterranean ecosystems and services they provide (contacts: Wolfgang Cramer, wolfgang.cramer@imbe.fr, Alexander Ereskovsky, alexander.ereskovsky@imbe.fr)

New research should boost studies enabling to understand the impact of changing climate and land use on services provided by the marine, terrestrial and aquatic ecosystems. The core of the studies should be on ecosystems of significance at the scale of the entire Mediterranean basin. Particular importance is given to:

- The role of soils for ecosystem services provisioning.

- The role of biodiversity for ecosystem function and integrity.
- In relation with TWP2, the interaction between land and marine ecosystems affected by human activities and global change forcings, using a modelling approach.
- In relation with WP3, valuation of different ecosystem services for different stakeholders.

WP3: Human-environmental interaction: perception, adaptation and mitigation (contacts: Olivier Chanel, olivier.chanel@univ-amu.fr, Sylvie Thoron, sylvie.thoron@u-pec.fr)

WP3 focuses on modelling decision-making in the context of risks and compares the functioning of international environmental regimes for climate and biodiversity. The research should continue to support the societal significance work in the other WPs, in particular by developing socio-economical modelling (with TWP2). A particular effort should be made on:

- The perception of environmental problems (climatic change, biodiversity loss, natural hazards). This implies to work (i) on the influence of perception on the behaviour of individuals and on the decision making process, (ii) on the perception biases, how to limit them and to take them into account.
- The environmental consequences of the public policies: What kind of relation to establish with the stakeholders? Should scientists provide information on the society choices or inform on the local knowledge? How should scientists communicate scientific results?
- Research should help introducing the socio-economic dimension in the models developed by the other WP, in relation with TWP2. This includes the modelling of societal response to global changes, but also risk studies for decision-makers.

TWP1: The observation systems and databases (contacts: Thomas Curt, thomas.curt@irstea.fr, Patrick Raimbault, patrick.raimbault@univ-amu.fr)

TWP1 coordinates the observation systems and databases necessary to collect these observations. A large number of observatories are managed by the member laboratories of OT-Med. They concern a broad range of ecosystems. Research in TWP1 should strengthen research integrating several of the data streams from these observatories in order to answer interdisciplinary questions. Among these are:

- The carbon cycle: the existing measurement stations of greenhouse gas fluxes can be combined and completed to provide a transect from the sea to the ICOS tower of OHP, in order to better understand carbon cycle at the regional scale and its impact on acidification of the North western Mediterranean sea.
- Aix-Marseille, a model of big city: global change induces additional problems for sustainable development; a state of the art document of current knowledge about various interactions between climate change, biodiversity, land use, urbanism, economic development, water resources, health and other factors should be established in collaboration with stakeholders; this should be done in connection with the experience accumulated in other big cities of the Mediterranean basin.



- Regional datasets necessary for the modelling developed in TWP2 should be supported by TWP1: soil, vegetation, land use, agriculture, demography, economical activities ...

TWP2: Toward an integrated modelling of the Mediterranean systems (contacts: Alberte Bondeau, alberte.bondeau@imbe.fr, François Carlotti, francois.carlotti@univ-amu.fr)

The priority of TWP2 is to focus on modelling as a tool for exploring and understanding the interactions between the elements of the system (socio-economic units, marine and terrestrial ecosystems). This should lead for the Mediterranean system to the development of scenarios for mitigation of and adaptation in the context global change and anthropogenic action. To achieve this objective, it is proposed to:

- Design and adapt both socio-economic (e.g. agent-based) and ecosystem models to take into account the common forcing exerted on Mediterranean systems.
- Simulate numerically the development of the Mediterranean system in the next decade, taking into account the IPCC global change and associated socio-economic scenarios (e.g., land use). Sectorial models should be adapted and applied using the same forcings, first independently and then in combination, considering that full coupling is only a far objective or only possible for a few models.
- Key ecosystem functions and socio-economic activities affected by environmental change should be identified; indicators and methods of valuation of ecosystems services and socio-economic impacts should be developed.
- Provide scenarios of mitigation of global climate change impacts on ecosystems that could be useful for policy-makers.

Application requirements

Internal call for joint projects

- The planned research must be carried out within at least two member laboratories of OT-Med (see web site) or within one OT-Med member laboratory associated with one member laboratory of ECCOREV. If this condition is satisfied other laboratories and private enterprises are also welcome.
- A project may include costs for research expenses, small equipment, a PhD thesis fellowship (three years) or a postdoc fellowship (one year with a possible extension for a second year). We do not cover technicians' or engineers' salaries. Project costs relate only to personnel actually paid by the project – a substantial involvement of the PI and other OT-Med members is expected.
- After approval of a project, the selection of the candidates for the posts specified in the project (PhD students, postdocs) will be under the responsibility of the project PI(s), but approval by the OT-Med executive committee is required. Employment contracts will be drawn up and signed by OT-Med. For both PhD and postdocs, an international advertising of the position is requested in order to receive a number of high-level candidatures and discourage local candidatures.

For the postdoctoral fellowship, mobility is required. The candidates who did their PhD at the partner laboratory of OT-Med and who have no postdoctoral experience elsewhere in France or abroad are not eligible. For PhD candidates we expect good final results of their Master 2 (minimum “mention bien” or equivalent). In some strongly well-argued cases, a post-doc already working at OT-Med may be considered for a new but different post-doctoral project.

- The duration of the project may be between 1 and 3 years (a project including a PhD fellowship should be a 3-yr project).
- The funding amount that can be requested is not limited *a priori* but the demand must be compatible with the amount of money available for this call (see above). The selection committee may reduce the requested amount to keep a good equilibrium between the WPs.
- Co-funding (already obtained or requested) is welcome and enhances the chance of selection. Thus, the call may be used as “seed money” to prepare a new project, to consolidate the financial plan of a starting project, or to complete an ongoing project.
- Only projects corresponding to research strategy of each WP (specified here above) will be funded, with the exception of possible small projects proposing new avenues but strictly in the framework of the OT-Med general priorities.
- Only the projects accepted by a WP coordinator are eligible. But this eligibility does not guarantee the selection of the project.

Support to mobility

- **Outgoing fellowship:** This call intends to help any scientist active in OT-Med to make short visits in a foreign institution to develop scientific collaborations in relation with the priorities of OT-Med (see eligible themes above). The visited lab can be in other Mediterranean countries or elsewhere, under the condition that the research is directly connected with the Mediterranean. We will support short visits of one to four weeks. Outcome of these fellowships should be a written project to be submitted to an external research agency or a scientific paper. A plan for this must be developed in the proposal.
- **Ingoing fellowship:** As for outgoing fellowship, there is also a possibility of funding short visits of scientists from abroad who want to initiate or develop collaboration with a research team member of OT-Med.

Note: OT-Med wants to help young scientist to attend to international conferences where they will have the opportunity to present their results as oral talk or posters. This is limited to one support per year and per person. Additional help should be requested to the team where the scientist works. This type of application is not covered by this call. Applications can be made directly to the director of OT-Med at any time but with a sufficient delay before the event (two months minimum). The decision will be made with consideration of available funds and the pertinence of the planned conference for OT-Med. If granted, OT-Med support must be made clearly visible on the poster or in the oral contribution.

Support to scientific events (of summer schools, conferences, workshops)

- The main organiser must be a member of one of the OT-Med laboratories.
- This call is intended to support international events, **occurring after 1st June 2015**, in which local students and scientists are given the opportunity to interact with high-level scientists from various countries and particularly Mediterranean countries.
- It is essential for these events that the organiser invites a number of distinguished speakers in order to attract a sufficient number of participants; a few fellowships must be reserved to young scientists from developing Mediterranean countries.
- Summer schools are intended to train young scientists in cutting edge research concepts or techniques related to OT-Med's scientific domains; workshops are intended to gather around a table the best specialists in a given topic within the scientific areas of OT-Med and to carry out collaborative work (data syntheses, reviews, model development ...); OT-Med funding can be used as a complement for a conference budget in preparation or for setting up a new conference. In any case, the event must be of an outstanding level and at the centre of the OT-Med priorities.
- The OT-Med committee may propose some key speakers, corresponding to the international collaborations that it is developing.
- Cross-initiatives between labex are also appreciated.

Process

- The proposal must be submitted **by a scientist from OT-Med** (in concertation with the WP leaders concerned) by email to the administrative director of OT-Med: bonifay@cerege.fr until the 5th February 2015, at 8 am.
- The proposal (reduced to a single pdf file) must follow the form provided in the appendix.
- After initial screening, the OT-Med Executive Board will assign two external referees for each project.
- At mid-April 2015, the Management Board will rank and select the projects; applicants will be notified before the end of June.
- The selection criteria are: (1) the scientific excellence, innovative nature of the project and quality of the interdisciplinarity, (2) the robustness (feasibility) of the work plan, (3) the consistency between the project and the priorities of OT-Med, (4) the quality of the organization set up to support the project, including a realistic and coherent budget, (5) the academic excellence of the investigators.
- It is possible that the selection of a given project is made contingent on a modification of the proposed budget.

Obligations of funding recipients

- The recipient must submit a short research report at the end of the project,



indicating (1) how the actual cost of the project was covered by the funds received, (2) how the objectives have been achieved, (3) the main output, in particular the papers published or submitted in relation with the project. For two-year projects, a progress report must be submitted before the end of the first year.

- The recipient must acknowledge OT-Med as the funding source in all communications related to the project, in particular in publications and oral presentations.