

# **Support Action for Strengthening PAlestine capabilities for seismic Risk Mitigation**

## **SASPARM 2.0**

**2014 PROJECT FOR CIVIL PROTECTION FINANCIAL INSTRUMENT  
PREPAREDNESS AND PREVENTION SCHEME**

### **PROJECT OVERVIEW**

**Name**  
**e-mail**



# SASPARM 2.0



The project was presented in the **DG ECHO** scheme





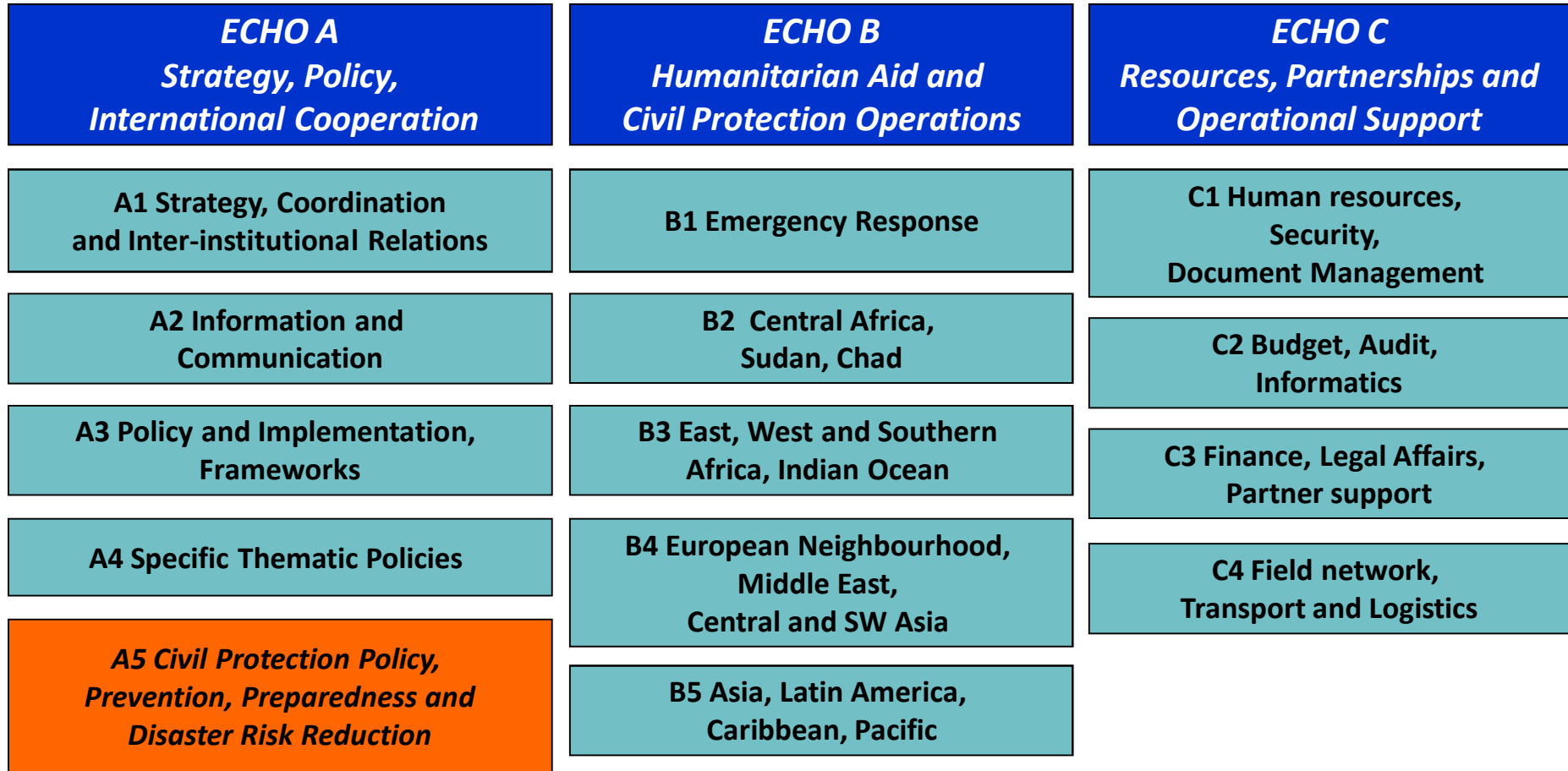
## **DG Humanitarian Aid and Civil Protection - ECHO**

<b>ECHO A</b> <i>Strategy, Policy, International Cooperation</i>	<b>ECHO B</b> <i>Humanitarian Aid and Civil Protection Operations</i>	<b>ECHO C</b> <i>Resources, Partnerships and Operational Support</i>
A1 Strategy, Coordination and Inter-institutional Relations	B1 Emergency Response	C1 Human resources, Security, Document Management
A2 Information and Communication	B2 Central Africa, Sudan, Chad	C2 Budget, Audit, Informatics
A3 Policy and Implementation, Frameworks	B3 East, West and Southern Africa, Indian Ocean	C3 Finance, Legal Affairs, Partner support
A4 Specific Thematic Policies	B4 European Neighbourhood, Middle East, Central and SW Asia	C4 Field network, Transport and Logistics
<i>A5 Civil Protection Policy, Prevention, Preparedness and Disaster Risk Reduction</i>	B5 Asia, Latin America, Caribbean, Pacific	





## DG Humanitarian Aid and Civil Protection - ECHO





	<p>EUROPEAN COMMISSION DIRECTORATE-GENERAL HUMANITARIAN AID AND CIVIL PROTECTION - ECHO</p> <p><b>ECHO A - Strategy, Policy and International Co-operation</b> <b>A.5 - Civil Protection Policy</b></p>
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## PROJECT ATTRIBUTION

### Preparedness & Prevention 2014 Call

	Grant Agreement No.	Applicant organisation/ Title of the Project	Country	Responsible Desk Officer 1	Responsible Desk Officer 2
<b><u>PREPAREDNESS PROJECTS</u></b>					
1.	SI2.693261	University of Crete  <b>EVANDE</b>  Enhancing volunteer awareness and education against natural disasters through e-learning	GR	<b>Cristina Brailescu</b> email: <a href="mailto:cristina.brailescu@ec.europa.eu">cristina.brailescu@ec.europa.eu</a> Tel.: +32 2 29 95 380	<b>Ioanna Sgourdopoulou-Karra</b> email: <a href="mailto:ioanna.sgourdopoulou-karra@ec.europa.eu">ioanna.sgourdopoulou-karra@ec.europa.eu</a> Tel.: +32 2 29 95617
2.	SI2.693276	Sea Alarm Foundation  <b>EUROWA MODULE</b>  European module for oiled wildlife emergency response assistance	BE	<b>Ioanna Sgourdopoulou-Karra</b> email: <a href="mailto:ioanna.sgourdopoulou-karra@ec.europa.eu">ioanna.sgourdopoulou-karra@ec.europa.eu</a> Tel.: +32 2 29 95617	<b>Asta Mackeviciute</b> email: <a href="mailto:asta.mackeviciute@ec.europa.eu">asta.mackeviciute@ec.europa.eu</a> Tel.: +32 2 29 52899
3.	SI2.694378	Emergency Services College  <b>EU-NU Coop</b>  EU-NU Cooperation project on strengthening EU's Nordic USAR modules	FI	<b>Per Øyvind SEMB</b> email: <a href="mailto:per-oyvind.semb@ec.europa.eu">per-oyvind.semb@ec.europa.eu</a> Tel.: +32 2 29 63942	<b>Biljana ZUBER</b> email: <a href="mailto:Biljana.ZUBER@ec.europa.eu">Biljana.ZUBER@ec.europa.eu</a> Tel.: +32 229-91804
4.	SI2.693705	RBINS  <b>HNS-MS</b>  Improving preparedness to face HNS pollution	BE	<b>Ioanna Sgourdopoulou-Karra</b> email: <a href="mailto:ioanna.sgourdopoulou-karra@ec.europa.eu">ioanna.sgourdopoulou-karra@ec.europa.eu</a>	<b>Asta Mackeviciute</b> email: <a href="mailto:asta.mackeviciute@ec.europa.eu">asta.mackeviciute@ec.europa.eu</a> Tel.: +32 2 29 52899



## PREVENTION PROJECTS

	Grant Agreement No.	Applicant organisation/ Title of the Project	Country	Responsible Desk Officer 1	Responsible Desk Officer 2
19.	SI2.693890	MoI FIRE AND RESCUE  <b>From GAPS to CAPS</b>  Risk management capability based on gaps identification in the BSR	LT	<b>Biljana ZUBER</b> email: <a href="mailto:Biljana.ZUBER@ec.europa.eu">Biljana.ZUBER@ec.europa.eu</a> Tel: +32 229-91804	<b>Asta Mackeviciute</b> email: <a href="mailto:asta.mackeviciute@ec.europa.eu">asta.mackeviciute@ec.europa.eu</a> Tel.: +32 2 29 52899
20.	SI2.693711	SIGMA  <b>ECOSHAZ</b>  Economics of prevention measures addressing coastal hazards	GR	<b>Ioanna Sgourdopoulou-Karra</b> email : <a href="mailto:ioanna.sgourdopoulou-karra@ec.europa.eu">ioanna.sgourdopoulou-karra@ec.europa.eu</a> Tel.: +32 2 29 95617	<b>Biljana ZUBER</b> email: <a href="mailto:Biljana.ZUBER@ec.europa.eu">Biljana.ZUBER@ec.europa.eu</a> Tel: +32 229-91804
21.	SI2.696863	SAMARITAN INTERNATIONAL  <b>ADAPT</b>  Awareness of Disaster Prevention for vulnerable groups+	Intl	<b>Patricia Sidarous</b> email: <a href="mailto:Patricia.SIDAROUS@ec.europa.eu">Patricia.SIDAROUS@ec.europa.eu</a> Tel.: +32 229-86782	<b>Biljana ZUBER</b> email: <a href="mailto:Biljana.ZUBER@ec.europa.eu">Biljana.ZUBER@ec.europa.eu</a> Tel: +32 229-91804
22.	SI2.693249	<del>Villa Montesca</del>  <b>CP MODEL</b>  Civil protection massive open developed e-learning	IT	<b>Biljana ZUBER</b> email: <a href="mailto:Biljana.ZUBER@ec.europa.eu">Biljana.ZUBER@ec.europa.eu</a> Tel: +32 229-91804	<del><b>Ioanna Sgourdopoulou-Karra</b></del> email : <a href="mailto:ioanna.sgourdopoulou-karra@ec.europa.eu">ioanna.sgourdopoulou-karra@ec.europa.eu</a> Tel.: +32 2 29 95617
23.	SI2.694399  (External)	EUCENTRE (external)  <b>SASPARM 2.0</b>  Support action for strengthening <del>PAlestine</del> capabilities for seismic Risk Mitigation	IT	<b>Elisabetta BELLOCCHI</b> Email: <a href="mailto:elisabetta.bellocchi@ec.europa.eu">elisabetta.bellocchi@ec.europa.eu</a> Tel.: +32/2/29 98737	<b>Roberto SCHILIRO</b> Email: <a href="mailto:Roberto.SCHILIRO@ec.europa.eu">Roberto.SCHILIRO@ec.europa.eu</a> Tel.: +32 229-53433



# SASPARM 2.0



The project was presented in the **DG ECHO** scheme



It continues the cooperation with Europe's neighbours in the context of the European Research Area, started by SASPARM, an FP7 Project.

**Duration** in months: 24

**Starting date:** January 01, 2015



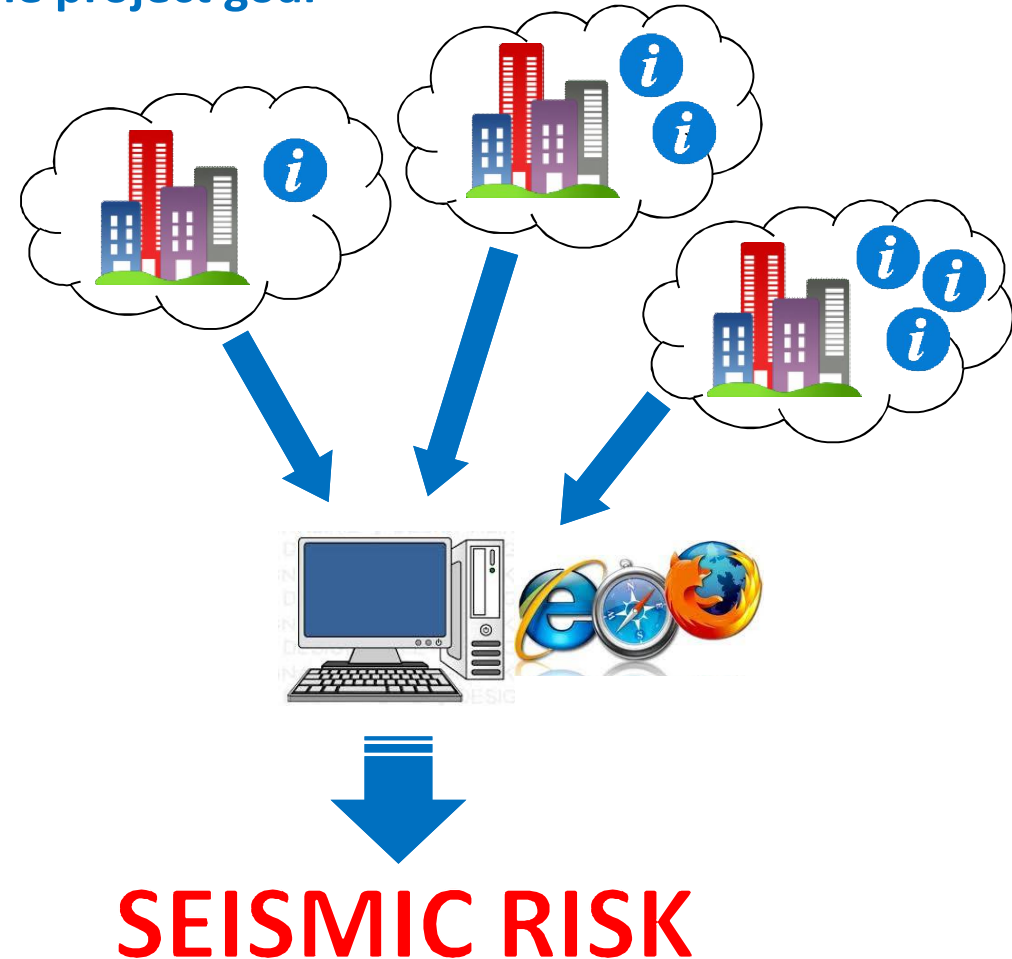
## Consortium:

- ✓  **Eucentre (Coordinator):** promotes and supports research and education in the field of seismology, geology, geotechnical engineering, hazard and risk assessment, flooding vulnerability assessment, ecological approach and emergency management, Re-insurance market;
- ✓  **IUSS-Pavia:** offers advanced international undergraduate and graduate programs through:
  - Undergraduate Internal courses open, on a merit base, to the most promising students of University of Pavia;
  - Level II University Master degrees, fully taught in English providing a strong International approach;
  - PhD Degrees providing an interdisciplinary point of view and exposure to cutting edge research;
- ✓  **An-Najah National University:** was originally established as An-Najah Nabuls School in 1918 in the Palestinian city of Nablus. In 1977 it became a full-fledged university and it is now the largest university in Palestine. The Earth Sciences and Seismic Engineering Center (ESSEC) at NNU was established in October 1996 in the city of Nablus. It is the only specialized center in earthquake engineering in the West Bank or Gaza Strip.



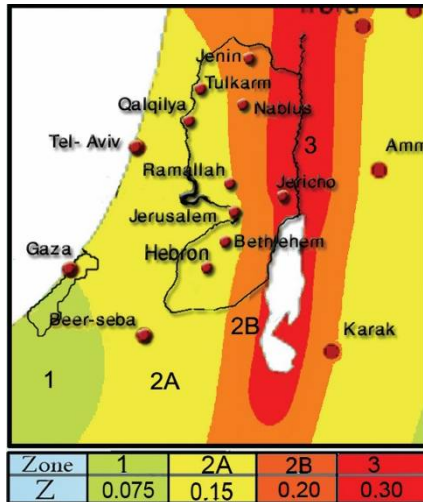
## The project goal

The project goal is to create a web portal where different users (**students/citizens/practitioners/GO and NGO stakeholders**) will be able to input and manage all the data on buildings, with increasing level of detail, and obtain all the information about the corresponding seismic risk.





## Hazard



## Vulnerability



## Exposure



# SEISMIC RISK

evaluation of the total losses caused by earthquakes that will be of interest in a given temporal period in a specific area



$$R = V \cdot E \cdot H$$

**R = Risk**

**V = Vulnerability:** attitude of property present in a structure to undergo a certain level of damage as a result of a certain level of shaking

**E = Exposure:** distribution of the population and civil activities in seismic areas; it depends on the historical evolution of the settlements

**H = Hazard:** probability of exceeding a fixed level of shaking in a site, in a specific time period



$$R = V \cdot E \cdot H$$

- Hazard is a physical characteristic of the territory
- The risk depends also on “human” variables : urbanization, number and value of the buildings, the presence of industries, etc.



**You cannot modify the Hazard, but you can mitigate the risk  
by acting on the Vulnerability**





## Project main targets

- ✓ The increase of risk perception by citizens and the development of the citizens' science
- ✓ The capacity building of local practitioners and building contractors
- ✓ The engagement of local stakeholders and policy makers leading them to establish prevention plans in the development of urban resilience strategies





## Project expected results

- ✓ An increased awareness of seismic risk by the actors involved in the project: citizens, students, practitioners, GO and NGO stakeholders
- ✓ A shared database including a large number of vulnerability data
- ✓ A Web-Based Platform that integrates the data above and treats them through vulnerability models developed for the Palestinian building typologies, to evaluate seismic risk
- ✓ Guidelines on the implementation of measures to reduce vulnerability and, hence, mitigate seismic risk
- ✓ Guidelines for risk management policy aimed at mitigating the impact of socio-economic losses



## The project is made of 8 different tasks:

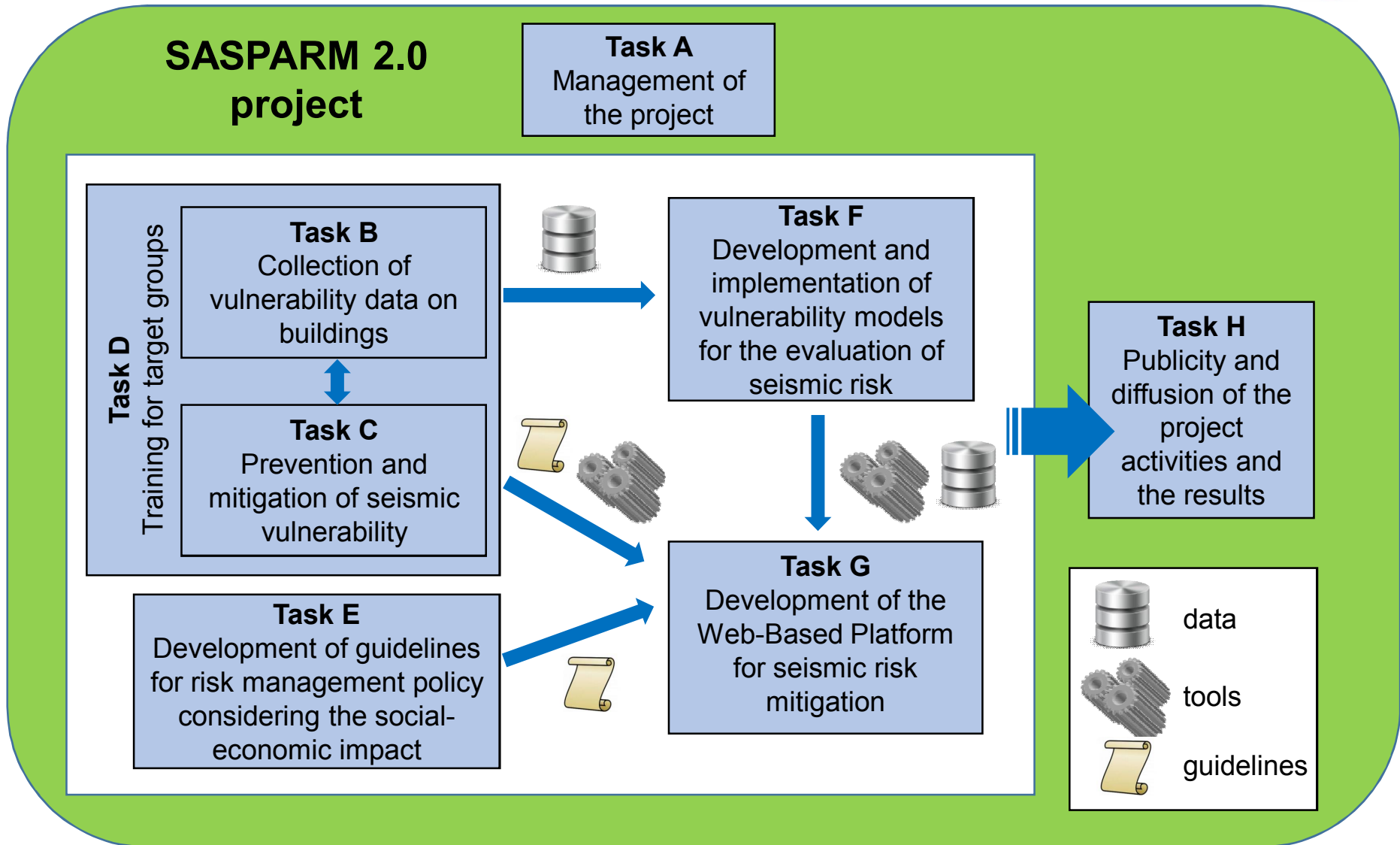
- **TASK A:** organization of all the activities and management of the project;
- **TASK B:** collection of structural data by citizens and practitioners in forms. Two collection forms are planned, one for citizens and one for practitioners with differences in level of detail. The collected data will be used to implement the vulnerability models that will be used in the Web-Based Platform to evaluate seismic risk;
- **TASK C:** prevention and mitigation of seismic vulnerability through retrofit measures identified using the data collected in task B;
- **TASK D:** training courses for students, practitioners and citizens on the compilation of the forms and the use of the collected data;



## The project is made of 8 different tasks:

- **TASK E:** critical evaluation of existing tools and guidelines to quantify and reduce seismic risk in Palestine;
- **TASK F:** development and implementation of vulnerability models for the evaluation of seismic risk using the data collected in the task B;
- **TASK G:** development of the Web-Based Platform which has to integrate all the tools for performing seismic risk analysis;
- **TASK H:** identification and organization of publicity and the diffusion of the project activities and results.





## WebGIS platform

A Web platform will be realized. By managing the structural data collected on field the vulnerability and the seismic risk will be assessed. Mitigation measure as a function of the identified vulnerabilities will be suggested through the platform.

The platform will also be equipped with GIS functionalities (WEBGIS) thanks to which the stakeholders will have the possibility to identify critical conditions, since the results of seismic risk will be published in maps with a very high resolution graphical support.

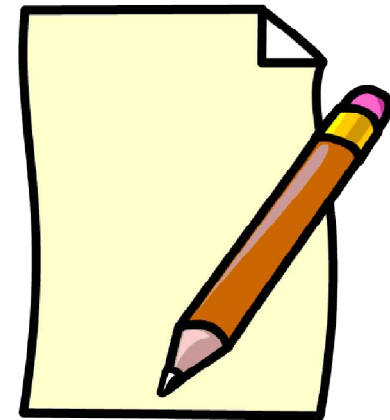


## Data collection

The in situ building data collection will be done through forms by general citizens and practitioners.

All the information collected through the forms will be used to identify the vulnerability class of the buildings according to their structural typology.

Appropriate retrofit measures for the mitigation of seismic risk will be suggested to the end users of the platform.





Form for the building

Citizens

Name of the compiler _____																																						
Education Level _____																																						
<b>1) Identification of the Building</b>																																						
Municipality _____																																						
Address _____																																						
Street Number _____		District/Municipality _____			Zip Code _____																																	
Name of the building _____																																						
Geographical Coordinates (WGS 84 System)				Lat. _____																																		
				Long. _____																																		
Position of Building :																																						
<input type="radio"/> 1 Isolated Building		<input type="radio"/> 2 Internal Building		<input type="radio"/> 3 End Building		<input type="radio"/> 4 Corner Building																																
<b>2) Description of the Building</b>																																						
N° of floors		Age		Use - Exposure			Property																															
N° Total floors with basement		Construction and renovation [max 2]		Type of Use	N° Units of use	% of Use	Occupants	A <input type="radio"/> Public																														
<input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3		1 <input type="checkbox"/> ≤ 1919		<input type="checkbox"/> Housing	_____	A <input type="radio"/> > 65%	<table border="1" style="font-size: small;"> <tr><td>0</td><td>0</td><td>0</td></tr> <tr><td>1</td><td>1</td><td>1</td></tr> <tr><td>2</td><td>2</td><td>2</td></tr> <tr><td>3</td><td>3</td><td>3</td></tr> <tr><td>4</td><td>4</td><td>4</td></tr> <tr><td>5</td><td>5</td><td>5</td></tr> <tr><td>6</td><td>6</td><td>6</td></tr> <tr><td>7</td><td>7</td><td>7</td></tr> <tr><td>8</td><td>8</td><td>8</td></tr> <tr><td>9</td><td>9</td><td>9</td></tr> </table>	0	0	0	1	1	1	2	2	2	3	3	3	4	4	4	5	5	5	6	6	6	7	7	7	8	8	8	9	9	9	B <input type="radio"/> Private
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<input type="radio"/> 4 <input type="radio"/> 5 <input type="radio"/> 6		2 <input type="checkbox"/> 19 ÷ 45		<input type="checkbox"/> Productive	_____	B <input type="radio"/> 30-65%																																
<input type="radio"/> 7 <input type="radio"/> 8 <input type="radio"/> 9		3 <input type="checkbox"/> 46 ÷ 61		<input type="checkbox"/> Trade	_____	C <input type="radio"/> < 30%																																
<input type="radio"/> 10 <input type="radio"/> 11 <input type="radio"/> ≥12		4 <input type="checkbox"/> 62 ÷ 71		<input type="checkbox"/> Offices	_____	D <input type="radio"/> Not used																																
N° Basements		5 <input type="checkbox"/> 72 ÷ 81		<input type="checkbox"/> Public Service	_____	E <input type="radio"/> Under Construction																																
<input type="radio"/> 0 <input type="radio"/> 1 <input type="radio"/> 2		6 <input type="checkbox"/> 82 ÷ 91		<input type="checkbox"/> Deposit	_____	F <input type="radio"/> Unfinished																																
<input type="radio"/> ≥3		7 <input type="checkbox"/> 91 ÷ 02		<input type="checkbox"/> Strategic	_____	G <input type="radio"/> Abandoned																																
		8 <input type="checkbox"/> ≥ 2002		<input type="checkbox"/> Touristic - Accommodation	_____																																	
<b>3) Main Material of the Building's Vertical Structure</b>																																						
Masonry A <input type="radio"/>		If the building is in reinforced concrete:																																				
		Reinforced Concrete B <input type="radio"/>		B.1 <input type="checkbox"/> The building has no walls at floor(s):		B.2 <input type="checkbox"/> The building has partially walls at floor(s):																																
		<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4		<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4																																		
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		B.3 <input type="checkbox"/> The building is composed totally by walls																																				







Form for the building

Practitioners

Name of the compiler: \_\_\_\_\_  
 Education Level: \_\_\_\_\_

**1) Identification of the Building**

Municipality: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Street Number: \_\_\_\_\_ District/Municipality: \_\_\_\_\_ Zip Code: \_\_\_\_\_  
 Name of the building: \_\_\_\_\_

Geographical Coordinates (WGS 84 System) Lat. \_\_\_\_\_ Long. \_\_\_\_\_

Position of Building:

1  Isolated Building      2  Internal Building      3  End Building      4  Corner Building

**2) Description of the Building**

N° Total floors with basement	Metrics		Age	Use - Exposure									
	Average floor height [m]	Average floor area [m <sup>2</sup> ]		Type of Use	N° units of use	% of Use	Occupants						
<input type="radio"/> 1 <input type="radio"/> 9	1 <input type="radio"/> < 2.50	A <input type="radio"/> < 50      I <input type="radio"/> 401 - 500	1 <input type="radio"/> ≤ 1919	<input type="checkbox"/> Housing	_____	A <input type="radio"/> > 65%	<table border="1"><tr><td>100</td><td>10</td><td>1</td></tr><tr><td>0</td><td>0</td><td>0</td></tr></table>	100	10	1	0	0	0
100	10	1											
0	0	0											
<input type="radio"/> 2 <input type="radio"/> 10	2 <input type="radio"/> 2.50-3.50	B <input type="radio"/> 51 - 70      L <input type="radio"/> 501 - 650	2 <input type="radio"/> 19 - 45	<input type="checkbox"/> Productive	_____	B <input type="radio"/> 30-65%	<table border="1"><tr><td>1</td><td>1</td><td>1</td></tr><tr><td>2</td><td>2</td><td>2</td></tr></table>	1	1	1	2	2	2
1	1	1											
2	2	2											
<input type="radio"/> 3 <input type="radio"/> 11	3 <input type="radio"/> 3.51-5.0	C <input type="radio"/> 71 - 100      M <input type="radio"/> 651 - 900	3 <input type="radio"/> 46 - 81	<input type="checkbox"/> Trade	_____	C <input type="radio"/> < 30%	<table border="1"><tr><td>2</td><td>2</td><td>2</td></tr><tr><td>3</td><td>3</td><td>3</td></tr></table>	2	2	2	3	3	3
2	2	2											
3	3	3											
<input type="radio"/> 4 <input type="radio"/> 12	4 <input type="radio"/> > 5.0	D <input type="radio"/> 101 - 130      N <input type="radio"/> 901 - 1200	4 <input type="radio"/> 82 - 71	<input type="checkbox"/> Offices	_____	D <input type="radio"/> Not used	<table border="1"><tr><td>4</td><td>4</td><td>4</td></tr><tr><td>5</td><td>5</td><td>5</td></tr></table>	4	4	4	5	5	5
4	4	4											
5	5	5											
<input type="radio"/> 5 <input type="radio"/> > 12		E <input type="radio"/> 131 - 170      O <input type="radio"/> 1201 - 1600	5 <input type="radio"/> 72 - 81	<input type="checkbox"/> Public Service	_____	E <input type="radio"/> Under Construction	<table border="1"><tr><td>5</td><td>5</td><td>5</td></tr><tr><td>6</td><td>6</td><td>6</td></tr></table>	5	5	5	6	6	6
5	5	5											
6	6	6											
<input type="radio"/> 6	N° Basements	F <input type="radio"/> 171 - 230      P <input type="radio"/> 1601 - 2200	6 <input type="radio"/> 81 - 91	<input type="checkbox"/> Deposit	_____	F <input type="radio"/> Unfinished	<table border="1"><tr><td>7</td><td>7</td><td>7</td></tr><tr><td>8</td><td>8</td><td>8</td></tr></table>	7	7	7	8	8	8
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<input type="radio"/> 7	A <input type="radio"/> 0 C <input type="radio"/> 2	G <input type="radio"/> 231 - 300      Q <input type="radio"/> 2201 - 3000	7 <input type="radio"/> 91 - 02	<input type="checkbox"/> Strategic	_____	G <input type="radio"/> Abandoned	<table border="1"><tr><td>8</td><td>8</td><td>8</td></tr><tr><td>9</td><td>9</td><td>9</td></tr></table>	8	8	8	9	9	9
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<input type="radio"/> 8	B <input type="radio"/> 1 D <input type="radio"/> ≥ 3	H <input type="radio"/> 301 - 400      R <input type="radio"/> > 3000	8 <input type="radio"/> ≥ 2002	<input type="checkbox"/> Touristic - Accommodation	_____	Property A <input type="radio"/> Public B <input type="radio"/> Private							

**3) Structural Data**

Vertical Structure of the Building

Masonry	Reinforced Concrete	If the building is in reinforced concrete:	
		B.1 <input type="checkbox"/> The building has no walls at floors:	B.2 <input type="checkbox"/> The building has partially walls at floors:
<input type="radio"/> A	<input type="radio"/> B	<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4	<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4
		<input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/> 8	<input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/> 8
		<input type="checkbox"/> 9 <input type="checkbox"/> 10 <input type="checkbox"/> 11 <input type="checkbox"/> ≥12	<input type="checkbox"/> 9 <input type="checkbox"/> 10 <input type="checkbox"/> 11 <input type="checkbox"/> ≥12
		B.3 <input type="checkbox"/> The building is composed totally by walls	



## Courses

Training courses for **students, practitioners** and **citizens** will be organized with the aim to increase their awareness and knowledge of seismic risk. Practitioners and citizens will be trained to fill in the information of the collection form.

The courses for students will contribute to create a new generation of Civil Protection Volunteers who will support the Palestinian Civil Defence Directorate.

Students will help citizens during the collection of data for vulnerability assessment in SASPARM 2.0.



## Training for university students

The students of An-Najah National University will be trained in supporting the project actions in terms of seismic risk prevention. Between them, a group of volunteers will be then selected for supporting the Palestinian Civil Defence Directorate and helping the citizens during the collection of vulnerability data. These volunteers will represent the new generation of the Palestinian Civil Protection, with the support of European Partners, through the transfer of good practice first in Nablus city, and, then in other Palestinian municipalities. The training courses for the students will be related to the content of the forms to be filled in by the citizens and the practitioners. Through the students direct involvement and their critical feedback during and after the training, the Consortium will be able to spread this action to other Palestinian universities enlarging and, therefore, strengthening the group of Civil Defence Volunteers.

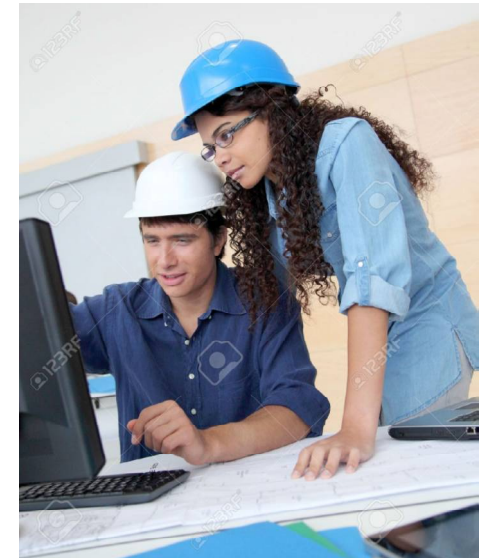


## Training for practitioners

The practitioners (e.g., engineers, architects) are fundamental actors in the fulfilment of seismic risk mitigation. The collaboration of European Partners will encourage an exchange of good practices regarding adoption of the new Seismic Building Code for the design and assessment of Palestinian buildings.

This training modulus will start in Nablus and will then be repeated in other municipalities, as it has been successfully done during the SASPARM Project with the direct involvement of the Engineering Associations.

The forms to collect seismic vulnerability data will be thoroughly explained during the courses, with case studies and a lot of photos.



## Training for citizens

Training for citizens will help them in understanding the importance of seismic risk prevention in their lifetime and for future generations. Citizens have to monitor their properties and be able to understand, with and, when feasible, without the advice of an expert, if their house can withstand an earthquake or if retrofit is required applying Seismic Standards.



The paper format of the forms produced for the vulnerability data collection will be used for explaining the type of information required. Practical examples will be given during the lessons. Surveys (i.e. anonymous questionnaires), collected during and at the end of the activity in Nablus, will allow direct feedback on this action and inform improvements before the wider roll out of this training modulus to a larger number of Palestinian citizens.



## Stakeholders

Workshops and lectures will be organized for stakeholders and policy makers, as well as members of GO and NGO Institutions of the different Palestinian municipalities, in order to disseminate the main concepts of seismic risk, its prevention and mitigation related to planning and management of cities where the political context cannot be disregarded.

The cultural shift and the development of the “citizens’ science” envisaged by the project actions will only be possible if the stakeholders are aware of the importance of the prevention in the development of urban resilience strategies.







## Project follow up



- ✓ Extend the case study of Nablus municipality not only to all the other Palestinian municipalities but also to other Third and European Countries;
- ✓ Engage policy makers and government to foster long-term actions. Moreover, promoting Palestinian stakeholders' activities in a risk mitigation perspective with the foundation of a Palestinian Civil Protection Mechanism;
- ✓ Establish the concepts of risk governance to account for the possibility of earthquake insurance coverage (considering that the related cost would be reduced if private initiative in retrofitting world be taken);





## Project follow up



- ✓ Ensure the maintenance of the Web-Based Platform to collect larger amounts of data on seismic vulnerability of citizens' properties first and public buildings next in order to keep the process of increasing awareness going on after the project lifetime.
- ✓ Promote new undergraduate and graduate courses on seismic risk mitigation since the training on this topic will play a fundamental role for the continuation of the project aims even after its lifetime. For this reasons, additional resources will be found to organize a new Master program in Palestine at the An-Najah National University, covering the topics of seismic risk mitigation. This action is already strongly encouraged by the Ministry of Education.

