ResCult • Increasing RESilience of CULTural heritage: a supporting decision tool for the safeguarding of cultural assets

Recipients: DGECHO

Duration: 18 months (from January 2017)

Partner: Politecnico di Torino
        CORILA
        UNISDR
        TUB
        SDIS04

Description: The ResCult project aims at building tools to increase the capacity of Civil Protection in order to prevent/mitigate disaster impact on Cultural Heritage (CH).

The project will realize a European Geo-referenced Database of Cultural Heritage; b) a “cadaster” of natural disasters; c) a platform for monitoring and modeling risk scenarios d) a platform for data acquiring crowd-data from citizens; e) usable 3D models in virtual reality of monuments and works of art (with a focus on three case studies), to support the recovery in the post-disaster phase and preserve digital memory in case of destruction and/or damage.

Objectives: The ResCult project objective is to enhance the capability of CP to prevent/mitigate disaster impacts on CH, offering a tool to strengthen the interoperability of Member States and EU multi-disciplinary cooperation in the field of emergency management. From an operational point of view, the project aims to:

- increase the sharing and harmonization of available data at European level on the Cultural Heritage on natural disasters, supporting the implementation of European standards such as INSPIRE regulations;
- increase the cooperation between Civil Protection systems, strengthening the prevention and risk management, and post-disaster recovery operations;
- create methodologies for risk analysis of cultural heritage based on GIS platforms in particular with respect to earthquakes, fires and floods;
- increase the public awareness on major risks for Cultural Heritage.

Methods:
- requirement analysis, construction of ontologies, context analysis and characterization of the “threats” (types of disasters), involving civil protection and other operators related to emergency management (fire brigade, etc.);
- creation, development and validation of the conceptual model of the European Database (European Interoperable Database, EID), and implementation;
- EID population through data collection from three case studies, including data from citizens and collected through web interface;
- definition of guidelines for the vulnerability assessment of Cultural Heritage with respect to natural disasters, taking into account the different phases of emergency management (prevention, preparedness and response).

Skills:
- Risk analysis related to natural disasters
- Knowledge of the INSPIRE Directive
The project will support the Civil Protection operators and other authorities responsible for emergency management in the sharing of data and information necessary for the Protection of Cultural Heritage, organized according to established European standards, with the aim of increasing cross-border interoperability and enhance security of territory both nationally and internationally.

The European Database will help to increase public awareness about the importance of protecting Cultural Heritage during disasters, strengthening the culture of risk prevention and information sharing.

Results:
- European Database on cultural heritage based on the INSPIRE legislation
- Availability of innovative risk analysis methods to support the strategy planning for mitigating the consequences of natural disasters
- 3D Models of monuments and works of art
- GIS-based map of natural disasters with risk indicators
- Documentary Video that shows the project results