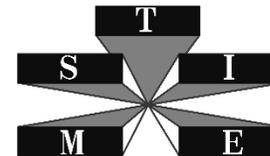


Research Activities within European Union Research Program for Improving Preparedness and Resilience



By



K. Harald Drager, TIEMS President



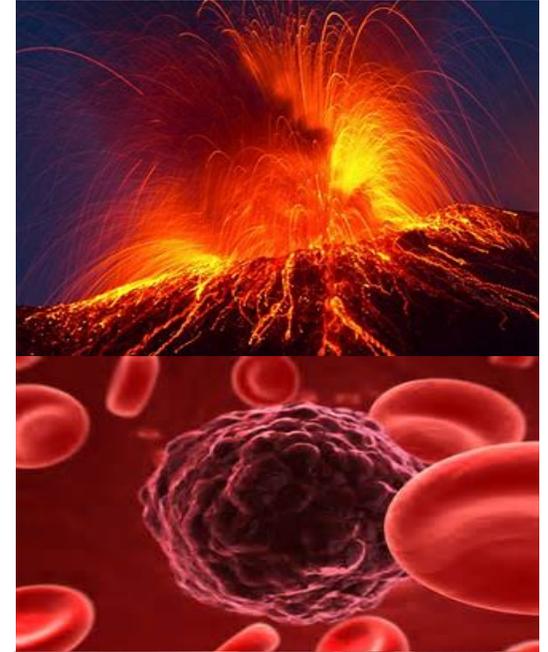


“We cannot eliminate disasters, but
We can mitigate risks,
We can reduce damage, and
We can save more lives”

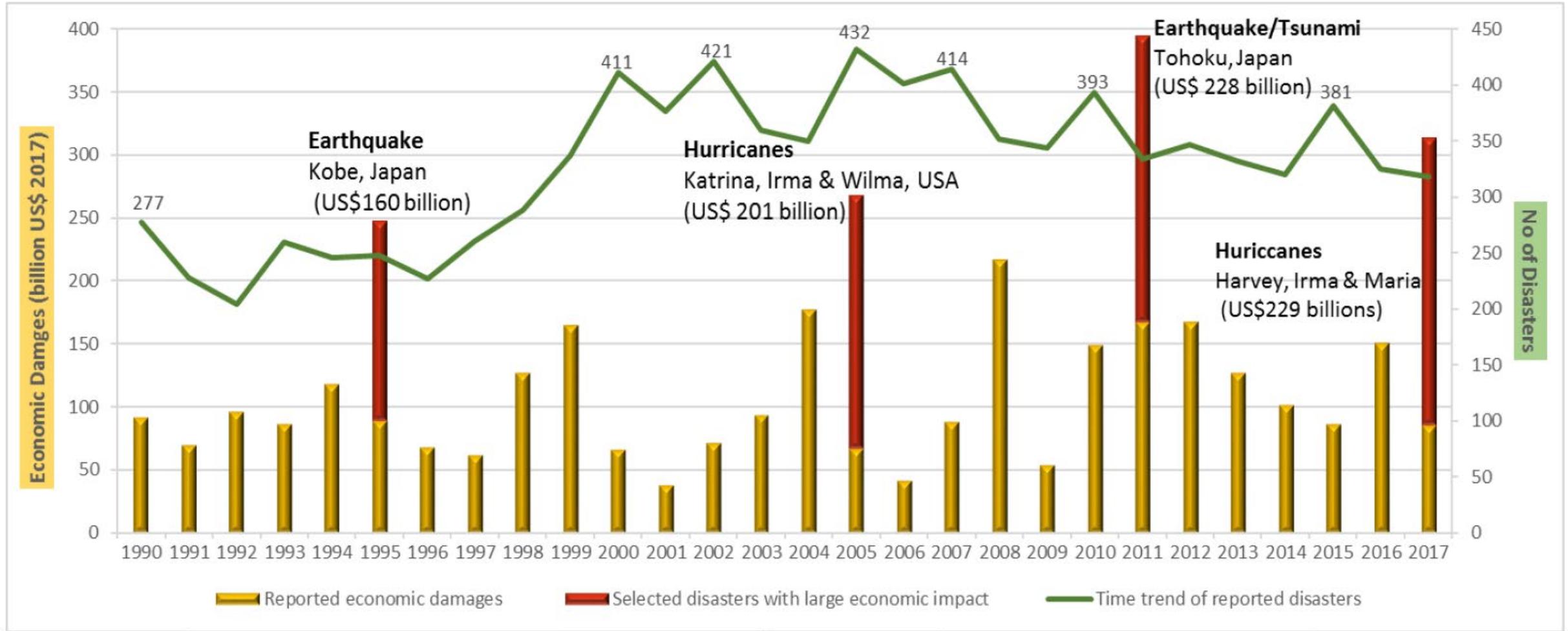
Ban Ki-moon
Former UN Secretary General



World at Risk in terms of types and frequency of Disasters and the Cost of these Disasters?



Annual Occurrence and Economic Damages: 1990-2017



Natural Disasters in 2017

Lower Mortality, Higher Cost

318
disasters

354 *

9,503
deaths

68,302 *

96 million
affected

210 million *

US\$ 314 billion
damages

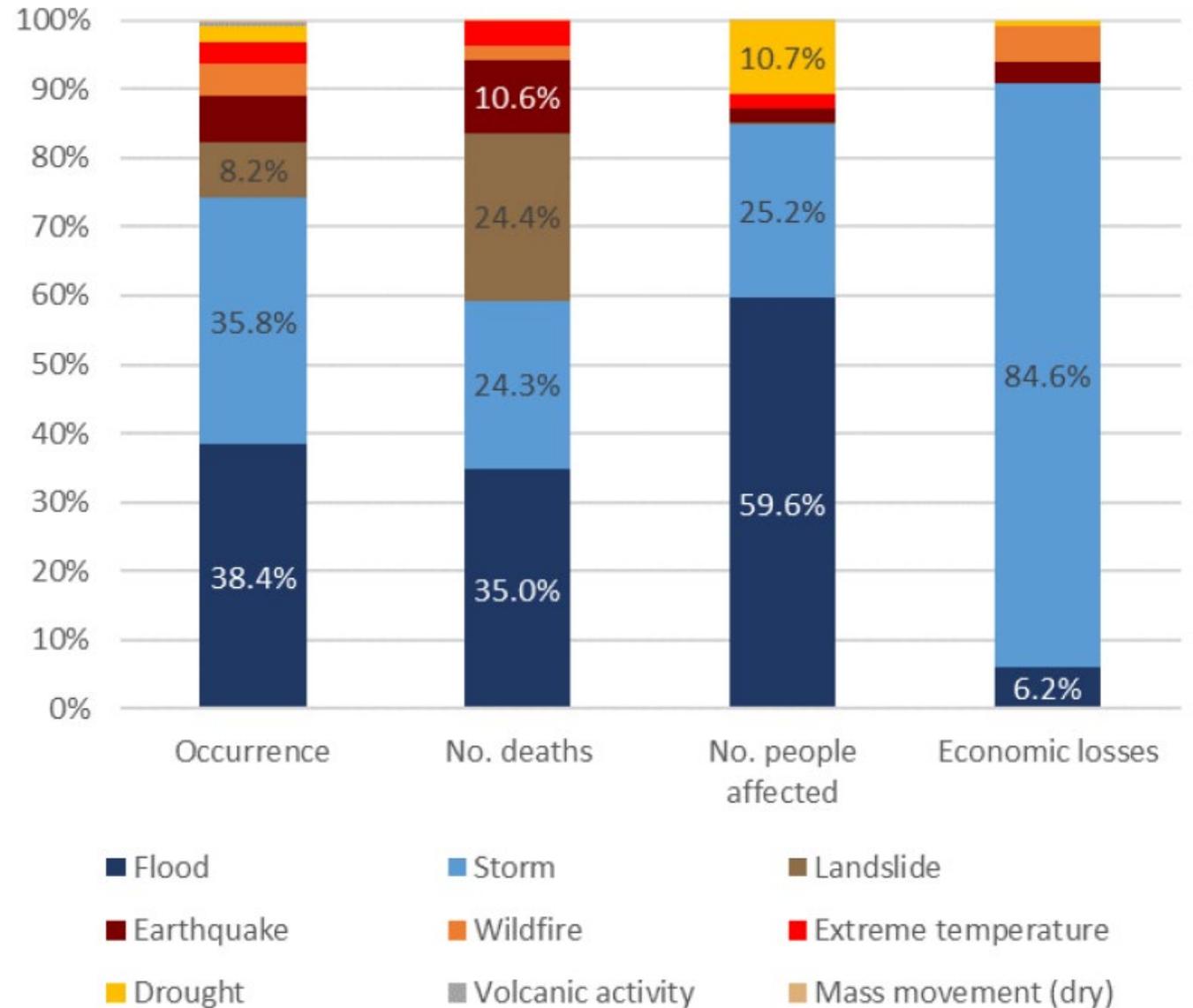
US\$153 billion *

* 2007-2016 yearly average



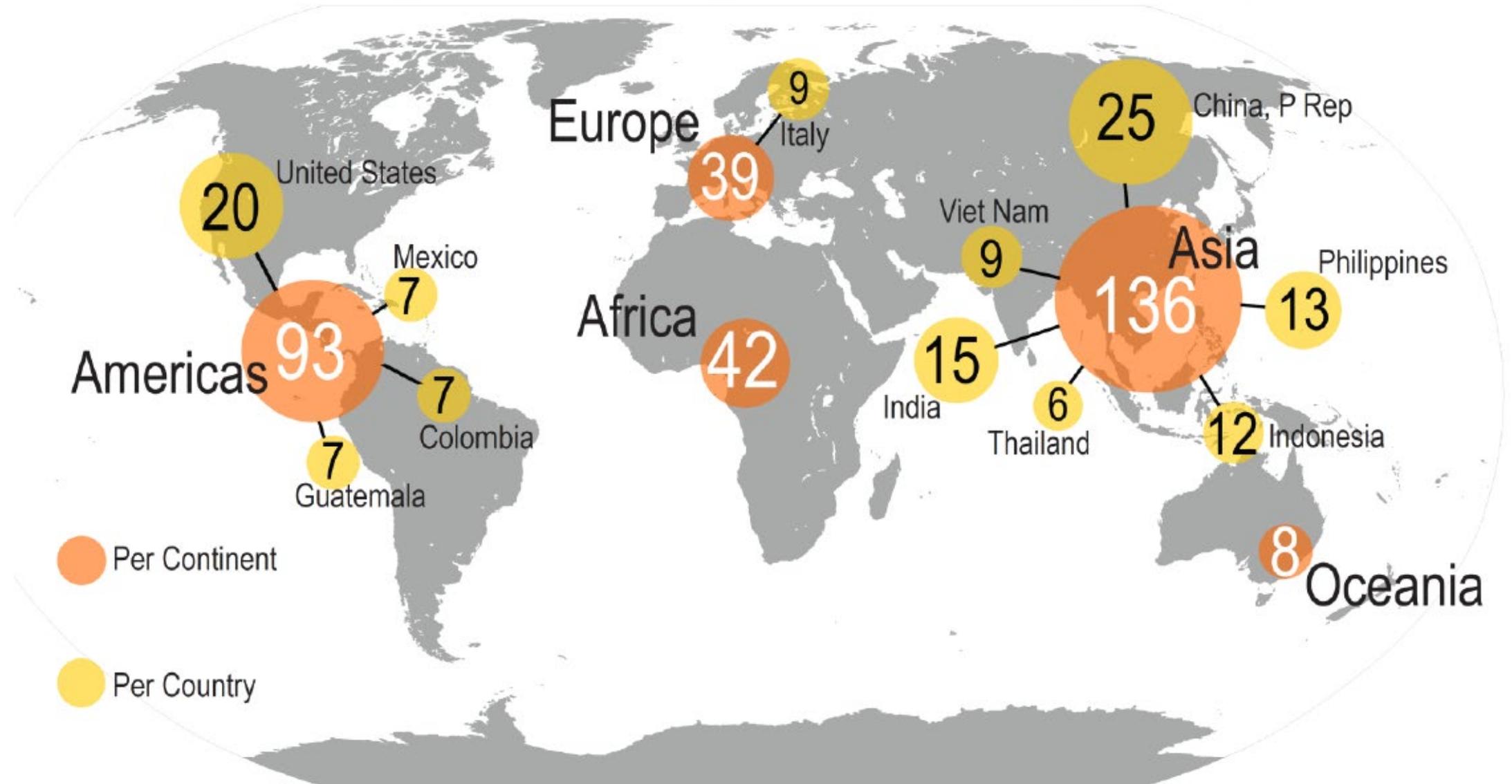
Ref.: EM-DATA

Share by Disaster Type for 2017



Ref.: EM-DATA

Number of Reported Disasters by Country



Ref.: EM-DATA

World at Risk



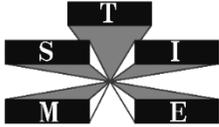
- During the 10 year period 2007 - 2017, it was registered 3540 disasters, with 683 020 deaths and 2100 million people affected
- Climate Change may increase the frequency and consequences of such events
- Between 2010 and 2050 the number of people over 65 in less developed countries is expected to increase more than 250 percent
- By 2050, 66% of the world's population will reside in cities
- 80 % of the ten largest cities are at risk of being severely affected by an earthquake, and 60% are vulnerable to storm surge and tsunami waves
- Vulnerability introduced by local conditions such as poverty, government corruption, poorly planned development, and environmental degradation are adding to the risk

Ref EM-DATA

Cost of Disasters

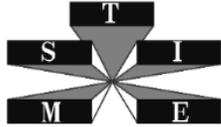


- Total global economic losses from natural disasters and man-made catastrophes were USD 337 billion in 2017
- Global insured losses from disaster events in 2017 were USD 144 billion, the highest ever on *sigma* records
- Hurricanes Harvey, Irma and Maria resulted in combined insured losses of USD 92 billion, equal to 0.5% of US GDP
- Insured losses from all wildfires in the world totalled USD 14 billion in 2017, the highest ever in a single year
- More than 11 000 people died or went missing in disaster events in 2017



TIEMS

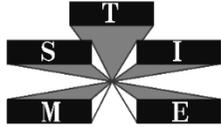
- TIEMS was founded in 1993 in Washington DC, USA, and is today registered as an international, independent, non political, not for profit NGO in Belgium
- TIEMS is a Global Forum for Education, Training, Certification and Policy in Emergency and Disaster Management
- TIEMS provides a platform for all stakeholders within the global emergency and disaster management community to meet, network and learn from each other and exchange knowledge and experience
- TIEMS aims to influence policy makers worldwide to improve global cooperation and to establish global standards within emergency and disaster management



TIEMS Chapters

Think Globally and Act Locally

1. Romania Chapter
2. BeNeLux
(Belgium/Netherlands/Luxembourg)
Chapter
3. China Chapter
4. South Korea Chapter
5. India Chapter
6. USA Chapter
7. MENA (Middle East and North Africa)
Chapter
8. Finland Chapter
9. Iraq Chapter
10. Japan Chapter
11. Italy Chapter
12. Nigeria & West Africa Chapter
13. Ukraine Chapter
14. Philippines Chapter
15. France Chapter (under establishment)



TIEMS Global Approach

The International Emergency Management Society - TIEMS, Focus on Cultural Differences to be Understood and Included in the Society's Events, Education and Research Programs

1. International Conferences and Workshops Worldwide
2. Research and Technology Development Projects
3. Education, Training and Certification Program

EU's funding of Research & Technology Development Activities



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Between 2014 and 2020, the EU will provide almost **€100 bn** in funding for research, mainly through its flagship research programme Horizon 2020. This funding usually takes the form of grants, to part-finance a broad range of research projects

The next Framework Program is
Horizon Europe

EU HORIZON 2020 Security Call

Call summary and aims

[+ More](#)

This Call deals with R&D and innovation towards establishing disaster-resilient societies, fighting against crime and terrorism, and improving border and external security.

Topic: [SU-DRS02-2018-2019-2020: Technologies for first responders](#)

Forthcoming

Publication date: 27 October 2017

Focus area: Boosting the effectiveness of the Security Union (SU)

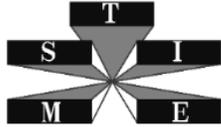
Types of action: RIA Research and Innovation action

DeadlineModel: single-stage

Opening date: 14 March 2019

Deadline: 22 August 2019 17:00:00

Time Zone : (Brussels time)



TIEMS RESEARCH & DEVELOPMENT ACTIVITIES

- 1. NARTUS** (2006 - 2009) - 4 Years - EU's 6th Framework Program
- 2. ASSET** (2013 - 2016) - 4 Years - EU's 7th Framework Program
- 3. HERACLES** (2016 - 2019) - 3 Years - Horizon 2020
- 4. DG ECHO HUB of Wildfire Expertise** (2019 - 2020) - 1 Year - Tender
- 5. World Bank Study of Civil Protection Worldwide** - 2017 - 2019 - Voluntary
- 6. TIEMS International Certification - TQC** (TIEMS Project) - Own financed

TIEMS representatives also participate(d) on advisory boards or user boards in the EU-funded projects; ACRIMAS, OPTI-ALERT, CRISMA, ARCHIMEDES, EDEN, PHAROS, TAWARA RTM, RESCUER, DRIVER+, and TARGET

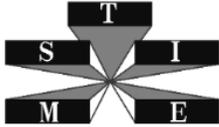


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The NARTUS Project 2006 - 2009



- **Involve** and support users, industry and research in exchanging ideas, best practices, developing roadmaps and in research activities to improve future public safety communications
- **Influence** the EU, stakeholders and standardisation bodies by providing expertise and contributions in order to:
 - Be the voice of our communities
 - Be a driving force towards the future of public safety communications
 - Contribute to the shaping of EU policies
- **Raise awareness** on the issues and challenges end-users, industry and researchers are faced with in the public safety area, discuss solutions and influence the EU research agenda. Inform our members about technology developments, challenges, solutions and research activities and outcomes.



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THE EU ASSET PROJECT

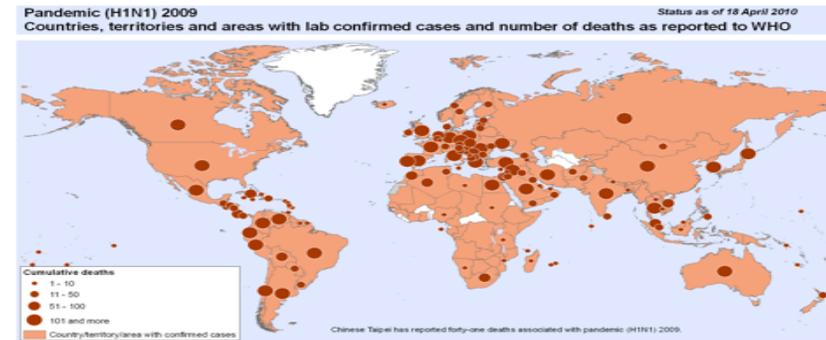
TIEMS was one of the partners in the EU project ASSET; see <http://asset-scienceinsociety.eu/>, with responsibility for High Level Policy Forum and Collection and analysis of experiences of participatory governance in crisis management and an Action Plan Definition in pandemics and epidemics. (2014-2017)



The 2009 H1N1 Pandemic



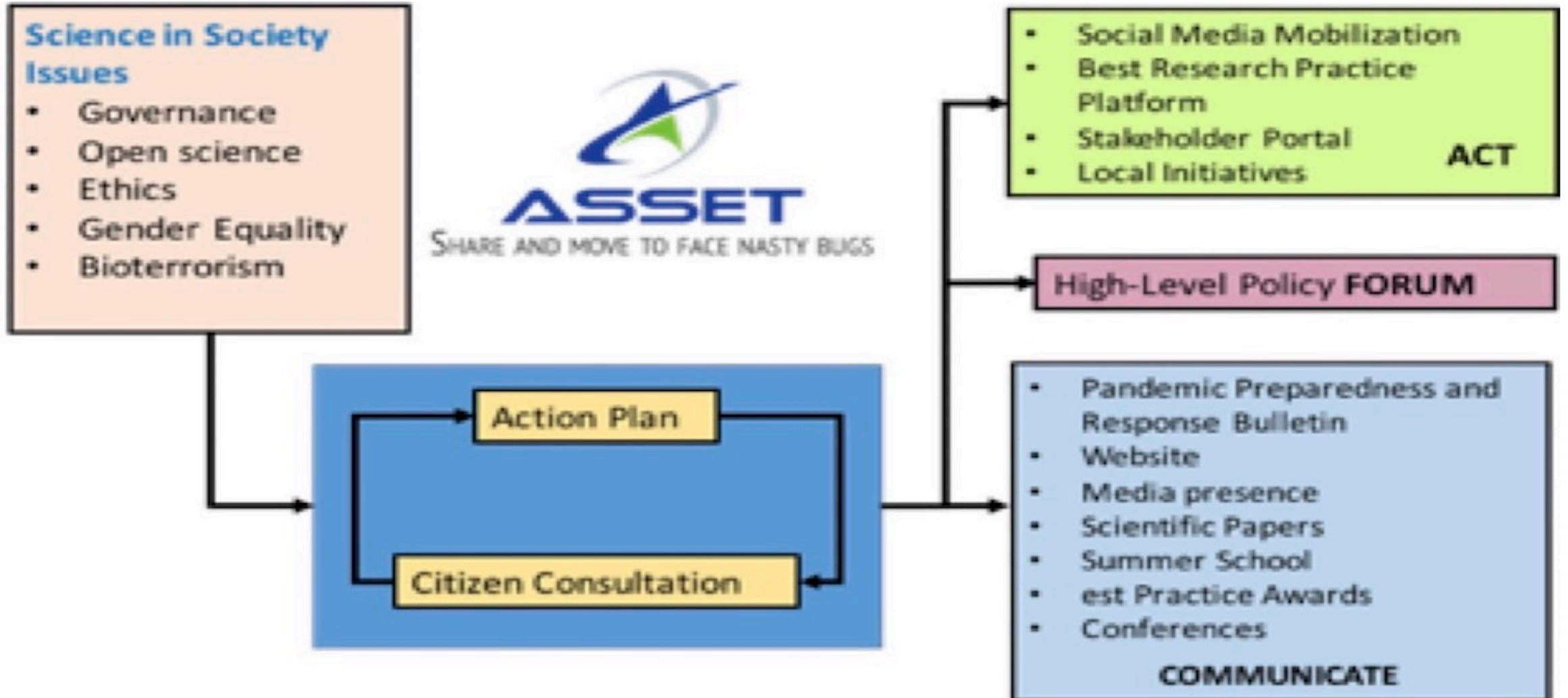
- Alarming outbreak in Mexico; soon in 73 countries
- Authorities predict many deaths; actual deaths like mild flu
- 78 million vaccine doses delivered, too late
- Confidence in health authorities eroded; low public compliance
- Influence of pharmaceutical companies questioned
- Mistrust fed by news coverage and social media





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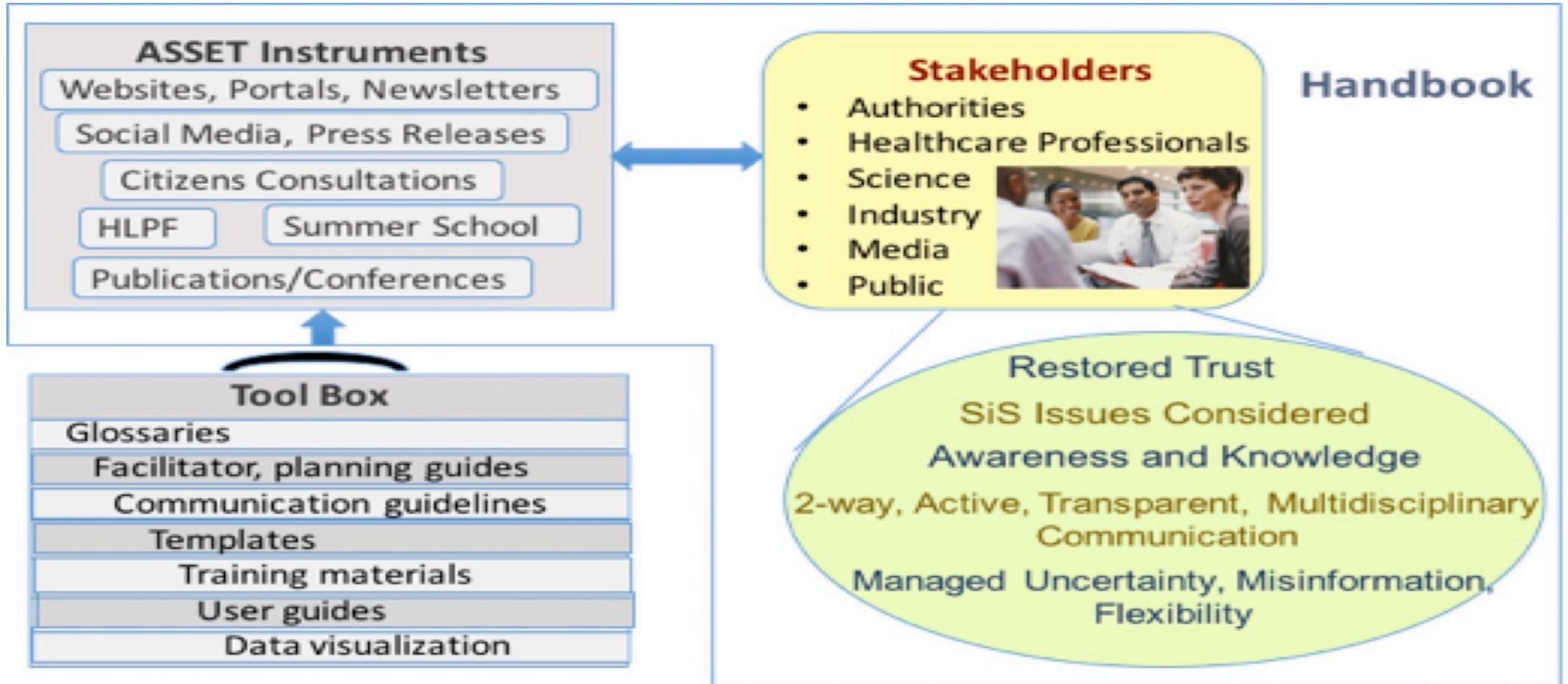
The ASSET EU Project

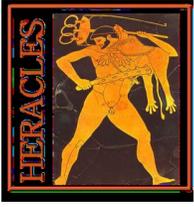




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The ASSET EU Project



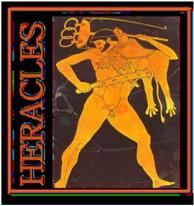


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The HERACLES EU PROJECT

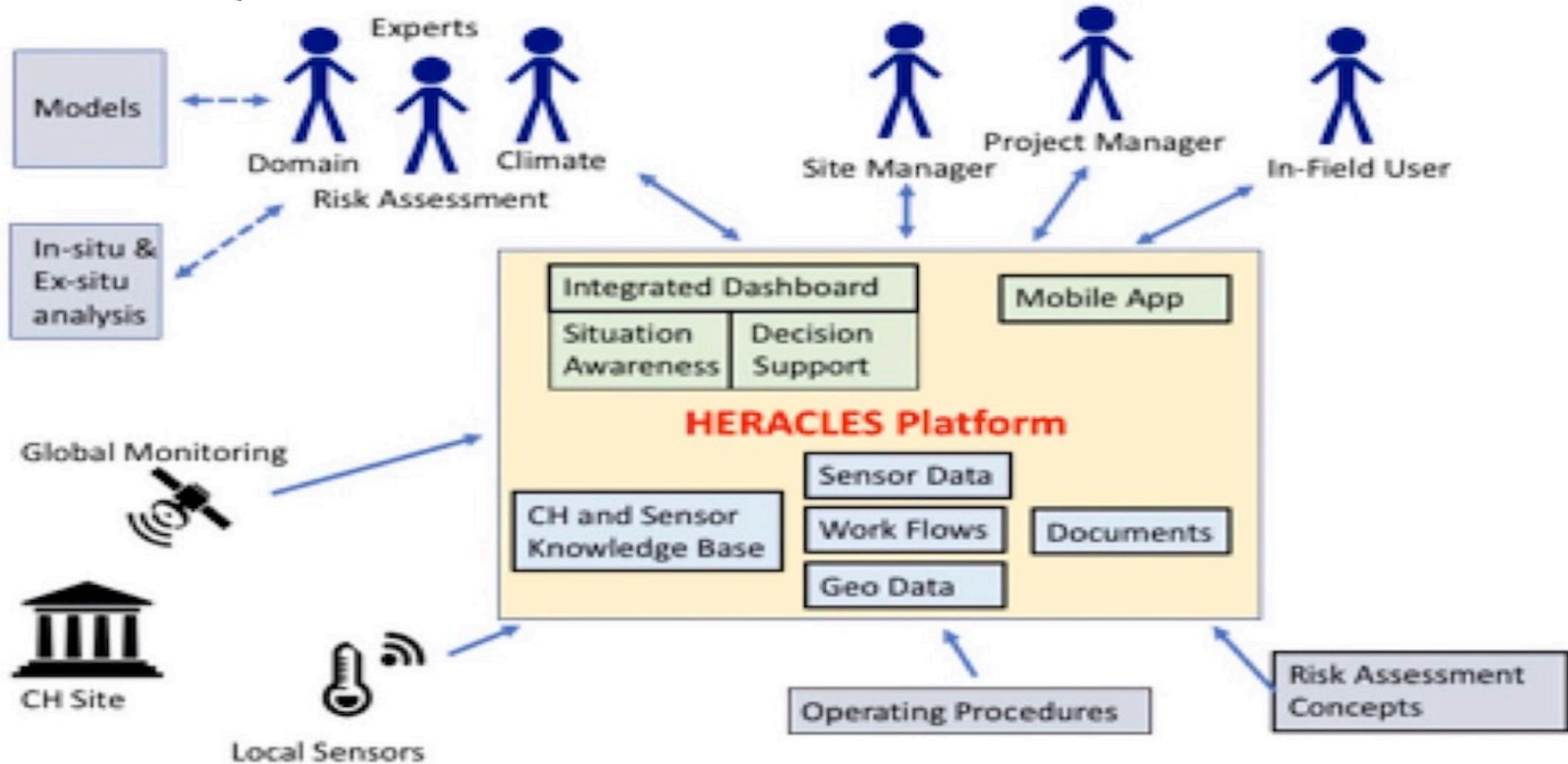
HERACLES main objective is to design, validate and promote responsive systems/solutions for effective resilience of Cultural Heritage (CH) against climate change effects.

This will be operationally pursued with the development of a system exploiting an ICT platform able to collect and integrate multisource information in order to effectively provide complete and updated situational awareness and support decision for innovative measurements improving CH resilience, including new solutions for maintenance and conservation.



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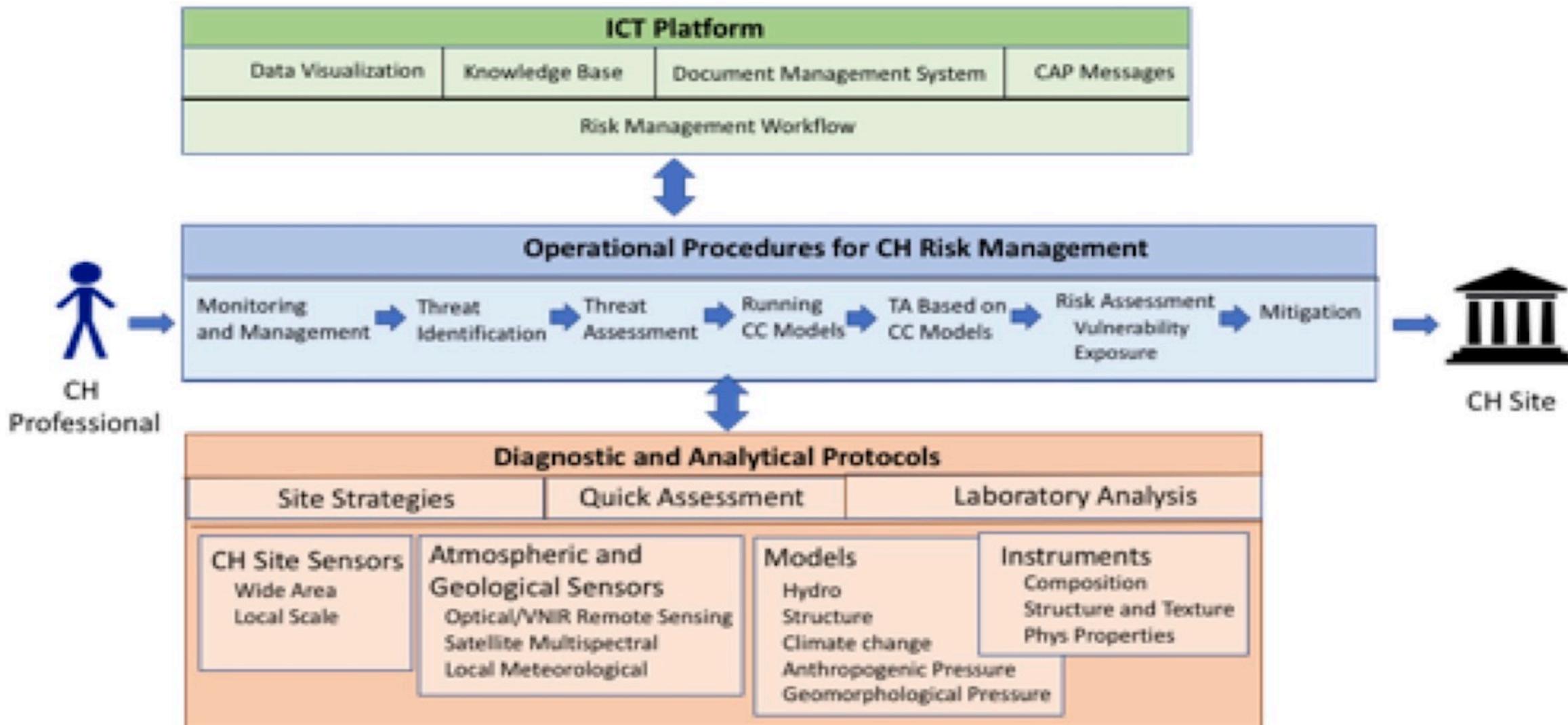
The HERACLES EU PROJECT





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The HERACLES EU PROJECT



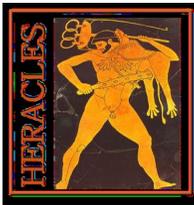


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The HERACLES Project

TIEMS responsibility in the EU project HERACLES; see <http://www.heracles-project.eu/>, are operational procedures for disaster prevention and risk management, best practise manual, and guidelines for virtual training courses and diverse content documents for the training sessions.

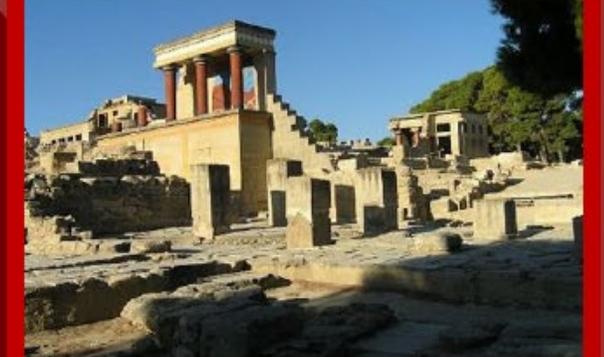
HERACLES Case Study Sites



Medieval Town of GUBBIO,
Italy



Old harbour and Venetian
fortress, HERAKLION, Crete,
Greece



Knossos Palace HERAKLION,
Crete, Greece



Network of European Hubs for Civil Protection and Crisis Management



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TIEMS is a subcontractor to Ecory's Company, in the Netherlands, for developing an expert HUB on wildfire expertise in Europe for DG ECHO project "Network of European Hubs for Civil Protection and Crisis Management". This HUB will serve as a prototype/example for establishing other HUBs with special expertise on other disaster types. (2019-2020)



About the project:

- Launched by the European Parliament
- Preparatory action
- Objective:

to make civil protection and disaster management tools more efficient and more visible for citizens and to better support disaster preparedness in the Union and its Member States



Hub for the integration of practice, knowledge and expertise

The objectives of the project:

- To **formulate a concept** for hubs for civil protection
- To **propose a generic hub-model** based on the experience of a pilot hub on forest fires

Why forest fires?

- In 2018 – new countries concerned
- Biggest share of requests for assistance through the UCPM





Important for the Union Civil Protection Knowledge Network

- Amendment to the UCPM legislation (Decision 1313/2013 – Art 13)
 - ✓ *Network of relevant actors in the field of civil protection*
 - ✓ *bring together and accentuate the impact of existing preparedness activities*
 - ✓ *promoting knowledge dissemination and innovation*

Project's guiding principles

- Build on what already exists -> amplification of the impact
- Integration of practice, knowledge and expertise
- Sustainability
- Replicability and lessons for next steps

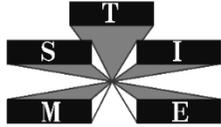


The World Bank study on Civil Protection in the World

TIEMS is a contributor to the World Bank/GFDRR study on "The State of Civil Protection in the World: Typologies, Good Practices and Economic Returns" covering Australia, China and Ukraine, in particular (2017-2018).

The World Bank/GFDRR has launched a global study on the “***State of Civil Protection in the World: Typologies, Good Practices and Economic Returns***” to deepen the overall knowledge on civil protection, understand good practices, challenges and lessons-learnt, and to build consensus within the DRM community on this important area for disaster risk management and resilience.





WORLD BANK STUDY OBJECTIVES

- A global analysis of the institutional diversity of civil protection systems and practices
- A series of deep-dive case studies conducted in a sample of fifteen countries to examine international best practices and lessons-learnt,
- A global public opinion survey to measure the community engagement in civil protection and preparedness and their feedback,
- An analysis of the economic returns on investments in civil protection and preparedness.

The targeted countries for the case studies are:

Developed countries: UK, France, **Australia**, Japan, USA, New Zealand, **Ukraine**

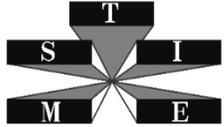
Developing countries: Chile, Mexico, Bangladesh, Senegal, Turkey, Morocco, Cambodia, India,
China

Highlights of countries with TIEMS contribution



Civil Protection in Australia

- In 2016-17, Australia committed \$3.61 billion (USD) to emergency management across all levels of government.
- The fire services attracted by far (94%) the highest level of funding
- In 2016-17, 20,354 full time equivalent (FTE) paid personnel were employed by state and territory emergency services, with the majority (76.9 per cent) firefighters.
- A large number of volunteer staff (231,115 people) also participated in the delivery of services in 2016-17.
- SWOT analysis of emergency management in Australia
- Recommendations for improvement



TIEMS Education, Training and Certification

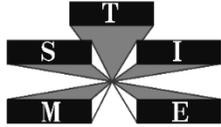


With an increasing number of disasters worldwide, resulting in more international collaboration and support to disaster stricken areas, the need for more education and training in emergency and disaster management seems evident. TIEMS believes that it is important to raise the awareness of the competencies needed in emergency and disaster management, and to support those participating in these activities and operations in acquiring those competencies.

*An international certification has been launched by TIEMS, called
TIEMS International Certification - TQC.*

TQC = TIEMS QI EDM Certification

QI EDM = Qualifications in International Emergency and Disaster Management



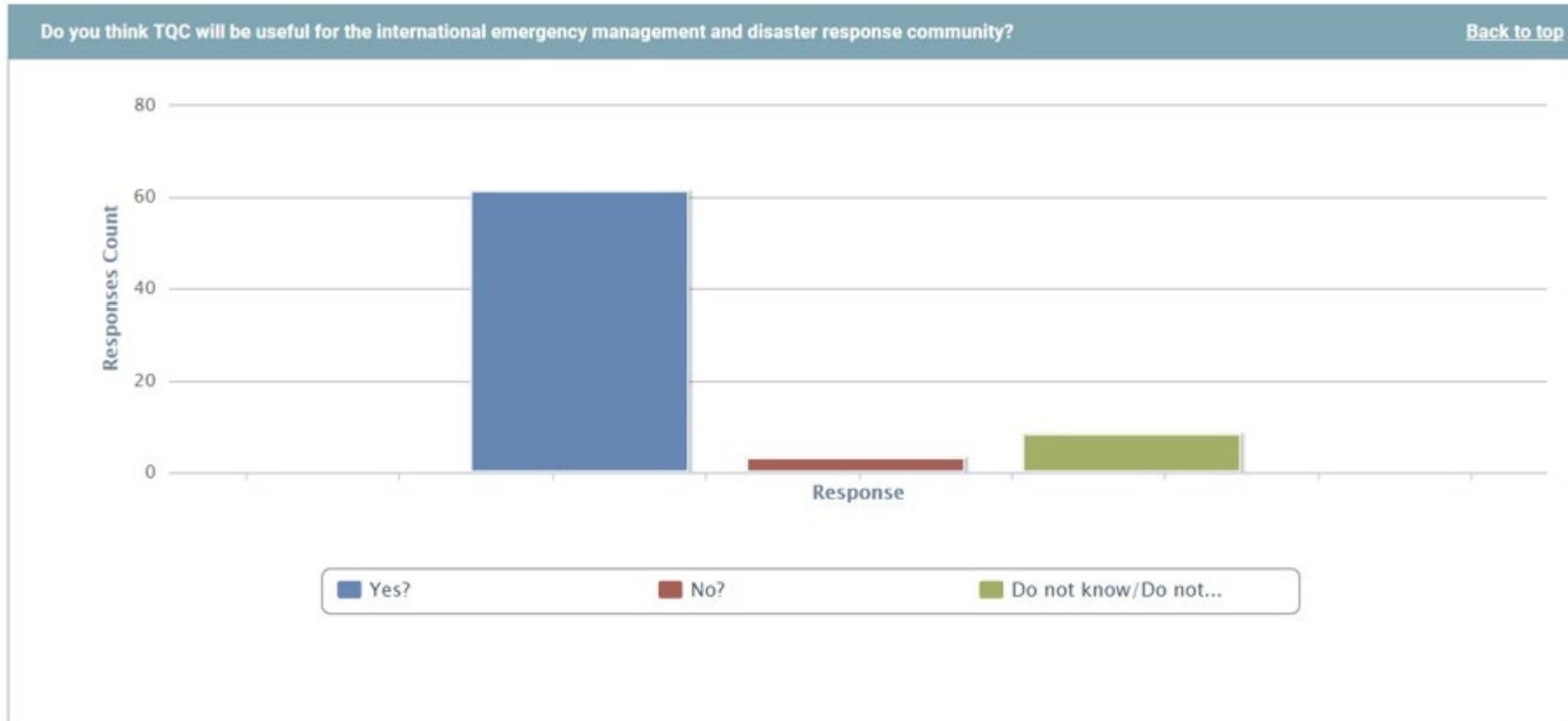
TIEMS TQC Survey Results

Total 72 experts from 33 countries have answered the TQC survey

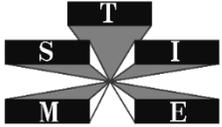
- Norway
- Iraq
- Nepal
- Jordan
- South Korea
- USA
- Italy
- China
- Ukraine
- Australia
- Croatia
- Russia
- UK
- Canada
- Japan
- Finland
- Philippines
- Czech Republic
- India
- Nigeria
- Spain
- Argentina
- France
- Oman
- New Zealand
- Slovakia
- Germany
- Netherlands
- South Africa
- Switzerland
- Greece
- Kosovo
- Turkey



Do you think TQC will be useful?



Yes: 61 (84.72 %), No: 3 (4.17 %), Do not know/Do not want to answer this question: 8 (11.11 %)
Total responses: 72



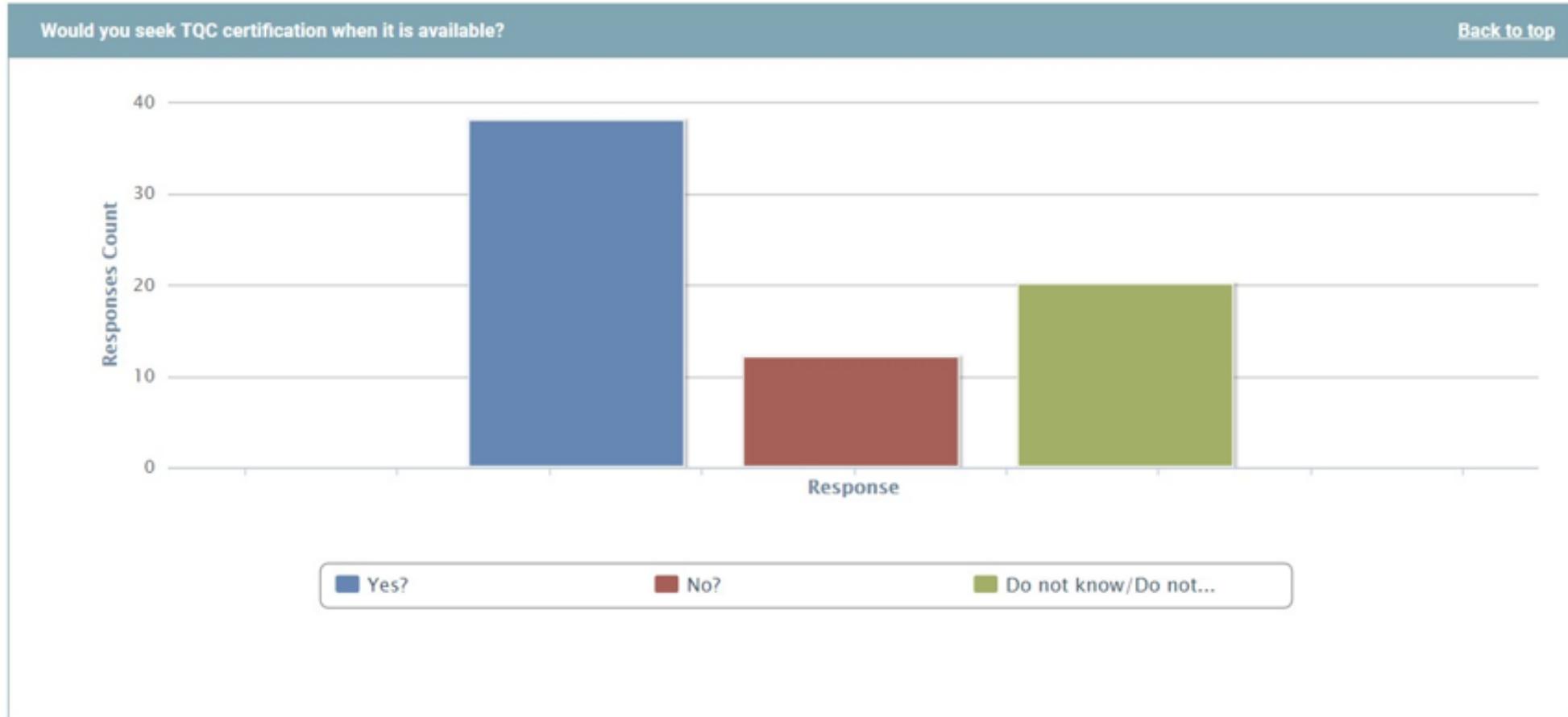
Why TIEMS TQC Certification

- *Although there are several higher qualifications in Emergency Management, they mainly focus on specific countries' requirements rather than an international focus*
- One of the most significant problems in the emergency management space, at least at the international level, is the diversity of opinions and schools of thought about what are the necessary and basic skills and capacities that EM should have. The certificate will definitely facilitate the discussion and will allow for the training of better and more efficient EM related personnel
- *A globally recognised certification will help professionals of varied backgrounds in disaster/emergency management have a better understanding of each other's competencies*
- There should be unified set of skills and knowledge required for management of emergency situations, as those can happen across the borders of the countries. In this situation, cooperation between nations will be required
- *Like credentialing, a certification obtained via a rigorous process from an organization with validated international standing or renown is a positive indicator of a person's knowledge base and capabilities*



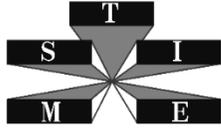


Will the Respondents Seek the Certification



Yes:38 (54.29 %), No: 12 (17.14 %), Do not know/Do not answer this question: 20 (28.57 %),

Total responses: 70

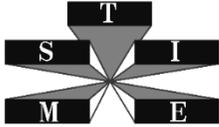


TIEMS TQC Certification Reference Standard & Best Practices

Any international recognized standard and best practice within Emergency and Risk Management, related to all phases of the Emergency Management and Risk Management Cycles, against which the TIEMS Certification Body do their Evaluation of the Applicant

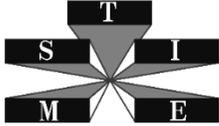


TIEMS has started a Survey of the existing National and International Standards, Best Practices, Guidelines, etc. about Emergency and Risk Management in the different Countries, where they exist



TIEMS TQC Certification Curriculum Focus





TIEMS International Education Partners

TIEMS TQC Certification Curriculum will be developed together with TIEMS Education Partners worldwide, comprising universities and training institutions and other institutions and companies, which can add value to TIEMS TQC Certification Curriculum. A Memorandum of Understanding (MOU) will guide the cooperation between TIEMS and these Education Partners, and below is a presentation of those institutions TIEMS has agreed a MOU with at present. New Partners with interest in TIEMS TQC Certification development are welcome.

Federal University of Technology, Minna, Nigeria

<https://futminna.edu.ng/>

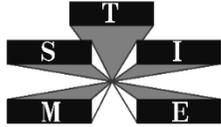
Illinois Institute of Technology, USA

<https://web.iit.edu/>

Dongguk University, Korea (Hosting TIEMS Korea Chapter) <https://web.dongguk.ac.kr/english/main/main.jsp>

Rhodes University, South Africa

<https://www.ru.ac.za/>

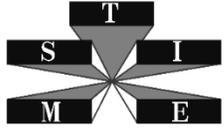


TQC User Requirements/TQC Test Candidates

In order to see to it that TIEMS International Certification - TQC, is relevant and appropriate and fulfilling the needs of the emergency management and disaster response community, and that it is up-to-date and using state-of-the-art technology, we have invited experienced professionals with different backgrounds and experience and from different countries, to be test candidates of TQC before it is opened to the community of professionals. Their role is to test the system from A to Z and give valuable feed-back on the quality, operational aspects, and relevance of this certification, to allow TIEMS to tune it to the needs of community experts.

The present Test Candidates are:

- Larry Porter, USA
- Gbenga Morenikeji, Nigeria
- Naill Momani, Jordan
- Jack Zhang, China
- Amardeep Bhardwaj, India
- Roman Tandlich, South Africa
- Desiree Beekharry, Australia



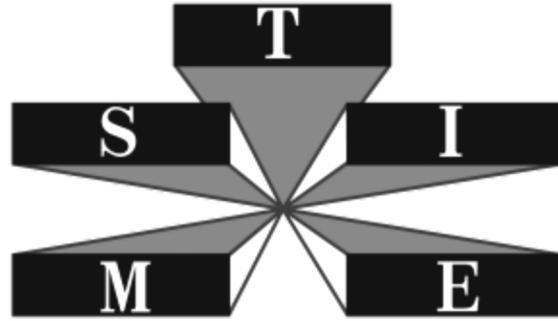
TIEMS 2019 Annual Conference

November 12 - 15, 2019
GOYANG, KOREA



Conference Host:
***TIEMS Korea Chapter jointly with the
Korean Society of Disaster & Security***





Thank You for Your Attention!

QUESTIONS?

