

**SASPARM**



An-Najah National  
University



**EUCENTRE**

European Centre for Training and Research in Earthquake Engineering

# **FUTURE COOPERATION SASPARM 2.0 PROPOSAL**

**Dr. Paola Ceresa**

Seismic Risk Mitigation in Palestine  
November 17-18, 2014



## “Support Action for Strengthening PAlestine capabilities for seismic Risk Mitigation” - SASPARM 2.0

- Proposal presented in the **DG ECHO scheme** – 2014 Call for Proposals – Preparedness and prevention projects in civil protection and marine pollution. **EU funding** scheme.
- **Consortium:** Eucentre (Coordinator), IUSS-Pavia and An-Najah National University.
- **Endorsement** of the Italian Civil Protection Department.
- **Support** from Nablus Municipality; Engineers Association - Jerusalem Center; National Agency for Disaster Risk Mitigation - Palestine; Secretariat of the International Strategy for Disaster Reduction - Regional office of Arab States; Italian Civil Protection Department; Global Earthquake Model (GEM) Foundation; ImageCat, Inc. – California).
- **EC financial contribution requested:** 499.983 EUR ( = 75% of total eligible costs).
- **Duration** in months: 24.
- **Submission:** May 30, 2014.



## SASPARM 2.0

- The need for **prevention in the field of seismic risk is strongly required** and this encouraged the new proposal.
- It represents a strategic avenue and a comprehensive advance of the **post-SASPARM environment** and involves the **same Consortium**.
- Its core is the development of a web portal where different users (**students/citizens/practitioners/GO and NGO stakeholders**) will be able to **input and manage data regarding buildings**, with increasing level of detail, obtaining information about the related seismic risk.
- **Protocols to acquire data** through guided procedures will be also available on the web portal to support a better understanding of each case study. **Increasing levels of knowledge will correspond to increasing reliability of the results in terms of seismic risk.**
- Since February 2013 **Nablus** became the **first Palestinian city to join the UNISDR's Making Cities Resilient Campaign**. Hence, undertaking the activities identified in SASPARM 2.0 will represent a natural evolution for the Palestinian Partner within a **collaborative European framework for mitigating seismic risk**.

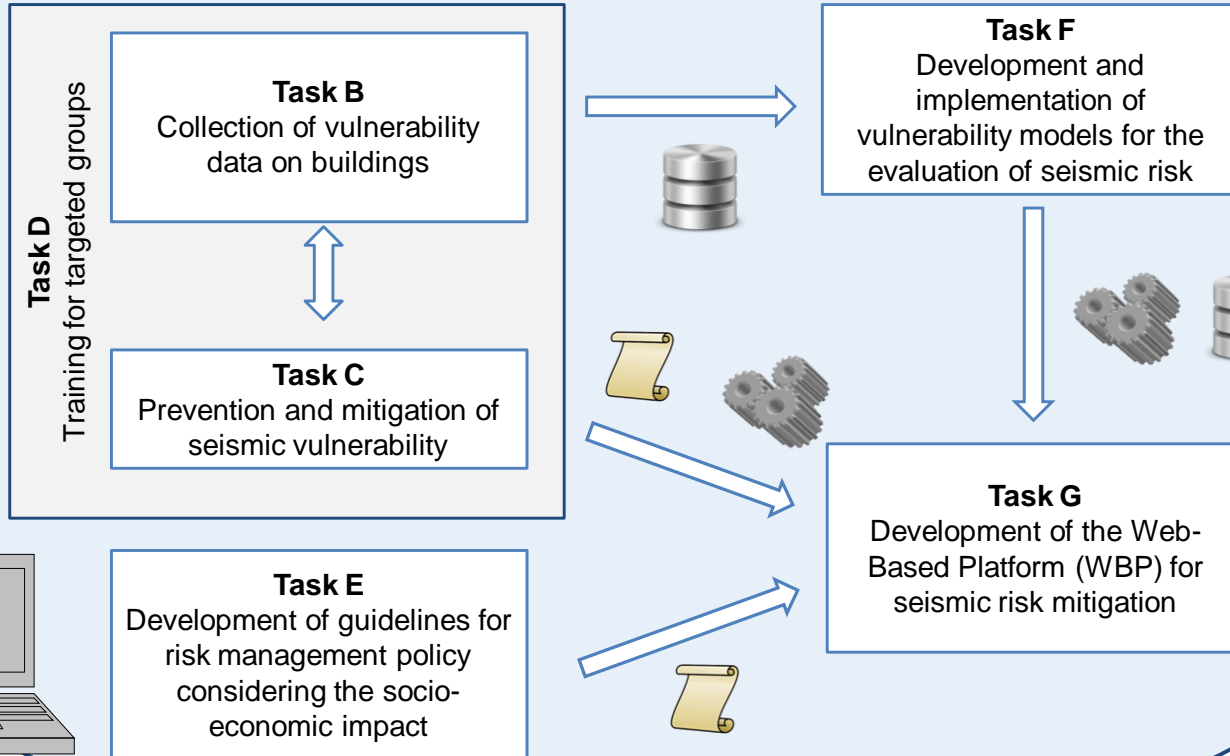


## TASKS

- Task A - Management and reporting to the Commission
- Task B - Collection of vulnerability data on buildings
- Task C - Prevention and mitigation of seismic vulnerability
- Task D - Training for targeted groups
- Task E - Development of guidelines for risk management policy considering the socio-economic impact
- Task F - Development and implementation of vulnerability models for the evaluation of seismic risk
- Task G - Development of the Web-Based Platform (WBP) for seismic risk mitigation
- Task H - Publicity



## SASPARM 2.0 Platform



data tools guidelines



## EXPECTED RESULTS

- ✓ An **increased awareness of seismic risk** by the actors involved in the project: *students, citizens, practitioners, GO and NGO stakeholders*.
- ✓ A **shared database** (DB) including a large number of vulnerability data.
- ✓ A **Web-Based Platform** (WBP) 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*.



# Task A - Management and reporting to the Commission

- **Objectives:** Project management activities
- **Actions:**
  - A.1 Overall legal and contractual management
  - A.2 Overall financial and administrative management
  - A.3 Technical work coordination and monitoring
- **Expected results:**
  - ✓ Grant Agreement
  - ✓ Consortium Agreement
  - ✓ Overall financial and administrative management
  - ✓ Interim and final financial reports
  - ✓ Project work plan
  - ✓ Interim and final technical reports
  - ✓ Kick-off and interim meetings
  - ✓ Technical coordination and supervision



## Task B - Collection of vulnerability data on buildings

- **Objectives:** Collection of data from different users (citizens and practitioners) to feed into the vulnerability models implemented in task F. Vulnerability models will be used by the WBP to evaluate seismic risk (task G). Data will be collected in forms.

- **Actions:**

- B.1 Definition of forms to collect data on buildings vulnerability
- B.2 Guidelines for the collection of data on vulnerability of buildings
- B.3 Implementation of an electronic version of the vulnerability data forms

- **Expected results:**

- ✓ Identification of structural typologies in Palestine
- ✓ Paper forms to collect vulnerability data from citizens
- ✓ Paper forms to collect vulnerability data from practitioners
- ✓ Guidelines for filling in the forms defined in Action B.1
- ✓ Electronic format of the forms developed in Action B.1 linked to the WBP
- ✓ A free App for smart phones or tablets where the e-forms can be filled in



## Task C - Prevention and mitigation of seismic vulnerability

- **Objectives:** Implementation of mitigation measures of seismic risk. The information on vulnerability from task B will be used to identify the corresponding retrofit measures. Knowledge on the retrofit capability of local building contractors has to be gathered. Citizens have to be informed on the benefit of retrofit measures also in terms of cost.

- **Actions:**

- C.1 Identification of retrofit measures

- C.2 Training on design and implementation of retrofit measures

- **Expected results:**

- ✓ Report on retrofitting measures to mitigate the seismic vulnerability of the buildings in Nablus city and other municipalities
  - ✓ Training material (slides, short reports) for practitioners and building contractors
  - ✓ Tool to link the vulnerability data with the corresponding retrofit measure



## Task D - Training for targeted groups

- **Objectives:** Development of the so called “**citizens science**” which is the most powerful tool for guiding the project activities toward the fulfilment of the foreseen priorities.

- **Actions:**

- D.1 Training for university students
- D.2 Training for citizens
- D.3 Training for practitioners
- D.4 Training for stakeholders

- **Main expected results:**

- ✓ Creation of the Civil Defence Volunteers' (CDVs) group
- ✓ Increased awareness of the targeted groups and transfer of good practices
- ✓ Direct involvement of citizens in collecting vulnerability data of their properties
- ✓ Strong collaboration between citizens, students and CDVs
- ✓ Training material to encourage the adoption of the Seismic Building Code



## Task E - Development of guidelines for risk management policy considering the socio-economic impact

- **Objectives:** It merges with the results of the previous tasks and integrates monetary assessment with public and private interests.

- **Actions:**

- E.1 Critical evaluation of existing tools and legal mechanisms to quantify seismic risk within private and public arena
- E.2 Guidelines for modelling seismic related risk including impact on society
- E.3 Retrofit measures to mitigate the social costs of earthquakes
- E.4 Explicit best institutional practices and alternative answers to mitigate the social costs of earthquakes

- **Main expected results:**

- ✓ Comparative analysis of the existing tools and their applicability in Palestine
- ✓ Guidelines for the identification of indicators for good risk governance practices
- ✓ Focus group meetings with stakeholders and risk policy experts
- ✓ Guidelines for insurance policies



## Task F - Development and implementation of vulnerability models for the evaluation of seismic risk

- **Objectives:** Sets of fragility curves defined for the as built structural types identified in Nablus first and then in other Palestinian municipalities.

- **Actions:**

- F.1 Development of the methodology

- F.2 Validation of the developed simplified models

- **Main expected results:**

- ✓ Report on the fragility curves for each structural typology that classifies the analysed building stock

- ✓ Validation report of the implemented methodology and the derived fragility functions



## Task G - Development of the Web-Based Platform (WBP) for seismic risk mitigation

- **Objectives:** Technological transfer of all the outputs from other tasks into the Web-Based Platform (WBP) for seismic risk mitigation. Plan to maintain the WBP after the project lifetime.

- **Actions:**

- G.1 WBP design

- G.2 Integration of tools for performing seismic risk analyses

- G.3 WBP implementation

- **Main expected results:**

- ✓ Software requirement specification

- ✓ Electronic forms to collect vulnerability data

- ✓ Tools to suggest homeowners the mitigation measure of the seismic vulnerability of their properties

- ✓ Tools to perform seismic risk analysis integrated in the WBP

- ✓ Beta version and version 1 of the WBP (in English and Arabic languages)



## Task H - Publicity

- **Objectives:** Effective dissemination and exploitation of project results both within the Consortium and towards EU countries, Third Countries and external Risk Community.

- **Actions:**

- H.1 Generation of a dissemination and results exploitation plan
- H.2 Dissemination workshops and reports
- H.3 Managing project documents, media work and training material on WBP
- H.4 Monitoring progress of dissemination and exploitation of joint scientific production results
- H.5 Support synergy with related projects
- H.6 Exploitation study

- **Main expected results:**

- ✓ Dissemination and results exploitation plan; Layman's report to be distributed
- ✓ Newsletter; Media work and final conference
- ✓ Project web portal on WBP; publicity and training material available online
- ✓ Scientific and technical papers; conference proceedings



## IN SUMMARY

The main targets of SASPARM 2.0 are:

- ✓ 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 plans of **prevention** in the development of **urban resilience strategies**





EUROPEAN COMMISSION  
DIRECTORATE-GENERAL HUMANITARIAN AID AND CIVIL PROTECTION - ECHO

ECHO A - Strategy, Policy and International Co-operation  
A.5 - Civil Protection Policy

Brussels,  
ARES (2014)

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Ref. Ares(2014)3757526 - 12/11/2014

**Ref.:** 2014 Call for prevention and preparedness projects in civil protection and marine pollution

**Subject:** Your proposal 2014/PREV/03 – "Support Action for Strengthening PAlestine capabilities for seismic Risk Mitigation (SASPARM 2.0)"

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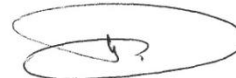
I am pleased to inform you that your proposal has been selected for funding. In the next few weeks you will, therefore, be offered a grant agreement on your proposed action for signature.

Please note that this notice is provided for information purposes only and does not constitute a financial or legal commitment by the Commission.

The full list of supported projects will be published on the following website:  
<http://ec.europa.eu/echo/en/funding-evaluations/financing-civil-protection-europe/selected-projects>

I look forward to a fruitful cooperation.

Yours sincerely,



Hans DAS  
Head of Unit



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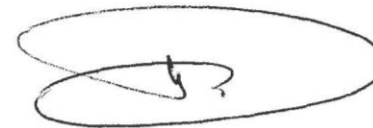
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