Ministero degli Affari Esteri
e della Cooperazione Internazionale

Grande Rilevanza

Stati Uniti d'America
Resilience to natural diisasters

Identificativo	**PGR06129**

Elementi generali

Area di ricerca	**Resilience to natural diisasters**
Titolo (in Italiano)	**Paesaggi Resilienti**
Titolo (in altra lingua)	**RE-LAND, REsilient LANDscapes**
Parola chiave #1	**Landscape**
Parola chiave #2	**Natural disasters**
Parola chiave #3	**Sendai Framework for Distaster Risk Reduction**

Ente proponente italiano

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Descrizione delle attività in programma

Sintesi

Natural disasters such as earthquakes, floods, landslide and wildfires cause immense losses in terms of human lives lost, business downtimes, disruption of social networks, and damaged properties. These losses result in large part from the destruction of critical infrastructure (e.g. transportation and communication networks), as well as essential building structures that provide for housing, business, and cultural/historical needs. Recovery from disasters can extend for many years with potentially far-reaching impact on regional depopulation, with effects on cultural heritage sites, labor market, economic output, cultural vitality, and collective memory and traditions. Many examples are recorded in history of uprooted communities and abandoned towns and villages. The abandonment of territories from populations results in the loss of landscape identities, which are continuously regenerated by deep interactions between humans and nature. Furthermore, the costs for restoring the landscape balance are impressively high. Disasters of this magnitude are not only possible, but are occurring at increasing frequency, which in some cases can be attributed to climate change. However, we can look towards a brighter future, not by avoiding the events themselves (which is impossible), but by improving our planning and preparation for such events. This is no small endeavor, requiring scientific and applied research across the boundaries of traditional disciplines (i.e. Earth and Environmental Sciences, Engineering, Urban and Regional Studies, Geography, and Social Sciences and Humanities, etc.) at a global scale. The purpose of the project is to develop a holistic vision to allow for innovative approaches to planning and decision-making and for innovative solutions aimed at territorial resiliency. Moreover, the project engages with the affected communities from recent events (e.g. the 2016-2017 Central Italy earthquakes), adopting the citizen-science paradigm at relevant stages.

Obiettivi

As stated by the Sendai Framework paradigm of 'Building Back Better' (BBB), the process for reducing the effects of natural disasters on cultural and historical heritage and other public and private buildings and goods, requires a complementary and multidimensional array of competences. In accordance with that, the core mission of RE-LAND is to contribute to interdisciplinary research in support of policy and decision makers (decision support system), to guide and adjust those policies and plans that are drawn up to boost community disaster preparedness, response and recovery speed.
In particular, the joint research will focus on themes to support short-term objectives of rebuilding devastated portions of Central Italy with an aim towards halting the cycle of periodic devastation, as well as longer-term objectives of disaster risk reduction to improve community resilience at a broad scale. The outcomes of this case study will be applied then to other sample areas.
The partnership is composed of Italian and US universities that have been studying these issues since long and with complementary experiences and expertise. In this way, we aim to support the different levels of governance on territorial management through interdisciplinary research. Experts in urban and regional planning, ecology, economics, cultural heritage and sociology will work together with colleagues specializing in structural engineering, wind engineering, hurricane engineering, earthquake engineering, seismology, and earth sciences.
In the timeframe of its duration, RE-LAND will exchange lesson learned and best practices among the IT and US teams. It will create a solid international platform for REDI, the international center that UNICAM, INGV, INFN and INGV are setting up for disaster risk reduction. In view of this, special attention will be paid to engage young early-stage researchers through research periods abroad and exchange of experiences with senior scholars of the partner country.