

MedWaves
Agència de Residus de Catalunya
Passeig de la Zona Franca, 107
08038 Barcelona, Spain

Terms of reference (TOR) for the recruitment of a laboratory with the ability to conduct analysis of PFOS and HBCD under the GEF-Funded Mediterranean Sea Programme (MedProgramme) on Enhancing Environmental Security (2019-2024)

**Component 1:
Reduction of Land Based Pollution in Priority Coastal Hotspots, and
measuring progress to impacts / Child Project 1.1
“Reducing Pollution from Harmful Chemicals and Wastes in
Mediterranean Hot Spots and Measuring Progress to Impacts” / Output 1.3**

About the position

MedWaves, in order to fulfil the obligations of the MedProgramme Child Project 1.1 (GEF ID 9684), the hiring of one laboratory to conduct analysis of various samples that may contain different Persistent Organic Pollutants (POPs).

The duration of this task is estimated to end just before the 31st of December 2024.

BACKGROUND/ DESCRIPTION OF THE PROBLEM AT STAKE

The continuing degradation of the Mediterranean coastal zone and marine environments, coupled with the urgent growing impacts of climate variability, the loss of livelihoods and dramatic deterioration of social conditions along critical sections of the Southern and Eastern Mediterranean shores, prompted the development of the Mediterranean Sea Programme: Enhancing Environmental Security (MedProgramme).

The coastal populace of the Mediterranean show significant diversity in terms of socioeconomic and gender aspects, leading to different population subgroups showing varying susceptibilities and vulnerabilities. Risks arising from pollutants and hazardous substances often work as threat multipliers, meaning although **chemical pollution and hazardous substances** have blanket exposure on general populations, the ramifications and long-term effects of these conditions vary. Threat multipliers exacerbate present conditions of poverty and lack of economic capital, lack of health equity and access, and gender and sociocultural differences, leading to different coping capacities of population subgroups.

In recent years, a number of POPs have been listed under the Stockholm Convention, we call these 'new POPs' since there is limited evidence of their impacts **specifically on the Mediterranean Sea**. However, in the scoping phase of this project and via the country NIPs, the use of 3 of these new POPs was confirmed in Lebanon, Tunisia and Morocco as priority chemicals in specific sectors:

1. **Perfluorooctanesulfonic acid (PFOS):** In 2009 Parties decided to list perfluorooctane sulfonic acid (PFOS), its salts and perfluorooctane sulfonyl fluoride (PFOSF) in Annex B to the Stockholm Convention (decision SC-4/17). **The use of firefighting foam containing PFOS** and other per and polyfluorinated alkylated substances (PFAS) has resulted in the contamination of ground water, drinking water and surface water in many countries including the Southern Mediterranean Sea, which are considered to be particularly vulnerable to water stresses and shortages under current climate change scenarios. Climate stresses are also predicted to increase the frequency and weather-driven danger of fires in the Mediterranean region, resulting in increased need and extent of application of firefighting foams. PFOS is added in firefighting foam concentrates at levels between 1 to 10%, and then further diluted in water to produce the foam, such that 1 tonne of PFOS will generate between 16 to 33 tonnes of POPs waste foam with concentrations of PFOS above the low POPs limit of 50ppm. In addition to disposing of waste foams, the Stockholm Convention guidance also recommends that the wastewater from fire-fighting be gathered and managed in an environmentally sound manner. Failure to treat firefighting water has led to contamination of drinking water sources in Germany and the US. USEPA found that the drinking water of at least 6 million citizens has PFOS/PFOA levels above the health advisory level; while in Germany, remediation of PFOS contamination at Dusseldorf Airport, including drinking water sources and a nearby lake, is estimated to cost 100m euro to remediate.

2. **Hexabromocyclododecane (HBCD)** In 2013, the Conference of the Parties listed HBCD in Annex A with specific exemptions for production and use of HBCD for expanded polystyrene (EPS) and extruded polystyrene (XPS) in buildings is a category of brominated flame-retardants, used in the Mediterranean in expanded polystyrene foam (EPS) and extruded polystyrene foam (XPS) in building insulation, and leading to exposure from products and dust at home and the workplace. HBCD is used at concentrations between 0.5 to 2.5%, such that 1 tonne of HBCD results in the contamination of 100 to 200 tonnes of EPS/XPS. For example, Egypt alone uses 120,000 tonnes of polystyrene a year, although there is no data on how much of this is treated with flame retardants.

CONTEXT TO MEDWAVES' INSTITUTIONAL FRAMEWORK

MedWaves is a centre for international cooperation on development and innovation based on the sustainable consumption and production approach (hereinafter SCP). It is attached to the Catalan Waste Agency (Agència de Residus de Catalunya, referenced as ARC).

The Centre is one of the Regional Activity Centres established in the framework of UNEP/Mediterranean Action Plan (hereinafter UNEP/MAP), the programme of UN Environment established to support the member countries of the Barcelona Convention for the Protection of Marine Environment and the Coastal Region of the Mediterranean. Since 2009, the Centre also operates in support of the Stockholm Convention, an international agreement involving 180 countries to fight against the generation of persistent organic pollutants, highly polluting and toxic substances. MedWaves has the mandate from the Barcelona and Stockholm Conventions to provide assistance to their Contracting Parties in fulfilling their commitments under those treaties, particularly through the support to the countries to shift to sustainable consumption and production patterns and circular economy.

In the performance of its mandate, MedWaves fosters the introduction of solutions on eco-innovation, marine litter/plastic pollution prevention, circular economy and safe alternatives to toxic chemicals through the provision of advisory services, technical assistance, innovative training materials, networking services and accompaniment in the implementation of measures. MEDWAVES also leads a comprehensive support programme for the creation and development of green, circular business models and enterprises.

Given its particular experience on the prevention of toxic chemicals in the Mediterranean region, MedWaves is involved in the execution of the Mediterranean Sea Program (Medprogramme): Enhancing Environmental Security funded by the Global Environmental Facility Trust Fund (GEF. Reference: ID 9607 together with UNEP/MAP (one of the executing Agency) and UNEP (implementing agency)

OBJECTIVE OF THE MEDPORGRAMME

The GEF/UN Environment “Mediterranean Sea Programme (MedProgramme): Enhancing Environmental Security” (2019-2024) represents the first GEF programmatic multi-focal area initiative in the Mediterranean Sea. It will operationalize priority actions to reduce major transboundary environmental stresses in its coastal areas while strengthening climate resilience and water security and improving the health and livelihoods of coastal populations.

As such, the MedProgramme is based on the success of the partnership between UNEP/MAP, the GEF and the 22 contracting parties to the Barcelona Convention. It is based on an overview of change that can generate a series

of 8 interconnected components (projects) to move towards "A healthy Mediterranean with productive and biologically diverse marine and coastal ecosystems that contribute to sustainable development for the benefit of present and future generations".

More specifically, it aims to accelerate the implementation of agreed priority actions to reduce the main transboundary environmental tensions affecting the Mediterranean Sea and its coastal areas, while strengthening climate resilience, water security and improving health, in addition to increasing the livelihoods of coastal populations.

It will be implemented in ten beneficiary countries sharing the Mediterranean basin: Albania, Algeria, Bosnia and Herzegovina, Egypt, Lebanon, Libya, Montenegro, Morocco, Tunisia and Turkey. Its eight Child Projects cut across four different Focal Areas of the Global Environment Facility Biodiversity [BD], Chemicals and Waste [CW], Climate Change Adaptation [CCA] and International Waters [IW]) and involve a wide spectrum of developmental and societal sectors ranging from banking institutions, the private sector, governmental and non-governmental bodies, industry, research, media, and various other organizations including Regional Activity Centres.

The MedProgramme is structured around 4 components:

- Component 1: Reduction of Land Based Pollution in Priority Coastal Hotspots and Measuring Progress to Impacts
- Component 2: Enhancing Sustainability and Climate Resilience in the Coastal Zone
- Component 3: Protecting Marine Biodiversity
- Component 4: Knowledge Management and Programme Coordination

MEDWAVES is mainly involved in the implementation of component 1, as described in the next section.

COMPONENT 1 - CHILD PROJECT 1.1

Under Component 1, MedWaves will be more particularly involved under Child Project 1.1, aiming to improve human health and coastal habitats, through the reducing pollution from harmful chemicals (POPs and mercury) and waste in Mediterranean hotspots and measuring progress to impacts. Hence, the project will focus on land-based sources of hazardous chemicals pollution, namely Persistent Organic Pollutants (POPs) banned under the Stockholm Convention, and mercury banned under the Minamata Convention. This work will complement actions by partners under Child Projects 1.2 and 1.3 which will focus on wastewater as a source of excess nutrient pollution to the Mediterranean.

Based on the problem and objective analysis the child project 1.1 has been designed around:

- a) Engaging with participating country governments on the provision of disposal options (for POPs) and long-term containment (for mercury) by UNEP/MAP; and
- b) Raising awareness on mercury in the healthcare sector, through targeted pilot activities to introduce alternatives by MedWaves.

These ToRs are related to the execution of '**Output 1.3. of Child project 1.1: Long term POPs reduction through pilot activities on new POPs alternatives**', under the responsibility of MEDWAVES, which seeks to demonstrate the practical replacement of new POPs through the adoption of environmentally sound alternatives in Mediterranean countries. The first phase of the programme will beneficiate to Lebanon, Morocco and Tunisia.

Prevention of the new POPs identified in the Stockholm Convention National Implementation Plans (NIPs) will be focused on the following chemicals and sectors:

- **PFOS will target Civil Defence and public firefighting organizations**, as these are the single largest users of PFOS foams; and also due to the direct application of large volumes of foams directly onto soil and surface waters. While the gas & oil, and restaurant extinguishers sectors also import large volumes of PFOS, and may discharge unused foams directly to sewers, these are more dispersed among multiple users and not cost effective for a first pilot project to address.
- **HBCD will target importers of EPS/XPS pellet and manufacturers of EPS/XPS insulation panels** and architects, engineers, financiers and standard setting and procurement bodies who may have a role in setting specifications for building developments. Users in the building sector were prioritized over textiles in vehicles, because of a more limited number of users in the building sector, compared to textiles that are in every imported-in service vehicles, trucks, etc.

TASKS TO REALISE

The objective is to analyze the samples to confirm the presence of Persistent Organic Pollutants (POPs) in the samples collected during sampling in Morocco and Tunisia. These samples will be sent directly to the laboratory that wins this position. The sampling process will involve the following indicative number of samples:

a) For PFOS:

- Collecting 27 samples from foam fire extinguisher reservoirs.
- Gathering 43 samples from sediments/groundwater in proximity to the foam fire extinguisher reservoirs or from sites where they have been used.

b) For HBCDD:

- Acquiring 28 EPX/XPS samples from panels/pellets
- Collecting 9 samples from leachate.

The laboratory will assist the two different organizations that conducted the sampling in obtaining all the necessary documentation to send the samples to the laboratory.

All samples will be transported at 4°C, although it is suggested to transport them at -4°C if possible. To minimize potential degradation to the maximum extent possible, they will be stored and preserved at -20°C until they are analyzed at the laboratory.

After the analysis, two reports will be prepared: one containing the findings from the samples collected in Morocco, and another containing the findings from the samples collected in Tunisia.

MEANS AND MODALITIES OF WORK

- The laboratory could start the work after the validation of the offer by the contractor, and after having received the required samples. The work will finish by the end of December 2024.
- The laboratory will work under the supervision and coordination of the Policy Area team of MEDWAVES.
- Working languages will be English.

ELIGIBILITY

The laboratory applicant must fulfil the following requirements:

- Being able to comply with national fiscal context and rules for receipt of international funds from Spain.
- Partnership and subcontracting are not allowed.
- Availability to analyse these samples in an evident way is a prerequisite.

HOW TO APPLY AND SELECTION PROCESS

Candidates should submit the following documents. The official forms to be submitted can be downloaded [here](#).

They consist of:

1. **Technical Offer (Maximum 4 Pages):** The proposal must articulate the extent to which applicants meet the specified conditions and demonstrate their capacity to successfully fulfil the mission. It also has to include the different techniques that will be used to analyse each sample and outline their approach to executing the activities outlined in these terms of reference. The submission may encompass a concise professional background, incorporating relevant project references related to the topic to underscore the applicant's capability.
2. **Financial offer:** This financial offer must specify the price for each kind of sample per unit, including taxes. Additionally, the price for each sample cannot exceed 150€. The total offer will be the sum of all the samples mentioned in the tasks to be completed multiplied by its corresponding price per unit. However, this does not imply that there cannot be increases in these numbers eventually. In such cases, the price will be added to the proposal based on the price per sample, ensuring that the total amount for all analyses never exceeds 14,000€ (including all taxes).
3. **Bank form** filled in, signed and stamped by the bank (if the stamp is not possible, the candidate will annex a digital certificate).

Offers must be sent to jordimoles@gencat.cat with the subject 'Laboratory to analyse samples containing POPs' before the 9th April 2024, midnight (CET).

All candidates will be notified upon the reception of the offers.

Applications who meet the requirements will be assessed and rated in accordance with the following criteria (100 points):

Points	Criteria
Maximum 55 points	The extent to which the technical bid is responding to the needs.
Maximum 45 points	Financial bid.

The MEDWAVES may also conduct personal interviews to facilitate the assessment.

If you have questions concerning these ToR, please contact: jordimoles@gencat.cat

SELECTION AND PAYMENTS

The winning candidate will be notified by email on the selection of the offer. From that moment on, work can start according to the calendar.

Payments will be made via bank transfer upon presentation of the invoice, and will be processed upon confirmation that all analyses are completed and the final report has been written.

Payments will be done in a period of 60 days after reception and validation of the invoice. The Contractor is not responsible for banking costs that might be applied by the consultant(s) bank, neither for changes in currency exchange.

AUTHORSHIP AND OWNERSHIP OF THE WORK

The ownership of the work covered by the Contract related to this ToR shall belong to the MedWaves and any use or mention thereof in publications, articles, interviews, conferences, etc., in any language and without any temporal or territorial limitation, shall have the relevant authorization and indicate the MedWaves as the owner. Thus, the selected expert(s), on behalf of any persons who, if appropriate, may collaborate with him/her in the drawing up of the Report, will assign to the MedWaves the rights for the reproduction, distribution and sale of the Report, in any form of publication and commercialization, for its use in any language and throughout the world, as well as for its partial reproduction for teaching or research purposes. Nevertheless, the MedWaves shall ensure that the name(s) of the material author(s) of the document appear(s) prominently on all the copies which are published, so that the latter may use the final or partial results of their work in the terms stipulated in this contract.

CONFIDENTIALITY CLAUSE

The information to which the selected expert(s) obtains access for the development of the purpose of this Contract, provided that it is not classified as public, shall be of a confidential nature and may not be used for activities other than those included in this Contract. In the event that a particular use of the information raises doubts with regard to respect for this Confidentiality Clause, the successful bidder must, in any case, request the consent of the MedWaves.