

Terms of Reference

for a Contractor to prepare an MSP Input study on elaboration of risks for coastal infrastructure due to climate change impacts in Šibenik-Knin County

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Scope of the assignment

This ToR refers to the execution of National Expert's tasks on the preparation of an MSP Input study on risks for coastal infrastructure due to climate change impacts in Šibenik-Knin County. The study will be prepared in the frame of the preparation of Input studies with recommendations for Marine Spatial Planning (MSP) and climate change adaptation in the Šibenik-Knin County marine area (in further text: Input studies), being the Activity 5.1 "Vulnerability and Feasibility Analysis of pilot areas" of the "Adriadapt - A Resilience information platform for Adriatic cities and towns" project (in further text: the Adriadapt project). The task will be accomplished in line with the key UNEP/MAP and EU legal requirements, such as the ICZM Protocol for the Mediterranean, the Regional Climate Change Adaptation Framework and the EU Strategy on adaptation to climate change. In addition, the task will take into consideration the national strategies on adaptation to climate change in Italy and Croatia.

Duration of the assignment

The assignment will be carried out in the period from mid-September 2019 to the end of February 2020.

Background information

The Adriadapt project aims at promoting local and regional resilience by developing the knowledge base required to identify suitable climate adaptation and planning options. In this way, the project will enable local authorities to respond to policy needs related to climate action in urban and coastal zones of the project area.

The project goal will be supported by four actions:

1. Harmonize and improve available climate-related knowledge generated by existing national and European monitoring and data collection networks, and produce new information to be used in the decision-making process;
2. Create a climate information system or knowledge platform for the Adriatic region (Adriadapt Resilience platform) containing best practices, guidance documents, legal frameworks and climate and vulnerability studies, to foster the design of multi-scale adaptation and resilience plans and measures, which will support safe and sustainable socio-ecological systems, linking natural, social and economic dynamics that cross transversally from the inland, coastal and marine areas in the two partner countries;
3. Test and integrate the knowledge platform in selected Italian and Croatian pilot areas which will transect the hinterland to sea to provide diverse solutions for a range of habitats.
4. Maintain and disseminate the information contained in the knowledge platform as a region-specific repository for climate policy and plans, which provides support and locally relevant information aiming at climate resilience planning. In addition, PAP/RAC will secure transfer of relevant knowledge to other Mediterranean coastal stakeholders.

PAP/RAC activities are related to the actions 2 and 4, and are structured in the working packages 4 and 5. Information to be provided is to be user-friendly, primarily targeted to the local and regional authorities of the two countries.

The Activity 5.1 "Vulnerability and Feasibility Analysis of pilot areas" of the Adriadapt project envisages that "in at least one area, the focus will be placed also on the marine aspects (activity and MSP plan)." In the Coastal Plan of the Šibenik-Knin County (see point 5 of the Background information) the

elaboration of a marine spatial plan was recommended. For this reason, Šibenik-Knin County, being the Project partner, is considered a relevant and appropriate candidate for being the pilot area in the Activity 5.1. County committee for management of the coastal and marine areas established to support implementation of the Coastal Plan is considered to be the key subject for orienting and for future implementing of the Input studies and recommendations, ultimate task of this contract.

The Input studies will be prepared in collaboration and for use of the Šibenik-Knin County with inputs by several selected experts, and supported by PAP/RAC, IUAV and CMCC (all being members of the Project Team), as part of the Activity 5.1 of the Adriadapt project.

Preparation of the Input studies should consider previous assessments carried out in the area – namely, the Coastal Plan for Šibenik-Knin County, with its accompanying studies. The Coastal Plan for Šibenik-Knin County was developed in 2015 by PAP/RAC and Plan Bleu as part of the UNEP/MAP project "Integration of Climatic Variability and Change into National Strategies to Implement the Protocol on ICZM in the Mediterranean" (ClimVar & ICZM), within the framework of the MedPartnership initiative. The plan also addresses a number of issues which are relevant for MSP, including in particular: coastal and maritime tourism, ports and marinas, aquaculture, biodiversity preservation and measures for protection of the narrow coastal belt. Measures to improve adaptation to climate change of these sectors (and a number of coastal issues) were identified by the plan, and can serve as basis for further, more detailed elaboration and update taking into account most recent knowledge of climate variability and change.

The Input studies should also take into account the requirement by the ICZM Protocol for the Mediterranean, Regional Climate Change Adaptation Framework for the Mediterranean Marine and Coastal areas, UN Environment's Ecosystem based adaptation (EbA), as well as European Maritime Spatial Planning Directive, Flood Directive, Marine Strategy Framework Directive and the EU Strategy on Adaptation to Climate Change.

Considering that area of this task belongs to what is recently recognised as "land-sea interactions" the Expert is invited to use PAP/RAC's terminology and to provide feedback on the proposed methodology presented in the document "Land-Sea Interactions in the framework of ICZM and MSP" and the relevant table attached.

Process of the Study preparation

The process of preparation of the final output, i.e. the Input study, will be carried out in three phases: (i.) establishment phase; (ii.) analysis phase, and the (iii.) presentation and adoption phase. The details on each phase, as well as the role of the National Expert (in further text: the Expert), in elaboration of coastal infrastructure risks due to climate change impacts are detailed below.

1. Establishment Phase:

In this phase the local authorities will be consulted. Operational co-ordination and harmonization between local authorities, the Expert and Project team members will be guided by PAP/RAC. Inputs for Scoping report will be prepared in this phase by the Expert with the aim to identify most important risks for coastal infrastructure in the narrow coastal belt of the Šibenik-Knin County that may be endangered by the sea level rise and by extreme weather events. Other inputs, concerning different issues, will be prepared by other selected national experts. These inputs will be presented at the Adriadapt training workshop for the entire Project team (including IUAV and other organizations involved related to support for MSP tools). Identification of trends of climatic parameters and impacts on coastal infrastructure, as well as on the important sectors in the area will be among the key outputs of this phase. The information needed for Scoping report inputs

will be delivered by the relevant County authorities. If certain information are lacking (but are considered important by County Committee) the Expert will take it into consideration.

Upon finalization, the Scoping report is to be presented to the County Committee and to other key stakeholders at the training workshop to be held at the end of this phase. At this training workshop the Expert should present up-to-date knowledge on the subject, and discuss with participants on the needed inputs for contributing to the finalization of the Scoping report.

2. Analysis Phase:

Based on the preliminary findings of the expert team (Input studies), the Expert will provide a deeper assessment of risks for coastal infrastructure in the narrow coastal belt of Šibenik-Knin County that may be endangered by the sea level rise and by extreme weather events (e.g. possible damage of infrastructure in terms of parts of infrastructure that could seriously reduce the sea water quality by contaminating it), taking into account additional information provided by local authorities during the preparation of Scoping report as well as the findings of the other expert team members. The Expert will provide general recommendations and measures to mitigate the (identified) impacts of climate change or to adapt to these impacts. Relevant findings from scoping phase and input studies should be communicated as applicable to be spatialized in order to eventually be organized in format suitable for Geographic Information Systems (GIS).

3. Presentation and Adoption Phase:

The Input studies with recommendations will be presented to the County Committee and other authorities and project partner assisting with introducing climate change and adaptation to it into future MSP.

The operational co-ordination and harmonization will be secured by PAP/RAC, by a series of meetings and workshops.

Key Tasks of the Expert

The key tasks envisaged under this ToR are the following:

- i. To update relevant information on the trends in climate parameters in Šibenik-Knin County related to impacts of climate change on coastal infrastructure.
- ii. To define the list of the data and information needed to be provided by the colleagues from the Šibenik-Knin County.
- iii. To prepare a chapter of the Scoping report and to participate in the integration of the results of the stage 1 Establishment.
- iv. To prepare a chapter of the Input studies with general recommendations and measures to mitigate identified impacts of climate change and to adapt to these impacts and to participate in the integration of the results of the stage 2 Analysis.
- v. To regularly attend meetings and workshops, and present the findings (detailed in text above) in different phases.
- vi. Provide comments on the integrated version of the Recommendations on enhancing resilience along the Adriatic coast.

Deliverables and Deadlines

The Contractor will prepare the following outputs:

Outputs	Deadline
Draft Section of the Scoping report	15 November 2019
Final Section of the Scoping report	15 December 2019
Draft Section of the Input studies	15 January 2020
Final Section of the Input studies	25 February 2020
Meeting/workshop presentations	2 days before the scheduled meetings/workshops*
Review of the Recommendations on enhancing coastal resilience along the Adriatic coast	26 February 2020

- *At least 4 Meetings/Workshops of the entire project team are envisaged in the period between October 2019 and February 2020, to be organized in Šibenik and in Split, Croatia.*

The deliverables should be prepared in Croatian with a summary in English, in addition to presentations for the meeting with partners where working language is English.

Responsibility and Communication

The Expert will be responsible to PAP/RAC Director or to project manager.

Qualifications

The Expert should have the following educational and professional qualifications:

- Senior professional level with a minimum of six years of experience in interdisciplinary technical sciences, with focus on climate change and its impacts;
- Advanced degree in any of project relevant technical or environmental sciences, relevant for this project;
- Ability to analyse issues and information and prepare briefs and summaries on key ideas and issues;
- Strong research skills, combined with superior communication and interpersonal skills;
- Fluency in both spoken and written Croatian and English.

Costs and Remuneration

The estimated value of the task defined by this ToR is of HRK 62,000. Travel costs pertaining to the expert meeting are included in the aforementioned amount. The payments will be made on an output-delivery basis, upon submission of the outputs defined in the point above and subject to clearance by PAP/RAC, as follows:

Instalment	Payments
Final section of the Scoping report	30%
Final Input Study with recommendations for MSP and for climate change adaptation in the Šibenik-Knin County marine area, and Recommendations commented	70 %