

Findings of the TQC Survey on Development of the TIEMS TQC Curriculum

TQC = **TIEMS** **Q**ualifications in International Emergency and Disaster Management (QIEDM) **C**ertification

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Introduction

TIEMS TQC Survey asked opinions from the international emergency management and disaster response community on structure and content of TIEMS international certification concept, TQC, defined as TIEMS Certification of "Qualifications in International Emergency and Disaster Management" (QIEDM). Total 72 experts from 33 countries have answered the TQC survey. They come from the following countries:

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

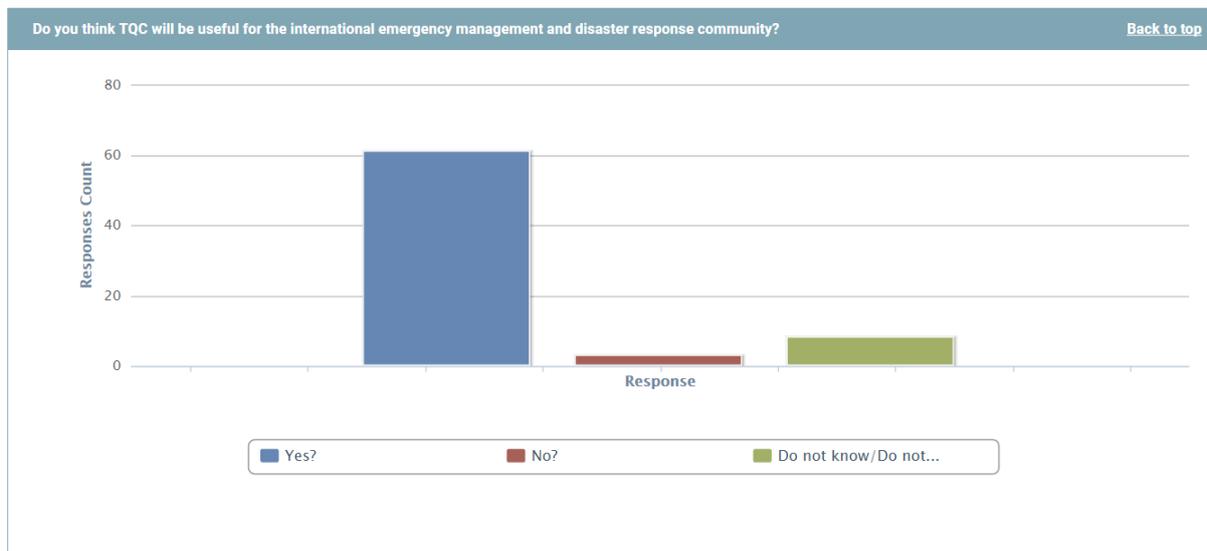
Below is the findings of the TQC Survey.

Majority of the Respondents Support the TQC Concept

After a brief introduction in the Survey of the background and purpose of the TQC concept, the questionnaire asked if the respondent supports the development of the TQC concept. The introduction and the response to this question follow below, and show that a majority of the respondents support this development, namely 84.72 %.

INTRODUCTION and QUESTION in the Survey

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 can be one way to improve the qualifications and competencies of these experts. TIEMS has worked for several years on a concept to develop a certification of Qualifications in International Emergency and Disaster Management (QIEM), named TIEMS QIEM Certification or TQC. In the following questions, we seek your opinion and advice on the framework and content of such a certification.



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

Total responses: 72

The Reason for Support of Development of TQC

The respondents stated also why they support TIEMS development of the TQC, and the following are key responses selected from all answers:

- 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.
- The certification will help worldwide knowledge and skills sharing, communication among experts and responsible organizations, and building informal networks capable of fast activation and deployment.
- As TIEMS gathers together emergency management experts from all over the world, it boasts experiences of a wide array of best practices tested globally, in different settings and under different conditions, and this pool of experiences is precious to draw from in acknowledging and assessing recognized and accepted practices.
- To be more educated and learn from each other experiences from disaster relief units and commanders. Exchange all potential knowledge about all crisis situations, inclusive in the international scale.
- A certification can be useful to ensure a minimum standard in the qualifications.
- Harmonizing ways of working is important and global standards improve this.
- There are many local aspects of disasters and emergency situations. However, it is important to dare best practices. This certification will allow for it.
- With the diversity of practitioners, any independent international recognition of skills and competencies it is useful in vetting candidates for jobs and missions.
- 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.
- Helps to put international standardization and increasing cooperation.
- 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.
- Currently, there are very few certification schemes in emergency management. Most are very limited in scope, either geographically (e.g. IAEM/CEM to the US) or functionally (e.g. several business continuity certifications). What is lacking is a truly international emergency management certification, and I hope TQC will be that.
- This certification is a symbol of unified global efforts to improve emergency management world-wide

Below are all answers given on this question:

QUESTION: *Please comment on the reasons for your answer above?*

- *I am not aware of any international similar certification*

- *to add value of worldwide knowledge of disaster management*
- *TQC will be highly instruments to enhance the knowledge of the DRR professionals of the member nations and beyond.*
- *It is necessary to educate and train for response activities.*
- *Share best practices across the world, and improve international collaboration.*
- *there is no recognized international certificate in this domain that could be accepted internationally such as business continuity certificates from BCI and DRI*
- *Because it will contribute to the process of standardization on how to deal with emergency and disaster management*
- *International Emergency Management for all kinds of disasters need certification, and TIEMS TQC will be a useful tool for each of disaster communities.*
- *One of the most significant problems in the emergency management space, at least in 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*
- *Emergency management (EM) cuts across several disciplines e.g. science, psychology, sociology, geography and there are few academic courses specialising in EM. Many people go into EM with no qualifications in the field and TQC would provide standard qualifications across the world.*
- *Usually there is not clear qualification on this issue in the countries. There are many diverse of them (risk analyst, firefighter, security engineer, etc.), so any initiative at international level on harmonisation of the competences is welcome.*
- *Information about efficiency of response measures, collected by international team , is very important for expert system development in order to increase the quality of emergency response*
- *Many countries are building their emergency culture, especially public disaster experience, training and education. So, TQC will be useful for the international emergency management and disaster response community.*
- *Increased the natural and man-made disasters need to increase capacity building of worker in the field of emergency management and disaster response.*
- *There is still an ISO standard (22320) which is in duty with several other ones (22300, 22320, 22326, 22327, 22395), in the field of CM. Furthermore many Technical committees are now working to define others standards (CBRNE, People alert etc.)*
- *It sounds like a good way to increase consistency and demonstrate skills.*
- *It will raise the level of preparedness of first responders and others who complete the certification.*
- *I think such kind of certification need not be of international but be of national.*
- *TQC must be focusing on those regions in the world where there is no similar international certification. There are U.S. based The International Association of Emergency Managers (IAEM) and The International Association for Disaster Preparedness and Response (DERA). TIEMS has the HQ in Brussels, Therefore, it is logical and I would rather seek the EU TQC in close cooperation with various EU DGs etc. with an extension to Asia (i.e. China and Philippines). It is obvious that North America should be omitted, at least in the beginning. The EU has no unified certification framework in civil protection although DG ECHO makes some efforts. The development of TQC should be carried out as the H2020 project.*
- *A global recognised certification will help professionals of varied backgrounds in disaster/emergency management have a better understanding of each other's competences*
- *TQC could collaborate the experts in Disaster Risk Reduction area to circulate knowledge of disasters and emergency skills under a common standard and multi-departmental consensus worldwide.*

- *This is a great way for folks to show they have international credentials and a great way for folks to use a common standard for international operations.*
- *To increase global awareness and competence to deal with disaster*
- *It provides an unified approach for disaster management qualification and national emergency response*
- *The certification will help the worldwide knowledge and skills sharing, communication among experts and responsible organizations, building informal networks capable of fast activation and deployment.*
- *TIEMS gives the possibility to have better contacts between specialists, interchange of knowledge and technology among people, shows terrible state of population life in the countries, where poverty and corruption take place, necessity to know English as international language for fast and active cooperation, use of progress for better life. Reveals the worst places on the Earth, organizes support and give the way for overcome problems for the people communities there. TIEMS is the strongest organization directed for the mankind survival in the XX! Century ever seen by me.*
- *I would have replied maybe, if I had a choice. It is difficult to generalize the usefulness of TQC for the EM&DR community across the world. IAEM has been promoting CEM for many years. However, CEM is valued only in US.*
- *As TIEMS gathers together emergency management experts from all over the world, it boasts experiences of a wide array of best practices tested globally, in different settings and under different conditions, and this pool of experiences is precious to draw from in acknowledging and assessing recognized and accepted practices.*
- *With the development of technologies, the elimination of emergencies becomes a complex process. It is also necessary to study the experience of successful management of emergencies.*
- *Web based, standardised + registration to the European Commission*
- *The response to emergencies and disaster need a lot of awareness, efforts and coordination. Training is one of the primary tool to achieve that.*
- *We need some experts who are qualified and competent in emergency and disaster management.*
- *Certification helps with quality control and validation of expertise*
- *TQC will be very useful. Nigerian Universities have produced many graduates in the field of Disaster Risk Management but the degree earned does not qualify graduates as certified experts. TQC will help us to distinguish certified experts from among the graduates.*
- *Builds trust and facilitates cooperation.*
- *We need some experts who are qualified and competent in emergency and disaster management.*
- *To refresh the information and getting skills which will improve the outcome*
- *Although there are several higher qualifications in Emergency Management, they mainly focus on specific countries' requirements rather than an international focus.*
- *The ability to deal with emergency situation and disaster is very important.*
- *To be more educated and learn from each other experiences from disaster relief units, commanders. Exchange all potential knowledge about all crisis situations international scale incl.*
- *A certification can be useful to ensure a minimum standard in the qualification.*
- *Harmonizing ways of working is important and global standards improve this*
- *There are many local aspects of disasters and emergency situations. However, it is important to dare best practices. This certification will allow for it.*
- *To much focused on the anglo-saxon world!*

- *Be prepared for better response from any kind of emergencies is motto of actual sustainable urban community! Resilient community is global goal!*
- *With the diversity of practitioners, any independent international recognition of skills and competencies is useful in vetting candidates for jobs and missions.*
- *My answer is maybe. It all depends what you want to accomplish by the certification. Are you talking about general disasters, or other that may involve hazardous materials such as toxic chemicals or radioactivity? If it were the latter, the degree of difficulty increased dramatically.*
- *define standard methods activate effort Exchange methodology define new intervention means*
- *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.*
- *I would have to see the extent of the certification. A certification for its own sake is pretty worthless.*
- *It feels to me as though TIEMS and IAEM are in competition with each other. How will this offering differ and/or improve upon the CEM model, or will it? Improvement and growth is always needed- where's the data cross-walking between TIEMS concept and the reality of IAEM's CEM? Hard to support without this understanding and there is already too much competition for limited time and money.*
- *Depends on the requirements if it will be useful to me.*
- *Addresses international emergency management.*
- *Help to put international standardization and increasing cooperation*
- *I believe that a certification is a critical component for EM standardization. But, it should be in an "international" evaluation mechanism. (I was an IAEM member and after 15 years of service, I attended the 2008 CEM certification exam in UK. Although I passed the written exam, IAEM did not satisfy with my CV and personal background documents. My service was enough, my experience was not bad and my papers was sufficient, but as IAEM is not an "International" organization, I could not prove my competence in their style. My application file was 10 centimeters thick and the whole application including my travel expenses, cost me about \$6000- which is a very big amount in my countries condition. The only problem was their US based criteria, mispricing and their narrow vision. I do not think that I can try another exam after this experience, but I'm still supporting an "International Certification " idea because of its importance)*
- *Most of these people are type A to begin with and I fear certification will become more of a barrier to entry to others whose overall education has probably prepared them better than the certification would have*
- *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*
- *Maybe it would be useful. If the TQC is for individuals, what will the expected benefits be for individuals who hold it? Better job prospects? Preferred hiring? Higher compensation? If it does not provide one or more of these benefits, I do not see how it will be useful.*
- *In my field of ICT's supporting emergency management it is obvious that extra training is required.*
- *Too many Universities worldwide offer Master degree in the same field*
- *Currently, there are very few certification schemes in emergency management. Most are very limited in scope, either geographically (e.g. IAEM/CEM to the US) or functionally (e.g. several business continuity certifications). What is lacking is a truly international emergency management certification, and I hope TQC will be that.*

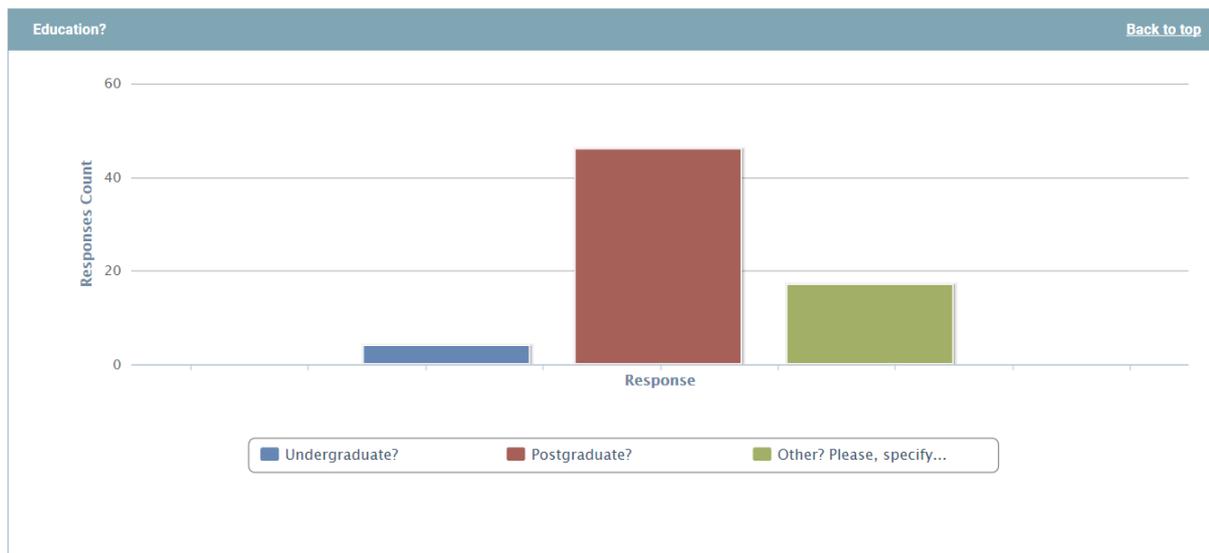
- *This certification is a symbol of unified global efforts to improve emergency management world-wide*

Total Responses: 64

Background and Experience of the Respondents

In order to qualify the answers to the survey, the respondents were asked to state their education, if they had participated in any emergency deployment, how often they had participated in full scale exercises and type of employment. The answers are below, and show that the respondents should be well qualified to answer this type of survey.

Education



Undergraduate: 4 (5.97 %), Postgraduate: 46 (68.66 %), Other: 17 (25.37 %), Total responses: 67

Profession or speciality of those who have answered the questionnaire shows a good spread of competences as shown below of the detailed feed-back of the profession or speciality from the respondents:

- *Emergency Medicine Master trainer*
- *Water waste water emergency response and recovery*
- *Disaster Management Specialist*
- *Non structured Disaster Management*
- *Engineer/Consultant*
- *Professor, Consultant, Trainer*
- *Critical Infrastructures Resilience*
- *Professor of USAR Expert Group Leader of CEA Deputy General Team Leader of CHINA International SAR Team*
- *Economist, Phd. disaster management*
- *Doctor of physical and mathematical sciences, professor, civil protection*
- *Natural hazards consultant*
- *Mathematical modelling, Environmental safety and Civil protection*

- *Risk management, disaster & emergency management, critical infrastructure protection, system sciences in general, information systems*
- *Seismic loads; seismic and natural risk assessment and management; near real time earthquake loss estimation in emergency mode*
- *Emergency Industry Zone Plan, Public emergency safety experience, Seismic Risk Analysis and Assessment*
- *Senior Fire Officer*
- *Researcher*
- *Business Continuity Management / Disaster Recovery Planning Program & Project Management*
- *Computer Science*
- *Disaster Information as early warning and/or prediction*
- *Security expert*
- *Social media*
- *Emergency and Disaster Management; CCDRR Education*
- *Innovation management and finance*
- *Remote sensing*
- *Information technologies, electronics*
- *Head of the Department of civilian protection and computer modelling of ecology - geophysical processes*
- *Emergency and Disaster Management*
- *Head of Unit for Specialized Training in Protection and Rescue, National Protection and Rescue Directorate*
- *Associate Professor, Department of Geodesy and Cartography, Faculty of Geography*
- *Professional specialist engineer of crisis management*
- *Project Officer in Critical Infrastructure Protection and Resilience*
- *Secretary General.*
- *Resilient recovery; urban resilience*
- *Environmental Management*
- *Management*
- *President, CEO*
- *Chairman of KSDS.*
- *Emergency Medicine*
- *Officer Development in Emergency Management.*
- *CBRN protection military branch*
- *Software developer*
- *Resilience, human factors*
- *Water sanitation and legislation analyses.*
- *Senior Security Expert*
- *Civil/Military background and education, telecom and civil protection- emergency management. Bachelor degree - Military Master degree - Civilian*
- *Risk management with specialist skills in emergency management, petrochemical emergency response, business continuity/disruption related risk, and risk communications.*
- *Radiation Protection/Nuclear Engineering/Health Physics*
- *Command and control system Architecture*
- *CBRN Officer, Military*
- *Emergency management, specializing in higher education*
- *Emergency Manager*
- *Mental Health/Emergency Management*
- *Emergency medicine specialist*
- *Marine Communications, Marine Emergencies Response (& Applications of OPRC and HNS Conventions), Maritime Policy*

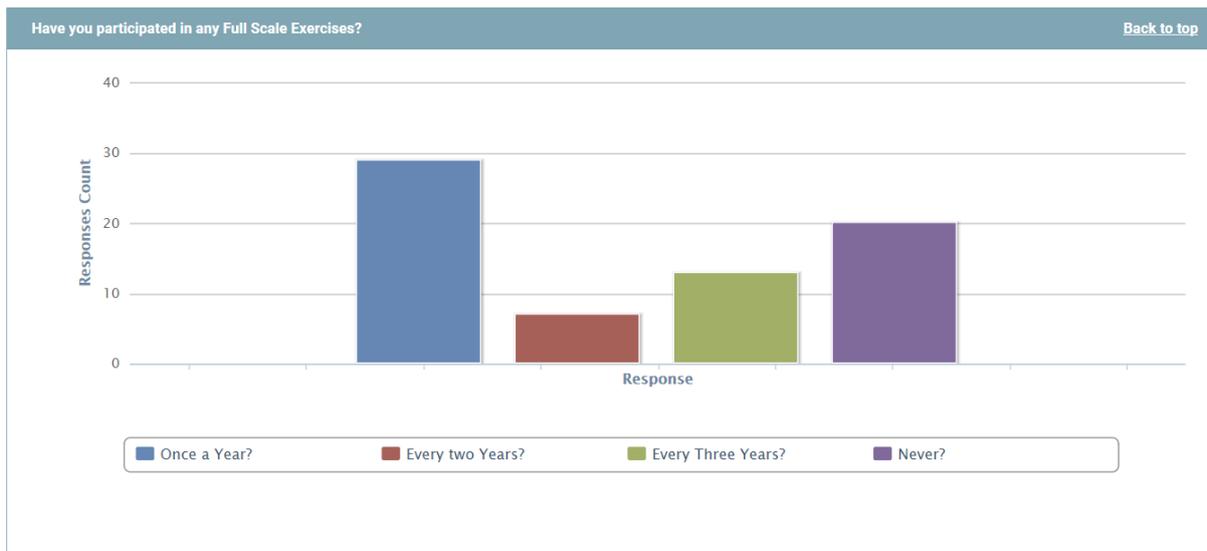
- *Information Systems, cyber security, systems analysis, crisis management, engineering*
- *Ph.D. in Emergency Management from The George Washington University, with a research emphasis in military support to civil authorities*
- *Business continuity management (now retired)*
- *Emergency information management, environmental information management, simulation , crisis management, GIS*
- *Crisis and disaster risk management and reduction, CC Adaptation, Urban Resilience*
- *Research Scientist, Emergency Management & Critical Infrastructure Protection*
- *Deputy Emergency Management Coordinator -Coastal Community Resilience - Hurricanes , Storm Surge, Flooding, Wind Events Disaster Management -Maritime Disaster Management -Seaport hazard mitigation -Short/ long-term Recovery - Disaster Mitigation - CERT -Shelter management/ Shelter Ops*

Total Responses: 67

Respondents Participation in any Emergency Deployment

Have you participated in any Emergency Deployment?		Back to top
Local Emergency Declaration?	29 43.28%	
State Level Declaration?	18 26.87%	
National Level Declaration?	30 44.78%	
International Level Declaration?	22 32.84%	
Never?	19 28.36%	
# of people who answered question	67	

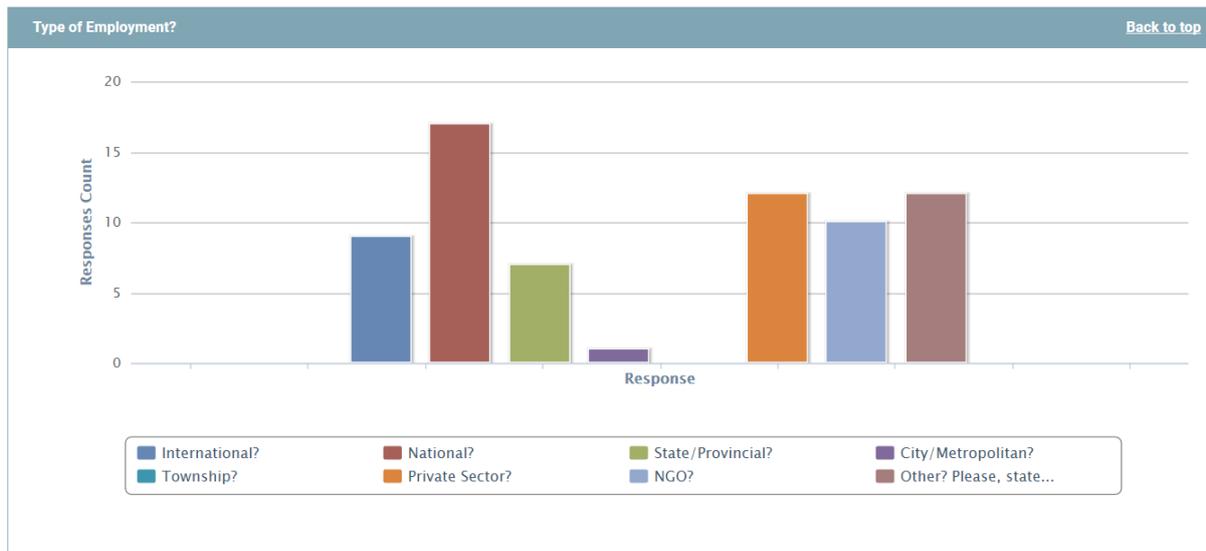
Respondents Participation in full Scale Exercises



Once a Year: 29 (42.03 %), Every two Years: 7 (10.14 %), Every three Years: 13 (18.84 %), Never: 20 (28.99 %)

Total responses: 69

Respondents Type of Employment



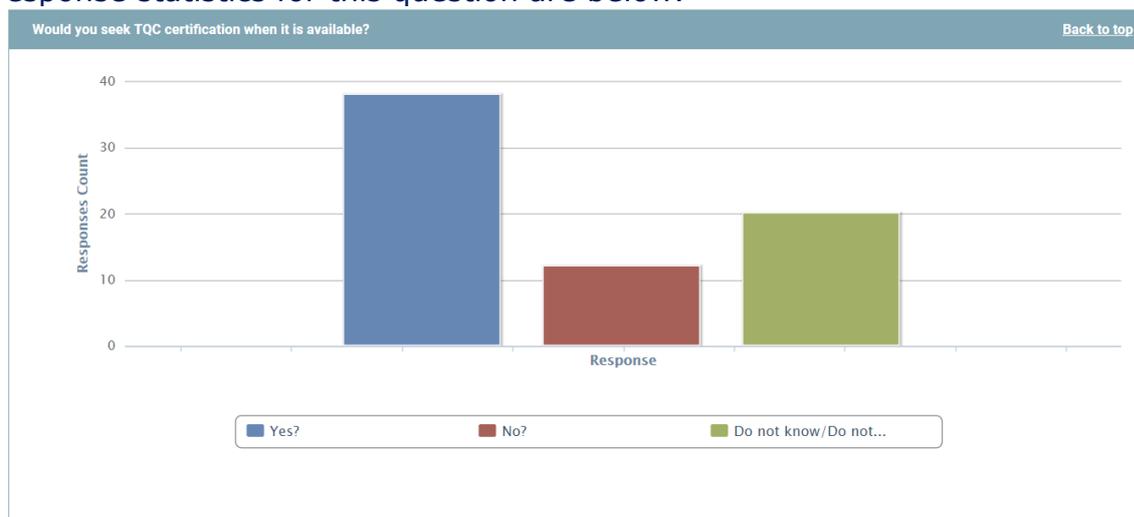
International: 9 (13.24 %), National: 17 (25.0 %), State/Provincial: 7 (10.29 %), City/Metropolitan: 1 (1.47 %), Private Sector: 12 (17.65 %), NGO: 10 (14.71 %), Other: 12 (17.65 %)

Total responses: 68

The above described background and experience of the respondents to the TQC Survey show that they represent a qualified and experienced international group, which guidance are very valuable input for TIEMS in the development of TIEMS TQC Curriculum.

Will the Respondents to the Survey seek TQC Certification?

We also asked if the respondents would seek TQC certification when it is available. More than half of the respondents (54.29 %) are positive, and say they will seek TQC certification when it is available. This is a very encouraging answer. The response statistics for this question are below.



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

Total responses: 70

National Certification Schemes to be Aware of

When developing an international certification scheme, it is important to be aware of existing national certification schemes, which may have an impact on the development and content of TQC. From the responses received, the below listed countries are the main ones having national/local certification schemes, which should be analysed in order to include their competence objectives in TQC, with the aim of gaining future acceptance of TQC as an added-on certification for those with these local certifications.

- | | | |
|---------------|-----------|----------------|
| ▪ South Korea | ▪ Iraq | ▪ New Zealand |
| ▪ USA | ▪ France | ▪ South Africa |
| ▪ China | ▪ Canada | ▪ Switzerland |
| ▪ Australia | ▪ Japan | ▪ Netherlands |
| ▪ Russia | ▪ Nigeria | |

Below are all answers given to this question:

QUESTION: *Are there any national certification schemes for emergency and disaster management in your country? If yes, please, list your country and the names of the certification schemes?*

- *BCP certification in Korea*
- *US - IAEM*
- *Not in Italy, as far as I know*
- *Emergency response person, China*
- *Yes, there is an advanced diploma in Australia provided by the National Centre for Emergency Management Studies. Course components are Fully online, or available with a workshop at industry request. Introduction to Emergency Management Business Continuity Planning Political Acumen Planning for Emergencies Blended courses include a workshop Exercise Management Evaluation for Emergencies Communities and Disaster Recovery To be piloted in the next six months Community Engagement for Emergency Management (blended) Emergency Risk Management (blended) Coordinating Resources for Emergencies (blended) Community Safety Messaging (online) There are also certificates provided by professional associations such as Floodplain Management Australia.*
- *There is voluntary certification of experts, software and equipment in Russia. It is carried out by the Head Emercom Institute on Civil Deference and Emergency Situations*
- *Training Program of emergency rescuers from the Ministry of Civil Affairs, It is divided into three grades.*
- *Iraqi Commission for Medical Specialization for emergency medicine; ministry of health diploma in emergency medicine*
- *Yes in France, we have an incident command system taught in the field of civil protection (focus on fire services in France). This framework is called GOC (acronym meaning Command Operation Management).*
- *Canada: Ontario Association of Emergency Managers (OAEM)*
- *FEMA has some certification schemes.*
- *YES: Japan There are at least two schemes, 1) 防災危機管理者 : <https://www.bohsai.jp/kouza/esso.html> 2) 防災士 <http://www.bousaisikai.jp/about.html>*

- *Not in Finland, not in Ukraine.*
- *In China, State Administration of Work Safety issues EDM certificate after training; Chinese Academy of Governance, Ministry of Education, China Earthquake Administration Bureau and some other departments also have their own programs and certifications on DRR (Disaster Risk Reduction) trainings.*
- *Yes, civil and defence both have a multiple crisis management certifications, including INSARAG*
- *Not yet. Something is being discussed, but only in the area of Cyber*
- *Certificates are given in Ukraine for the participation to obtain theoretical and practical knowledge in seminars, conferences, field practices in universities. Making people educated how to behave themselves in extraordinary situations.*
- *Yes, a sort of, delivered by a Faculty and National Protection and Rescue Directorate. <https://www.vvg.hr/about-the-study-programmes/specialist-study/crisis-management/?lang=en> and Firefighting Certificates*
- *Croatia Specialist graduate professional study of crisis management (study programme not certification)*
- *The national certification schemes for disaster prevention safety management is under review.*
- *NIGERIA Post Graduate Diploma in Disaster Risk Management Masters in Disaster Risk Management*
- *Disaster life support*
- *Yes: Graduate Certificate in Emergency Management (Massey University New Zealand) Graduate Diploma in Emergency Management (Massey University New Zealand) Graduate Certificate in Emergency and Disaster Management (CQ University Australia) Bachelor of Emergency Management (Charles Sturt University Australia)*
- *High school education program in crisis management finish by diploma. Life cycle educational training / education all medics, paramedics, firefighters, soldiers , finish by certification.*
- *Please check CEN working group on Crisis Management (I don't remember the number ...)*
- *Disaster management institute of Southern Africa has a professionalism programme for disaster management professionals.*
- *There are several MAS and CAS possibilities in Switzerland. The best education is to be an officer in a disaster relief unit.*
- *Yes! Just private education institutions provide certification -bachelor degree, with their initial capabilities! State program provide, certification for specific topic, and limited audience!*
- *CEM. AEM. MIFE.*
- *FEMA in the US as an example.*
- *Yes, IAEM CEM as well as some state certifications. There is also a Military Emergency Management Specialist (MEMS) with 3 levels from the State Guard Association of the US.*
- *Yes, IAEM runs the Certified Emergency Manager program, there is also the EMI series of courses for practitioners culminating in the advanced and executive academies*
- *There are state certifications available, as well as IAEM's CEM. Frustrating as to why we cannot unify a standardized model for professionals [USA].*
- *Many in the USA, FEMA in bed only with IAEM.*
- *CEM (<http://www.iaem.com>).*
- *Turkey has not a national certification mechanism.*
- *U.S.: IAEM's CEM*
- *IAEM Certified Emergency Manager. IAEM says approximately five thousand (5,000) people hold the credential. I do not know of one in Asia.*

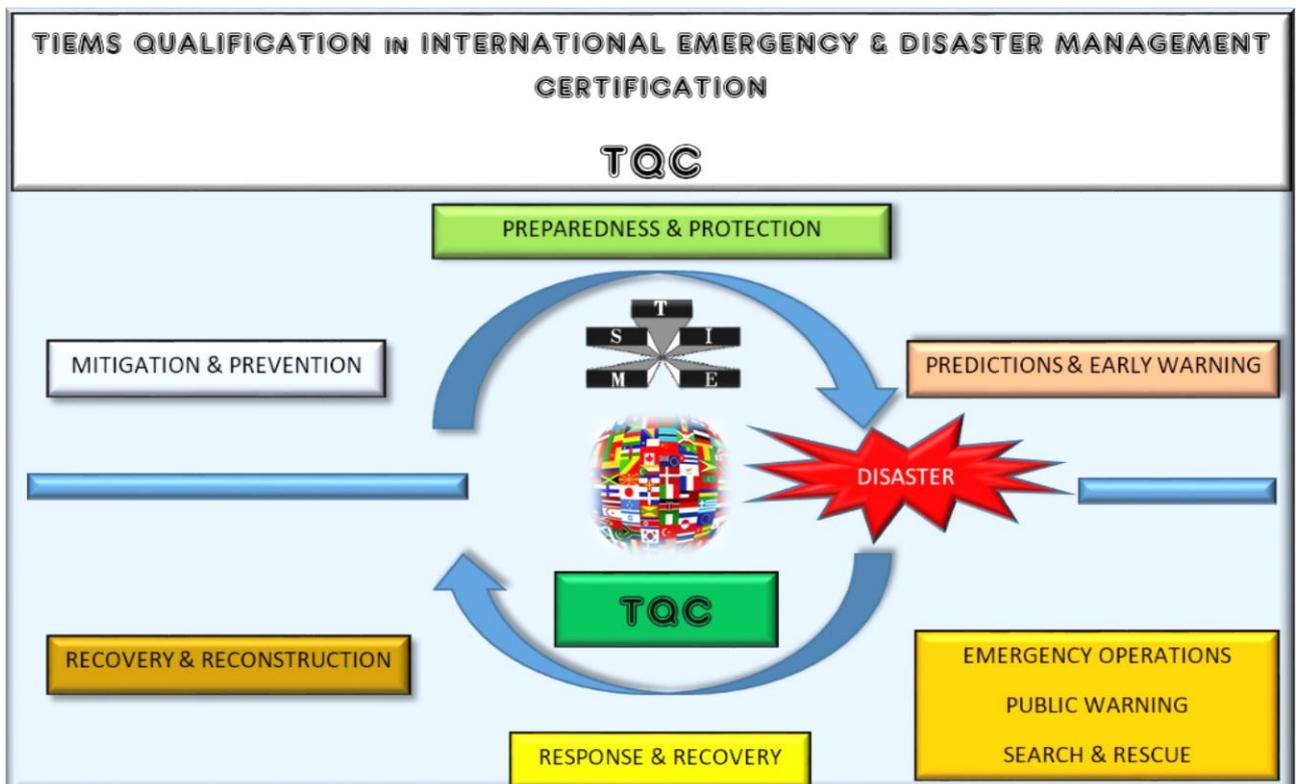
- *The Dutch IFV has established a sophisticated master programme for emergency management led by Menno v Duin. There is also a specific and obligatory training programme for information management officers*
- *Greece: None. Italy: None. France: Risk Manager, professional title (Repertoire national des competences professionnelles)*
- *Through IAEM- Certified Emergency Manager (National, Others would be State specific certifications)*

Total Responses: 61

Knowledge and Competences to be in the TQC Curriculum

The respondents were to choose from a list of multiple choices of knowledge/competences for inclusion in the TQC Curriculum. In addition, they were to add other knowledge/competences not found in the list in the questionnaire, which they think are important to include in TQC Curriculum.

Based on the answers, the first draft TQC Curriculum includes the following knowledge/competences, listed in context of the Disaster Cycle in an International Perspective, as illustrated in the figure below.



Knowledge and Competences to be included in the first TQC Curriculum

1. International Perspectives

- A. Relevant International Organizations, their Missions, Agreements and Procedures
- B. Sendai Framework for Disaster Risk Reduction
- C. International Agreement Framework for Emergency Assistance
- D. Worldwide Civil Protection Organizations and Operations
- E. Legal and Ethical Issues in Emergency and Disaster Management
- F. International Terrorism
- G. International Epidemic and Pandemic Crisis
- H. Public Private Partnership Oriented Emergency and Disaster Management

2. Mitigation & Prevention

- A. Risk Management Theory and Practise
- B. Disaster Types, their Characteristics and Statistics
- C. Critical Infrastructure Protection
- D. Business Continuity Management
- E. Emergency Community Based Response (CERT)

3. Predictions & Early Warning

- A. Climate Change and Impact on Disasters
- B. Cyber Attacks and their Potential Consequences
- C. Disaster Early Warning Systems and Operations
- D. Simulations and Exercises

4. Emergency Operations

- A. Emergency and Disaster Management Tools and Techniques
- B. Application of Earth Observation/Space Technology
- C. Application of Web-based Assistance Technology and Systems
- D. Emergency Critical Communication Systems
- E. Mass Casualty Management
- F. Command, Control and Coordination of Incidents
- G. Emergency Medicine Perspectives
- H. Incident Evaluation, Briefing, Debriefing and Review Techniques
- I. Handling of International Media and its Coverage of International Crisis

5. Public Warning

- A. Public Warning Systems and Operations
- B. Social Media in Emergency and Disaster Management

6. Search & Rescue

- A. International Search and Rescue Methodologies and Operations

7. Recovery & Reconstruction

- A. Recovery and Reconstruction Planning
- B. Temporary Housing and Medical Care of Victims
- C. Claims and Grants Processing

The above content of the TQC Curriculum is the result of the answers to the questionnaire on knowledge/competences in the TQC Survey, as seen below:

What knowledge/competencies do you think should be included in such a certification?			Back to top
Risk Management Theory and Practise?	60	84.51%	
Disaster Types, their Characteristics and Statistics?	57	80.28%	
International Search & Rescue Methodologies and Operations?	52	73.24%	
Climate Change and Impact on Disasters?	46	64.79%	
Sendai Framework for Disaster Risk Reduction?	45	63.38%	
Disaster Early Warning?	59	83.10%	
Emergency Medicine?	41	57.75%	
Critical Infrastructure Protection?	53	74.65%	
International Terrorism?	40	56.34%	
Emergency and disaster Management Tools & Techniques?	62	87.32%	
Epidemics and Pandemics?	43	60.56%	
Civil Protection Organizations and Operations?	50	70.42%	
Emergency Communication Systems?	58	81.69%	
Emergency Community Response Teams - CERT?	52	73.24%	
CBRNE Basics?	38	53.52%	
Relevant International Organizations, their Missions, Agreements and Procedures?	40	56.34%	
Business Continuity Management?	40	56.34%	
Cyber Attacks and their potential Consequences?	44	61.97%	
Media and its Handling of International Crisis?	44	61.97%	
Other? Please, explain below!	20	28.17%	
# of people who answered question	71		

Additional given comments to the TQC Curriculum follow:

- **1. Need and Importance of Cooperation, Coordination, Collaboration and Networking**
- **2. Command, Control and Coordination or Incident Command System**
- **3. Legal and Ethical Aspects/Issues in Disaster Management**
- **4. Community Based Disaster Risk Management**
- **5. Public Private Partnership Oriented Disaster Management**
- **6. Disaster Research and Anthropological Theory**
- **7. Application of Earth Observation/Space Technology**
- **8. Interrelationship/Correlation between Disaster and Development**
- **9. Mental, Public Health and Socio-**

Economic Aspects of Disasters 10. Identification and management of the deceased (Dead Body Management)/Mass Casualty Management (e.g. Triage) 11. Incident Evaluation - Briefing, Debriefing and Review 12. Simulations and Exercises 13. Formulation of Action Plan & Logical Framework 14. Case Studies

- *How different countries organize emergency management*
- *Incident Command System or decision support system by using information technology to respond natural and man-made disasters*
- *NGO SAR TEAMS Community Emergency Response Team (CERT) Personnel emergency response techniques and drills*
- *Community disaster education and engagement Evaluation and lessons learned Understanding the at-risk communities Four phases of disaster management Resilience and emergency management*
- *Standardisation as cross-cutting topic.*
- *Emergency safety experience and drilling*
- *I mention some competencies, but as I said, it sounds as reinventing the wheel...*
- *I think that certification should be relatively focused. Many of the above topics seem more appropriate for degree programs rather than certification topics.*
- *Somehow, I feel that there is the huge amount of training on Emergency Medicine in the world. TQC may include some basics but not training any first aid tricks. I would prefer to replace Emergency Medicine by Emergency Response Psychology. The practitioner must anticipate the mental stresses, how to deal with this, and so on.*
- *CCDRR: Child-Centred Disaster Risk Reduction*
- *different trainings, EOC management, cultural sensitivity training, urban response , civil military cooperation, citizen engagement, financial management and grant writing, logistics, health centre management*
- *remote sensing and geospatial analysis for emergency response information support*
- *Negotiation Techniques Psychology of Crowd*
- *Knowledge obtained online and in www sites on the themes mentioned above. Online certificates knowledge in English proficiency.*
- *Disaster Preparedness Swimming and Life Saving Techniques*
- *Host Nation Support (!, provision and acceptance of international support)*
- *Modelling of emergencies and forecasting their development.*

- *All above is covered via 5 years study programme but for certification will be useful operational competencies for first responders.*
- *Communications with affected communities; post-disaster needs assessments; development of a disaster recovery framework*
- *Disaster Risk Matrix*
- *The above list is not very structured. I would suggest that you include preparedness, response and recovery. By going through these three stages you will find other topics to be addressed*
- *Political requirements for response to assist in other countries.*
- *Natural disaster omen, recognition and judgement*
- *Organization after crisis management - to be able to recognize institutions to deal with it in all scale or full range.*
- *I think it is very important to include existing and/or ongoing standardization activities as much as possible. For instance, on medicine and CBRNE there will already be a lot. The list under question 5 is pretty heterogeneous. I would say, look at Sendai and include all addressed topics under your standardization initiative.*
- *Ethics of humanitarian assistance*
- *It should be a basic module with several additional modules, depending the future job of a Person. Once again, a Military education is the best.*
- *Below ticked are just most priority topics, but, all of them are useful. Other useful from my perspective will be, depend of level, for example: NIMS - it will be important for Emergency Managers, ICP - Will be important for tactical leader (first response unit leader), EOC - Will be important for head or deputy head of EOC , etc..*
- *Maritime emergencies - piracy, oil spills, and ship wreck recoveries International Maritime and aviation law in emergency and disaster response. Risk communication for multicultural messaging Funding, finance, and ethics. .*
- *Emergency response if an integral part of long-term recovery. Make sure you have a long view of the response rather than just focusing on the short-term search and rescue missions. Fukushima is a lesson. I therefore would like to add internal case studies to the list.*
- *Why not integrate? Unify with existing certifications, and allow specialty under the broad concept of Disaster Management.*
- *Amateur Radio (HAM)*
- *Basic technology and associated trends.*
- *Emergency drill preparation and management, crisis knowledge management, social media use in crises,*

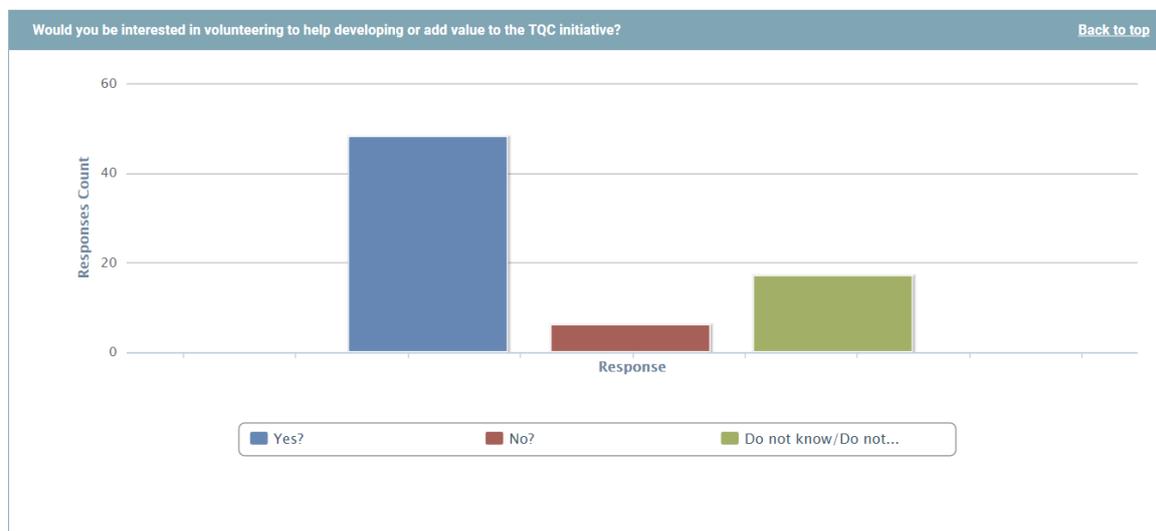
crisis IT and other technologies, leadership, collaboration and negotiation

- *Use of the military (including its capabilities and limitations) military support to civil authorities. There is high relevance of business continuity, but BC is well established with its own certification.*
- *Information systems and usage (emergency management systems) risk planning*
- *Vulnerability and risk assessment, damage evaluation*
- *Emergency planning; exercise design, conduct and evaluation.*
- *International policies*

Total Responses: 46

How to Develop the TQC Curriculum

The respondents were asked if they would like to volunteer helping develop and add value to the TQC initiative, and it was an overwhelming positive response as shown below.



Yes: 48 (67.61 %), No: 6 (8.45 %), Do not know/Do not want to answer this question: 17 (23.94 %)
Total responses: 71

The answers to which competences/knowledge they could contribute with, is shown in the following figure.

If yes to the above question, what expertise could you contribute to the development of TQC?			Back to top
Risk Management Theory and Practise?	28	52.83%	
Disaster Types, their Characteristics and Statistics?	25	47.17%	
International Search & Rescue Methodologies and Operations?	7	13.21%	
Climate Change and Impact on Disasters?	7	13.21%	
Sendai Framework for Disaster Risk Reduction?	8	15.09%	
Disaster Early Warning?	14	26.42%	
Emergency Medicine?	6	11.32%	
Critical Infrastructure Protection?	18	33.96%	
International Terrorism?	3	5.66%	
Emergency and disaster Management Tools & Techniques?	23	43.40%	
Epidemics and Pandemics?	8	15.09%	
Civil Protection Organizations and Operations?	12	22.64%	
Emergency Communication Systems?	11	20.75%	
Emergency Community Response Teams - CERT?	8	15.09%	
CBRNE Basics?	7	13.21%	
Relevant International Organizations and their Missions, Agreements and Procedures?	5	9.43%	
Business Continuity Management?	13	24.53%	
Cyber Attacks and their potential Consequences?	6	11.32%	
Media and its Handling of International Crisis?	6	11.32%	
Other? Please, explain below!	10	18.87%	
# of people who answered question	53		

Others competences they could contribute with are below:

- *Training for capacity building of responding to emergencies*
- *Emergency management theory and disaster cases analysis*
- *Community disaster education and engagement Evaluation and lessons learned*
- *Understanding the at-risk communities Four phases of disaster management*
- *Resilience and emergency management*
- *Standards, standardisation issue, usage of terms and concepts particularly in international environment. - This could be cross-cutting topic.*
- *Disaster Impact Knowledge Base Development and Management*
- *Disaster Preparedness; Disaster experience*
- *Describing existing systems and estimating where a Ngo as TIEMS could have an added value.*
- *Cybersecurity expertise.*
- *Examples of social media handling during crisis*
- *CCDRR: Child-Centred Disaster Risk Reduction*
- *Different trainings, EOC management, cultural sensitivity training, urban response, civil military cooperation, citizen engagement, financial management and grant writing, logistics, health centre management*
- *Nursing*
- *remote sensing for emergency response information support*
- *Civil protection in Ukraine. Nature and Techno-genic Threats and Risk Management, Radioactive, Chemical and Biological Risks. Computer modelling of eco-geophysical processes.*

- *Modelling of emergency situations and forecasting their development using geo-information technologies.*
- *Rapid mapping in disaster response*
- *Communications with affected communities; post-disaster needs assessments; development of a disaster recovery framework*
- *Community Awareness and Preparedness for Emergency*
- *My expertise areas include innovation, collaboration, education and solidarity and in particular research & development collaboration, network + community management , collective intelligence and open education ... these may be indirectly relevant for TQC*
- *Terra Seismic can forecast many major earthquakes 2-5 months before they will strike.*
- *I'm emergency specialist from Iraq with my experience in mass casualty, BLS, ACLS Trainer, emergency room trauma course trainer*
- *Member of Institute Fire Engineers 43 Years in NZ Fire Service 16 Years Manager Officer Development for NZ Fire Service*
- *CBRN advance*
- *I have been developing a disaster management course for healthcare professionals*
- *I am a former Cmdr of a Disaster Relief Rgt. I'm a former UN Military Observer. I'm a Safety and Security advisor to various GO's and NGO's*
- *The best from my site, 1.Planning and evaluate TTX and FX 2.EOC. 3.ICS and NIMS*
- *Maritime emergencies - piracy, oil spills, and ship wreck recoveries International Maritime and aviation law in emergency and disaster response. Risk communication for multicultural messaging*
- *Special expertise in radiological disasters, and specially in the long-term community recovery.*
- *C2&C4 systems architecture*
- *I have served Emergency Management efforts in multiple countries, but applying the term 'expert' seems contrary to me, in a field that is still developing. I would be interested in volunteering to better understand the international perspectives on how each defines the terms used here [is "Business Continuity Management" described and inclusive of the same concepts in the U.S., say as in Britain or the Latin American countries? "Disaster Early Warning" means what to each country?] You may have already assessed this?*
- *Address basic technology and associated trends.*
- *Military skills*
- *My experience covers marine emergencies such as SAR and Oil-Spill incidents, but I am busy with my doctoral thesis in these days. So, I am really sorry for not to being a part of your valuable efforts.*
- *Emergency drill preparation and management, crisis knowledge management, social media use in crises, crisis IT and other technologies*
- *Military support to civil authorities*
- *Early warning includes preparation of common information picture risk management requires agreement on perceived risks and terminologies, especially cross sector , such as between water and emergency management or power and emergency management.*
- *Risk assessment*
- *Emergency planning; exercise design, conduct and evaluation.*
- *Coastal community disaster management*

Total Responses: 45

TIEMS International Education Network of Excellence

TIEMS will not “re-event the wheel” in the TQC Curriculum development. TIEMS will seek cooperation worldwide with universities and training institutions offering courses within the suggested preliminary TQC curriculum, and invite for cooperation in this effort. However, there may be need for development of new courses as well, which are not available from any education institution today. These will be developed by TIEMS in cooperation with TQC partners.

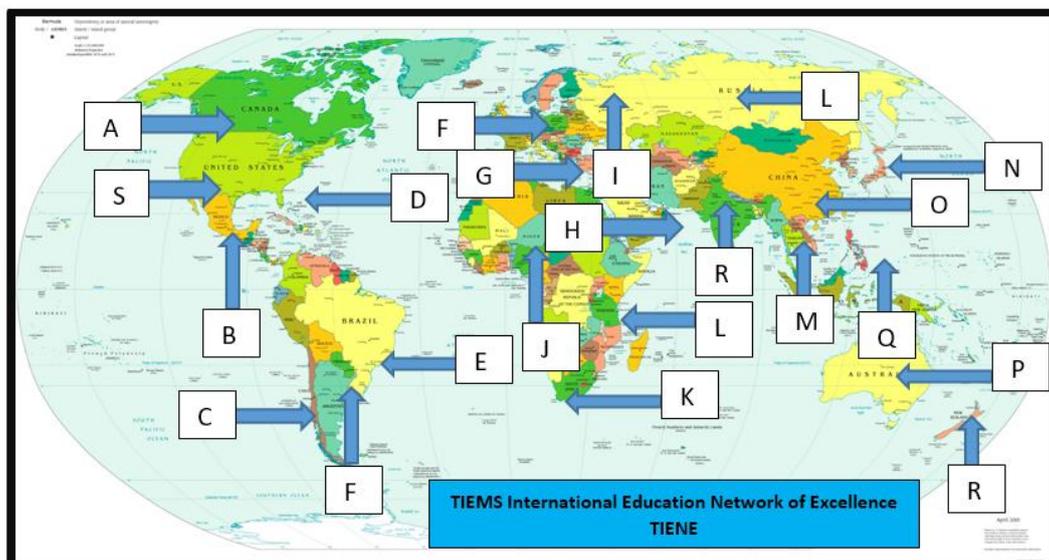
Above strategy will assure that the TQC Curriculum will be of good quality and according to the state-of-the-art, with cooperation with worldwide universities and training institutions, which teach courses and provide training that fit into the TQC Curriculum. These courses and training need to be in the English language in the start-up of the TQC initiative. However, the plan is to offer the TIEMS TQC Curriculum in local languages in the next step of this development, and then through TIEMS chapters.

Agreements with cooperating universities and training institutions will be established such that these courses can be offered on-line as part of the TQC Curriculum, or be taught in classrooms at the universities or training institutions, which like to cooperate with TIEMS in this effort.

These universities and training institutions will then be part of TIEMS International Education Network of Excellence (TIENE). These courses and training together with new ones that have to be developed will form the full TQC Curriculum, and be updated and developed according to the state-of-the-art, seeing to it that these courses and training are always up-to-date.

TIEMS worldwide TQC volunteers through TIEMS chapters will be the national contact points for the different universities and training institutions.

TIEMS will seek cooperation worldwide, such that all world continents are included within the TIEMS International Education Network of Excellence, as shown in the picture below.



Some universities and training institutions have been approached for cooperation, and the first agreement is ready to be signed in the form of a MOU. TIEMS intends to cover all continents of the world with its International Education Network of Excellence.

The next step for finalizing the TQC Curriculum will be to make up the TQC pre-exam and TQC exam together with TIEMS International Education Network of Excellence.

When the agreements for the TIEMS International Education Network of Excellence is in place, overview matrices of courses vs education institutions will show which courses will be available where, worldwide, for example as follows:

1. International Perspectives of Courses offered in TQC Curriculum

	Inst.1	Inst.2	Inst.3	Inst.4	Inst.5	Inst.6	Inst.7	Inst.8	Inst.9
A.									
B.									
C.									
D.									
E.									
F.									
G.									
H.									

Conclusions of the TQC Survey and further plans

The results of the TQC Survey show an overwhelming positive and detailed response and support from those who have responded, 72 experts from 33 countries. The next step in the development of TIEMS TQC Curriculum will be to build the TIEMS International Education Network of Excellence (TIENE).