

# WP 5 - Transfer & share of acquired knowledge

Act 5.2- Development and implementation of capacity building actions

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# READINESS

## The Project

The **READINESS project**, capitalizing the methodologies, best practices and results of **IPA Adriatic HOLISTIC** project, is aimed at mitigating the exposure of citizens to fire and seismic hazards, improving the joint emergency services response and implementation of innovative crisis management procedures.

Raising awareness campaigns and training pilot actions for the civil protection volunteers, citizens and school pupils have been carried out from **01/10/2018** to **30/09/2019**.

**The present document is based on the analysis and discussion of PPs' experiences.**

# COMMON ACHIEVEMENTS

## Advanced trainings

- **Trainings** are more effective if differentiated according to specific roles in emergency;
- Experienced CP Operators can also perform the role of trainers, in different specific areas;
- 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.

# COMMON ACHIEVEMENTS

## Operational capacity

- **Operational capacity** may be greatly improved with practical exercises involving many components of CP system in realistic emergency scenarios; common trainings/exercises between different regions and countries allow to “learn by doing”, facilitating the growth of operational capacity in regions less experienced.
- This **sharing of good practices** should become possibly a **permanent training method** to be regularly replicated in the territories of the Partners.

# COMMON ACHIEVEMENTS

## Monitoring and new technologies

- Pilot experiences of buildings' **seismic monitoring and territory monitoring** for wildfire risk allowed to select the proper solutions for the different areas through the know how sharing and the possibility to develop new tools tested in different contexts. Over time it's important to provide for further opportunities in order to verify, compare and update the PPs 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.

# COMMON ACHIEVEMENTS

## Awareness 1/2

- Specific and innovative **advanced and participatory training methods** have been experienced in order to actively involve the children and, through them, their families (by different approaches).
- **Awareness campaigns** should be supported with further activities such as the widespread distribution of publications. These more targeted actions are more effective if 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 all citizens.**

# COMMON ACHIEVEMENTS

## Awareness 2/2

- The common actions carried out by the PPs, in order to increase the awareness of the population are of particular importance (**direct involvement, videos, publications, social media 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 important to keep the memory alive**. These objectives can be achieved through 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...).



# COMMON ACHIEVEMENTS

## 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.

# FACED ISSUES

## Knowledge 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.

# FACED ISSUES



## Costs and expenses

- **Critical issues related to monitoring activities were 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.
- A good solution to optimize investments is represented by **scientific cooperation agreements** with Universities or Research Institutes, because collected data may have a value for prevention and CP emergency management, but also an added scientific value for researchers who may use those data to improve or test new methodologies and IT tools to face natural risks and give support during emergencies.

# PILOT PROJECTS

## Pilot projects Deployment

### WP 4 – Pilot projects deployment

		PP (AF)	PP (ACHIVED)
<i>Activity 4.1</i>	Advanced training campaign for civil protection		
4.1.1	Advanced training courses	12	21
4.1.2	Wildfire exercises	5	8
4.1.3	Combined earthquake and wild fire exercise	3	5
4.1.4	Cross border combined simulation/drill	2	2
<i>Activity 4.2</i>	Pilot implementation of SPB seismic monitoring innovative procedure		
4.2.1	Instrumentally monitoring buildings	90	97
4.2.2	Visual and dimensional screening	18	45
4.2.3.	Detailed analysis of SPB's (preliminary restoration designs)	6	6
<i>Activity 4.3</i>	Awareness raise campaign to improve citizen's promptness		
4.3.1	Info days addressed to students and school children	6	13
4.3.2	Cross border awareness day for children	6	6
4.3.3	Exhibition of civil protection vehicles and equipment	6	7
4.3.4	Citizen's involvement during combined earthquake and wildfire exercise	6	6

Thematic Task Forces, in collaboration with experts in these areas from the participating project regions, assessed **the impact of the pilot projects** carried out in individual areas to see what are the **weak points** in fire protection and the reduction of earthquake risk in the regions of **Croatia and Italy**.

# PILOT PROJECTS

## WP4 Activity 4.1

### Advanced trainings for civil protection Evaluation of the achieved results and recommendations

The partner projects fully accomplished all the tasks set out in the activity 4.1. The Application form envisaged the implementation of **12 advanced courses for civil protection members**, **5 open space firefighting exercises** and **3 earthquake intervention exercises**. Two project partners held joint cross-border exercises. Some of the READINESS project partners agreed to hold joint exercises, which included interventions in the case of earthquakes and wildfires, as in the case of Zadar County and Dubrovnik-Neretva Region.

During the assessment, all project partners concluded that open fire and earthquake drills were also needed in the forthcoming period to increase the safety of residents in the participating regions. **It is recommended** by all participants and evaluators **to continue similar education** since they lead to an increase in the individual and group preparedness of the members of the voluntary and professional civil protection forces.

## Pilot implementation of SPB's seismic monitoring innovative procedure Evaluation of the achieved results and recommendations

Differences were observed between the legislation of Croatian and Italian regions. In Italy, public interest buildings are defined by law. In Croatia, no law specifies which buildings are strategic ones.

Screening was performed for selected SPBs of different type of occupancy: **schools, student dorms, health care centers, nursing home, fire station and municipalities.** Additionally, preliminary damage assessment according to EMS-98 damage scale was done for SPBs based on the available information. Both continuous and characterization investigations are **non-invasive** and therefore **sustainable**. There was interest from the territory in the activities carried out.

## Pilot implementation of SPB's seismic monitoring innovative procedure Evaluation of the achieved results and recommendations

All results clearly point out that **the seismic performance** of similarly important and complex buildings **cannot be assessed by simplifying procedures used for assessments of building stock at an urban scale**. Within this study, seismic assessment was performed using numerical and experimental analysis, with numerous useful observations for facilitating future decisions.

For more precise assessment (based on reliable input data), **comprehensive experimental testing**, including destructive methods for obtaining material properties are necessary.

# PILOT PROJECTS

## WP4 Activity 4.3

### Awareness raise campaigns to improve citizen's promptness Evaluation of the achieved results and recommendations

All project partners have achieved **exceptionally good results** during the realization of this activity. The projected results were significantly exceeded, which had an even better and more justified effect.

Part of the **activity that was dedicated to children was especially interesting** when we jointly organized a day of cross-border awareness day for children because they realized that children in other places were also involved in a similar type of the education. Citizens' participation in the organization of exercises was extremely helpful.

**Number of people reached by the initiatives for increasing awareness in general are reached.**

PP	Target	Carried out	Total carried out
LP (MolR)	1500	1500	9200
PP 1 (DNR)	900	1200	
PP 2 (MarR)	1100	2900	
PP 3 (SDC)	1200	1200	
PP 5 (FVG)	1600	1600	
PP (ZC)	700	800	
Indicator value		7000	



# PILOT PROJECTS

Observed  
changes 1/2

- PPs 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 sharing good practices with 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**.

# PILOT PROJECTS

Observed  
changes 2/2

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

# POLICY RECOMMENDATIONS

## Training

- The project PPs expressed 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 reduce the distances existing between European countries in terms of CP organization** and interoperability, which is conditioned by the different distribution of risks within Europe.
- Joint exercises and training could be a useful tool in order to allow the circulation of good practices and experiences.

# POLICY RECOMMENDATIONS

## Seismic risk monitoring activities 1/2

- **Seismic monitoring activities** can be finalized to evaluate **buildings resilience**, to assess any worsening of risk conditions and 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.
- A 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.

# POLICY RECOMMENDATIONS

*Seismic risk  
monitoring activities  
2/2*

- **Strategies** and **guided paths for vulnerability reduction** with a chain for "seismic safety" based on resilience and prevention.
- A **new European building regulations** which represent the criteria to be followed for new buildings and for reducing the vulnerability of buildings.

# POLICY RECOMMENDATIONS

## 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.

# POLICY RECOMMENDATIONS

## 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** and **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.

# STRATEGIC ACTIONS

*A path  
to resilience*

- ▶ **Improve equipment with adoption of state of the art tools for facing emergencies**
- ▶ **Train continuously the personnel and volunteers with new and classical equipment testing operative procedures and emergency plans**
- ▶ **Elaborate common exercise with neighboring countries with specific experiences to share about prevention and intervention in seismic/wildfire emergencies**



# STRATEGIC ACTIONS

*A path  
to resilience*

- ▶ **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.**
- ▶ **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.**

# MULTIMEDIA RECAP




*Click the image  
below*



or go to: <https://youtu.be/sLx0X1ljJ5w>

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