

## BLACK SEA EARTHQUAKE SAFETY NET(WORK) – ESNET<sup>1</sup>

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**Abstract** *ESNET* project is working in the frame of the Joint Operational Programme “Black Sea Basin 2007-2013” financed by EU and national co-financing. The project objective is to contribute to the prevention of natural disasters generated by earthquakes in Black Sea basin by developing a joint monitoring and intervention concept between the partner countries (Romania, Bulgaria, Moldova and Turkey, see Fig. 1). Its duration is 24 months starting in March 2012 and has five major groups of activities. In the end of project implementation the disaster potential, with accent on the seismic risk degree and the earthquakes effects in the intervention area will be assessed, an integrated seismic monitoring and intervention concept will be developed and the capacity of local emergency intervention units for joint response activities in case of disasters will be increased. The present paper describes the expected cross-border impact of the action, its methodology and final results and outputs for the project’s beneficiaries.

**Key words:** cross-border cooperation, JOP “Black Sea Basin 2007-2013”, seismic risk, seismic monitoring, joint intervention concept

### Program framework

The Black Sea Basin is one of the main areas of interaction between the European Union (EU) and its eastern neighbor countries. In order to address the challenges emerging in this area and in terms of relations with the other southern and eastern EU neighbours, the EU released a comprehensive new strategy in May 2004, the European Neighbourhood

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<sup>1</sup> This publication has been produced with the assistance of the European Union. The content of this publication is the sole responsibility of its authors and can in no way reflect the views of the European Union

Policy (ENP)<sup>2</sup>. To implement this Strategy, financial means are being made available through the European Neighbourhood and Partnership Instrument (ENPI)<sup>3</sup>. The core policy objectives of cross-border cooperation (CBC) on the external borders of the Union are to support sustainable development along both sides of the EU's external borders, to reduce differences in living standards across these borders, and to address the challenges and opportunities following EU enlargement or otherwise arising from the proximity between regions across European land and sea borders. The Black Sea Basin eligible area occupies a territory of 834,719 sq. km. and includes a population of 74.2 million people. It involves ten countries, some of which include the whole of their national territory (Armenia, Azerbaijan, R. Moldova and Georgia), while for some others those regions closest to the Basin (Bulgaria, Greece, Romania, Russia, Turkey<sup>4</sup> and Ukraine).



**Fig. 1.** ESNET partner's institutions.

In order to achieve stronger regional partnerships and cooperation the program is aimed at contributing to its key objective: “a stronger and more sustainable economic and social development of the regions of the Black Sea Basin”. The ESNET project is released under OBJECTIVE 2: WORKING TOGETHER TO ADDRESS COMMON CHALLENGES of the Black Sea Basin ENPI-CBC programme, Priority 2: Sharing resources and competencies for environmental protection and conservation.

<sup>2</sup> European Neighbourhood Policy STRATEGY PAPER COMMUNICATION FROM THE COMMISSION COM (2004) 373 final Brussels, 12.5.2004

<sup>3</sup> Regulation (EC) No 1638/2006 of the European Parliament and of the Council of 24 October 2006 laying down general provisions establishing a European Neighbourhood and Partnership Instrument.

<sup>4</sup> Turkey as a negotiating candidate country is not covered by the ENPI Regulation (EC) N° 1638/2006 but allowed to participate in the Black Sea Basin Programme in accordance with art. 86(4) of the Commission Regulation (EC) No 718/2007 and the Article 9(5) of ENPI Regulation.

## **Project objectives**

The overall objective of the project is to contribute to the prevention of natural disasters generated by earthquakes in Black Sea basin by developing a joint monitoring and intervention concept. All the countries involved in the project have their own studies, strategies, prevention and intervention systems in case of earthquakes, but until now there has not been an integrated approach so far in the Black Sea basin. Given the cross-border character of seismic activity results, it is necessary to have a cross-border approach on prevention, monitoring and intervention in case of earthquakes. There are also three specific objectives:

1. To assess the disaster potential, with accent on the seismic risk degree and the earthquakes effects in the intervention area. The first step in achieving the project main objective is to have an accurate and up-to-date assessment of the potential of disasters provoked by earthquakes in the project area/regions. This assessment will be carried out at national level and will be used in designing the common concept/approach for dealing with earthquakes at regional level, thus ensuring the cross-border character of the objective.

2. To develop an integrated seismic monitoring and intervention concept. This integrated concept, built on the basis of the previous objective, will have a cross-border relevance and is at the core of the action. The monitoring and intervention in case of earthquakes will be coordinated among the participating countries based on this concept, thus a more effective and efficient approach being ensured.

3. To increase the capacity of local institutions emergency intervention units for joint response activities in case of disasters. By involving the local emergency units and public administration in the project activities, especially in trainings, conferences and consultations, a better cooperation at cross-border level will be achieved. Step by step, the respective bodies will increase the cooperation and will benefit from each other's expertise.

Target groups aimed for achieving these objectives are: bodies in the partners countries and regions acting in the earthquakes research sector; emergency intervention units in the areas covered by the project; local public authorities in the areas covered by the project; NGOs acting in the field of information and intervention in case of natural disasters

## **Methodology**

The project methodology was chosen in line with the specificity of the needs and constraints of the target groups. The activities proposed will gather the added-value of each target group and will lead through its outputs and results to the fulfillment of the overall and specific objectives of the ESNET action.

The activities follow logically and are scheduled so as to deliver the best possible results in a reasonable timeframe. The implementation methods are based on permanent cooperation among partners and on-line meetings will take place every time it is necessary to ensure a good coordination. The project team (Fig. 2) is large enough to allow each partner to make sure that is able to fulfill its activities and also that the legal and financial regulations and requirements are observed.



**Fig. 2.** ESNET project team at the Bulgarian study visit, organized in Varna.

NIEP is the most authorized entity in the field of earthquakes in Romania. The same can be said about the Bulgarian (NIGGG) and Moldavian (IGS) partners. The Turkish partner (IBC) is an NGO with a long history in the field of protection to disasters and intervention in case of catastrophes.

All partners have the capacity to involve relevant stakeholders from their countries (local public administrations, emergency units, NGOs), based on the long-term cooperation history.

## **Activities**

ESNET project implementation is organized in five groups of activities:

*Activity 1: Assessment of the current situation.* Aim of this group of activities is to provide a high level of mutual knowledge regarding the current status of the national frameworks, strategies, policies and procedures regarding the prevention, monitoring and intervention in case of earthquake. At this moment, each country has its own systems, methodologies and institutions dealing with earthquakes/disasters, but very little have been achieved in what concerns the cooperation among them at regional level. Sharing expertise and benefiting from each other's experience is the basic tool for a cross-border project and the partners are determined to make the most out of using them.

*Activity 2: Increase the sector cooperation by setting up the Black Sea Safety Network.* The aim of the action is to create a platform for long-term cooperation among the

stakeholders in the participating countries, in the field of preventing, monitoring and intervention in case of earthquakes. This platform will take the form of a network whose tools will be: a web portal, monitoring and early warning software and communication tool (e-group). In order to make sure that the network will be operational on long term, an agreement shall be signed by all project partners, providing for clear commitment concerning the active participation to the network activity (e.g. supply of information and documents to be posted on the portal, inviting the network members to attend sector events etc). The portal will be a good mean to communicate with the stakeholders but also with the citizens on issues of common interest regarding the earthquakes. The network will also communicate with similar networks in order to ensure synergy of the activities instead of overlapping.



**Fig. 3.** Visit to the Dobrogea Seismological Observatory (Eforie)

*Activity 3 Capacity building.* The aim of the action is to increase the administrative capacity of dealing with earthquakes in the Black Sea area covered by the countries participating in the network. Joint curricula will be developed according to the needs assessment data identified during country assessments carried out in Group of Activities 1 and based on the regional strategic requirements. The training will be delivered by trainers from each country to the emergency units staff from the respective country.

*Activity 4 Visibility of the Action.* The aim of this group of activities is to make the project and the EU contribution widely known to the general public in the participating countries and even further. This will be achieved through conferences and press conferences, distribution of promotion materials, dissemination of press releases, net book and regular project updates.

*Activity 5 Management and coordination of the Action.* The last group of activities aims to ensure a smooth project implementation, in agreement with the EU and national

(where applicable) laws and regulations. Face to face as well as on-line meetings of the project team members will ensure the strong cooperation between partners. Evaluation of activities and expenditure verification will ensure that the project and the grant contract provisions are observed and no irregularities are made.

## **Expected results and outputs**

Execution of the first group of activities will result in: 1) Broad expert knowledge shared on the earthquake related issues for each participating country; 2) Support of the public authorities for the elaborated reports and proposed plans; and 3) Basis for creating a long-term cooperation network. Four study visits (Fig. 3) and four county assessment reports resulted in estimation of the existing framework in the field of prevention, monitoring and intervention related to earthquake (potential) disasters in the region.

Envisaged long-term cooperation among the stakeholders in the participating countries, in the field of preventing, monitoring and intervention in case of earthquakes will be achieved through one “Seismic Safety Net(work) Web Portal” developed and launched, and One “Black Sea Joint Seismicity Monitoring and Early Warning System” set up as a software tool.

A “Regional Capacity Building Start-up Curricula” elaborated, with approx. 10 training subjects included and 2 days training sessions in each country, with the participation of 20 professionals from the emergency units in each participating country will be the results from *Capacity building* package. These will ensure training support for the professionals in the sector of earthquake monitoring, early warning and intervention as well as increased capacity of emergency units to react to earthquake disasters.

Planned visibility actions will contribute to spreading a broad knowledge of the project and its donors to the public in the participating countries.

## **Acknowledgements**

The project is financed by the European Neighbourhood and Partnership Instrument and national co-financing under the Joint Operational Programme “Black Sea Basin 2007-2013”, grant contract Ref. № 1.2.1.65963.80 MIS-ETC 250.

## **Черноморска мрежа за сеизмична безопасност - ESNET**

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**Резюме** Проект ESNET се изпълнява в рамките на съвместна оперативна програма на Черноморския басейн 2007-2013, финансиран от ЕС и национално съ-финансиране.

Целта на проекта е да допринесе за превенцията на природни бедствия, генерирани от земетресения в региона на западния бряг на Черно море, чрез разработване на система за съвместен мониторинг и концепция за реакция между партньорските страни (Румъния, България, Молдова и Турция). Неговата продължителност е 24 месеца, с начало март 2012 г. и съдържа пет основни групи дейности. В края на изпълнението на проекта ще бъдат оценени потенциалите за бедствие, с акцент върху степента на сеизмичен риск и възможните ефекти от земетресения в областта, ще бъдат разработени интегрирана система за сеизмичен мониторинг и концепция за намеса и ще бъде увеличен капацитета на местните звена за реакция при кризи и съвместни дейности в случай на бедствие. Статията представя информация за очаквания трансграничен ефект на предвидените дейности, методологията и крайните резултати за бенефициентите по проекта.