

Call for STSM applications – COST Action PERIAMAR (CA18221)

Call 4, Grant Period 3 (published on February 07th 2022, updated on March 18th 2022)

The COST Action PERIAMAR aims to design an environmental risk assessment (ERA) procedure to avoid unacceptable impacts of pesticides to amphibians and reptiles. With this purpose, PERIAMAR has established a multidisciplinary network of scientists from research institutions, regulatory agencies, chemical industry, environment-focused NGOs, and research private business that will analyse the available information and design an ERA protocol for possible implementation in the future. In addition, PERIAMAR will contribute, through its networking tools, to create a critical mass capable to address knowledge gaps requiring further research on the long term, in order to maintain an ERA scheme safe enough to amphibians and reptiles.

Short Term Scientific Missions (STSM) are exchange visits aimed at supporting individual mobility, strengthening existing networks, and fostering collaboration between COST Action participants. An STSM should specifically contribute to the scientific objectives of the COST Action, whilst at the same time allowing those partaking in the missions to learn new techniques, gain access to specific data, instruments and/or methods not available in their own institutions/organizations.

Eligibility rules

STSM applicants must be **affiliated to a legal entity** that should have within its remit a clear association with performing scientific or technological research. Examples of entities include, but are not limited to, public entities, universities, research centres, companies, associations, specific organisations (e.g. the European Commission, EU bodies, offices, and agencies, European RTD Organisations, International Organisations), or any other form of legal entity recognised under a national or international framework. The entity of affiliation should be **located in a COST Full or Cooperating Member¹, in a Near Neighbour Country² or be a European RTD Organisation**. Affiliation of the applicants to their legal entities should take any form of recognised relationship between the individual and the entity, including, but not limited to, a work contract, enrolment in a research performing study programme (e.g. PhD or Post-Doctoral programme), voluntary service in a NGO or emeritus professorship. The legal entities to which applicants are affiliated are considered as Home Institutions.

¹ Albania, Austria, Belgium, Bosnia and Herzegovina, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Israel, Italy, Latvia, Lithuania, Luxembourg, Malta, the Republic of Moldova, Montenegro, The Netherlands, The Republic of North Macedonia, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey, United Kingdom.

² Algeria, Armenia, Azerbaijan, Belarus, Egypt, Georgia, Jordan, Kosovo, Lebanon, Libya, Morocco, Palestine, Syria, Tunisia and Ukraine.

The Host Institution is the institution that will host the successful applicant. Host Institutions must fulfil the same criteria as legal entities recognized as eligible Home Institutions (see previous paragraph), with the only exception that **Host Institutions can be located anywhere in the world**. Host and Home Institutions cannot be located in the same country.

Characteristics of the STSM

STSM duration must be consistent with the characteristics of the planned work. Expected initial date, as indicated in the STSM application, can be at any time since the publication of the present call. STSMs must be finished, and the approved scientific reports submitted **by October 20th 2022**.

STSM grants are financial contributions for travel, accommodation and subsistence expenses. Applicants will indicate the requested contribution, which can be **up to a maximum of 4,000 EUR**. The Core Group of the COST Action PERIAMAR, upon mandate from the Action's Management Committee, will determine the quantity awarded to each approved grant based on the requested amount, duration, location and outcome of the application evaluation. Only for indicative purposes, applicants may observe the daily allowance rates established by COST for each country (www.cost.eu/daily_allowance).

Applications under this Call are encouraged to relate to one of the **scientific priorities** outlined in the table annexed at the end of this document. STSM related to other topics can also be granted as long as they are in agreement with PERIAMAR objectives. For details on those objectives, interested people are encouraged to consult the Action's [Memorandum of Understanding](#). An indication of possible hosts for the STSM of the present call is also given in the scientific priorities table. Applicants can also look for alternative hosts if these are suitable to carry out the proposed work plan.

Application process

All STSM applicants are kindly requested to follow the steps below in order to complete their applications:

1. Log in to your e-cost account (<https://e-services.cost.eu/user/login>). If you do not have an e-cost account, create one (<https://e-services.cost.eu/user/registration/email>)
2. On the left menu, click on 'COST Actions' and then 'Grant Applications' (direct link via <https://e-services.cost.eu/activity/grants>). Access the application form by clicking on the button 'Apply for Grant' and then 'Short-Term Scientific Mission grant'
3. Choose the action 'CA18221 – Pesticide Risk Assessment for Amphibians and Reptiles' and the Grant Period 3 'AGA-CA18221-3'
4. Indicate the proposed title of your STSM

5. Indicate the requested amount and banking details where the grant will be paid if awarded (these should have been indicated when creating your profile). If the correct banking information does not appear in the scroll-down list, modify it in your e-cost profile.
6. Indicate Start and End dates. Make sure that:
 - End date allows you to have your STSM report approved by October 20th
 - You have agreed with the proposed Host Institution on the STSM dates
7. Complete the information relative to the Host Institution and the responsible person at the Host Institution.
8. Save and continue to the 'upload documents' page.
9. Upload the following documents:
 - a) Grant Application, which should be prepared using the Grant Application Template available at the application page and also [here](#).
 - b) Confirmation from the STSM Host institution that the applicant can perform the activities detailed in the STSM work plan on the agreed dates, according to the template available [here](#).
 - c) Letter of support from the applicant's Home institution, which can be prepared using the template available [here](#).
 - d) CV, including a list of academic publications (no specific format required).Documents c) and d) must be uploaded using the option 'other' in the Document Type scroll-down list of the application.
10. Submit the application.

The application submission is completed if its status in the list of applications appears as "submitted". After submitting an application, applicants are recommended to contact the Action Chair (Manuel Ortiz, manuele.ortiz@uclm.es) and the Grant Awarding Coordinator (Dan Cogalniceanu, dcogalniceanu@univ-ovidius.ro) to inform them that an STSM application has been submitted.

DEADLINE FOR SUBMISSION OF APPLICATIONS: April 22nd 2022

Evaluation process and criteria

Applications will be evaluated by a panel chaired by the Grant Awarding Coordinator following a two-step process:

Step 1. Applications will be evaluated for their eligibility according to COST rules for STSM, as described in Article 6.4 of the COST Annotated Rules.

Step 2. Eligible applications will be evaluated according to the following four criteria:

1. Adherence to COST mission and policies:

- Geographical diversity. Notably, STSM to and/or from COST Inclusiveness Target Countries.
- Gender balance.
- Participation of Young Researchers or Innovators.

2. Pertinence, quality and viability of the proposed research work, and expected output in relation to the selected scientific priority, if applicable.

3. Suitability of the applicant: relevance and quality of research track record in relation to the career stage.

4. Suitability of the host: expertise and experience in the relevant research area, and technical and human resources available to support STSM success.

A maximum of five points will be awarded to each of the four criteria above. A minimum threshold of three points needs to be achieved for criteria 2, 3 and 4.

A final ranked list of the applications will be drawn up and agreed by the evaluation panel and submitted to the Grant Awarding Coordinator with a recommendation for approving the STSM to the highest ranked application(s).

Obligations of STMS grantees

STSM grantees must incorporate to the Host Institution on the date established in the selected application.

Within 30 days of finalisation of the STSM **or by October 20th 2021**, whatever comes first, grantees must access their STSM application in e-cost and submit a final report of the activities conducted during the STSM, which must be prepared using the template available [here](#). The Grant Awarding Coordination will evaluate the STSM report. In case that amendments to the STSM report are requested, this will be communicated to the grantee, who will submit the amended report within one week following communication from the Grant Awarding Coordinator or by October 25th 2021, whatever comes first.

STSM grantees are encouraged to read the [Grant Holder rules for participation in COST Action CA18221](#), relative to possible tax withholding to be applied to the grant.

Considerations relative to Covid-19

In order to minimize problems associated with the pandemics that STSM holders can face because of the need of travelling and staying abroad, PERIAMAR has established a series of measures to facilitate the development of STSM, which include:

- Possibility of last-minute cancellation of the STSM before the recorded start date.
- Possibility of last-minute modification of the dates, including total duration, at any time before the recorded start date and upon agreement with the host. This modification cannot preclude, however, from meeting the general conditions about timeline for STSM established in the present call and, if it involves a change of duration, may come along with a modification of the approved grant amount.
- Possibility of last-minute modification of the STSM host if there is an evident restriction to travel to the initially proposed country and an alternative, suitable host exists.
- Possibility of extension of the STSM duration if evident restrictions to return to the home country exist. This extension cannot suppose, in any case, the finalization of the STSM after the end of the current Grant Period.
- In general, any justified measure destined to minimize the inconvenience caused to STSM holders by the Covid-19 will be considered, as long as it matches COST principles, rules and guidelines.

STSM applicants are encouraged to get information about the conditions for travelling to the destination country. COST actions cannot cover expenses associated with the protocols that, in order to control the spread of SARS-CoV-2, may be imposed to travellers by the authorities from different countries.

Annex: Scientific priorities and proposed hosts for STSM of the present call

WG	Scientific priority (see description below)		Proposed Host(s) and contact
1	1.1	Review the suitability of exposure models (e.g. USEPA, EFSA...) to estimate the relative importance of different exposure routes.	RifCon, Germany (Dr Dirk Nickisch, Dirk.Nickisch@rifcon.de)
	1.3	Histochemical and immunohistochemical techniques on amphibians' tissues	University of Perugia, Italy (DVM Daniele Marini, marinivet@gmail.com Dr. Cecilia Dall'Aglio, DVM cecilia.dallaglio@unipg.it)
2	2.1	Feasibility of ecological mesocosms to ERA of pesticides on reptiles. A pilot test with wall lizards	CIBIO – Research Centre in Biodiversity and Genetic Resource, Portugal (Dr Miguel Carretero, carretero@cibio.up.pt)
	2.2	Update of functionality of the NA2RE system: the Atlas of distribution of European amphibians and reptiles	University of Porto, Portugal (Dr Neftalí Sillero, neftali.pablos@fc.up.pt)
3	3.1	Identify options to predict toxicity in vivo using in vitro testing	University of Aveiro, Portugal (Dr Isabel Lopes, ilopes@ua.pt)
	3.2	Review on the endpoints used to assess the ecotoxicity of pesticides to reptiles needed to improve animal welfare when making risk assessment	National Institute of Biology, Slovenia (Dr Anamarija Zagar, Anamarija.zagar@nib.si)

IMPORTANT NOTE: *the eligibility to host, or to be granted with, an STSM under the present call is not limited to the priorities and hosts listed in this table. Any STSM proposal addressing PERIAMAR goals can be granted if it matches the eligibility rules described in the call and is evaluated positively.*

Brief descriptions of the scientific priorities:

1.1. First versions of the exposure models used in the current EU risk assessment were released almost 20 years ago. At that time, the focus of these tools was definitely not on amphibian and reptile exposure. This review should clarify if a) the available tools cover all relevant exposure routes and b) the model approaches are suitable in space and time for the current and future amphibian and reptile risk assessment.

1.2. Different staining methods, lectins and/or antibodies will be used to investigate histologically tissues of amphibians. The trials that will be carried out may guide future steps to evaluate pesticide toxicity at microscopic level.

2.1. As a result of a previous STSM performing a preliminary analysis of the literature on mesocosm and other manipulative experiments with herpetofauna, it became clear that the studies performed to date are strongly biased towards amphibians while reptile species are largely neglected. This STSM intends to cover this gap by carrying out a pilot study with wall lizards *Podarcis* sp., a relevant component of the herpetofauna inhabiting agroenvironments and, hence, exposed to agrochemicals. The feasibility of a mesocosm approach to test the effects of biotic (competitors, predators, parasites) and abiotic (temperature, humidity) factors on wall lizard condition will be evaluated over a period of 5 months. The outcome of the work should be an experimental paper published in an indexed journal in the field and a dissemination note with the main conclusions. It may finally become a BSc or MSc if the student is interested.

2.2. In 2014, the Societas Europaea Herpetologica published an Atlas of distribution of European amphibians and reptiles in form of an innovative web map service that provided the possibility of access to herpetological distribution data through an online website, the NA2RE system (<https://na2re.ismai.pt/>). The system consisted in a main server connected to local clients hosting the national data bases. Each time the user requires to visualise a species, the main server connects to the local clients and builds the virtual data base. This system had the advantages of eliminating copyright issues with the data owners, which used to be the national governments, and avoiding records to be duplicated as the data updates are performed directly by the local clients. This is a very useful tool for managing amphibian and reptile populations at the continental level with different purposes, including the large-scale assessment of pesticide risks. It allows for identifying species susceptible of exposure to pesticides and other factors related to agricultural intensification and to evaluate distribution changes in association with such intensification. In order to make the NA2RE system more efficient for herpetofaunal population management and conservation, it needs to be updated to host new data at higher spatial resolution than the originally planned (i.e. 50 km). Also, the new available technologies, such as the use of Docker, will allow building the client in the cloud without the necessity of a physical server, hence facilitating the participation of national entities in the NA2RE system. Finally, easier administrative engines are necessary to improve the management of distribution data in the local clients, especially to adapt eventual taxonomical changes to the species distribution data. The holder of this STSM will provide support in this update while gaining training in the technological skills necessary to manage this distribution data bases and their applicability to wildlife management.

3.1. The work to be developed during the STSM period aims to compare the toxicity caused by xenobiotics in commercial cell lines of *Xenopus laevis* and in embryos of the amphibian species *Xenopus laevis* and *Pelophylax perezi*. With this, it is intended to identify alternatives to animal experimentation to be used at early stages of risk assessment for amphibians. This work will be developed within and ongoing research project.

3.2. Currently, there is limited guidance in countries around the world on the cumulative and experimental endpoints used to assess the effects of pesticides in reptiles, while the need for them is increasing with the need to research their exposure to pesticides which is still lacking. This work includes a literature and other information research to compile data on previously

used endpoints in reptiles. Following this, a specific review of research of the dermal and ingestion exposure experiments to pesticides in reptiles will also be made, with the aim to identify the type of experiments used. Both reviews will be useful to develop strategies how to implement the 3Rs (replacement, reduction and refinement) principles to improve the welfare of reptiles while defining methodologies to be used in the assessment that pesticide pay pose to this Class of vertebrates.