



United Nations  
Educational, Scientific and  
Cultural Organization



## INTERNATIONAL WORKSHOP

# ***“Increasing Resilience to *Natural hazards* through *Information and Communication* *Technology*”***

**14-15 September 2016**  
**UNESCO Headquarters, Paris – France**



The International workshop on **Increasing Resilience to Natural hazards through Information and Communication Technology**, to be held on 14-15 September 2016 at UNESCO Headquarters in Paris, is organized by the Section on Earth Sciences and Geo-Hazards Risk Reduction and the Science Unit of the UNESCO Regional Bureau for Science and Culture in Europe, Venice (Italy), in cooperation with ISMB (Institute Mario Boella) and the Consorzio per il Sistema Informativo del Piemonte (CSI-Piemonte).

The workshop is a milestone event of the H2020 Project “Improving Resilience to Emergencies through Advanced Cyber Technologies” (I-REACT), which aims to set an integrated platform to support emergency management in case of floods, wildfires, and other extreme weather events. The platform will leverage on a wide array of new information and communication technologies for real time reporting, social media exploitation, acquisition of imagery from space, utilization of wearable (bands, smart glasses) and drone technologies.

UNESCO contribution to I-REACT project is consistent with the Sendai Framework for Disaster Risk Reduction 2015-2030, which stresses the importance of using appropriate communications, geospatial and space-based technologies together with their related services to strengthen the use of mobile phone networks to support national measures for successful disaster risk communication, as appropriate and in accordance with national laws.

The technological innovation embedded in the I-REACT project is, therefore, meant to increase the effectiveness and the coordination of emergency responders on the entire disaster management cycle, with particular emphasis in preparedness, warning and emergency response.

The two-day workshop is built upon an interactive framework in which emergency responders and carefully selected international advisors will interplay with I-REACT system developers, providing substantial feedbacks on how the system should be conceived, designed and developed in order to better tackle the hazards at stakes (mainly floods and wildfire) and how to bridge the existing gap between innovative solutions and end users in the field of Disaster Risk Reduction (DRR). The lack of information, the inherent complexity of modern tools and their poor interoperability place constraints on end users, limiting the benefit from the utilization of such innovative solutions.

UNESCO’s role in enhancing the capacity of Member States in DRR, by means of technological innovations, and science is fully in line with this strategic vision, which also entails meaningful actions and a well-devised mobilisation of citizens and professional volunteers through the use of an integrated system, encompassing social media integration and crowdsourced approaches.

I-REACT is a three year lifespan IA (Innovation action) project, funded by the European Commission, with [Grant agreement #700256](#), under the DRS-01-2015 - Crisis management topic 1: potential of current and new measures and technologies to respond to extreme weather and climate events (<http://www.i-react.eu/>). It was kicked off on 1/06/2016.

## Objectives

The workshop aims to meet the following objectives:

- To set the stage for dialogue between I-REACT developers and disaster management professionals in order to gain insight into ways of designing more tailored solutions to emergency responders and citizens through a co-design session aimed at the definition of the information that should be collected from the field during the entire emergency cycle.
- To identify, through interactive methodologies and earlier devised questionnaires, which operational procedures and processes can be improved during emergency situations resulting from natural hazards under different scenarios, especially in the case of floods and fires. In particular, the whole cycle of the Disaster Risk Management triggered by the hazardous event will be analyzed.

## Methodology

The workshop will be developed over two days and based on three main sections.

The first part is introductory, devoted to present the overall concept of I-REACT and to give the floor to invited emergency responders and stakeholders in order to present their overall operational structures and critical needs. During the second session, the participants will be invited by the I-REACT team to engage on a co-design activity through which the information required for having a better situational assessment will be identified, prioritized, and put together to create the first definition of the in-field report. This section will be organized in five working groups and it will involve all participants.

The third part of the workshop will take place on the following day. It will be lengthy devoted to setting in place a detailed evaluation of the processes foreseen by I-REACT with respect to compliance with the end-user procedures and improvements opportunities. Invited civil protection authorities and project advisory board representatives, assisted by the I-REACT partners, will also focus on the mapping of operational procedures and the identification of possible gaps to be covered by the support of I-REACT solutions in the emergency management cycle. This session will be concluded by an open discussion about other key requirements that may have been left out from previous discussions and to give the opportunity to raise priorities and concerns. In parallel, a short enquiry on cost-benefit applied to the proposed (DRR) I-REACT solutions will be performed.

Further to this, the first advisory board meeting of the project will be held in order to define the strategy for a successful project implementation and exploitation with a medium and long term perspective.



The outcomes of such a consultation are of high relevance since at the basis to link research and innovation activities of the I-REACT project to the requirements of disaster management professionals, and to better coordinate their efforts and services for risk reduction and disaster prevention towards a more resilient society.

## **Venue**

UNESCO Headquarters, 1 place Fontenoy, Room VI, Paris, France.

## **Organizers**

UNESCO Section on Earth Sciences and Geo-Hazards Risk Reduction

UNESCO Regional Bureau for Science and Culture in Europe - Science Unit

ISMB Istituto Superiore Mario Boella

## **Working Language**

English

## **Contact persons**

*For queries on the programme agenda:*

UNESCO Regional Bureau for Science and Culture in Europe, Science Unit

Mr. Davide Poletto Email: [d.poletto@unesco.org](mailto:d.poletto@unesco.org)

*For organizational aspects:*

UNESCO HQ, Section on Earth Sciences and Geo-Hazards Risk Reduction

Ms. Irina Pavlova Email: [i.pavlova@unesco.org](mailto:i.pavlova@unesco.org)

## AGENDA

### Wednesday 14 September - First day

#### Morning

Time	Dur.	Subject	Participants
8.30 - 9.00	30'	Registration	
9.00 - 9.15	15'	<b>Welcoming speeches:</b> <i>Division of Ecological and Earth Sciences, Natural Sciences, UNESCO</i> <i>UNESCO Regional Bureau for Science and Culture in Europe (Venice)</i> <i>I-REACT Project Coordinator, ISMB</i>	All
<b>9.15 – 12.30 Session I – Introductory part</b>			
9.15 – 10.00	45'	<b>I-REACT Presentation:</b> <i>Project Coordinator, ISMB</i>	All
10.00 - 10.45	45'	<b>Stakeholders Introduction</b> (part I) <ul style="list-style-type: none"><li>• <i>End-Users &amp; Advisors introduce themselves</i> <i>(3 slides per 3 minutes each)</i></li></ul>	
10.45 - 11	15'	Coffee break	
11.00 – 12.30	1h30'	Stakeholders Introduction (part II)	All
12.30 - 13.30	1h	Lunch Break	

### Wednesday 14 September - First day

#### Afternoon

Time	Dur.	Subject	Participants
<b>13.30 - 18.45 Session II – Co-design of a data collection tool for the disaster management -</b> <i>Leader, ISMB</i>			
13.30 - 13.45	15'	<b>Explanation of the working sessions:</b> <ul style="list-style-type: none"><li>• <i>The participants (end user + consortium members + advisors) will be divided into predefined groups</i></li></ul>	All

13.45 - 15.15	1h30'	<b>Co-design Part I – Report requirements definition</b>  The aim is to elicit the core features to be implemented in the I-REACT data collection process and the mobile report. <ul style="list-style-type: none"> <li>Each group will be asked to elicit and prioritize needs, best practices, crucial information</li> </ul>	All
15.15 - 15.30	15'	Coffee break	
15.30 - 17.00	1h30'	<b>Co-design Part II – Ideas sketch up for the data collection</b>  The aim is design a tangible report, responding to the priorities raised during the part I. <ul style="list-style-type: none"> <li>Each group will sketch a template of I-REACT report. Sketch tools and facilities will be provided.</li> </ul>	All
17.00 - 17.15	15'	Coffee break	
17.15 - 18.45	1h30'	<b>Co-design Part III - Discussion and Design Consolidation</b>  The aim is collect the consensus on the best ideas and design solutions. <ul style="list-style-type: none"> <li>Each group will present to all their output: starting from the template, they share the thought and decisions took</li> <li>The plenary session will be invited to ask and provide comments and to decide about the solutions to be implemented.</li> </ul>	All
18.45 - 19.00	15'	<b>Wrap up of the first day, ISMB</b>	All

## Thursday 15 September – Second day

### Morning

Time	Dur.	Subject	Participants
8.30 - 9.00	30'	Arrival of participants	
9.00 - 9.20	20'	<b>Recap and Introduction to day II, CSI</b>	All
<b>9.30 - 15.30 Session III – Gap Analysis – Leader CSI</b>			
9.30 - 11	1h30'	<b>Gap analysis on operation procedures and processes (part I)</b>  The aim is to evaluate the key I-REACT predefined scenarios in	All

		<p>comparison with the current processes.</p> <ul style="list-style-type: none"> <li>Each End User and Advisor will be invited to fill in an online form on processes to be enabled by I-REACT, with the support of 1 or 2 project partner.</li> </ul>	
11 – 11.15	15'	Coffee break	
11.15 - 12.30	1h15'	<p><b>Gap analysis on operation procedures and processes</b> (part II)</p> <ul style="list-style-type: none"> <li>Each End User and Advisor will be invited to identify possible additional scenarios to complete the gap analysis. Each of them will be assisted by 1 or 2 I-REACT project partners.</li> </ul>	All
12.30 - 13.30	1h	Lunch Break	
13.30 - 15.00	1h30'	<p><b>Gap analysis on operation procedures and processes</b> (part III)</p> <ul style="list-style-type: none"> <li>Open discussion on the Gap analysis to raise key requirements, priorities and concerns</li> </ul>	All
13.30 - 15.00	1h30'	<p><b>In parallel: Cost Benefit analysis: Alpha</b></p> <ul style="list-style-type: none"> <li>One-to-one enquiry</li> </ul>	End users
15.00 – 15.30	30'	<b>Wrap up</b> of the Gap Analysis: CSI	All
15.30 – 15.45		<b>Final closure:</b> UNESCO	
15.45		End of the End Users Workshop	

Time	Dur.	Subject	Participants
<b>16.30 – 18.30</b>		<b>Session IV - Advisory Board Meeting</b>	
16.30 - 18.30	2h	<b>First advisory board meeting</b> of the I-REACT project focused on strategic guidelines for the implementation and exploitation.	I-REACT Project Board and Advisory Board members
<b>18.30</b>		<b>Closure</b>	