

WP5 – Transfer & share of acquired knowledge

Action 5.1 – Deliverable 2

STRATEGIC AGENDA

on resilience increase
from forest fire and earthquake risk

Introduction

The Strategic Agenda proposed by READINESS project is a result of experiences of HOLISTIC and READINESS activities and from the issues and topics discussed in the strategic Agenda Workshop held during the 4th Project Meeting in Ancona (Marche – Italy).

READINESS approach has consisted in adopting and using guidelines, methodologies, best practices and practical results achieved by HOLISTIC project to mitigate the exposure of the population to the impact of forest fire and seismic hazards and to improve the ability of population to accommodate and recover timely and efficiently from the effects of above hazards

This document, based on the analysis and discussion of PPs' experiences, is organized in 4 aspects, explained in the first 4 paragraphs, and a final paragraph of the proposed Strategic Agenda actions, as follows:

- 1) common achievements;
- 2) faced issues;
- 3) observed changes from various Pilot deployments individuated;
- 4) policy recommendations suggested;
- 5) Strategic actions suggested.

- **1) Common achievements**

From the experiences of the PP, general considerations concerning the strategies oriented to specific areas have emerged.

a) Advanced trainings

Trainings are more effective if differentiated according to specific roles in emergency, as the volunteers are required to promptly execute operational directives, while the Professional CP Operators and Technicians, who must best evaluate the scenarios in place and therefore identify the most appropriate solutions, both in emergency and in ordinary, need to have a more depth training also from the theoretical point of view.

Experienced CP Operators can also perform the role of trainers, in different specific areas: scenarios related to seismic risk, forest fire risk, assessment of the adequacy of specific aspects of the C.P. system, as the equipment, logistic supports, etc. To this end, it is necessary to ensure that all the components of CP system adopt the same language, result that may be obtained by standardizing some theoretical and practical training programs.

The operational skills of the volunteers that are integrated into the CP system, may be improved by training, but also well supported by internal teaching.

The need for permanent improvement in training programs has emerged, also on the basis of training criticalities highlighted during previous experiences.

b) Operational capacity

Operational capacity may be greatly improved with practical exercises involving many components of CP system in realistic emergency scenarios; in order to facilitate the growth of operational capacity in regions with less experience on some kind of emergency, for example in the field of seismic risk, common trainings/exercises between different regions and countries are a very good solution because allows to “learn by doing” together, applied both on methodologies and on specific equipment use or techniques.

This sharing, on fixed occasions, of good practices should become possibly a permanent training method to be regularly replicated in the territories of the Partners.

c) Seismic and forest fires monitoring and new technologies

Pilot experiences of seismic monitoring of buildings and on monitoring territory for wildfire risk, shared between partners, allowed to select the proper solutions (equipment, instruments, IT solutions, tracking systems, ...) for the different areas in a more effective way, thanks to the know how sharing and the possibility to develop new tools that may be tested in different contexts. Over time it will be appropriate to provide for further moments of verification, comparison and updating between the PPs, to update each other on development of instruments, equipment and operating procedures.

The progressively standardized technical equipment among the Partners can constitute an adequate support to all the initiatives adopted and aimed at increasing cooperation and response capacity.

d) Awareness

Specific and innovative advanced and participatory training methods have been experienced in order to actively involve the children and, through them, their families. Different approaches have been tested: some with the direct and active involvement of the "target population", eg. students and the school world with experiences in theater, ballet, drawing and singing, puzzles, educational activities.

Awareness campaigns should be supported with further activities such as the widespread distribution of publications, that may be created or shared working in synergy between the various PPs, capitalizing the experiences and developed tools.

These more targeted actions are more effective if are part of multi-faceted strategies aimed at large-scale prevention, making the largest number of people aware of all the critical issues affecting the territory.

Particular attention must be paid not only to the actions that the Authorities can put in place before, during and after an emergency, but also on the active role of each individual citizen, especially the procedures in the event of an emergency and the self-protection measures to be adopted in different risk scenarios

The common actions carried out by the PPs, in order to increase the awareness of the population are of particular importance. They have been achieved not only through direct involvement, but also through videos, publications, information disseminated via social channels .

These tools are particularly effective because the seismic events are, sometimes, experiences of extreme gravity but that recur after very long pauses, and the effects can be aggravated by a lowered attention to the prevention procedures and the insufficient capacity to operate promptly in emergency scenarios.

It is considered important to keep the memory alive, as the first point for an awareness-raising policy. These objectives can be achieved thanks to specific initiatives and meetings and contacts with the direct witnesses of catastrophe experiences, aimed at small groups (of students, citizens, civil protection workers and healthcare facilities, etc.) that can focus their attention on operational strategies to be adopted in their own territories.

e) Exercises for operators with citizen involvement

It is necessary that the civil protection system (operators and volunteers) can regularly test the response capacity on field with exercises to verify any critical issues connected to the use of the acquired equipment and thus guarantee operational efficiency standards. But these exercises are more effective with the involvement of population, that may actively participate to learn itself how to behave in emergency scenario and to gain awareness of the functioning of all the CP system aimed at their safety.

The ability to take video footage and/or the presence of viewers on these occasions make it possible to achieve the second objective of direct public involvement and dissemination, through videos to be shared with the greatest number of citizens to promote knowledge of the problems and related issues. optimal solutions.

- **2) faced issues**

- a) knowledge support and integration**

The consultation and presentation of the activities carried out by the PPs revealed the need for greater sharing among technicians/operators and public decision makers of a more precise knowledge of the seismic monitoring methods and of the its purpose, meaning of the data obtained and the contest for the application of the results obtained. The Decision makers, supported by technicians, should be better informed as, following the survey activities, they will have to take strategic decisions and also allocate resources.

The surveying activities must therefore be included in a path, defined "a priori", in support of subsequent choices of land management and identification of priorities in remediation interventions.

- b) costs and expenses**

Critical issues related to monitoring activities were also highlighted, even considering that new technologies adopted are cost-effective, because a systematic and long lasting monitoring require planned investments, both on economic and personnel resources. The costs to be incurred or the funding available represent a constraint, a limit for the purchase of equipment (capital expenditure) to be used and the number of buildings that can be monitored, but an additional financial limit is connected with the need of skilled personnel employed in monitoring activities and maintenance of installed equipment (greater current expenditure).

A good solution to optimize investments is represented by scientific cooperation agreements with Universities or Research Institutes expert in these fields, because collected data may have a value for prevention and CP emergency management, but also an added scientific value for researchers who may use the data collected to improve or test new methodologies and IT tools for the scientific in planning strategies to face natural risks and give support during emergencies.

- **3) observed changes from various Pilot deployments individuated**

- a) effects of the pilot projects**

PP were able to equip themselves with new instrumentation for seismic monitoring and forest fires monitoring and active wildfire fighting, to develop new methods of training using new IT tools, multimedia support materials and with the sharing of good practices between partners.

New prevention techniques such as strategic building monitoring arouse interest in measurements carried out useful to assess seismic risk, so that this activity will be extended to other buildings and used both to increase the security of strategic public buildings and for the planning of interventions and the development of local prevention strategies.

Exercises and public events made raise a request from population and stakeholder involved of more knowledge of CP system and experiences to be prepared to face natural risks.

- **4) policy recommendations suggested**

These key point have been evaluated to be included in the Strategic Agenda:

a) Training

The project PPs expressed the common consideration concerning the need to define homogeneous lines for training, a tool for the constitution of a common and supranational operational base to be declined then, within the national/regional C.P. system between Operators and the different Groups of volunteers, in line with the European intervention model, in the C.P. field.

The results of European projects should ensure both operational impacts and the identification of good practices to accelerate the reduction of the distances currently existing between European countries in terms of CP organization and interoperability, which is conditioned by the different distribution of risks within Europe, both regarding seismicity and forest fires.

Joint exercises and training could be a useful tool in order to allow the circulation of good practices and experiences.

b) Seismic risk monitoring activities

Seismic monitoring activities can be finalized to evaluate the behavior of buildings and its modifications, using different tools and in different conditions to assess any worsening of risk conditions and to assess the extent of material and casualty damage in the event of a seismic shock taking into account the typology of building involved. Knowledge acquired in "peace time" may be used just after an earthquake to evaluate safety condition of strategic buildings in the area affected by the event.

A common goal could consist in sharing data acquired during monitoring campaign using common measuring protocols, in order to create a rich database of different categories of buildings and structures examined, allowing deeper analysis of data and scientific work to improve monitoring techniques and the use of information acquired for a better in urban and emergency planning.

Also to outline are strategies and guided paths for vulnerability reduction with a chain for "seismic safety" based on resilience and prevention.

The activities to be carried out must also refer to the new European building regulations which represent the criteria to be followed for new buildings and for reducing the vulnerability of buildings.

c) Citizen participation

Education of population at different level improve every risk reduction strategy; starting from children is more easy and may be an efficient way to reach also adults. Involving citizens in practical activities like exercises helps comprehension of all the CP organization and the different roles of the "actors" on field, making also understand their own role as "aware citizen" who are an important part of the system.

d) Financial resources

The need for an increase in funding to meet the increase in requests for monitoring and instrumental needs was highlighted.

More investments are important also in new IT technologies an equipment, especially to improve efficiency of teams, that often suffer of lack of personnel. New technologies are useful not only from the operational point of view, but also in the safety of operators during activities in dangerous scenarios.

- **5) Strategic actions suggested**

- 1. Improve equipment with adoption of state of the art tools for facing emergencies**
- 2. Train continuously the personnel and volunteers with new and classical equipment testing operative procedures and emergency plans**
- 3. Elaborate common exercise with neighboring countries with specific experiences to share about prevention and intervention in seismic/wildfire emergencies**
- 4. Develop new strategies also in relation to climate change/global warming and the greater risk that results for forest fire; improve risk communication to citizens with standardized protocols/color codes.**
- 5. Encourage synergies aimed at enhancing continuous, multi-risk and multilevel training, also through joint exercises involving Administrators, Operators and Technicians, Volunteers, students and the cooperation and scientific support of Universities and Research Institutes.**