

## **Terms of Reference (TOR) for Consultancy services**

**Project:** Joint Monitoring for Environmental Protection in BSB Countries

**Post title:** IT Systems Information Management Researcher

**Duration:** 20.10.2020 - 16.06.2020

**Duty station:** Regional Environmental Centre for Caucasus, Armenia

### **Project Background**

Project “Joint Monitoring for Environmental Protection in BSB countries” is aimed at solving common problems of nature parks and protected areas in the Black Sea Basin (BSB). The overall project objective is to contribute to increasing the level of availability of cross-border compatible environmental monitoring data and information in nature parks and protected areas in BSB. The major project outcome will be the creation of an intelligent platform for the collection, processing and analysis of environmental data via Web-based cloud service for automatic data collection from wireless sensor networks and Web-based cloud service for video content. An Online Monitoring System (OMS) for environmental data in BSB will integrate the measurement data and will serve as a platform for the dissemination of the collected information and data. The developed smart technologies and intelligent wireless sensor networks will also be used for conducting a monitoring of the condition of natural habitats and the availability of invasive species, and for distance observation of territories which are most dependent on climate change and anthropogenic influences. A cross-border team of researchers will be formed who will develop a common methodology for monitoring the condition of natural habitats and the availability of invasive species and conduct the monitoring. The methodology will guarantee the collection of compatible data and topical information about the location and size of damaged areas, the types of pressure and the evaluation of potential sources and forms of threat. We will use distance methods (satellite/drone photographs) for territories most dependent on climate change and anthropogenic influences etc. For each nature park or protected area, permanent sampling control sites will be designated in which experts and volunteers will perform annual field observations. Based on the collected monitoring information Report on the assessed existing and potential sources and forms of pressure on key areas within protected territories of the Black Sea Basin will be developed and a List of proposed measures to be undertaken towards pollution preservation and restoration of the monitored key areas.

### **Main duties**

- In close cooperation with Smart Environmental Monitoring Expert develop online monitoring system (OMS) for environmental data monitoring, data inputs, in line with project targets and expected outcomes;
- In close cooperation with Smart Environmental Monitoring Expert and other researchers dealing with water, air and botany create database for collected data of river and dust air quality;
- In close cooperation with Smart Environmental Monitoring Expert develop testing and use of cloud information system for collecting, processing and storing data from drones and wireless sensor networks,
- In collaboration with Smart Environmental Monitoring Expert to ensure use of smart technologies and conducting joint monitoring of the Dilijan National Park,
- Regular participation in the meetings, cross border discussions and events within the project,
- Support the organization of the activities in Dilijan,
- Participation in field trips with Water quality and Air quality researchers, and experts on Smart Environmental Monitoring and Invasive species,
- Prepare progress reports and final report,
- Represent the project and give presentations when necessary,

**Required Qualifications:**

- Degree from accredited university in Geography, GIS Information Systems, Information management or another related field;
- Minimum of three years of professional experience relevant in GIS and data management;
- Understanding and experience of the protected areas in Armenia;
- Good analytical skills, ability to express ideas clearly and concisely both orally and in writing.
- Excellent oral and written communication skills, with an ability to communicate with a wide range of audiences;
- Strong ability to work in a team setting within multi-cultural environment with sensitivity and respect to diversity
- Ability to travel internationally when needed.

**Outputs, Terms and Conditions for provision of services**

- Prepare progress reports and final report with results of activities, analysis of compatible data,
- The collected information will be updated with remote sensing data through the developed smart technologies and it will be accessible (ensure accessibility of collected data in collaboration with project team and experts),
- In collaboration with Smart Environmental Monitoring Expert to ensure use of smart technologies and conducting joint monitoring of the Dilijan National Park,
- Regular participation in the meetings, cross border discussions and events within the project,
- Conduct necessary field trips with the researchers, and perform analysis of necessary information at spot,
- Represent the project and give presentations when necessary,
- Participation in preparation of final package of documents and reports,
- Reports on field trips targeting implementation of above mentioned tasks in a team with the national and international experts.

**Languages:** Fluency in Armenian (writing, reading, speaking) is necessary. Proficiency in English (writing, reading, speaking) is also necessary.