

## Stakeholder meeting to introduce the draft architecture of the System

Tbilisi

16 August 2024

The 4<sup>th</sup> stakeholders working group meeting in hybrid format for the project BUILDING UP INTEGRATED MONITORING AND EARLY WARNING FOREST FIRES DETECTION SYSTEM IN THE BORJOMI - KHARAGALI NATIONAL PARK BY INNOVATIVE REMOTE SENSING TOOLS, IN GEORGIA was held on August 16, 2024 in the Radisson Blu Hotel in Tbilisi organized by N(N)LE International Business and Economic Development Center (IBEDC).

The 4<sup>th</sup> meeting of the stakeholders working group is related to Activity 2.4: Organize a stakeholder working group to introduce the draft architecture of the integrated monitoring and early warning forest fires detection system to be used in Borjomi-Kharagauli National Park to present results of Activity 2.3 Design the integrated monitoring and early warning forest fires detection system for the Borjomi-Kharagauli National Park and Activity 2.5 Establish a detailed cost analysis of the system to stakeholders working group. The main objective of this meeting was to present selected the “smoke and flame detection technology based on the video cameras and management system” scenario, as an architecture of the integrated monitoring and early warning forest fires detection system to the stakeholders and to receive approval from them, which should be designed and deployed in Borjomi-Kharagauli National Park.

The National Agency of Protected Area, Beneficiary of the services, supported the organization of the 4<sup>th</sup> SWG meeting by coordinating communication with relevant public authorities and the stakeholders.

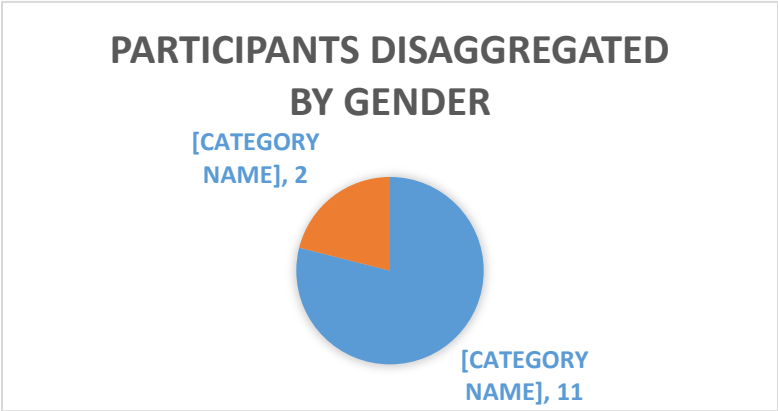
13 participants including IBEDC team and project stakeholders attended the meeting, as it follows (4 of them online base: Avtandil Mikaberidze, Giorgi Maisuradze, Merab Machavariani and Ioana Lazar):

No.	Name of the representative	Gender M / F	Institution and position
1.	Davit Kobakhidze	M	Head of division on biodiversity of Agency of Protected Area
2.	Avtandil Mikaberidze	M	Representative of Agency of Protected Area
3.	Giorgi Maisuradze	M	Representative of Borjomi-Kharagauli National Park
4.	Rati Gelashvili	M	Representative of Biodiversity Department of Ministry of Agriculture and Environmental Protection
5.	Mamuka Kemertelidze	M	Representative from Ministry of Internal Affairs Emergency Management Service

6.	Giorgi Abramashvili	M	Head of Borjomi-Kharagauli Division of Ministry of Internal Affairs-Emergency Management Service
7.	Zaur Saralidze		Representative from Ministry of Internal Affairs Emergency Management Service
8.	Nino Chkhobadze	F	Head of Green Movement of Georgia/Friends of Earth
9.	Dimitri Labadze	M	Representative of Business Sector
10.	David Tsiskaridze	M	N(N)LE International Business and Economic Development Center(IBEDC) – Team Leader
11.	David Kurdgelaidze	M	N(N)LE International Business and Economic Development Center(IBEDC)-IT Expert
12.	Merab Machavariani	M	N(N)LE International Business and Economic Development Center(IBEDC)-Forest Management Expert
13.	Ioana Lazar	F	N(N)LE International Business and Economic Development Center(IBEDC)-International Gender Expert

It should be noted that some representatives couldn't come in this meeting, but instead of them came others: Giorgi Maisuradze attended instead of Levan Sabanidze from Borjomi-Kharagauli National Park. New representative Zaur Saralidze attended from Ministry of Internal Affairs Emergency Management Service. All of them were proposed and confirmed by the above mentioned relevant governmental institutions.

Tabel no.1 – Participants disaggregated by gender



The scope of the meeting was to deliver a presentation of the Design of the integrated monitoring and early warning forest fires detection system for the Borjomi - Kharagauli National Park and of the detailed cost analysis of the system to the stakeholders working group. The Power Point presentation as

delivered by Mr David Tsiskaridze and Davit Kurdgelaidze is attached to the report. Afterwards it was open discussion between the project team and the stakeholders.

Most questions were related to the working process of the proposed video camera system scenario and about its advantages and disadvantages. IT expert Davit Kurdgelaidze provided clarifications and described the technology with its positive and negative sides. Stakeholders

expressed a particular interest for video flame and smoke technology due to its practicality and its capability to be adapted to the local reality of Borjomi - Kharagauli National Park.

## 1. Video cameras:

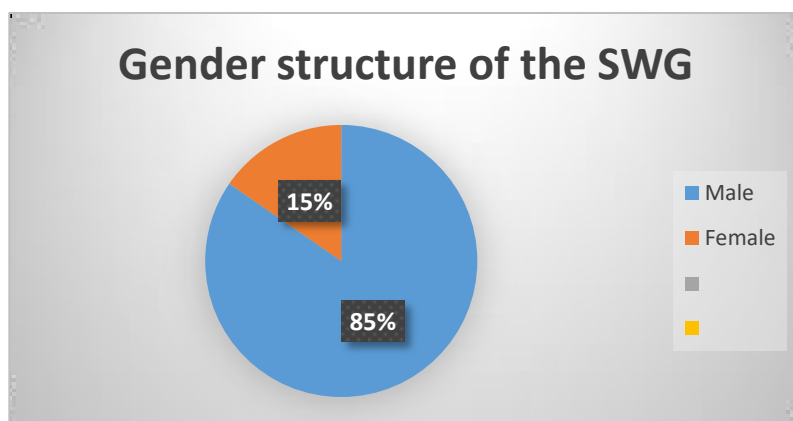
- What are the limitations of the systems?
  - ✓ Fog – if video cameras are in fog, they do not see the forest area
  - ✓ Night - night vision cannot work at long distances
- How does the system detect smoke?
  - ✓ The camera operates in patrol mode, automatically scanning the forest area according to a pre-agreed schedule. The video camera automatically transmits the video image to the central system. With the help of an artificial intelligence function, a central system processes the video image in real-time, performs smoke/fire detection, and sends a signal to the operators.
- At what distance can the system detect smoke, and how accurate is it in detecting the location of the fire?
  - ✓ It depends on how the particular area's patrol modes are configured, and what zoom the camera works on a specific area. The pilot system detected smoke at a distance of 17 kilometers. •Ensuring the accuracy of determining coordinates with visibility from one camera with an error (with an object range of up to 10 km) of no more than 150.
- How many cameras can be connected to the system?
  - ✓ The number of cameras is unlimited, so it will be necessary to increase the server infrastructure resources accordingly.
- Can the rights of system users be differentiated? For example, can an administrator with general access and a user with limited access be distinguished?
  - ✓ Yes, the system supports the distribution of user rights and user groups. The corresponding accesses can be configured at the level of one camera. It is also possible to connect different companies to one system and differentiate rights for each organization separately

The presentation of investment and running costs was done using data from the CBA analysis. The economical benefits of the solution were also brought to the attention of the stakeholders based on the CBA.

As a result, the stakeholders working group made the final decision and adopted the “smoke and flame detection technology based on the video cameras and management system” as the solution to be implemented.

The structure of the stakeholders’ working group (SWG) disaggregated by gender is the following:

Table no. 2 – Gender structure of SWG



Taking into account the fact that most representatives of public bodies that are stakeholders of the project are men, a distinct attention will be given to involve in all local activities more young people and women from the local communities that are actual direct beneficiaries of the project.

Annex 1-Attendance sheet of the 4<sup>th</sup> SWG meeting

Annex 2– PowerPoint presentation used during the 4<sup>th</sup> SWG meeting;

Photos of the event





Team leader

David Tsiskaridze