Disaster Risk Management and Civil Resilience

DRM-FRAME

Work Package 2 Report

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The DRM-FRAME project

The project "Disaster risk management and civil resilience DRM-FRAME" is an ERASMUS+ co-funded EU project of action type KA220-VET-"Cooperation partnerships in vocational education and training" and has a duration of 2 years. The scope of the project is to enhance the capacity, skills building and preparedness in the area of Disaster Risk Management (DRM), including prevention, effective response and recovery and to promote local development opportunities. This will be achieved through the development of an interactive learning and training tool which will integrate a training curriculum in the area of DRM. The training audience is primarily composed by civil protection professionals at local, regional and national level, vocational trainers, volunteer associations, etc.

The consortium, composed by Higher Education Institutions, Research Institutes and Vocational Educational Providers, will jointly create an integrated curriculum which inter alia will train professionals in the basic concepts for Disaster Risk Reduction (DRR) and relevant policy issues, basic steps for Vulnerability and Capacity Assessment, enrichment of strategic plans for DRR and management at local level, etc.

In this framework an interactive multilingual platform will be developed with the following features: (i) an e-learning space, including the topics of the training curriculum, supported by a web-GIS platform which will allow the illustration of the evolution of scenarios at the areas of interest; (ii) a double assessment tool, which will enable the customization of the training path and the evaluation of the acquired skills; (iii) communication and networking capabilities among users. The outcome of the project will be validated by a number of external experts and during the multiplier events in all partner countries.

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Abbreviations

Table 1: List of Abbreviations

Abbreviation	Explanation
BSc	Bachelor of Science
DRM	Disaster Risk Management
DRR	Disaster Risk Reduction
ECTS	European Credit Transfer and Accumulation System
EN	European Standards
h	Hour
ha	Hectare
Km^2	Square kilometre
M	Mandatory course
M_w	Moment magnitude (for earthquakes ≥ 5.5)
M_s	Moment magnitude (based on surface seismic waves)
MSc	Master of Science
NaTech	Natural Hazards Triggering Technological Disasters
NW	Northwest
O	Optional course
°C	Degrees Celsius
OM	Mandatory optional course
PhD	Doctor of Philosophy

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Executive Summary

This document describes the activities and their results in the framework of Work Package 2 – Primary research and situation analysis on disaster risk management, emerging needs and civil resilience resources. WP2 is the foundation of the DRM-FRAME as in this WP the needs and challenges in the necessary skills and competences are identified. The work carried out and presented in this document is divided in the three activities of WP2 of the DRM-FRAME project, that is:

- A1 “Partner countries’ current practices for disaster risk management and civil resilience”.
- A2 “Study of the current educational offer existing in the EU”.
- A3 “Definition of Current Competencies in Disaster Risk Management and Civil Resilience”.

The aim of activities A1 and A2 is to understand the best practices and approaches found in five partner countries (Greece, Italy, Cyprus, Belgium and Slovakia), regarding the training provided in the DRM field and the experience gained in DRM during urgent situations. Activity A3 builds upon the findings from previous tasks and leverages the expertise of the consortium to gain a comprehensive understanding of the current state of the field.

To achieve these objectives, the DRM-FRAME consortium employs a multifaceted methodology: builds and conducts a survey and data collection, creates focus groups and promotes the stakeholder engagement, conducts literature review, comparative analysis, and provides recommendations and policy implications.

Overall, the main findings of the survey results indicate the need for a comprehensive approach to DRM training. This approach should address identified weaknesses, enhance critical skills, and foster collaboration and information sharing among stakeholders, thereby building resilient disaster response systems across various levels and contexts.

The focus groups were organized in order to collect useful experiences that capture successful tools and approaches relevant to the field. The focus groups were also useful to identify gaps in education and training in the DRM domain.

In Belgium, the focus group discussions underscored the importance of comprehensive training opportunities for humanitarian workers involved in crisis management. Participants highlighted the effectiveness of current training programs but emphasized the need for sustained support and long-term planning in disaster response. The discussions also emphasized the interconnectedness of countries in disaster management efforts, stressing the importance of collaboration and shared strategies among stakeholders.

Cyprus faces significant challenges in disaster response due to a lack of regulatory frameworks, jurisdictional issues, and political complexities. The focus group discussions revealed a critical need for unified training pathways and coordinated efforts among governmental agencies, professionals and volunteer groups. Recommendations included establishing clear educational pathways for professionals and volunteer groups, improving the efficiency of training programs and fostering international collaboration.

In Greece, participants emphasized the value of practical, hands-on learning experiences, and the need for integrating DRM education into school curricula from an early age. The discussions highlighted successful coordination efforts during past natural disasters, driven by proactive training and inter-agency collaboration. Future actions should focus on expanding educational platforms, integrating advanced technologies into DRM practices, and enhancing community engagement.

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Italy's discussions among municipalities and local authorities emphasized the strategic importance of spatial planning and integrated protocols in disaster risk management. Participants underscored the need for interdisciplinary collaboration, leveraging new technologies, and promoting open data initiatives to enhance response strategies. Future actions should focus on developing managerial skills, improving communication among stakeholders, and integrating disaster risk considerations into broader development policies.

Slovakia's focus group discussions emphasized the critical role of expert-led crisis management and the importance of regular crisis plan exercises. Participants highlighted challenges in crisis communication and coordination between national levels and local levels. Recommendations included enhancing educational initiatives to include innovative elements like virtual reality and scenario modelling, as well as increasing public awareness and involvement in disaster preparedness.

Various educational programs either in the form of academic offering (undergraduate, masters' programmes, and PhDs) or in the form of vocational educational training have been found in the five countries of the project, which denotes that an educational offering in the EU exists.

From the work conducted it is seen that Procedures, Tools, Skills, and VET Training in DRM require modifications and further development within the field. Critical issues identified across all participating countries pertain to the effective utilization of available tools and data. Employing mapping methods and data analysis can significantly contribute not only to hazard analysis but also to the processes of response and overall recovery in disaster-affected areas.

Furthermore, the simplification of procedures and the establishment of common protocols are widely recognized as factors that can facilitate faster disaster response and enhance communication among professionals in the field. Additionally, the enhancement of communication between field professionals and involved scientists is of particular importance. This can be achieved through targeted field training and immersive, hands-on disaster response exercises.

It is interesting to also refer to the necessity of studying factors such as socio-economic, environmental, cultural, human rights and how they affect the field. It is also a common belief that adaptation to cross-cultural data is critical both for the part of education and for the part of the processes in DRM. Special value must also be given to the value of informing the general public and encouraging their participation in the field, as in this way training in the subject can be improved and procedures can be improved.

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1 Introduction

1.1 Background

DRM stands at the forefront of global efforts to mitigate, prepare for, respond to, and recover from natural and human-induced hazards. The framework of DRM encompasses a multifaceted approach that involves comprehensive planning, effective coordination, and the utilization of advanced tools and skills to safeguard communities and enhance resilience against disasters. Across five partner countries (Greece, Italy, Cyprus, Belgium, and Slovakia), the DRM-FRAME consortium has undertaken activities that have provided insight into the current disaster management education and training scene. Critical insights into the weaknesses and strengths of DRM field have been revealed through thorough studies of educational offerings, targeted stakeholder interactions, and rigorous surveying. These findings not only draw attention to the difficulties that exist now, but they also emphasize how important it is to change DRM procedures in order to better serve emerging demands.

This study has shed light on the DRM landscape's strengths and urgent concerns through comprehensive surveys, targeted stakeholders' discussions, and in-depth evaluations of educational initiatives. This research aims to advance the development of DRM techniques and capabilities by pointing out weaknesses in existing practices and emphasizing areas for improvement. This introduction lays the groundwork for a thorough analysis of the consortium's findings, which cover important topics such as the advancement of vocational training in DRM, technology advancements, skill development, and procedural improvements. These results highlight the difficulty in managing the risks associated with disasters and support the need for multidisciplinary, cooperative methods that are essential to constructing resilient communities and preserving human life.

The findings of the project will be disseminated to a diverse audience, including experts in education and training, public administrators, policy makers, volunteers, associations, and public authorities. This report will provide valuable insights into best practices and effective tools in the field. Furthermore, it will assist in identifying existing gaps. The report will be of particular interest to Vocational Education and Training (VET) providers, as well as VET and employment policy makers at both local and regional levels.

The value of DRM is indisputable; however, the pillars in the field that require proper configuration to enhance processes, tools, and training need further examination. The Work Package 2 (WP2) serves as a tool to comprehend the dynamics of the scientific field in the participating countries and to identify best practices as well as gaps that need to be addressed. *How, then, can we establish the conditions for successful disaster risk management and adapt training to this subject in an ever-evolving environment?*

Undoubtedly, the last few years have seen significant disruption due to the COVID-19 pandemic and various physical disasters across Europe. These events have hugely impacted our lives and the daily operations of businesses. It appears that extreme events are becoming the new norm, with catastrophic occurrences expected to become more frequent in the future. DRM represents a pivotal framework for mitigating, preparing for, responding to, and recovering from diverse hazards that threaten communities worldwide. In recent years, escalating frequencies and intensities of natural disasters, compounded by the increasing vulnerabilities of urban populations and critical infrastructures, have underscored the urgent need for effective DRM strategies.

DRM encompasses a multifaceted approach that integrates risk assessment, proactive planning, community engagement, and the utilization of technological innovations to enhance resilience. By anticipating and mitigating potential hazards, DRM aims not only to reduce the impacts of disasters but also to foster sustainable development and safeguard lives and livelihoods. While it is impossible

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to predict such events with absolute accuracy or completely avoid these peculiar dangers, both private and public entities can and must prepare for an uncertain future. This future will encompass challenges such as climate change, rapid technological advancements, geopolitical risks, logistics chain vulnerabilities, and issues related to the security of personal data.

Adapting to such a complex and ever-changing business environment requires an action plan that includes people, data, tools, training and systems that can cope with almost any condition. Countries are investing heavily in an integrated risk management (RM) system. Such a system would not only act as a crisis response mechanism during extreme events but also serve as a preventive measure against various types of risks, thereby contributing to the recovery of affected areas. Emerging trends worldwide and in Europe, indicate the great importance of DRM. Unfortunately, there is a rise in natural and human disasters that affect all the European countries and as a result both the economy and society. In recent years, the EU has faced many challenges related to climate change adaptation, public health, transport, energy (European Commission,2024).

As underlined by the World Bank (2021), there is a need for Europe to act in the field of DRM. It is vital to enhance technical and human capacity of civil protection, to build skills in the area of DRM, including the issues of prevention, effective handling and rehabilitation. These actions also include sharing good practices and knowledge in order to raise institutional and public awareness in the field.

The project in question is an effort in this direction, as it aims to improve education and training in the subject, to develop innovative tools and adopt good practices. Enhanced knowledge, robust evidence, and a greater focus on transformative processes and innovative tools are essential for improving our understanding of disaster risk, building resilience, and developing risk-informed policy-making approaches. These elements also contribute to smart, sustainable, and inclusive growth.

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2 Work Package 2 Survey

The survey conducted in WP2, which aims at understanding partner countries' current best practices for disaster risk management and civil resilience, consists of two parts:

a) an online survey with questionnaires and

b) local/national focus groups.

The survey was provided a significant input for the consortium to collect information about the current needs and opinions of experts in the DRM field. Also, it provided information about the mechanisms and procedures in DRM. Through this method the consortium took the opportunity:

a) to find out attitudes and reactions,

b) to measure satisfaction,

c) to understand the need for change in the field.

Both the questionnaires and the focus groups are essential in order to understand the current needs and most importantly to identify innovative approaches and tools in the field.

2.1 Online survey

The DRM-FRAME consortium conducted an online survey as part of WP2 to gather insights into DRM practices across Greece, Italy, Cyprus, Belgium, and Slovakia. This section details the methodology employed, key findings, and implications derived from stakeholders' responses. The target groups of interviewees are practitioners, researchers, VET trainers, people and volunteers working in civil protection, NGOs and in organisations addressing emergency situations. The platform used for the survey is Google forms. The online survey was composed of 4 sections, and the time needed to be completed is about 20 minutes. The survey included questions regarding personal data, current practices in DRM, the current educational offer in the field, emerging required skills in the field and emerging training needs.

The methodology encompassed the following steps:

1. Survey Design: Development of a structured questionnaire focusing on DRM education, training, challenges, and perceptions of current DRM practices. The questionnaire was designed to elicit both quantitative data and qualitative insights.

2. Target Audience: Stakeholders included governmental bodies, non-governmental organizations (NGOs), academic institutions, and civil society organizations engaged in DRM activities. The survey aimed for diverse representation to ensure comprehensive insights.

3. Data Collection: The survey was administered online using a platform accessible to stakeholders in all participating countries. It collected responses over a specified period to ensure a robust dataset reflective of current perspectives and practices.

4. Data Analysis: Quantitative data was analyzed using statistical methods to identify trends and patterns, while qualitative responses underwent thematic analysis to extract key themes and narratives.

The online survey yielded several key findings that illuminate the current landscape and challenges in DRM across the consortium's partner countries. The questionnaires outcomes are presented separately by each partner's country in the Annex 1 of the report.

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Questionnaire structure

The questionnaire consists, as stated earlier, from four sections:

Personal data and role in the DRM: in this section of the questionnaire basic information on the profile of the respondent is asked such as country, age class, gender, main role in DRM, years of experience in DRM, institution type (pubic, private), jurisdiction level (local, regional, national), experience of the person to specific hazards.

Current practices in DRM: most significant risks in the area of jurisdiction, opinions on leading actors per disaster management phase, weaknesses and best practices in DRM.

Current educational offer in DRM: questions related to the knowledge around the educational offer in DRM in their countries, opinions on the training of personnel, formal or informal, etc., how often they participate in training exercises, best practices in DRM education or training.

Emerging required skills and emerging training needs in DRM: questions on the required skills and competencies of the personnel per disaster management phase and how to acquire these skills, (approach followed, e.g., formal learning).

The questionnaire is available in Annex 1 of this document.

Main findings

Overall, the survey results indicate the need for a comprehensive approach to DRM training. This approach should address identified weaknesses, enhance critical skills, and foster collaboration and information sharing among stakeholders, thereby building resilient disaster response systems across various levels and contexts.

In this section, the main findings are briefly presented. A statistical analysis per question/country along with the respective graphs is presented in Annex 1 of this document.

Belgium

A total of 9 responses from Belgium stakeholders have been collected. The majority of stakeholders in DRM fall between the range 25-34 and 35-44, with females being a significant percentage. Most of them hold master's degrees. Their primary roles include NGOs, trainers, and academics. About one third of them have been involved in DRM for 5-10 years, while a low percentage has been working for one year or less or over than 20 years. Most respondents work in private institutions, with the majority of them being national institutions. They have extensive knowledge and experience in handling hazards like wildfires, earthquakes, floods, and CBRN incidents.

From the collected responses it became evident that wildfires, earthquakes and man-made hazards have been identified as the highest risks in their field of work. Civil protection professionals and NGOs are the main organizations that are involved in all the phases of disaster management. Coordination challenges, inadequate early warning systems, poor infrastructure resilience, limited community engagement, insufficient risk assessment and bureaucratic issues have been identified as the main weaknesses. On the contrary, comprehensive risk assessment, and a multidisciplinary approach, involving various sectors such as governmental agencies, NGOs, local communities, academia, and private sector, belong to the effective disaster risk management.

The various stakeholders in DRM acquire their knowledge mainly through continuous learning and practical experience. Holding a master's degree in the area is considered to be crucial, while most of the stakeholders have expressed the importance of this aspect. Most of them a well-informed about the availability of educational programs related to DRM and participate actively in online series. In

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general, training practices such as civil protection exercises are highly valued by the majority. The majority of the stakeholders participate in exercises as players. As a best practice in the education for DRM has been highlighted the integration of technology and community participation for immersive learning experiences. Also, they have pointed out specific master's programmes in various EU countries.

The practical experience in DRM has been specifically pointed out by the stakeholders, recommending real-world examples and training exercises. In order to be prepared they are in favour of serious gaming in both physical and simulated environments. Critical thinking, project management, decision-making, communication and organization have been identified as key competencies. For the emergency phase, organization and team working are the first competencies, followed by problem-solving skills. For the recovery and rehabilitation phase, communication, creative thinking, problem-solving skills and project management are considered as crucial. Finally, from the answers gathered, it is clear that problem-solving skills are developed in the best way possible through problem-based learning, while critical and creative thinking follow closely.

Cyprus

From Cyprus, 21 responses were collected, most of them from male respondents belonging in the age class 35-44. Most of them hold have a Master's degree. They are volunteers in civil protection or other associations involved in emergency response. About one third of them have been working in the DRM domain between 1 and 5 years, while a small percentage has more than 20 years of experience. The majority of them has significant experience in wildfire disaster management, and work mainly in private and national institutions.

The sample of the Cypriot stakeholders are mainly active in the fields of earthquakes and wildfires. Based on their answers policy makers have a key role in prevention/preparedness (pre-disaster phase), while in the response phase emergency services professionals (e.g. firefighters) and NGOs and associations (including volunteers) are the main actors. According to their opinion, political decision-makers are also significantly involved in the post-disaster phase.

The main critical aspects or weaknesses of procedures and practices in DRM that have been identified by Cypriot stakeholders are coordination and cooperation of government agencies, insufficient preparation and training, education and awareness, and wrong people in key positions / meritocracy.

Good, proper, selfless cooperation between government agencies and voluntary bodies, cultivating a sense of common purpose and genuine cooperation, and empowering communities through preparedness initiatives have been identified as best practices in DRM. In addition, the empowerment of communities through preparedness initiatives are also recommended.

Continuous learning and practical experience are the main learning tool about DRM in Cyprus. According to them a bachelor's degree and technical training are crucial for addressing disaster risk management topics. The majority of them is familiar with educational programs like MSc Risk, Crisis & Disaster Management. Only 19% participate frequently in Informal training practices such as civil protection exercises are important, despite the fact that they consider it important. Stakeholders recommend integrating training into health and safety initiatives and using VR technologies. They propose developing training tools for risk management professionals to enhance preparedness and effectiveness.

Practical experience and the need for all stakeholders to acquire specific knowledge and skills in communication and public engagement has been pointed out by the stakeholders from Cyprus. In addition, they have stressed the need for training in the psychological and sociological aspects of

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disasters. Create thinking and problem solving are crucial in the prevention phase while critical thinking, organization and teamwork are essential in the response phase. Data analysis, organization and teamwork are considered the most appropriate skills for formal learning, while critical thinking, project management and coordination of personnel are also important.

Greece

In total, 56 responses have been gathered from Greece. The majority of the stakeholdrs belong to the age 35-44 years old, while 75% approximately are male and most of them hold a Masters' degree. The majority are professionals emergency responders, with a considerable number being volunteers in civil protection, or other associations involved in emergencies, and trainers/educators in disaster risk management. Most of have an experience of more than 20 years. They work in public institutions, and more than half of these organizations have national territorial jurisdiction. Their experience and knowledge on DRM focuses on wildfires and man-made hazards (e.g. technological accident, CBRN incident, accident of transportation of dangerous goods).

Wildfires, extreme weather events (e.g. windstorms, hailstorms, heat waves), floods and earthquakes have been identified as the highest risks. According to our stakeholders from Greece, in the prevention phase, policy makers should be involved in, while in the response phase, emergency responders, such as firefighters, are the main actors. In the post-disaster phase, professionals (e.g., architects, engineers, geologists, planners...) and civil protection professionals play a crucial role.

Communication and coordination problems between the different groups involved in and the lack of a comprehensive plan to coordinate all available resources are the main weaknesses of DRM procedures and practices. Moreover, some of the stakeholders identify weaknesses in inadequate training, dysfunctional coordination of disaster response agencies, under-utilisation of technology, failure to use available data, incomplete vulnerability risk mapping and lack of information provided to citizens.

Stakeholders have different recommendations on best practices in disaster risk management. One suggestion was to have a fully autonomous civil protection, providing all disaster response agencies, private or public, with their own links for optimal coordination, support services and materials for immediate intervention. The importance of clear roles and clear decisions and actions is important. Additionally, effective communication with society on disaster response protocols is considered necessary, as is the activation of specific groups of citizens through training programmes. Raising public awareness and engaging specific populations is also considered crucial.

According to the stakeholders' answers, knowledge on DRM is acquired through practical experience and non-formal learning in Greece, with technical or vocational training being the most important credentials for addressing the field. Only 39% of participants are aware of regional, national, or international educational and professional training programs in disaster risk management. Most of them believe that technical/vocational training, followed by master's degrees and professional degrees are the most important credentials for addressing DRM. They have participated in various training programs, such as the Greek Police Officers School, Political Emergency Planning, and Master's Degree Programs offered by Universities. Informal training practices is considered as very important. They participate in civil protection exercises often. In many cases this kind of participation is mandatory in participants' institutions, usually once or twice per year.

They suggest that best practices in DRM education include: easy access to knowledge through interaction, such as educational platforms and practical training with realistic assessment of achievement, exercises in civil protection, and incorporating interactive and experiential learning

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methods like simulations, games, and drills as one best practice in order to practice decision making in a controlled environment.

They strongly believe that DRM requires experience, and consequently education should offer practical examples and training activities. In addition, they emphasize that DRM requires all stakeholders involved to acquire specific knowledge and skills in communication and public engagement.

Key competencies identified for the prevention and preparedness phase is the organization and teamwork (planning, coordinating, or implementing multiple elements at different levels of the DRM chain). In addition, approximately half of stakeholders consider communication (expressing information clearly, concisely, and empathetically in risk-prone areas and disaster-related situations) as important skills.

For the response phase, important skills include problem-solving (developing effective and efficient solutions to address issues in risk-prone areas and disaster-related situations, ~66%) and decision-making (making timely and effective choices in risk-prone areas and disaster-related situations, ~64.3%). Additionally, communication (expressing information clearly, concisely, and empathetically in risk-prone areas and disaster-related situations), organization and teamwork and project and personnel management and coordination play a main role in the emergency phase, as noted by 58.9% of respondents.

For the rehabilitation and recovery phase, stakeholders believe that problem-solving should be primarily developed and assessed (~52%). Additionally, data analysis (46.4%) and Construction and Engineering (Using knowledge of basic construction and engineering principles in risk-prone areas and disaster-related situations.) (48.2%) are among the main key competences believed by responders.

According to their experience and expertise, data analysis and creative thinking are deemed the most appropriate skills to be developed through a formal earning approach, involving expanding career knowledge by taking classes with educators, trainers, and academics (both are 53.6%). Critical thinking is the second most common choice among attendees (50%).

Problem-solving (Developing effective and efficient solutions to address issues in risk-prone areas and disaster-related situations) which involves developing effective and efficient solutions to address issues in risk-prone areas and disaster-related situations, is considered the most appropriate skill to be developed through problem-based learning, as indicated by almost 60% of respondents.

Organization and teamwork, which encompasses planning, coordinating, or implementing multiple elements at different levels of the DRM chain, is considered the most relevant skill to be developed through a learning-by-doing, learning-through-action, or experiential learning approach, according to 64.3% of stakeholders. In second place is data analysis (50%).

Italy

In total, 42 responses from Italy have been collected. A good balance between men and women was apparent in the Italian stakeholders (slight majority of the respondents were men), while a significant majority holds a master's and a doctorate degree. Most of the respondents are professionals such as architects, engineers, geologists and planners with a significant percentage belonging to policy makers. It is important to note that the respondents have a wide range of experience in DRM and both newcomers to the field and experienced professionals with years of experience have provided their answers. The majority of them work mainly in local public institutions. They are mainly experts on

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managing disasters such as earthquakes and floods. According to their responses, earthquakes, floods and landslides are the main threats in their jurisdiction area.

In the pre-disaster phase, policy makers are the most important actors, with civil protection professionals and emergency responders also playing an important role. During the response phase, stakeholders believe that the primary responsibility lies with emergency response professionals (e.g. firefighters and civil protection). According to participants, during the post-disaster phase, professionals such as architects, engineers, geologists, and planners are the ones who are the most involved. In addition, policymakers are also considered crucial players during this phase.

Heavy bureaucracy with slow timing and a lack of coordination between researchers and civil protection professionals are the main weaknesses of the procedures and practices in DRM are subject to debate. These issues result in a significant lack of planning.

They have recommended various effective practices in disaster risk management and these include the collaboration in drafting organic rules, promoting the adoption of design solutions that replicate ecosystem services provided by natural systems integrated in resilient, multifunctional landscapes. In addition, planning and education are highlighted as key aspects, suggesting a notable need for preparedness and knowledge dissemination.

Most respondents have acquired their knowledge directly through practical experience in the field. A survey of stakeholders from various professional backgrounds found that both master's and professional degrees are crucial for addressing seismic risk reduction. However, only 28% of participants were aware of any educational or professional training programs in DRM. Informal training practices are highly significant for them (52% acknowledged their importance). A small percentage of the experts answered the question if they participate often in civil protection exercises. Approximately 35% of them have never attended such exercises. Informal training practices are mandatory for 62% of participants, but half of their institutions never engage them in such exercises.

Disaster Risk Management education should focus on developing key competencies and skills for prevention, mitigation, and preparedness, according to their opinion. Critical thinking, data analysis, problem-solving, organization and teamwork, and decision-making for the prevention phase. In the response phase, the most important skills are problem-solving, organization and teamwork, and decision-making. Data analysis is considered the most appropriate skill for formal learning, followed by critical thinking, creative thinking, and research thinking. Problem-solving is the primary skill to be developed through problem-based learning, followed by critical thinking, data analysis, and decision-making skills. Organization and teamwork are the most appropriate skills for learning-by-doing, learning-through-action, or experiential learning, with problem-solving, decision-making, and project management benefiting from this approach.

Slovakia

In total, 47 responses from Slovakian stakeholders have been gathered with the majority of them being in the age of 18-24, with a slight male representation. Most of them hold a high school diploma (~40%), followed by those with a master's degree. They are members of NGOs or civic associations related to emergencies, with approximately 32% being volunteers in civil protection. Most of them work in public institutions, with a national jurisdiction (40.4%). The majority of participants are relatively new to DRM, while approximately 22% has a working experience of 10 to 20 years. Knowledge about disaster management focuses on droughts, floods, and extreme meteorological events. Droughts, floods, and extreme meteorological events are identified as the highest threats in their respective work areas.

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It is considered that civil protection and emergency response professionals are crucial during the prevention, mitigation, preparedness and response phases, with firefighters being the most involved. Architects, engineers, geologists, planners, and policymakers lead the post-disaster (rehabilitation and recovery) phase, according to stakeholders.

Stakeholders in Slovakia believe that the main weaknesses in disaster risk management (DRM) are linked to problematic legislation, inadequate training, communication, and lack of cooperation among actors. They recommend Fault Tree Analysis (FTA) and Event Tree Analysis (ETA) methods, as well as adequate funding, simulations, and supplies. They also point out the importance of training for cooperation and communication between intervening components as best practices in DRM.

Most stakeholders acquired their knowledge on DRM during their graduate or post-graduate studies. They consider that a Master's degree is the most important qualification for tackling DRM. The vast majority is not aware of any regional, national, or international educational and/or professional training programs in DRM. A small percentage of them, has participated in educational and/or professional training programs.

Most stakeholders recognize informal training practices (e.g. civil protection exercises) as very important training and educational tools. Around 30% of respondents rarely participate in civil protection exercises. When they participate, they take part as players in civil protection exercises and as observers.

A significant percentage of the institutions represented by participants require informal training practices, such as civil protection exercises, to be included as mandatory components of their training plans. More than half of the institutions engage in informal training practices once or twice a year. Approximately one third of them does not proceed with such practices.

Participants suggest utilizing virtual, mixed, and augmented reality technologies, along with a blend of theoretical and hands-on training approaches. They also recommend hosting professional seminars to share experiences in addressing practical and specific issues, such as emergency events. In addition, they advocate for the creation and implementation of simulations or case studies, among other innovative educational resources, as best practices in DRM education and training.

Stakeholders believe that disaster risk management (DRM) requires hands-on experience and practical examples. For the prevention and preparedness phase critical thinking has been characterized as crucial for disaster risk education, particularly in fostering skills for prevention, preparedness, and mitigation. Data analysis and communication skills have also identified as important. Problem-solving is considered crucial during the response phase, while decision-making skills appeared high in the rank. Construction and engineering skills have been identified as primary competencies for the post-disaster phase in recovery and rehabilitation. Creative thinking skills are also significant. Data analysis and critical thinking are considered suitable for formal learning, while data analysis, problem-solving, and critical thinking are suitable for problem-based learning as well. Finally, learning by doing, action, or experiential learning approaches are also considered essential for the development of problem-solving skills.

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2.2 Focus group synthesis

The focus groups were organized in order to collect useful experiences that capture successful tools and approaches relevant to the field. The focus groups were also useful to identify gaps in education and training in the DRM domain. Additionally, the participants underlined important issues regarding the DRM, like strategic planning and interconnectivity between mechanisms.
This section provides description of the focus groups in each country. Also, it includes important opinions and case studies that can be used as inspiration for the following WPs.

Belgium

In Belgium, the focus group discussions underscored the importance of comprehensive training opportunities for humanitarian workers involved in crisis management. Participants highlighted the effectiveness of current training programs but emphasized the need for sustained support and long-term planning in disaster response. The discussions also emphasized the interconnectedness of countries in disaster management efforts, stressing the importance of collaboration and shared strategies among stakeholders.

Insights:

- humanitarian workers generally feel adequately trained for crisis management;
- however, they emphasise on long-term risk management planning for sustained support;
- their motivations include safety, community commitment, and professional duty;
- they stressed on international collaboration for effective disaster management.

Challenges:

- continuous need for ongoing training and mental health support for workers;
- importance of comprehensive, long-term strategies in disaster response;
- necessity of effective coordination and support as crises progress.

Noteworthy points raised by the participants:

- It is interesting to note that the emphasis on long-term planning, resilience, and cultural sensitivity underscores the multifaceted nature of DRM.
- Participants' experiences highlight the importance of considering local contexts, political dynamics, and cultural nuances in intervention strategies. This approach enhances the effectiveness of interventions and also fosters community engagement and cooperation.
- Local authorities, institutions and organisations should prioritise ongoing training and support for workers' mental health and well-being.
- It is important to develop curriculum frameworks that encompass diverse perspectives and promote cross-disciplinary understanding among DRM professionals. Also, the curricula should emphasise on equally practical skills, emotional resilience, and cross-cultural communication.
- In DRM education, it's also crucial to tackle ethical challenges. These include issues like fairness, human rights, and protecting the environment.

Cyprus

Cyprus faces significant challenges in disaster response due to a lack of regulatory frameworks, jurisdictional issues, and political complexities. The focus group discussions

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revealed a critical need for unified training pathways and coordinated efforts among governmental agencies, professionals and volunteer groups. Recommendations included establishing clear educational pathways for professionals and volunteer groups improving the efficiency of training programs and fostering international collaboration.

Insights:

- Professionals and volunteers in emergency sectors primarily engage in wildfires and face significant risks;
- challenges include coordination gaps among agencies and volunteers;
- the political situation complicates central coordination during crises.

Challenges:

- lack of formal educational pathways for volunteers;
- inadequate and uncoordinated training for volunteers and risk practitioners.
- need for funding, visibility of EU initiatives, and local stakeholder involvement.
- inconsistencies of trainers' expertise providing formal and in-formal training programmes to the training programme's topic.
- lack of motivation for professional development among professionals
- lack of emotional intelligence skills e.g. managing situations where civilians feel stressed, how to better support people with disabilities or the elderly etc.
- lack of coordination among authorities and volunteer groups during natural disasters
- lack of public support such as governmental funding to volunteer groups or equipment
- lack of public awareness over preventing and managing disasters
- the lack of regulatory framework and clear responsibilities hinder effectiveness.

Noteworthy points raised by the participants:

- Issues of political agendas and shortsightedness were also hinted, through the fact that when leadership changes (through political change / appointment) there is no continuity and everything starts over with new people and new roles.
- It would be interesting to see some research into how political change / elections affect emergency preparedness and how cultural elements affect both preparedness and operational response / efficiency, as well as recovery.
- Funding is a major issue that needs to be addressed, as well as the recognition and validation of trainings obtained on a private basis, and the harmonization of content among different providers.

Greece

In Greece, participants emphasized the value of practical, hands-on learning experiences, and the need for integrating DRM education into school curricula from an early age. The discussions highlighted successful coordination efforts during past natural disasters, driven by proactive training and inter-agency collaboration. Future actions should focus on expanding educational platforms, integrating advanced technologies into DRM practices, and enhancing community engagement.

Insights:

- equal importance of both formal education and practical training in DRM;
- emphasis on inter-agency collaboration and practical exercises;

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- integration of DRM education into school curricula advocated;
- use of diverse educational platforms for asynchronous and synchronous learning.

Challenges:

- ensuring effective use of new technologies in DRM;
- addressing multi-hazard disasters and integrating interdisciplinary approaches;
- incorporating public awareness and community engagement in DRM strategies.

Noteworthy points raised by the participants:

- It is important to conduct regular evaluations of DRM strategies to identify areas for improvement.
- It is important to develop a chatroom within the DRM platforms as it will allow different stakeholder and registered participants of multiple backgrounds to come in contact, to share experiences and good practices. The chatroom may function in the form of a forum with given topics that will trigger the interest of different participants
- Educators should design DRM curricula that are accessible and engaging for students from various socio-economic, cultural, and educational backgrounds (the aim is to promote inclusivity and DRM education can reach a wider audience and foster a more resilient society).
- Several parameters that should be incorporated into the DRM training segment are as follows: 1) Educational Accessibility The availability of diverse platforms ensures accessibility to DRM education for various learners. 2)Engagement and Retention: Keeping courses concise and engaging is crucial for retaining learners' interest, especially in asynchronous learning. 3)Institutional Integration: Integrating DRM education into school curriculums can foster a culture of disaster preparedness from a young age. 4) User-Centric Design: Platforms should be designed with the user's needs and interests in mind, allowing for personalized learning experiences. 5) Stakeholder Collaboration: Collaboration among different stakeholders is essential for comprehensive DRM education and practice.
- Based on the experiences shared, an educational gap on evacuation was revealed so there is a twofold need: a) targeted training on the existing legislation, operational actions and responsibilities, addressed to first responders and disaster managers (professionals); b) awareness raising and trust building to the authorities, with popularized communication of the existing legislation on population requirements and rights in the case of evacuation or organized removal, addressed to the general public.

Italy

Italy's discussions among municipalities and local authorities emphasized the strategic importance of spatial planning and integrated protocols in disaster risk management. Participants underscored the need for interdisciplinary collaboration, leveraging new technologies, and promoting open data initiatives to enhance response strategies. Future actions should focus on developing managerial skills, improving communication among stakeholders, and integrating disaster risk considerations into broader development policies.

Insights:

- local authorities emphasized the importance of practical, ready-to-be implemented DRM strategies and action plans in urban and rural contexts;
- advocacy for open data, scenario planning, and new technologies in DRM;
- importance of interdisciplinary collaboration and integrated response protocols;

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- emphasis on spatial planning and community engagement in DRM phases.

Challenges:

- developing shared DRM protocols and enhancing strategic planning;
- promoting interdisciplinary collaboration and stakeholder engagement;
- integrating risk education into development policies and land use planning.

Noteworthy points raised by the participants:

- One interesting future action is to implement the quadruple helix approach to support monitoring and prevention,
- Key skills needed in DRM: 1) Understanding and integrating perspectives from various disciplines such as urban planning, geology, and civil engineering into disaster risk management strategies, 2) Analysing and evaluating multiple-hazard disasters as
- Interconnected systems and integrating multi-hazard scenarios into disaster management strategies. 3) Organizing and managing data interoperability among disaster management actors, facilitating effective sharing of information for search and rescue, disaster assessment, and public awareness.

Slovakia

Slovakia's focus group discussions emphasized the critical role of expert-led crisis management and the importance of regular crisis plan exercises. Participants highlighted challenges in crisis communication and coordination between national levels and local levels. Recommendations included enhancing educational initiatives to include innovative elements like virtual reality and scenario modelling, as well as increasing public awareness and involvement in disaster preparedness.

Insights:

- focus on crisis management expertise and strategic planning;
- challenges in crisis communication and national-level coordination;
- emphasis on innovative education approaches and practical learning;
- need for increased public and student participation in DRM practices.

Challenges:

- enhancing crisis communication and synergistic crisis planning;
- educating the public and students on security and safety measures;
- integrating new technologies and scenario modelling in DRM education.

Noteworthy points raised by the participants:

- In times of crisis situations it is important to have a person who is an expert in crisis management and who will also make the decision, as it is necessary to build on the plans that have been prepared as part of the prevention and not to try to improvise at any cost.
- Issuing guidelines, which is an essential condition for directing the population and others in a crisis situation, proved problematic from the point of view of personal experience. From the perspective of the emergency services, cooperation was better at the local level than at the national level.

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3 Educational and Training Programs related to disaster management

This section describes the finding from the research conducted in the five countries participating in DRM-FRAME on disaster risk management training programs. In the next sections, the overall findings are presented in, while the programs found are presented in Annex 2 of this document.

3.1 Educational and training programs related to disaster management in Belgium

Introduction

Belgium is also affected by both human and natural disasters. Belgium presents a high terrorism threat level (National Crisis Center). Taking into consideration that in the country lie the headquarters of prominent organisations, and also the fact, that a large number of popular social events take place annually in Belgium, it becomes a target for organised terrorist attacks. A significant number of events have occurred, with the 2016 attack at the Brussels National Airport being the deadliest. More recent events include the 2023 shooting in Brussels, which resulted in the death of two people, the 2018 shooting in Liege with the death of two police officers and of a citizen, and the failed attack at the Brussels central train station. Technological accidents, especially regarding SEVESO sites, present a moderate likelihood but lower impact, according to the national risk assessment conducted by the National Crisis Center(National Crisis Center). Power outages and disruptions in telecommunications are more likely, however their impact again remains relatively low.

Regarding natural hazards, storms and floods are the most likely to occur and seriously impact society and infrastructures. Belgium has been affected by floods in a number of occasions with the most significant one being the flood event of 2021, when a prolonged period of heavy rainfall affected central, northern and northwestern Europe. Citizens of large urban areas, like Liege, were urged to evacuate their homes, structures collapsed, road and railway networks were disrupted (The New York Times, n.d.).

Wildfires are scarce in Belgium, however, due to climate change, heatwaves and droughts are expected to affect northern parts of Europe as well (Amies, 2023). At present burnt area rates do not exceed 40 ha annually. In 2011 after a dry and hot spring, wildfires occurred resulting in a 2360 ha burnt area. This event still remains the most significant one (Climate Change Post, 2024).

Seismicity in Belgium is lower comparatively with the countries of southern Europe. Earthquakes can occur but they usually are of low to moderate magnitude and rarely inflict serious damage to infrastructures or threaten human lives. However, buildings, which are old and lack seismic protection regulations e.g., the EN Eurocodes, do exist within the rural and urban areas of Belgium, and therefore are more vulnerable. Furthermore, large urban areas are built upon soft soils, which present high seismic values such as ground acceleration and ground velocity. These factors increase the impact of earthquakes and although the likelihood of a strong earthquake occurrence is low the overall risk is moderate.

Brief description of the educational and professional training programs

Although the likelihood of natural disasters in Belgium is considered low, educational programs have been developed and provided by research organizations, universities, and other entities (totaling 5 identified programs). These programs offer ECTS units ranging from 60 to 120, with durations spanning from 3 months to 2 years. Costs vary from 2,000€ to 8,000€. Additionally, there are programs focusing on public health, the impact of the covid-19 pandemic, humanitarian crises, and security measures

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due to the elevated risk of terrorist attacks. Two professional training programs were identified, with one being a one-day seminar and the other extending over a two-week period. Both programs are conducted in English. These programmes, either academic or practical, target not only graduates from relevant fields but also first responders and disaster management professionals such as firefighters, emergency medical personnel, civil protection specialists, and police officers, among others. They offer multi-disciplinary courses varying from humanitarian assistance to international law and risk analysis. A fire safety engineering programme is also included among the available ones. Their duration might vary, from single day seminars to four semester MSc programmes. The following list presents educational and professional seminars integrated within the DRM-FRAME project. A detailed description of the educational offer in Belgium can be found in Annex 2 of this document.

3.2 Educational and training programs related to disaster management in Cyprus

Introduction

Cyprus is mainly exposed to natural hazards such as earthquakes, floods, wildfires. However, the frequency of occurrence is lower compared to Greece and Italy. On the other hand, heatwaves and drought are more and more frequent.

The July 2021 wildfire, which broke out near Limassol due to a heatwave of extreme intensity (temperatures exceeded 40oC) and long duration, is considered the most devastating. The wildfire cost the lives of four people and affected an area of 50 km2. Aerial assistance from neighboring countries was imperative for its suppression (Reuters, 2021).

Heatwaves and droughts are alarmingly increasing in frequency and intensity, something that concerns the whole Mediterranean area. July 2023 was the warmest July on record, whereas temperatures above 30 °C in Cyprus are becoming frequent even from April (World Health Organisation, 2024). Droughts are also likely to increase due to climate change leading to water scarcity. Cyprus is imposed to import ca 8 million m3 of water to satisfy citizen demands. Moreover, during dry and hot periods restriction measures are imposed to the population, leading to a reduction of consumption of up to 30% in some cities (Climate Change Post, 2024).

In addition to wildfires, earthquakes have been a serious concern, as strong seismic events have occurred. However, the epicentre of the majority of these events is situated far in the maritime area of the eastern Mediterranean, thus damage is not extensive. On the 10th of September 1953, a strong earthquake (Ms=6.5), with an epicentre in the western part of the country, led to extensive damage in structures, 40 deaths and 100 injuries around the area of Paphos, whereas it created a tsunami which affected nearby areas. Other significant events include the 1996 and 2022 earthquakes with magnitudes of 6.8 Mw and 6.6 Mw respectively. Cyprus presents high seismic activity for two main reasons: a) the country lies above the Cyprian trench and b) its proximity to the Pliny and Strabo trench, both delimiting the subduction zone of the African beneath the Eurasian tectonic plate (David Fernandez-Blanco, 2020).

Floods are also a major risk for Cyprus as almost every year smaller or larger events do affect different parts of the country (Savvidou K., 2008). The geomorphology, climatic regime and intensity of precipitation often leads to the occurrence of flash floods i.e., rapid river water level increase due to short but intense rainfalls. The deadliest event took place in 1859 with 18 fatalities, while at least 10 major floods have occurred since 1887.

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Brief description of the educational and professional training programs

Professional training as well as educational programs are offered by universities and first responders' organisations in Cyprus covering undergraduate and postgraduate levels. Master's programs are available with a duration of 18 to 30 months. These programs provide a wide array of courses on disaster management, encompassing various disciplines on natural hazards, security, risk management, and related topics. Additionally, a program focused on public health is incorporated into the curriculum.. Teaching methods include both physical presence and remote learning. Program costs fluctuate based on the institution, program duration, and credit requirements, ranging from 8,500€ to 14,000€. The programs offer 90 ECTS units and one of those programs is accredited by the Institute of Risk Management.

Moreover, three professional seminars are offered by various organisations targeting professionals in the crisis management domain e.g., firefighters, rescuers and medical staff among others, as well as experts in the standardisation sector. The seminars have a short duration ranging from 7 to 21 hours, are offered in the Greek and English languages and can be attended either remotely or physically. The following list presents disaster management-related academic and training programs in Cyprus, contextualized within the DRM-FRAME project.

A detailed description of the educational offer in Cyprus can be found in Annex 2 of this document.

3.3 Educational and training programs related to disaster management in Greece

Introduction

Greece is exposed to a variety of hazards, both natural and anthropogenic. However, it is the natural phenomena and processes that pose a serious threat to the country's environment its citizens and its economy.

The country lies right above the convergence zone between the Eurasian tectonic plate, which marches southwards, and the North-African plate, which marches towards the north and submerges below the former. This geological regime results in very high seismicity around the eastern Mediterranean and ultimately in Greece. Recent events include the 2020 earthquake near Samos Island, with a magnitude of 6.7(Earthquake Planning and Protection Organisation), which led to serious damage in the island and also in Izmir, Turkey whereas historical earthquakes include the 1999 earthquake of NW Attica, with Mw=5.9 (Simone Atzori, 2008), which led to 143 deaths and a financial damage of over 3 billion € (The TOC Team, 2023), the 1981 event of the eastern Corinthian Gulf with the occurrence of two earthquakes of Ms=6.7 and 6.3 respectively, and of course the major seismic events of the Ionian Sea, which occurred between 09 and 12 of August, 1953, with magnitudes between 6.4 and 7.2, which caused 455 deaths and 33,000 structures collapsed or heavily damaged (Koutsadelis, 2013). Volcanic activity is also present and is a direct consequence of the geological processes in the area.

In addition to geodynamic hazards i.e., earthquakes, volcanic eruptions, tsunamis and landslides, Greece, due to the variety of climatological conditions present in its territory, is also prone to hydrometeorological hazards. Although the main climatological regime is mediterranean, mainland Greece and specifically the central and northern parts of the country present a more continental character, therefore weather patterns can vary from hot and dry to humid and cold. Greece is regularly affected by extreme rainfalls, snowfalls and cold spells during winter, droughts and heatwaves during

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summer. Significant floods include the 2023 event, which affected almost the entirety of the Region of Thessaly and was caused by a low pressure system named “Daniel” by the National Observatory of Athens (CNN Greece, 2023), the 2020 flood which affected Thessaly and the Ionian islands and was caused by the “Ianos” Mediterranean hurricane, whereas a local flash flood, caused by extreme and short rainfalls, affected the western parts of Attica in 2017 and resulted in 25 deaths (Zougla, 2020).

Climate change has impacted Greece not only in the form of extreme precipitation and floods but also in the form of heatwaves and droughts, which as result lead to the occurrence of wildfires. Wildfires affect the country and cause ecosystem degradation, deaths, injuries and damage to households and infrastructures. Although significant extreme events have continuously occurred throughout the years, megafire events have alarmingly increased in the recent years. The tragic incident that occurred on 23 July 2018 in Mati, Greece, involved a wildfire which resulted in 104 people dying (Synolakis & Karagiannis, 2024).A wildfire broke out on the Greek island of Rhodes on 18 July 2023. Initially confined to the mountainous central area, the fire spread southwards on the fourth day, fueled by strong seasonal northerly winds. By 23 July, the flames had reached the southern coastline, burning more than 16,000 hectares (Synolakis et al., 2024). In the same year (2023) in August, the wildfire that affected the Regional Unit of Evros turned almost 95.000 ha of forests and rural areas to ash and is considered the largest wildfire of the last 20 years (Hellenic Fire Service, 2023). In addition, in summer 2021, following a prolonged period of drought and extreme heat, Euboea Island was affected by another megafire, which resulted in the devastation of an area equal to 51.100 ha (Dasarxeio, 2023). During the same period another large wildfire affected the Region of Attica with a burnt area of 18.753 ha (Hellenic Fire Service, 2023). Wildfires do not only cause desertification and environmental degradation but also deaths and injuries. In 2018, a wildfire which affected the eastern parts of the Attica Region caused 104 deaths, whereas the extreme wildfires of 2007 in the Peloponnese caused overall 67 deaths and affected a large part of the Regions of Western Greece and Peloponnese.

Although NaTech disasters are not that frequent, human induced crises, mainly in the form of traffic accidents occur, with recent examples including the railway disaster in the area of Tempi, with 57 victims, the wreckage of the “Samina” cruise ship, with 81 victims, the crash of the “Helios” aircraft, with all passengers (121 in total) losing their lives.

The variety of hazards has led to the development of civil protection plans. These plans lay out stakeholders’ roles and responsibilities throughout the four phases of the disaster management cycle i.e., prevention, preparedness, response and recovery. Stakeholders consist of first responders’ organisations, local government bodies, volunteers and the general public.

Brief description of the educational and professional training programs

In addition to civil protection strategies, a substantial array of educational opportunities related to disaster management and civil protection is available, which is unsurprising given the country's vulnerability. These opportunities encompass both academic courses and practical training programs. Most higher education institutions offer disaster management programs that integrate engineering, earth sciences, and environmental studies, typically requiring a relevant educational background, though this is not a stringent prerequisite. In Greece, there are 10 academic programs and 8 professional training programs and seminars available. The majority of these programs concentrate on natural hazards and disasters, as well as the organization and responsibilities of local government authorities and agencies. Predominantly, the academic offerings consist of 3- and 4-semester courses provided by institutions such as the National and Kapodistrian University of Athens, the Aristotle University of Thessaloniki, and the University of the Aegean, among others. Additionally, programs in disaster medicine, public health, and humanitarian logistics are included in the disaster management

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educational spectrum. Most of these programs incorporate field trips, practical exercises, and internships, facilitating the acquisition of hands-on experience for students.

The cost of educational and academic programs ranges from 1,500€ to 4,000€, with variations depending on the program's duration and the number of ECTS units offered, which range from 70 to 120.

Professional training programs are typically measured on an hourly basis, with lesson durations spanning from 35 to 80 hours. While these training programs also incur costs, specific pricing information was not widely available online at the time of the search. Occasionally, special discounts may be offered.

Furthermore, first responder organizations such as the Hellenic Police and the Hellenic Fire Service, alongside their academies, have formulated educational initiatives to enhance the capabilities of their personnel in disaster management. Additionally, other institutions like the Civil Protection Academy, the National Centre for Public Administration, as well as Universities and training facilities, deliver concise courses to citizens, volunteers, and public employees. These programs aim to familiarize individuals not only with disaster management but also with the structure of public administration and its role during crisis scenarios. Although traditional teaching methods may imply physical attendance, alternative approaches such as synchronous and asynchronous distance learning are also employed.

All educational Programmes are available in either physical, remote/on-line format or hybrid formats.

A detailed description of the educational offer in Greece can be found in Annex 2 of this document.

3.4 Educational and training programs related to disaster management in Italy

Introduction

Italy has been affected by both natural and anthropogenic hazards. Numerous disasters have occurred in the country with a very large impact on lives, infrastructures, cultural sites, the environment and the economy.

Italy has an active geotectonic regime, as it lies above the convergence zone of the Eurasian and African tectonic plates. The latter expands northwards from the Mediterranean Sea to the Alps, forming the Adriatic Sea (World Data, 2017). Consequently, the area is prone to geological hazards such as earthquakes as well as volcanic eruptions and landslides. Large seismic events have been documented. The earthquake, which occurred in 1693, in Sicily, with a magnitude of 7.4, is considered the strongest. Victims are estimated to reach the number of 60000, while tsunamis and cascading effects resulted in the devastation of an area of approximately 5600 km2 (ISAAC, 2024). Other significant and more recent events include the L'Aquila earthquake in 2009 with Mw = 6.3and the Amatrice earthquake in 2016 with Mw = 6.2 (USGS, n.d.). Volcanic activity is among the highest throughout the EU. Mts Etna, Stromboli, Vesuvius and Campi Flegrei have erupted at least 50 times the last 2000 years, with the most devastating eruption being that of Mt. Vesuvius in 1631, with at least 4000 estimated deaths (World Data, 2017).

The hydrometeorological risk is also high. The variety of climatological patterns throughout the country, with a mediterranean climate in the central, southern and coastal regions and a continental in the northern parts, subdued by climate change, results in the occurrence of extreme weather events including extreme rainfalls, snowfalls and heatwaves. The frequency of flood occurrence, as a result of heavy rainfalls, has increased. In 2023 alone, the Regions of Tuscany, Emilia-Romagna and

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Campania have been affected by unprecedented floods with a large number of casualties and severe economic consequences (Flood List, 2024).

In addition to natural hazards, Italy has suffered from technological accidents as well. The most severe event was the Seveso industrial accident in 1976. Overall, 6 tons of chemicals were released with serious impact on the nearby population and livestock capital. The Seveso disaster led to the development of the SEVESO Directive, which imposed strict regulations on industrial sites dealing with dangerous substances. However, accidents in the manufacturing sector are still reported in Italy, with the metallurgical and metal industries having the highest rate of accidents (21.7 and 19.5 accidents / million hours of work respectively) (Statista, 2024).

Brief description of the educational and professional training programs

Italian Universities and other research and first responders' organisations have developed educational and training programmes in order to increase both the academic and operational capacities of disaster management-related professionals. Some of these programmes are not intended only for experts in this domain but for the general public as well. A significant number of educational programmes ranging from undergraduate (BSc) to postgraduate (MSc, PhD) levels, are offered by esteemed Universities across the country. Their scope is to familiarise the student with the concept of disaster management, natural and human-induced hazards, focusing on various disciplines.

These educational programs primarily emphasize natural hazards, particularly earthquakes and floods, due to their frequency and significant impact on society MSc programmes lasting one to two years, attract graduates in related fields such as Geology, Enginnering, Forestry, Physics and Geography. Available 3-years BSc programmes on Civil protection provide main courses in environmental and engineering studies, while they offer some knowledge on emergency management and legal aspects. These programs offer courses in both Italian and English, although in-person attendance is typically required to a certain extent. Costs can fluctuate based on the university and the length of the program.

Civil Protection and Local Police Authorities have also developed courses for crisis and disaster management professionals, local government officials as well as volunteers. These hands-on training programmes focus on the familiarisation with local government structures, civil protection processes and the delineation of operational plans and procedures when disasters strike. Academic courses are also offered with the aim to help students understand the drivers and processes of natural phenomena. Search and Rescue and other practical training courses are included as well. The following list presents academic and vocational opportunities in Italy and, although not exhaustive, offering insight into the importance of disaster management for the country and its inhabitants.

In Italy, a total of 12 educational programs were identified, with costs ranging from free to 4,000€. The duration varies from 1 to 3 years, offering 60 to 180 ECTS units based on the specific program. These programs are primarily taught in Italian, although a few are available in English. Furthermore, 6 professional training initiatives focused on civil protection and emergency management were discovered, with costs ranging from free to 75€ per hour.

A detailed description of the educational offer in Italy can be found in Annex 2 of this document.

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3.5 Educational and training programs related to disaster management in Slovakia

Introduction

In Slovakia disasters, driven by natural processes occur frequently. Floods and extreme weather are the hazards with the highest frequency in the country. Although floods have always been a concern for Slovakia, in recent years, the phenomenon has increased in frequency and intensity, subdued by climate change. In 1998 and 1999 extreme floods occurred and affected several thousand citizens, whereas more recent events include the floods of 2010 and 2020 (World Bank Group, 2021). In 2021, heavy storms resulted in a dam failure in the district of Zarnovica, consequently leading to damaging flash floods in the surrounding areas (Davies, 2021).

With regards to geohazards, seismicity in Slovakia is low, especially compared to Greece and Italy, and this comes as no surprise as the country lies far from tectonic boundaries. However, neotectonic structures have led to the occurrence of seismic events. In general, the overall seismic risk is low to moderate with two to three earthquakes occurring annually, and one damaging event every 50 to 100 years. Major events have not occurred since 1763, when an earthquake caused 63 deaths and serious damage to houses in the area of Komarno (Jozef Minar, 2006). On the other hand, seismicity tends to be higher in some areas, mainly in the western parts of the country, where the boundary between the Carpathian Mountain range and the Pannonian basin is located. Seismically active faults increase the overall seismic risk in the said territory. In addition, earthquake induced phenomena e.g., landslides and rockfalls, are not uncommon, mainly in the mountainous areas, which are characterised by steep slopes. Almost 4% of the country's territory and approximately 20,000 people are exposed to landslides (Jozef Minar, 2006). Wildfires represent another significant hazard for the country. Although major events rarely occur, the frequency of occurrence increases as heatwaves and prolonged droughts affect not only southern countries but central and northern Europe as well. Wildfires also result in significant economic losses and therefore, something that has also bothered the insurance market of the county as well (Michaela Korena Hillayova, 2021).

Brief description of the educational and professional training programs

In Slovakia a significant number of disaster-related educational and practical training programmes are available, as indicated by the research conducted by the DRM-FRAME consortium, amounting to a total of 20 programs.. Universities and also first responders' academies offer a plethora of programmes across all academic levels, spanning from BSc to PhD degrees (totaling 13 programs). These programs encompass 120 or 180 ECTS units, with costs ranging from 2,000€ to 3,600€. The programmes in crisis management include multidisciplinary courses varying from enterprise crisis management, business continuity, risk assessment and protection of critical infrastructures to language courses. Moreover, there are few undergraduate and postgraduate programmes in fire engineering and protection that include courses in safety sciences and rescue activities. Their duration varies from 4 to 6 semesters, whereas teaching methods include both physical and remote teaching. The majority of them include in their curricula field trips, exercises, visits with an emphasis on organizations providing crisis management, civil protection and risk management.

In addition, there are brief seminars, offered by universities, research institutes, academies and educational centers (7 offers in total), aimed at offering practical and hands-on training not only for disaster management professionals but also for the general public. The duration of the training seminars varies from 1 day up to four weeks with a cost varying from 150€ up to 800 €. A detailed description of the educational offer in Slovakia can be found in Annex 2 of this document.

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4 Conclusions

4.1 Useful insights regarding the online survey

The DRM-FRAME partnership gathered important information about the state of DRM practices and education in Greece, Italy, Cyprus, Belgium, and Slovakia through an online survey and focus groups. Respondents predominantly work in public institutions in all partner countries indicating a common trend of institutional involvement in DRM across these countries. Furthermore, the interviewees from all five countries are a mix of newcomers and experienced professionals in DRM.

Stakeholders across different countries expressed concerns about critical weaknesses in current procedures:

- heavy bureaucracy,
- delayed response,
- lack of coordination between researchers and civil protection professionals in DRM practices,
- lack of planning in DRM, indicating a significant gap in preparedness and response strategies, which could hinder effective disaster management efforts.

Consequently, these aspects suggest a common challenge faced in the field of disaster risk management that requires attention and improvement on an international scale.

In the field of VET, a relevant number of respondents also noted the following:

- inadequacies in training,
- dysfunction in coordinating disaster response agencies,
- underutilization of technology,
- failure to leverage available data,
- incomplete vulnerability risk mapping,
- insufficient information provided to citizens as additional challenges in DRM practices (this evidence is complementary to the majority of participants who emphasized the importance of a Master's degree in DRM, with limited awareness of educational and professional training programs at regional, national, or international levels. as key weaknesses by stakeholders),
- communication and coordination issues between various groups involved in DRM, underscoring the need for improved collaboration and information sharing among different stakeholders to enhance disaster resilience and response capabilities across time and places.

The highest ranked skills by respondents are:

1. Critical thinking and data analysis, because they are necessary for evaluating complex challenges posed by disasters, fostering innovative solutions and strategies to address dynamic DRM issues, as highlighted by stakeholders.

2. Communication skills, because they are essential competencies in DRM, facilitating effective information exchange and public engagement, crucial for successful disaster risk management efforts.

3. Problem-solving, because it is crucial for creating effective solutions in risk-prone areas and disaster-related situations, as highlighted by participants in the survey.

Others are:

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4. Decision-making, because it plays a vital role in DRM, enabling stakeholders to make informed choices during emergency response situations, as identified by a majority of respondents in the survey.

5. Organisation and teamwork abilities, because they are essential for planning, coordinating, and implementing multiple elements at different levels of the DRM chain, emphasising the importance of collaborative efforts in disaster management.

In conclusion, the analysis of the answers emphasizes the need for hands-on experience and specific skill development indicating a shared perspective on the essential components of effective DRM training. Disaster risk education needs to focus on developing competencies like critical thinking and data analysis to enable stakeholders to analyze information systematically and make informed decisions in risk-prone areas. The findings, also, underscore the need for tailored training courses in DRM that incorporate practical examples, specific skills development, and increased awareness of available educational programs at different levels. Finally, informal training practices, including civil protection exercises, are recognized as valuable educational tools in DRM, emphasizing the importance of practical training activities for enhancing preparedness and response capabilities.

4.2 Useful insights regarding the Stakeholders' Focus Groups

The Stakeholders' Focus Groups organized by the consortium provided further insights into the challenges and opportunities in DRM across Europe. The Stakeholders' Focus Groups focused on two topics:

a) personal experience(s) in DRM and how this experience impacted the professional skills and career development of the participants and

b) recognition of educational pathways and learning opportunities currently present in the countries of the participants.

The Focus Groups brought in touch the consortium with professionals in the field of Disaster Risk Management, resulting in a realistic point of view. The participants shared their experiences, which is very useful for the following activities, as the consortium realized the good practices implemented on a case-by-case basis and the weaknesses that appear during operational planning.

The synthesis of focus group discussions from Belgium, Cyprus, Greece, Slovakia, and Italy provides a comprehensive overview of the challenges and potential in DRM across Europe. The insights gained through the discussions reveal common themes as well as unique perspectives that underscore the complexity and importance of effective disaster preparedness and response strategies.

Each country's unique challenges and opportunities reflect their specific contexts and experiences in disaster risk management. Stakeholders unanimously advocated for comprehensive training programs, interdisciplinary collaboration, public awareness campaigns, and integration of advanced technologies to enhance DRM preparedness and response capabilities. By addressing these insights through tailored strategies and collaborative efforts, each country can strengthen its resilience and readiness to respond to future disasters effectively.

Table 2: Insights and challenges from the focus groups.

FOCUS GROUPS		
Countries	**Insights**	**Challenges**

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Greece	-equal importance of both formal education and practical training in DRM -emphasis on inter-agency collaboration and practical exercises -integration of DRM education into school curricula advocated -use of diverse educational platforms for asynchronous and synchronous learning	-ensuring effective use of new technologies in DRM -addressing multi-hazard disasters and integrating interdisciplinary approaches -incorporating public awareness and community engagement in DRM strategies
Italy	-local authorities emphasized the importance of practical, ready-to-be implemented DRM strategies and action plans in urban and rural contexts -advocacy for open data, scenario planning, and new technologies in DRM -importance of interdisciplinary collaboration and integrated response protocols -emphasis on spatial planning and community engagement in DRM phases	-developing shared DRM protocols and enhancing strategic planning -promoting interdisciplinary collaboration and stakeholder engagement -integrating risk education into development policies and land use planning
Cyprus	-volunteers primarily engage in wildfires and face significant risks -challenges include coordination gaps among agencies and volunteers -the lack of regulatory framework and clear responsibilities hinder effectiveness -the political situation complicates central coordination during crises	-lack of formal educational pathways for volunteers -inadequate and uncoordinated training for volunteers and risk practitioners -need for funding, visibility of EU initiatives, and local stakeholder involvement

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Belgium	-humanitarian workers generally feel adequately trained for crisis management -however, they emphasise on long-term risk management planning for sustained support -their motivations include safety, community commitment, and professional duty -they stressed on international collaboration for effective disaster management -humanitarian workers generally feel adequately trained for crisis management -however, they emphasise on long-term risk management planning for sustained support -their motivations include safety, community commitment, and professional duty -they stressed on international collaboration for effective disaster management	-continuous need for ongoing training and mental health support for workers -importance of comprehensive, long-term strategies in disaster response -necessity of effective coordination and support as crises progress.
Slovakia	-focus on crisis management expertise and strategic planning -challenges in crisis communication and national-level coordination -emphasis on innovative education approaches and practical learning -need for increased public and student participation in DRM practices	-enhancing crisis communication and synergistic crisis planning -educating the public and students on security and safety measures -integrating new technologies and scenario modelling in DRM education

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Across all countries, common challenges include the need for improved coordination among agencies, enhanced training for volunteers and professionals, and integration of new technologies into DRM practices. Recommendations include developing comprehensive training programs, fostering interdisciplinary collaboration, promoting public awareness and community engagement, and integrating DRM education into formal and informal learning settings.

In conclusion, the focus group discussions underscored significant progress and ongoing challenges in DRM across Europe. By prioritizing comprehensive training, fostering inter-agency collaboration, and integrating innovative technologies, stakeholders can strengthen disaster preparedness and response efforts. These efforts are essential for building resilient societies capable of navigating the complexities of an increasingly unpredictable world. By learning from each other's experiences and implementing shared recommendations, European nations can enhance their capacity to mitigate risks, respond effectively to disasters, and foster sustainable recovery and resilience at local, regional, and national levels.

Moreover, in detail, conclusions could be grouped as it follows.

Training and education

Across all countries, there is a consensus on the critical importance of comprehensive training and education in DRM. Participants highlighted the need for holistic training programs that integrate practical skills, emotional resilience, and cross-cultural competencies. Integrating DRM education into school curricula from an early age emerged as a shared recommendation to instil a culture of preparedness and resilience in future generations.

Long-term planning and coordination

The discussions emphasized the necessity for sustained support and long-term planning in disaster response. While immediate crisis responses are well-coordinated, there is a recognized need for continuous risk management strategies that evolve with changing circumstances. Enhancing inter-agency collaboration, establishing shared protocols, and promoting open data initiatives were identified as crucial steps to facilitate seamless communication and coordination during emergencies.

Challenges and recommendations

Each country presented unique challenges reflective of its local context. Belgium calls for international training and support for humanitarian workers, Cyprus faces regulatory and jurisdictional complexities, Greece emphasizes practical learning experiences and community engagement, Slovakia prioritizes expert-led crisis management and improved crisis communication, and Italy stresses spatial planning and interdisciplinary collaboration.

Recommendations included developing unified training pathways, leveraging advanced technologies, and integrating disaster risk considerations into broader policies and strategies.

Future research and action

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Moving forward, there is a call for further research to understand the socio-economic and cultural factors influencing community resilience and disaster response. Addressing ethical challenges within DRM education, such as fairness, human rights, and environmental protection, is also crucial. The integration of advanced technologies for scenario planning, risk assessment, and data management is seen as essential for enhancing preparedness and response capabilities.

4.3 Useful insights regarding the existing educational offer in Disaster Risk management

The study completed in the five partner countries, regarding the educational and training programs in disaster risk management and civil resilience, demonstrates the existence of a variety of programs organized in academic institutions, research centers and other organizations. The academic institutions' programs are mainly at the postgraduate level (MSc and PhD). Regarding the undergraduate level, there are not exclusively DRM-related programs, but related courses which are located within programs of wider interest. The cost and duration vary depending on the country and the institution providing the program. Of particular interest are the professional training seminars, which vary not only in price and duration, but also in content. The approaches that are incorporated differ, although in most cases the target audience is the same, i.e. professionals.

The majority of the programs focus on:

a) Analyzing Natural and Human Disasters,

b) Crisis Management and Civil Protection,

c) Developing resilient areas,

d) Risk assessment,

e) Public Health.

The following table summarizes the educational opportunities in the five partner countries. We understand that both the costs and the duration of the academic courses fluctuate. A ratio is observed between the duration of the programs provided and their price. However, the lowest prices of the academic courses provided are observed in Greece and Italy. On the other hand, the most expensive programs seem to be provided by Institutions in Cyprus. Same situation is followed in the professional training programs/seminars, with the biggest difference being the duration of the courses.

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Table 3: Educational Opportunities in the partner countries

EDUCATIONAL OPPORTUNITIES								
Countries	**Academic Courses**				**Practical Training Programs**			
	Cost	**Duration**	**Scope**	**Interesting approaches-tools**	**Cost**	**Duration**	**Scope**	**Interesting approaches-tools**
Greece	1,500€ - 4,000€	18 to 24 months	Disaster management (engineering, earth sciences, and environmental studies), disaster medicine, public health, humanitarian logistics	Field trips, practical exercises, and internships, facilitating the acquisition of hands-on experience for students	Not Available	35-80 hours	Enhancement of the capabilities of the personnel in disaster management	Familiarization of the individuals with the structure of public administration and its role during crisis scenarios
Italy	free - 4,000€	12 to 36 months	Disaster management, natural and human-induced hazards (particularly earthquakes and floods), environmental and engineering studies, emergency management and legal aspects,Civil protection	Understanding the drivers and processes of natural phenomena	75€ per hour	Not Available	Familiarization with local government structures, civil protection processes and the delineation of operational plans and procedures when disasters strike	Hands-on training programme

Cyprus	8,500€-14,000€	18 to 30 months	Natural hazards, security, risk management, public health.	-	Not Available	7 to 21 hours	Crisis management	The target group includes experts in the standardisation sector
Belgium	2,000€-8,000€	3 to 24 months	Natural disasters, public health, the impact of the covid-19 pandemic, humanitarian crises, and security measures due to the elevated risk of terrorist attacks	Multi-disciplinary courses varying from humanitarian assistance to international law and risk analysis.	Not Available	One-day seminar and a two-week period	Crisis management	Participatory workshop sessions on risk communication, early warning systems and DRM governance.Examples from projects showcasing good practices related to disaster resilience. Role-playing

Slovakia	2,000€ - 3,600€	24 to 36 months	Crisis management, enterprise crisis management, business continuity, risk assessment, protection of critical infrastructures,language courses	Curricula field trips, exercises, visits with an emphasis on organizations providing crisis management, civil protection and risk management.	150€ - 800 €	1 day up to four weeks	Crisis management	Innovation forms of education in crisis management (virtual reality, augment reality, XVR, AI)

4.4 Points worthy of consideration

It is interesting to note that both the survey completed with the questionnaires, the focus groups and the study completed on the training programs, resulted in understanding the gaps in the field of DRM and highlighted the need for changes.

The activities of WP2 (A1, A2, A3) highlighted the importance of pillars that need to be taken into account when designing tools and approaches related to Disaster Risk Management. It is vital for the successful completion of the project, to identify the critical points that need improvement and those pillars that until today we consider to be undervalued in relation to their importance for successful DRM tools and approaches.

In order to enhance the capacity, skills building and readiness in the area of Disaster Risk Management including the issues of prevention, effective handling and rehabilitation, WP2 resulted in the need to improve the following pillars:

1. Procedures
2. Tools
3. Skills
4. VET Training.

Specifically, Table *4* outlines the common areas requiring improvement and further study, as identified in previous activities.

As observed, the categories of 1. Procedures, 2. Tools, 3. Skills, and 4. VET Training in DRM, require modifications and further development within the field. Critical issues identified across all participating countries pertain to the effective utilization of available tools and data. Employing mapping methods and data analysis can significantly contribute not only to hazard analysis but also to the processes of response and overall recovery in disaster-affected areas.

Furthermore, the simplification of procedures and the establishment of common protocols are widely recognized as factors that can facilitate faster disaster response and enhance communication among professionals in the field. Additionally, the enhancement of communication between field professionals and involved scientists is of particular importance. This can be achieved through targeted field training and immersive, hands-on disaster response exercises.

It is interesting to also refer to the necessity of studying factors such as socio-economic, environmental, cultural, human rights and how they affect the field. It is also a common belief that adaptation to cross-cultural data is critical both for the part of education and for the part of the processes in DRM. Special value must also be given to the value of informing the general public and encouraging their participation in the field, as in this way training in the subject can be improved and procedures can be improved.

Table 4: Needed changes regarding the 1. Procedures, 2. Tools, 3. Skills, and 4. VET Training in DRM

Procedures	• need for shared protocols establishment • need for improved coordination between the different agencies/professionals when handling a DRM case • need for reducing bureaucracy • need for quicker responses of the professionals in the field, during incidents • need for improved preparedness through response strategies • need for encouraging long-term planning • need for focusing on spatial planning in order to understand the specific characteristics of each incident • need for focusing on the recovery strategies after a disaster • need for interdisciplinary approaches for public awareness and community engagement • need for studying the impact of socioeconomic, cultural factors on DRM • need for incorporating factors like human rights and sustainability in the DRM
Tools	• promotion of open data • need for innovative tools • need for vulnerability risk mapping • innovative solutions through data analysis
Skills	• problem solving and decision making • improved communication skills that will help in the information exchange between professionals and the public engagement • enhanced teamwork capabilities • data analysis and data governance • risk assessment skills
VET Training	• enhanced practical training • need for cross-cultural training approaches • early training in DRM initiatives since school • tailored training courses depending on the target group • need for training in advanced technologies • need for training in data analysis • need for training in communication techniques

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Annex

Annex 1 – Questionnaire Survey and Results

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Template Questionnaire

Intro

This survey is part of the field research promoted by the Disaster Risk Management (DRM) and Civil Resilience Project (Project No 2023-1-EL01-KA220-VET-000162006). DRM is an Erasmus+ KA2 project which involves 6 Partners from 5 European countries. The DRM project aims to enhance the capacity, skill development and readiness in the field of Disaster Risk Management (DRM) including the issues of prevention, preparedness, resiliency & recovery effective handling and rehabilitation.

Higher Education Institutions (HEI) and Vocational Educational Training (VET) want to strengthen the education and training current paths with new contents, teaching, and learning practices for developing and improving those competencies and skills that will make many professionals in this field more competitive and impactful during and after man-made and natural disasters.

Recognizing the importance of both soft and technical skills the project wants to provide a novel and transversal approach for training the most relevant professionals engaged in the emergency operating phases in order to provide a common reference skills framework for disaster risk management and community resilience.

The survey is composed of 4 sections, and it takes around 20 minutes to be completed.

By proceeding with the questionnaire, I declare that I accept the consent form ...

Link to the consent form

The responses to the survey are automatically anonymized and aggregated neither allowing for the identification of individual respondents nor the attribution of individual responses to a respondent. All the data provided will be dealt in accordance with the EU General Data Protection Regulation (GDPR).

We guarantee that your name will not appear in public and that the management and statistics of your answers will be managed in anonymous way.

NEXT

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1 Personal data and role in the DRM

1.1 What country are you based in?

- ☐ Italy
- ☐ Greece
- ☐ Cyprus
- ☐ Slovakia
- ☐ Belgium
- ☐ other _____

1.2 Age range

- ☐ 18-24
- ☐ 25-34
- ☐ 35-45
- ☐ 35-54
- ☐ 55-65
- ☐ >65

1.3 Gender

- ☐ male
- ☐ female
- ☐ don't want to answer
- ☐ other

1.4 What is the highest degree or level of school you have completed? If currently enrolled, please indicate the highest degree you received so far.

- ☐ High school graduate, diploma or the equivalent
- ☐ Some college credit, no degree
- ☐ Trade/technical/vocational training
- ☐ Bachelor's degree
- ☐ Master's degree
- ☐ Professional degree
- ☐ Doctorate degree
- ☐ Other _____

1.5 Main role in DRM

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- ☐ Trainer/educator in DRM
- ☐ Trainee in DRM
- ☐ Policymaker at local and/or national level
- ☐ Professional in civil protection at local/regional level
- ☐ Professional in civil protection at national level
- ☐ Professional involved in DRM (architects, engineers, geologists, planners, etc.)
- ☐ Academic/researcher working in civil protection and DRM related topics
- ☐ Member of NGOs or civic associations directly/indirectly related to emergencies
- ☐ Volunteer in civil protection or other associations involved in emergencies
- ☐ other_____

1.6 For how long have you been working in DRM?

- ☐ 1 year or less
- ☐ Between 1 and 5 years
- ☐ Between 5 and 10 years
- ☐ Between 10 and 20 years
- ☐ More than 20 years

1.7 Private/public Institution

- ☐ private
- ☐ public

1.8 Territorial jurisdiction of your Institution

- ☐ local
- ☐ regional
- ☐ national

1.9 What level of knowledge/experience do you have about disaster management for the following disasters?

	Almost none	*Low*	*Medium*	*High*	*Very high*
Earthquake					
Floods					
Landslides					

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Droughts					
Extreme meteorological events (windstorms, hailstorms, …)					
Wildfire					
Man-made hazards (e.g. industrial accident, CBRN incident, accident of transportation of dangerous goods)					

2. Current practices in DRM

2.1 According to your knowledge and understanding, what is the level of risk of the following disasters in the area you work in?

	Very low	*Low*	*Medium*	*High*	*Very high*
Earthquake					
Floods					
Landslides					
Droughts					
Extreme meteorological events (windstorms, hailstorms, …)					

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Wildfire					
Man-made hazards (e.g. industrial accident, CBRN incident, accident of transportation of dangerous goods)					

2.2 According to your experience/knowledge, please indicate the leading(s) actor(s) involved in the different phases of DRM (for each phase you can flag one or two options).

	Policymakers at local and/or national level	Professionals in civil protection	Professionals involved in DRM (architects, engineers, geologists, planners...)	Academics/researchers working in civil protection and DRM related topics	NGOs and associations (including volunteers)
prevention /preparedness (pre disaster)					
response (emergency)					
rehabilitation / recovery (post emergency)					

2.3 According to your experience/knowledge, what are the main critical aspects or weaknesses of the procedures, practices in the DRM (you can also refer to Law, Directives, Special procedures)? (up to 500 characters)

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2.4 Can you recommend a best practice in DRM?

_____

3. Current educational offer

3.1 How true would you rate the following statements regarding education in DRM?

	Disagree	*Partially agree*	*Totally agree*	*Not applicable*
I acquired most of my knowledge on DRM during my undergraduate studies				
I acquired most of my knowledge on DRM during my graduate studies				
I acquired most of my knowledge on DRM during post-graduate studies				
I acquired most of my knowledge through continuous learning during my professional career (VET)				
I acquired most of my knowledge directly, through practical experience (non formal/informal learning)				

3.2 What degree or level of school / training do you believe is more important to tackle DRM? Please flag up to three choices.

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- ☐ High school graduate, diploma or the equivalent
- ☐ Some college credit, no degree
- ☐ Trade/technical/vocational training
- ☐ Bachelor's degree
- ☐ Master's degree
- ☐ Professional degree
- ☐ Doctorate degree
- ☐ Other _____

3.3 Are you aware of any regional, national or international educational and/or professional training programs in DRM?

- ☐ Yes
- ☐ No

3.4 If yes, could you please indicate up to five (5) regional, national or international educational and/or professional training programs in DRM?

1.

2.

3.

4.

5.

3.5. How important do you recognize informal training practices (e.g. civil protection exercises, ...) as training/educational tool? (1-not at all, 5-very much)

1 2 3 4 5

3.6 How often have you participated in civil protection exercises? (1-never 5-very often)

1 2 3 4 5

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3.7 If yes, in what role?

- ☐ Player
- ☐ Planner
- ☐ Scientific contributor
- ☐ Evaluator
- ☐ Observer
- ☐ Other – please specify

3.8 Are informal training practices (e.g. civil protection exercises, ...) mandatory as part of training plans in your Institution?

- ☐ yes
- ☐ no

3.9 In your institution/association how often do informal training practices (e.g. civil protection exercises, ...) take place per year?

- ☐ never
- ☐ 1-2
- ☐ 3-5
- ☐ 6-9
- ☐ every month

3.10 Can you recommend a best practice in DRM education or any innovative educational resource for DRM training?

_____

4. Emerging training needs (emergency skills)

4.1 How relevant would you rate the following statements regarding training in DRM (Rate from 5 = definitely to 1 = definitely not)

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	Definitely	*Probably*	*Possibly*	*Probably not*	*Definitely not*
DRM requires experience, so education should offer practical examples and training activities					
DRM is technical specialisation and requires very sectoral knowledge					
DRM requires all stakeholders involved to acquire specific knowledge and skills in communication and public engagement					
DRM requires all stakeholders involved to be trained in psychological and sociological aspects of related to disasters					
DRM requires didactical visits to real cases from past emergencies					
DRM requires to train with serious games both in real and virtual environments					

4.2 What are the key competencies and skills that disaster risk education should develop and assess?
For each skill, please flag the most relevant phase in which it is applied according to your experience or/and expertise or/and knowledge.

	Prevention / preparedness (pre-disaster phase)	Response (emergency phase)	Rehabilitation / recovery (post-emergency phase)
Critical thinking			

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(Analysing , evaluating, and synthesizing information in a systematic and objective manner, especially in multi-hazard and complex situations.)			
Creative thinking *(Developing innovative solutions, strategies, and approaches to address the complex and dynamic challenges posed by disasters.)*			
Research thinking *(Applying scientific methods and methodologies to understand the causes, impacts, and responses to disasters.)*			
Communication *(Expressing information clearly, concisely, and empathetically in risk-prone areas and disaster-related situations.)*			
Data analysis *(Collecting, organizing and using relevant information to extract meaningful insights, identify patterns, and support decision-making processes in risk-prone areas and disaster-related situations.)*			
Problem-solving *(Developing effective and efficient solutions to address issues in risk-prone areas and disaster-related situations.)*			
Organization and teamworking *(Planning, coordinating or/and implementing multiple elements at different levels of the DRM chain.)*			
Decision-making *(Making timely and effective choices in risk-prone areas and disaster-related situations.)*			
Project and personnel management and coordination *(Creating timelines, setting priorities, and allocating resources efficiently.)*			

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Construction and Engineering *(Using knowledge of basic construction and engineering principles in risk-prone areas and disaster-related situations.)*			
GIS technology *(Mapping risk-prone areas, identifying vulnerable populations, and planning for resource allocation.)*			
Logistical Skills *(Organizational skills to manage resources, equipment, and personnel.)*			
Legal and Ethical Awareness *(Understanding relevant laws and ethical considerations in risk-prone areas and disaster-related situations.)*			
Cultural Sensitivity and Community Engagement *(Understanding of human rights principles and protection of vulnerable populations.)*			
Report-writing and Documentation. *(Competence to accurately document assessment findings, create reports, and communicate the needs and impacts to decision-makers and national agencies.)*			

4.3 Per each of the skills, which is the best approach for learning according to your experience and expertise? Flag boxes per each skill (X).

	Formal learning *(Expanding career knowledge by taking classes with educators,*	**Problem-based learning** *(Reflecting on effective practices and practical examples*	**Learning by doing/learning through action** *(Planning simulations and exercises based on interactive*	**Experiential learning** *(Participating in hands-on, practical experiences in other regions or countries.)*

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	trainers and academics.)	*with experts in the field.)*	*teamwork 'dynamics.)*	
Critical thinking *(Analysing , evaluating, and synthesizing information in a systematic and objective manner, especially in multi-hazard and complex situations.)*				
Creative thinking *(Developing innovative solutions, strategies, and approaches to address the complex and dynamic challenges posed by disasters.)*				
Research thinking *(Applying scientific methods and methodologies to understand the causes, impacts, and responses to disasters.)*				
Communication *(Expressing information clearly, concisely, and empathetically in risk-prone areas and disaster-related situations.)*				
Data analysis *(Collecting, organizing and using relevant information to extract meaningful insights, identify patterns, and support decision-making processes in risk-prone areas and disaster-related situations.)*				
Problem-solving *(Developing effective and efficient solutions to address issues in risk-prone areas and disaster-related situations.)*				
Organization and teamworking *(Planning, coordinating or/and implementing multiple elements*				

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at different levels of the DRM chain.)				
Decision-making *(Making timely and effective choices in risk-prone areas and disaster-related situations.)*				
Project and personnel management and coordination *(Creating timelines, setting priorities, and allocating resources efficiently.)*				
Construction and Engineering *(Using knowledge of basic construction and engineering principles in risk-prone areas and disaster-related situations.)*				
GIS technology *(Mapping risk-prone areas, identifying vulnerable populations, and planning for resource allocation.)*				
Logistical Skills *(Organizational skills to manage resources, equipment, and personnel.)*				
Legal and Ethical Awareness *(Understanding relevant laws and ethical considerations in risk-prone areas and disaster-related situations.)*				
Cultural Sensitivity and Community Engagement *(Understanding of human rights principles and protection of vulnerable populations.)*				
Report-writing and Documentation. *(Competence to accurately document assessment findings, create reports, and communicate*				

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the needs and impacts to decision-makers and national agencies.)				

4.4 Do you have any further comments or advice? (optional)

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Questionnaire answers from Belgium

A total of 9 responses from Belgium stakeholders have been collected.

A.Personal data and role in the DRM (Disaster Risk Management)

The majority of stakeholders fall within the age range of 25-34 and 35-44 years, accounting for 66% of the total (both are 33.3%).

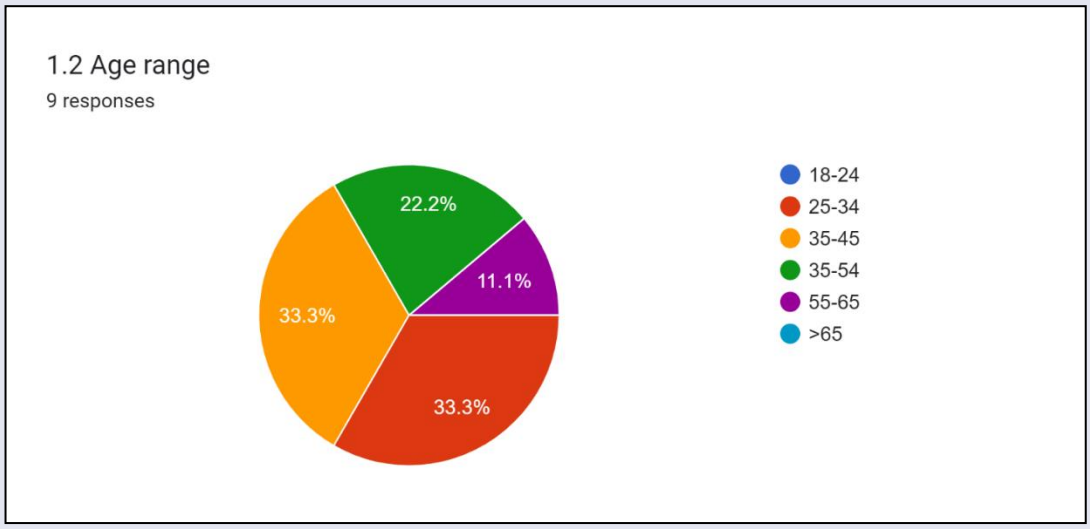

Figure 1. Graph depicting the age class of the respondents from Belgium.

Female participants make up 60% of the stakeholders. Master's degree holders represent 55.6% of the stakeholders. The rest of them have completed either a bachelor's or a doctorate degree (22.2% each).

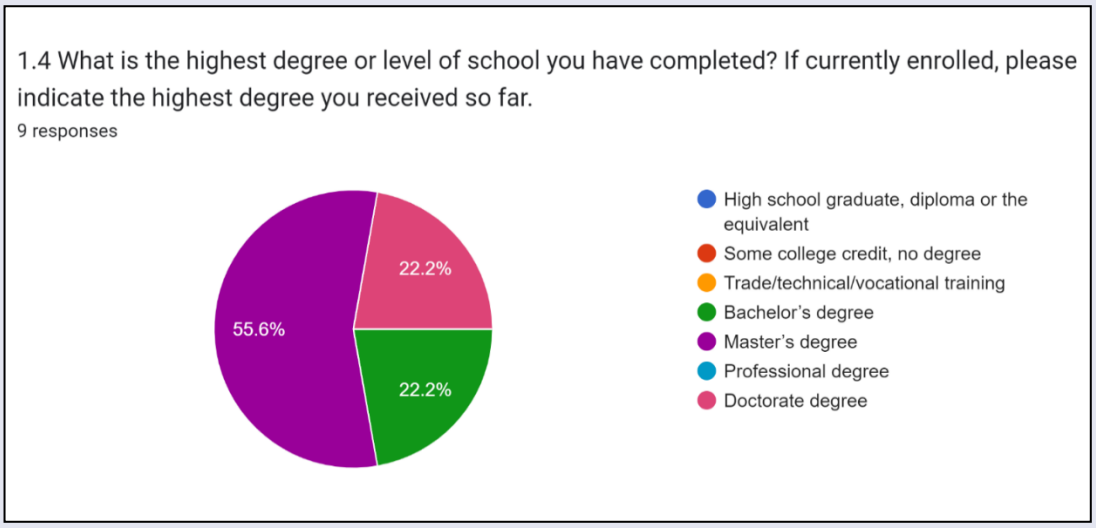

Figure 2. Education level of the respondents from Belgium.

According to most respondents (77.8%), their primary roles in DRM are: members of NGOs or civic associations that are directly or indirectly related to emergencies; trainers or educators (44.4%); and academic/researchers working in civil protection and DRM related topics (44.4%).

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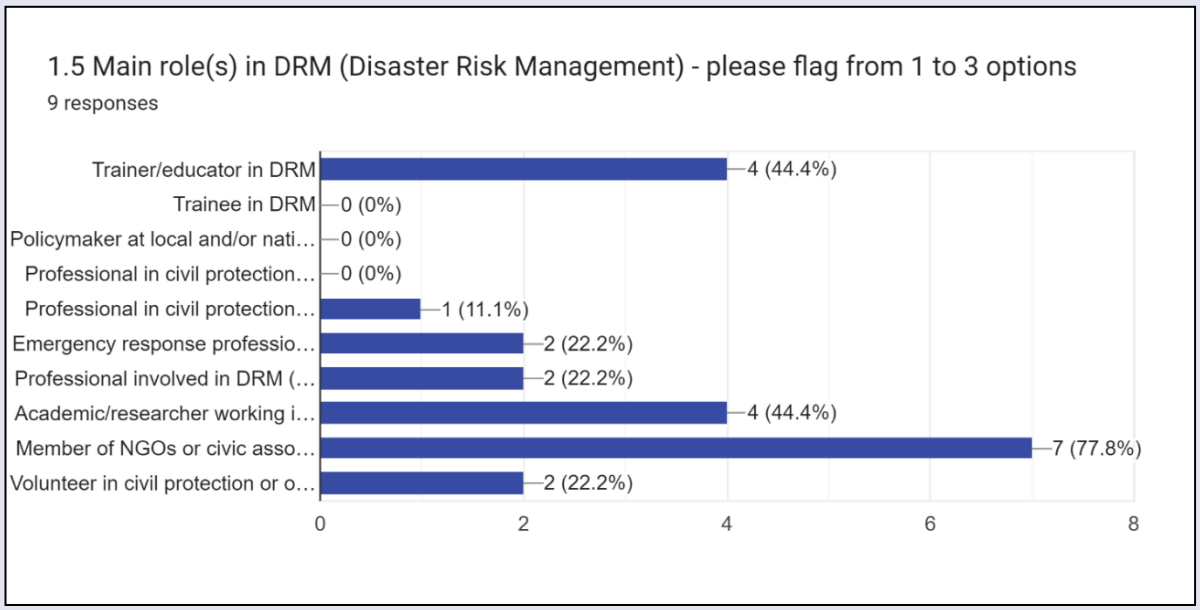

Figure 3. Role of experts from Belgium responded to the online survey.

33.3% of stakeholders have been involved in DRM for 5 to 10 years, whereas only 11.1% have been working in DRM for 1 year or less or for over 20 years.

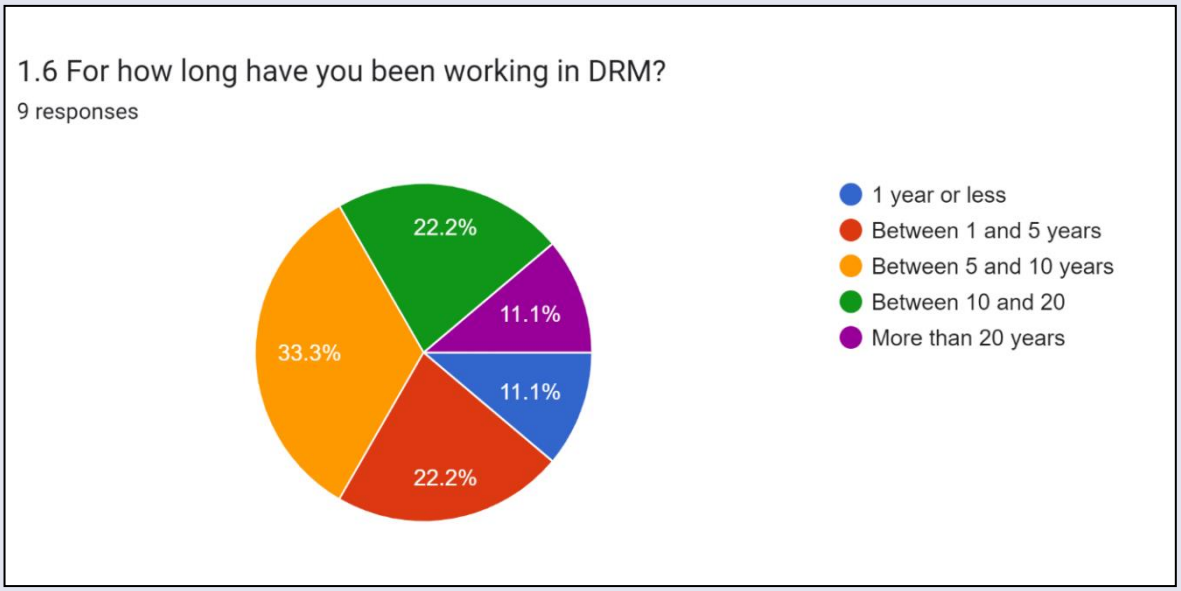

Figure 4. Years of experience of respondents to the survey (Belgium case).

Most respondents work in private institutions (77.8%), with 88.9% of these being national institutions.

They possess extensive knowledge and experience regarding wildfires, earthquakes, floods and man-made hazards, including technological accidents, CBRN (chemical, biological, radiological, and nuclear) incidents, and accidents involving the transportation of dangerous goods.

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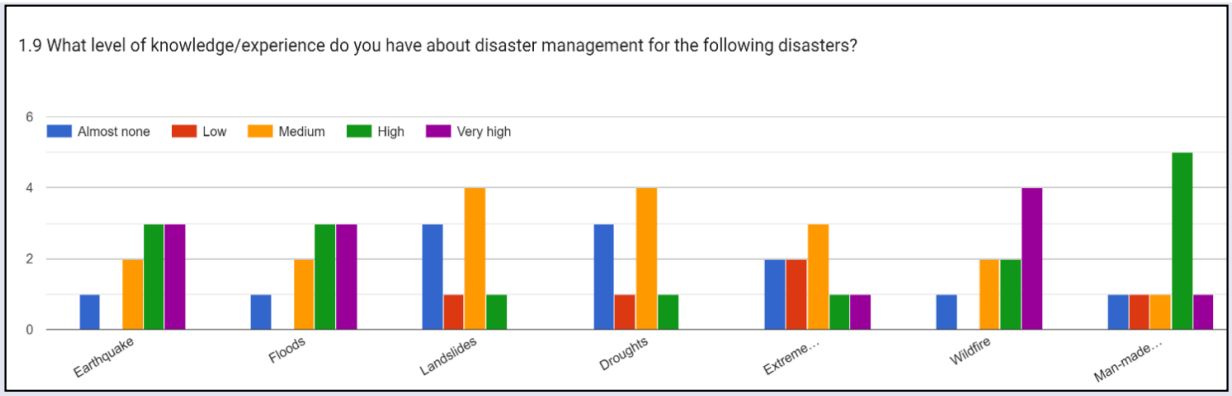

Figure 5. Level of expertise of respondents from Belgium per disaster type.

B. Current practices in DRM (Disaster Risk Management)

According to stakeholders, wildfires, earthquakes and man-made hazards, are identified as drivers of the highest level of risk in their respective work areas.

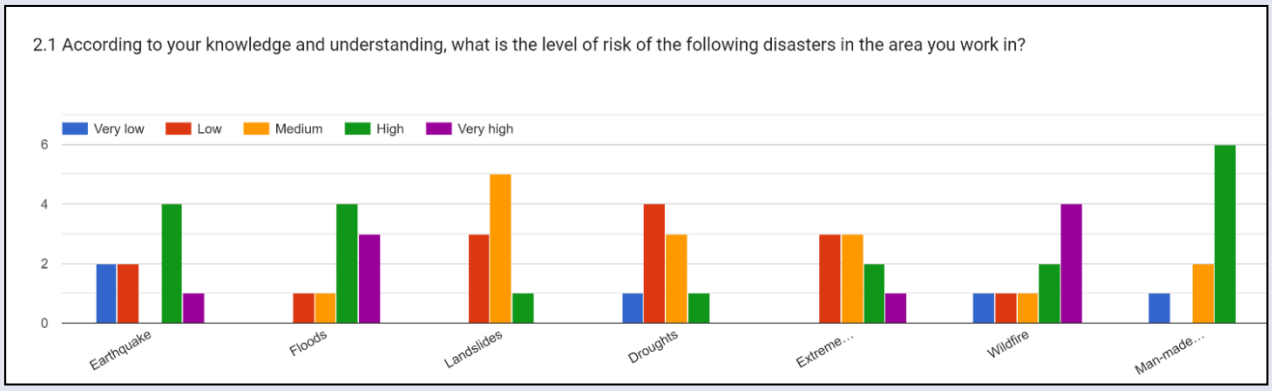

Figure 6. Most significant risks for Belgium.

Participants believed that NGOs and associations (including volunteers) (77.8%) and professionals in civil protection (55.6%) are the primary entities involved during the prevention, preparedness and mitigation phase (pre-disaster phase).

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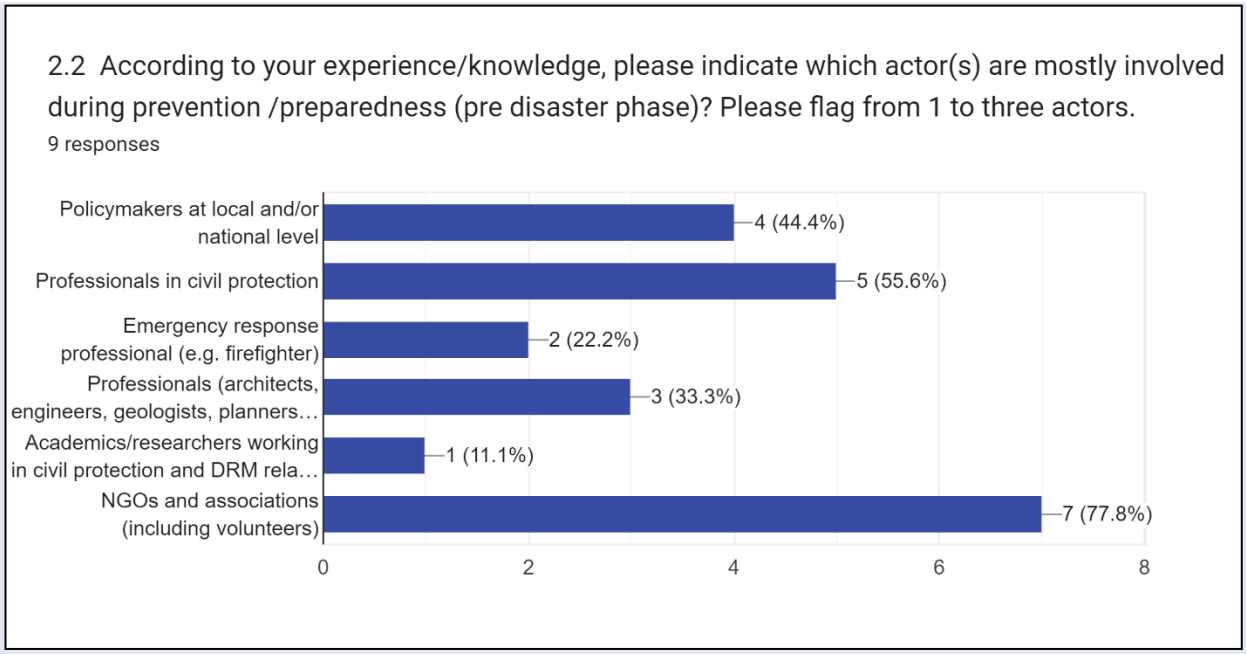

Figure 7. Actors involved in prevention and preparedness phase according to the experts from Belgium.

The respondents pointed out that during the response phase (emergency phase), the primary participants are emergency response professionals, such as firefighters, as well as NGOs and associations, including volunteers.

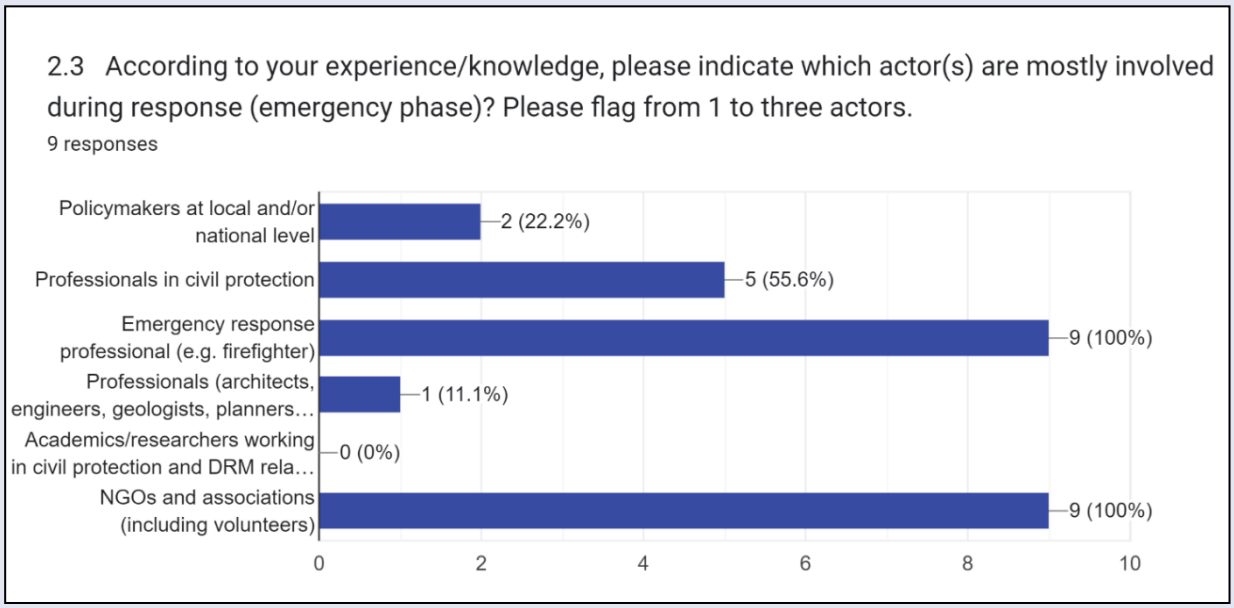

Figure 8. Actors involved in the response phase according to the experts from Belgium.

According to stakeholders – with 88.9% of answers – NGOs and associations (including volunteers) are deemed to play important roles during the rehabilitation and recovery phase (post-emergency phase).

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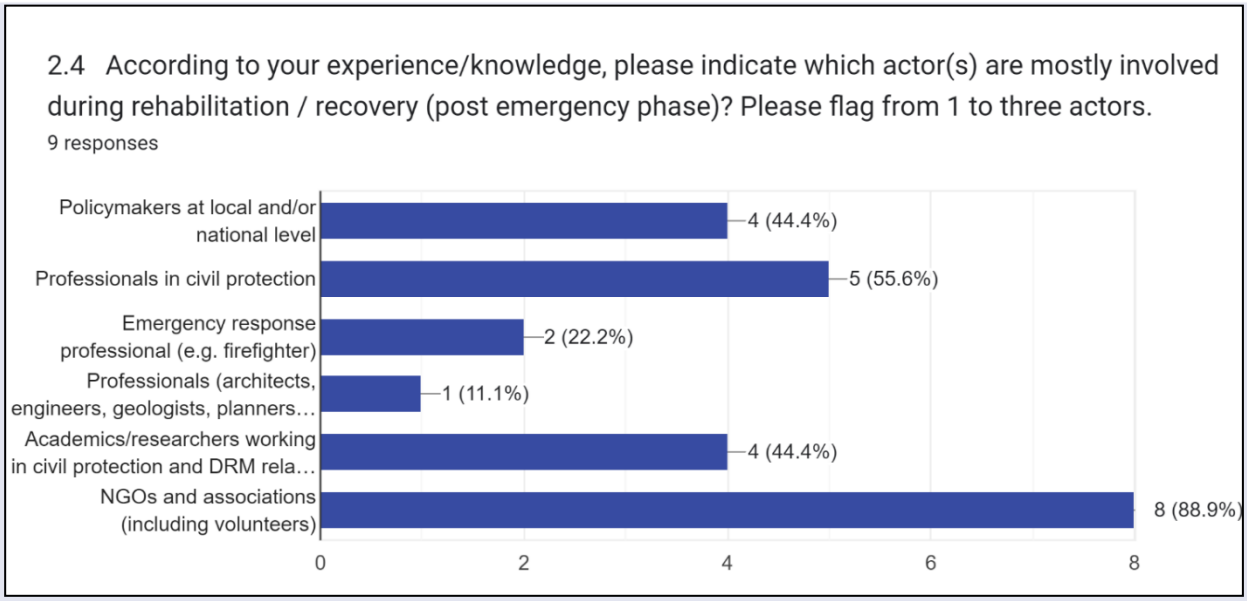

Figure 9. Actors involved in recovery and rehabilitation phase according to the experts from Belgium.

According to participants, the main critical aspects or weaknesses of procedures and practices in DRM include coordination challenges across different levels of government due to the country's complex federal structure, inadequate early warning systems, poor infrastructure resilience, limited community engagement, insufficient risk assessments, and bureaucratic hurdles.

They believe that one best practice in DRM is the implementation of comprehensive risk assessments. These assessments involve identifying, analysing, and evaluating potential hazards and vulnerabilities in a given area. Another best practice is that effective risk assessments involve a multidisciplinary approach, engaging stakeholders from various sectors such as government agencies, local communities, NGOs, academia, and private sector entities.

C. Current educational offer in DRM (Disaster Risk Management)

Stakeholders primarily acquired their knowledge directly through continuous learning during professional career (VET) and through practical experience, which falls under non-formal or informal learning methods.

Stakeholders believe that a master's degree is crucial for addressing DRM, with 77.8% expressing their importance.

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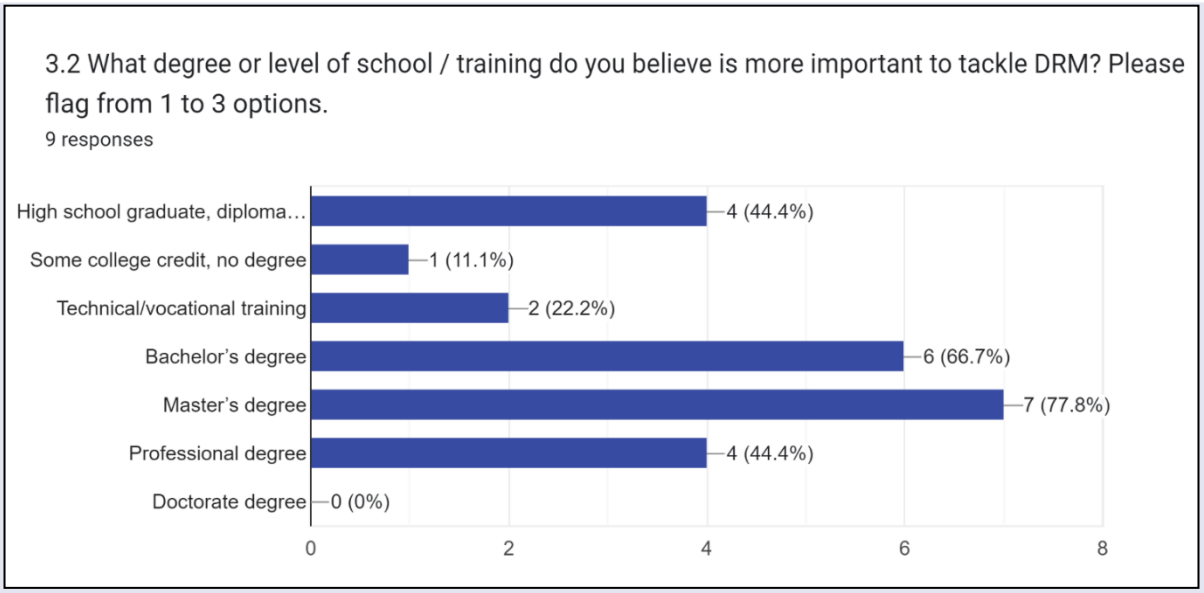

Figure 10. Optimal educational level for personnel to tackle DRM according to experts from Belgium.

77.8% of stakeholders are well-informed about regional, national, or international educational and professional training programs in DRM.

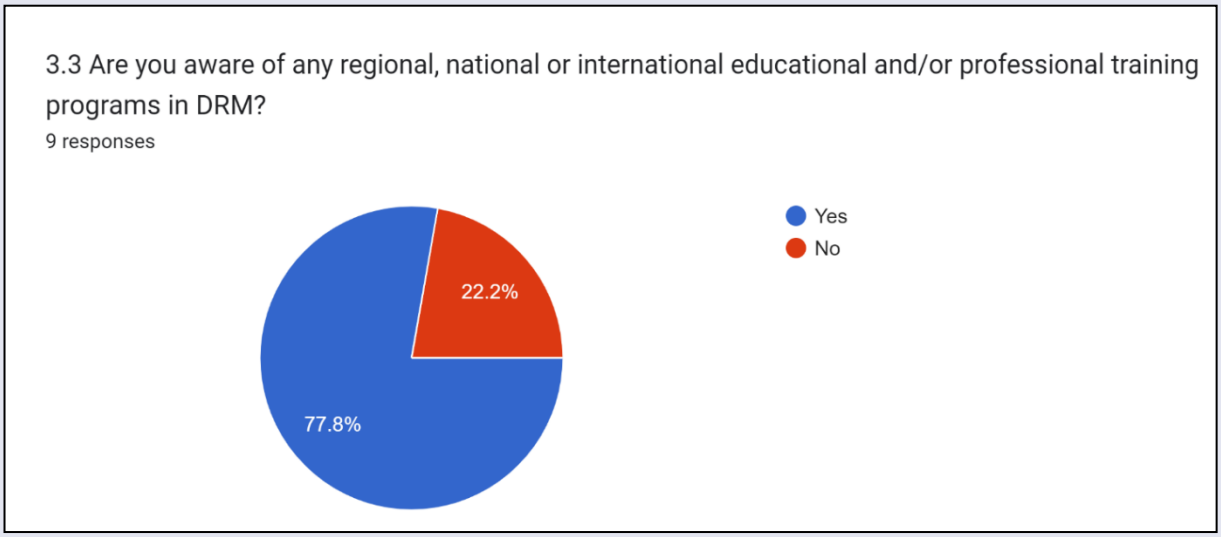

Figure 11. Awareness level on educational and/or professional training programs in DRM (Belgium case).

Stakeholders actively participated in the Disaster Risk Management Training online series in 2022. According to participants, a notable educational program in DRM is the master's program in "Strategies of Environmental Management, Disasters, and Crises" at the National and Kapodistrian University of Athens. Additionally, the Centre for Research on the Epidemiology of Disasters at the Université catholique de Louvain is recognized for its cutting-edge studies.

They recognize informal training practices, such as civil protection exercises, as highly important, with 77.8% of stakeholders acknowledging their significance as valuable training and educational tools.

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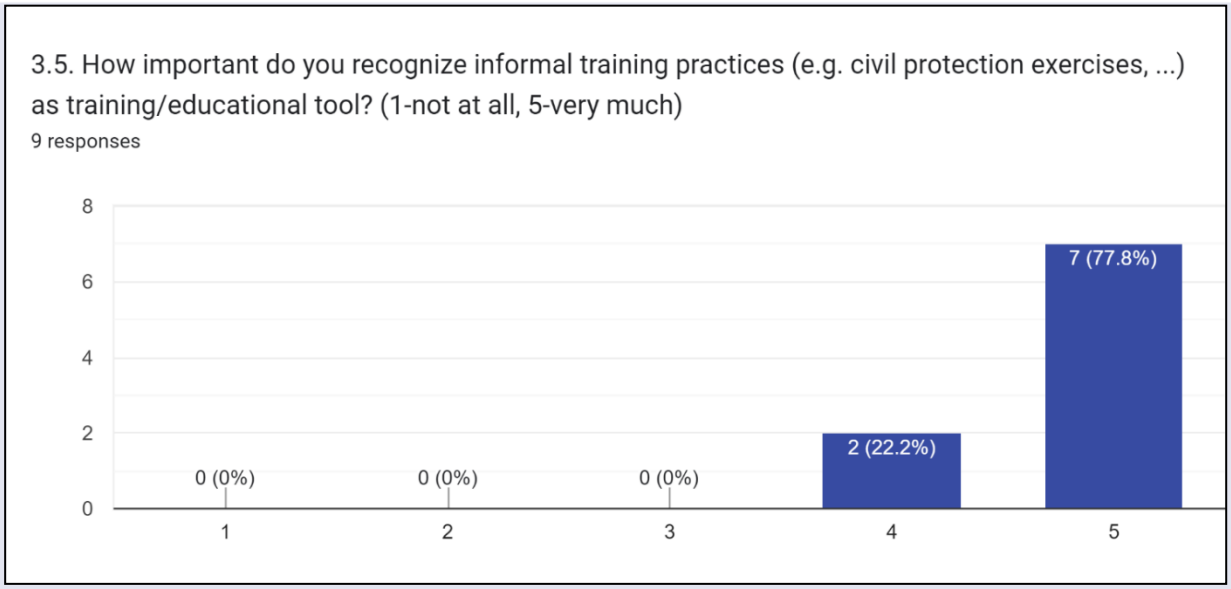

Figure 12. Level of importance of informal training practices as training/educational tool according to Belgium experts.

44.4% of stakeholders frequently participate in civil protection exercises.

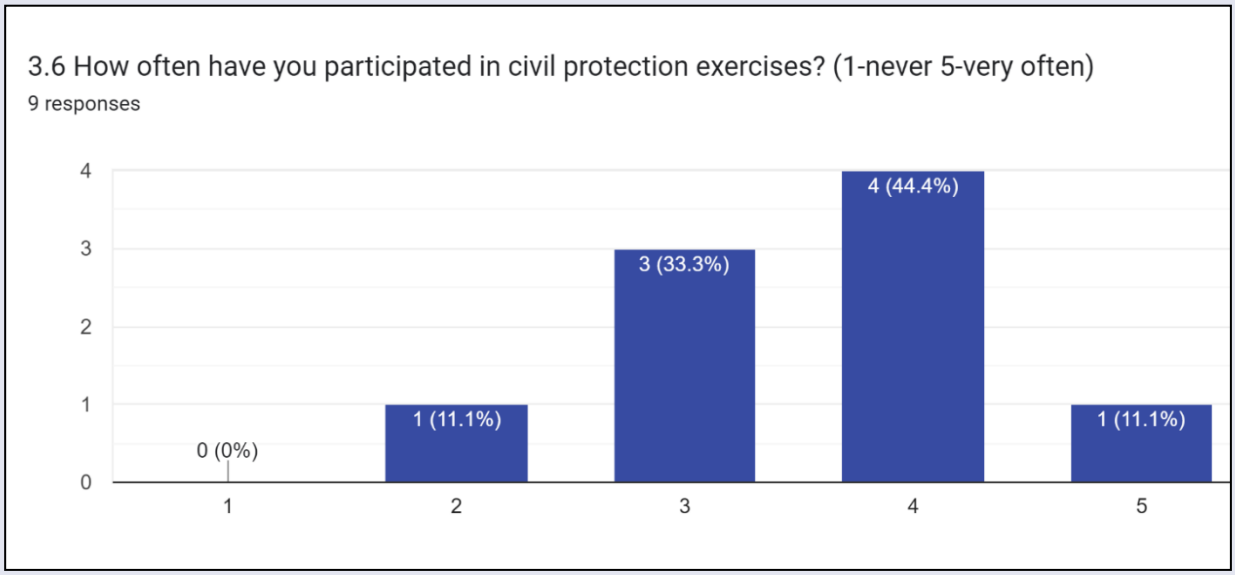

Figure 13. Frequency of participation in civil protection exercises (experts from Belgium).

They mostly participate as players (66.7%), while others engage as scientific contributors, and observers, with each of these categories representing 44.4% of the stakeholders.

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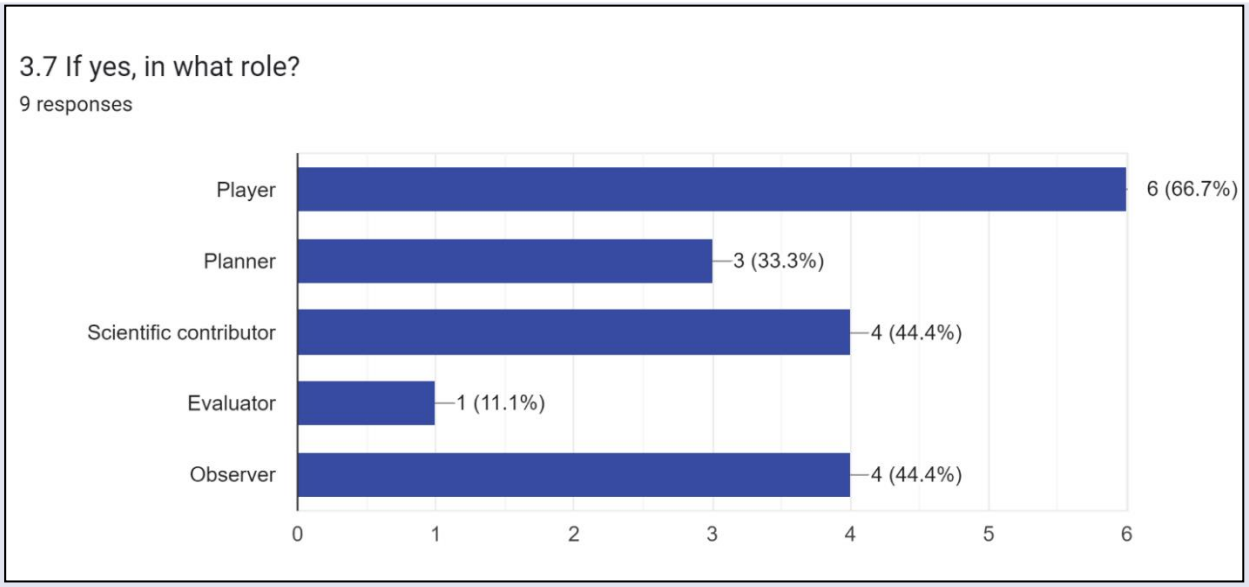

Figure 14. Role in the participation of exercises (experts from Belgium).

Informal training practices, such as civil protection exercises, are mandatory components of training plans in 88.9% of the respondents' institutions.

33.3% of participants take part in informal training activities, like civil protection exercises, once or twice annually, whereas another 33.3% engage in such activities three to five times per year.

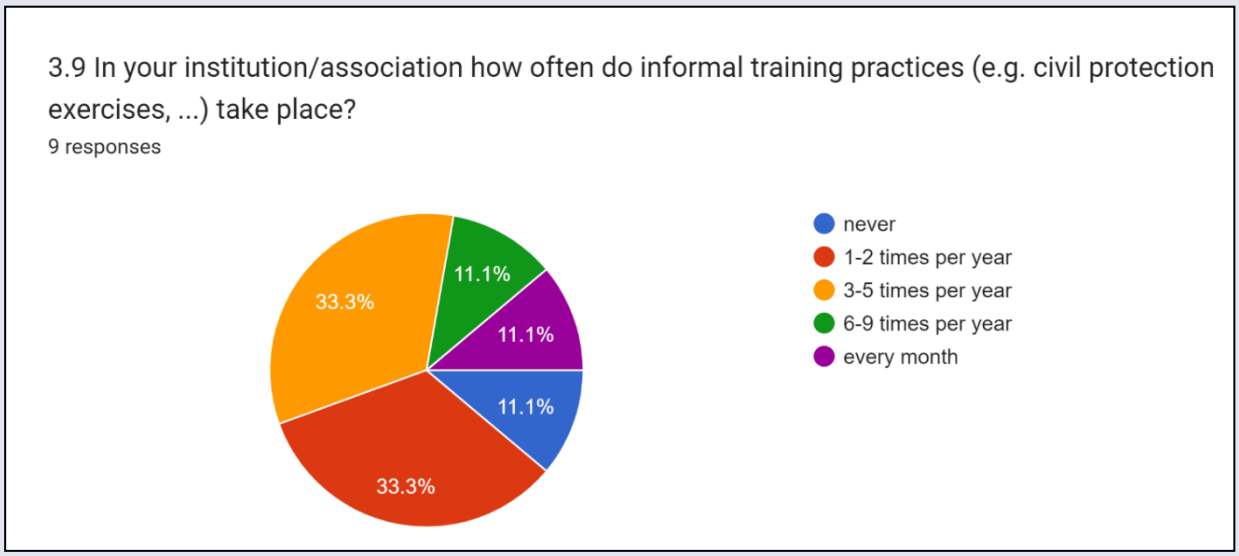

Figure 15. Frequency of informal training practices (experts from Belgium).

Attendees recommend integrating technology and community participation to create immersive, interactive learning experiences as a best practice in DRM education. Additionally, they again highlight the master's Program in "Strategies of Environmental Management, Disasters, and Crises" at the National and Kapodistrian University of Athens as an exemplary educational resource. Led by experienced scientists, this program offers a comprehensive understanding of environmental studies, disaster management, crisis response, and international cooperation. Another stakeholder, serving as the leader of the EU network of CBRN training centres, point out various courses offered by training centres across many EU countries. Specifically, these include the Master CBRN courses at the University of Rome Tor

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Vergata in Italy, the CBRN Consequences Management course for crisis management authorities at the Joint CBRN Defence Centre of Excellence in the Czech Republic, diverse DRM and CBRN courses at Campus Vesta in Belgium, and courses at the Fire Department of Dortmund in Germany, among others.

D. Emerging required skills and emerging training needs in DRM (Disaster Risk Management)

Stakeholders strongly emphasize that DRM requires practical experience, stressing that education should incorporate real-world examples and training exercises. They advocate for the use of serious games in both physical and virtual environments to effectively prepare individuals in this field.

According to participants, **critical thinking** (77.8%), **project and personnel management and coordination, communication, decision-making**, and **organization and teamworking** (all of these with 55.6%) are identified as the key competencies and skills that disaster risk education should focus on, to be developed and assessed for prevention, preparedness and mitigation during the pre-disaster phase.

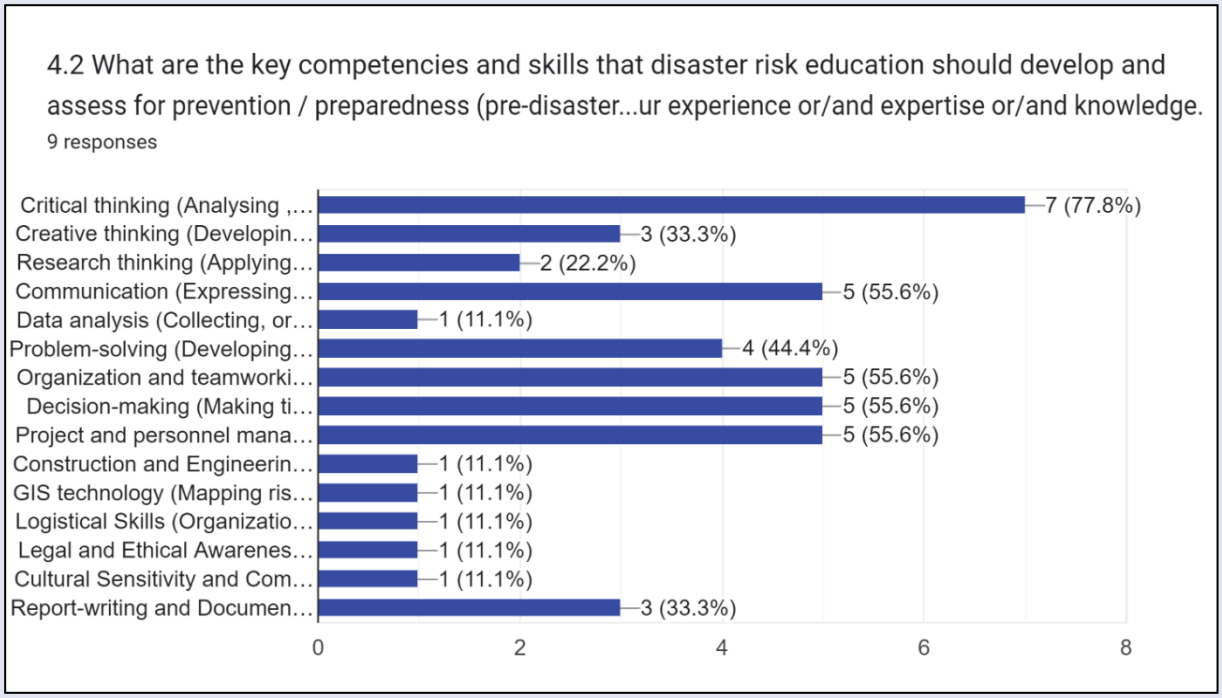

Figure 16. Key skills and competences that should be developed for the pre-disaster phase (according to experts from Belgium).

77.8% of stakeholders unanimously agree that **organization and teamworking** are the key competencies and skills that disaster risk education should prioritize for the response phase (emergency phase). They are followed by **problem-solving** skills (66.7%).

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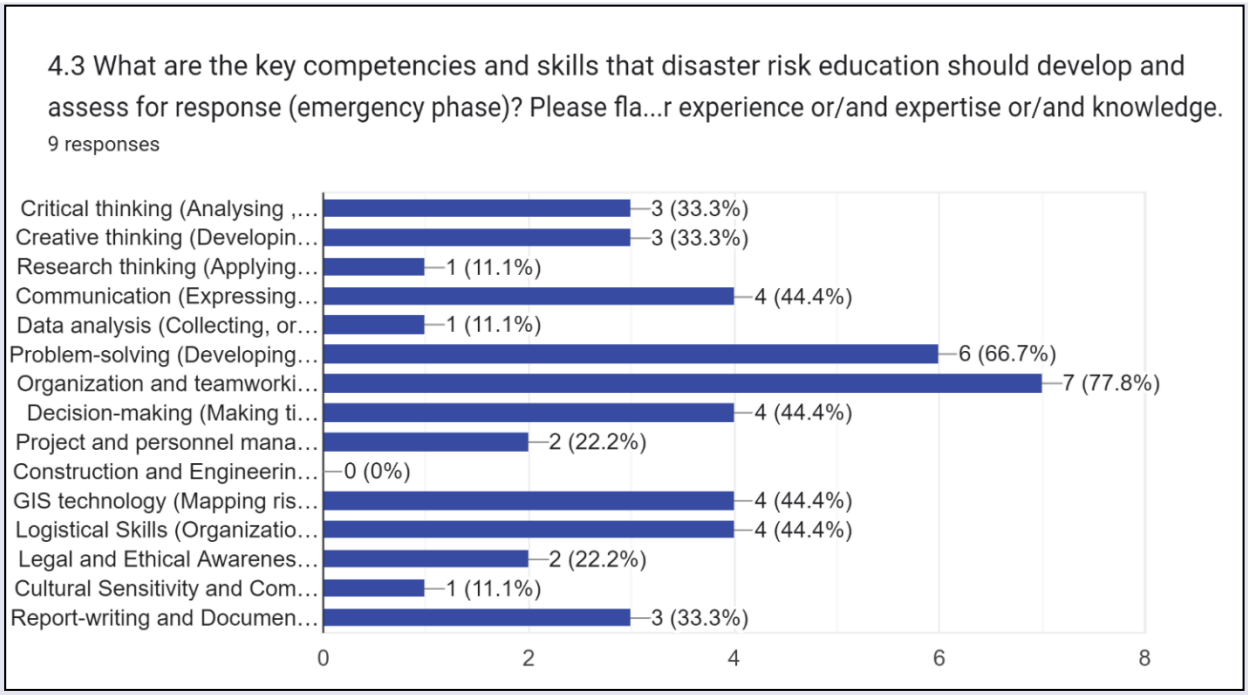

Figure 17. Key skills and competences that should be developed for the response phase (according to experts from Belgium).

55.6% of interviewees believe that **creative thinking**, **communication**, **problem-solving**, **project and personnel management and coordination**, and **report-writing and documentation** are the key competencies and skills that disaster risk education should focus on, to be developed and assessed for rehabilitation and recovery (post-emergencyphase).

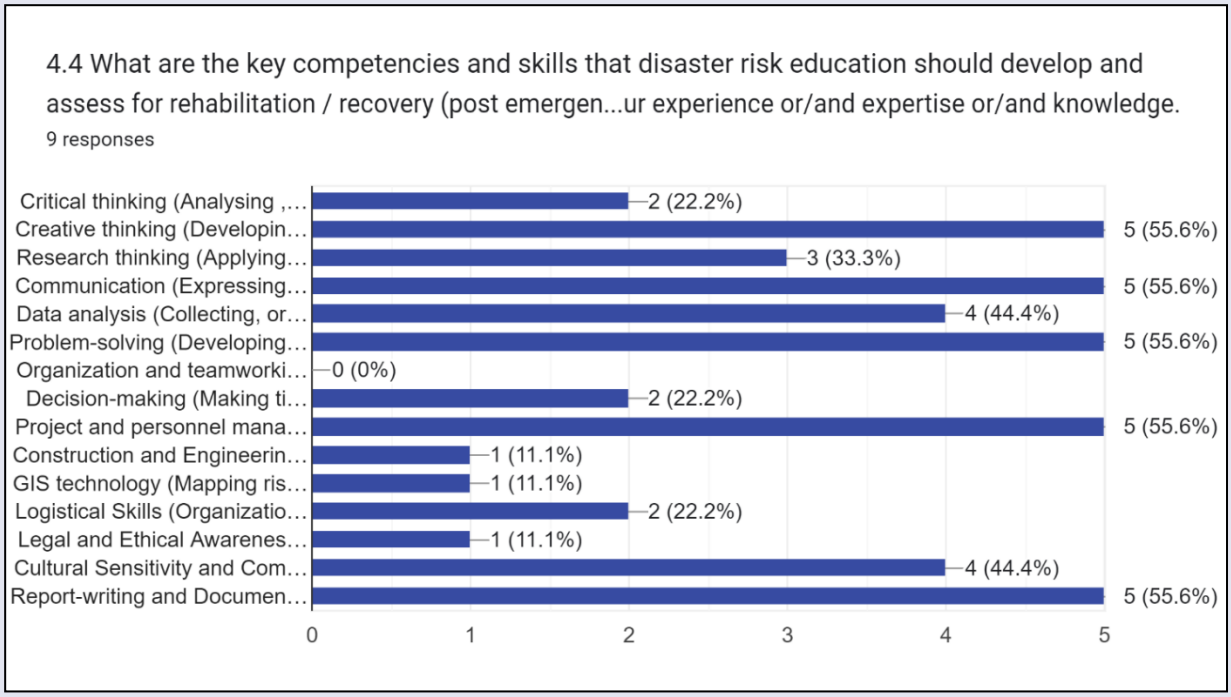

Figure 18. Key skills and competences that should be developed for the recovery phase (according to experts from Belgium).

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According to 77.8% of stakeholders, **problem-solving** is considered the most suitable skill to be developed through formal learning approaches, followed by **critical thinking**, **communication**, and **researchthinking**skills (44.4%).

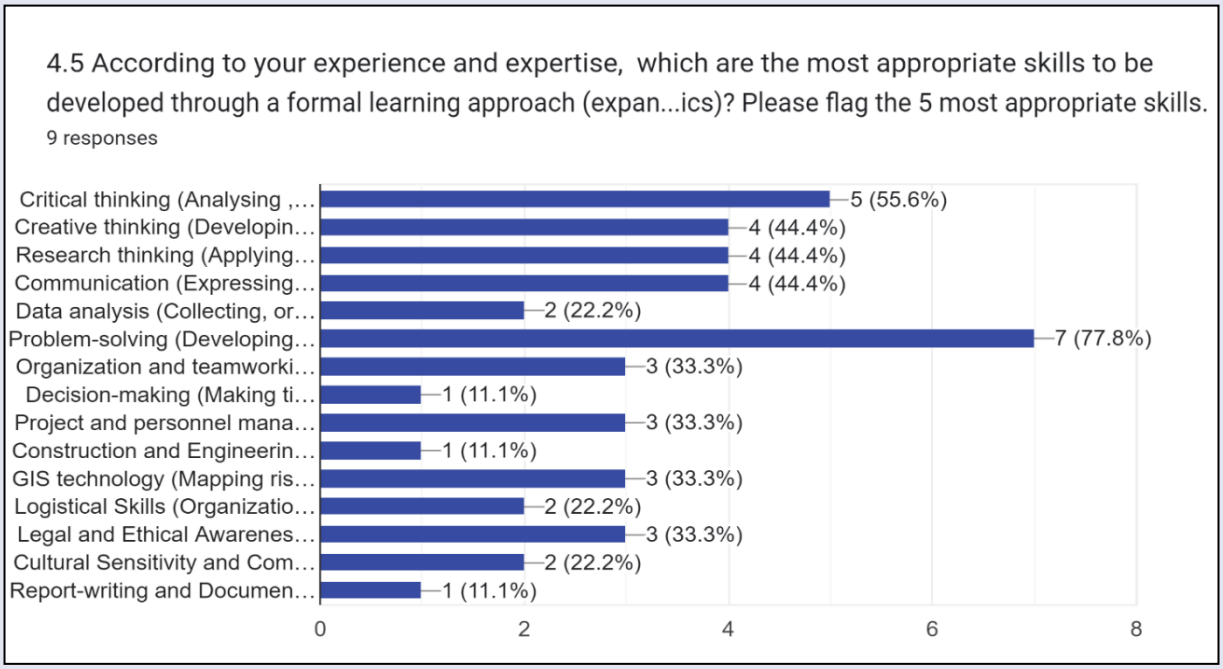

Figure 19. Skills to be developed through a formal learning approach (input from Belgium).

According to 88.9% of stakeholders, **problem solving** skill is best developed through problem-based learning, followed by **critical thinking** and **creative thinking** skills (66.7%).

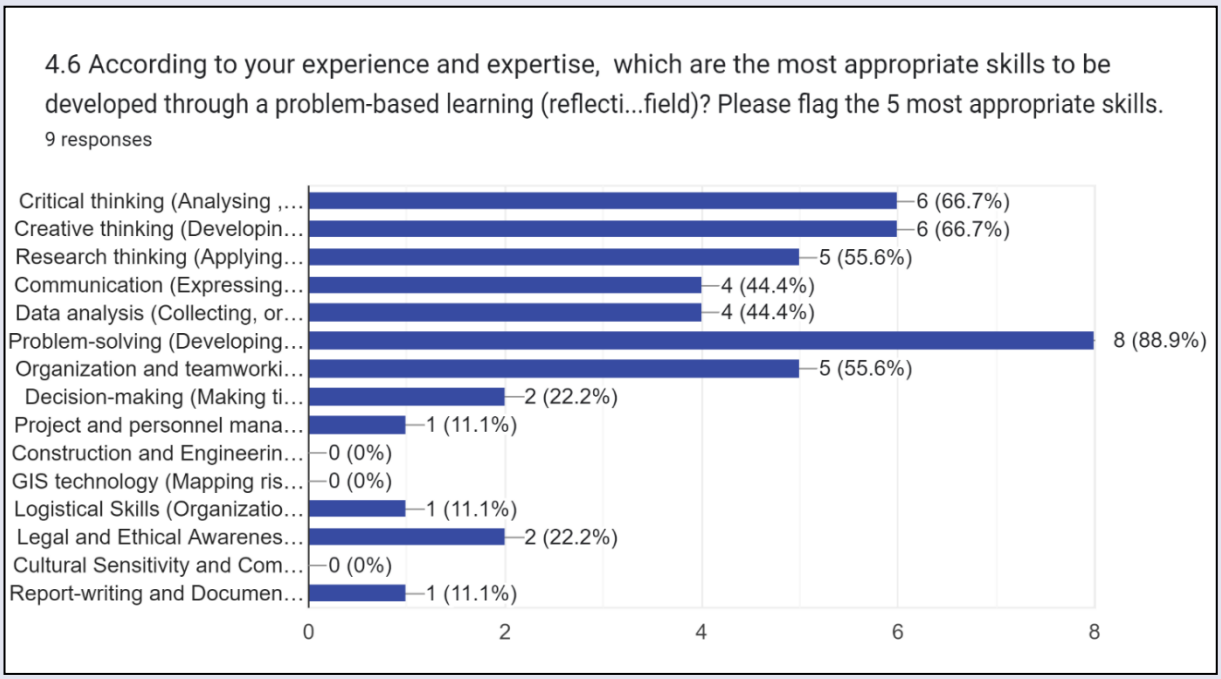

Figure 20. Skills to be developed through a problem-based learning (input from Belgium).

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88.9% of stakeholders agree that **critical thinking** and **problem-solving** skills should be cultivated through hands-on learning, learning by doing, or experiential learning methods.

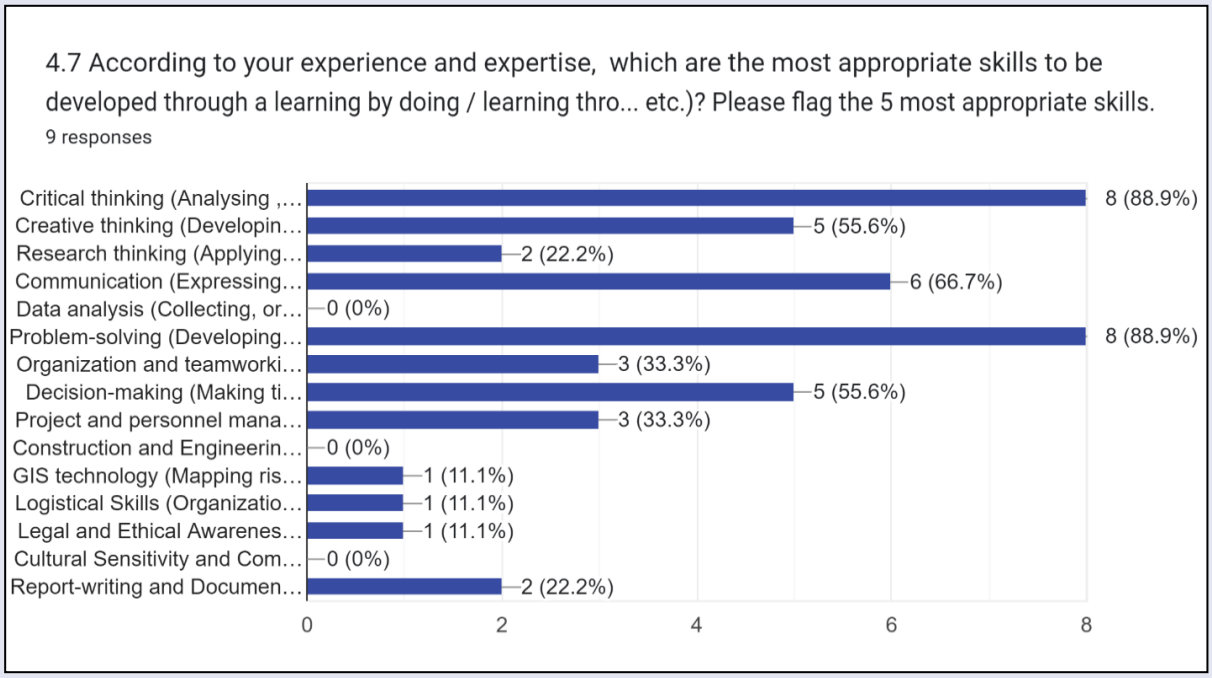

Figure 21. Skills to be developed through a learning by doing or other approach (input from Belgium).

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Questionnaire answers from Cyprus

We gathered 21 responses from stakeholders in Cyprus. The majority were male (61.9%), and most were between the ages of 35 and 44 (52.4%).

A.Personal data and role in the DRM (Disaster Risk Management)

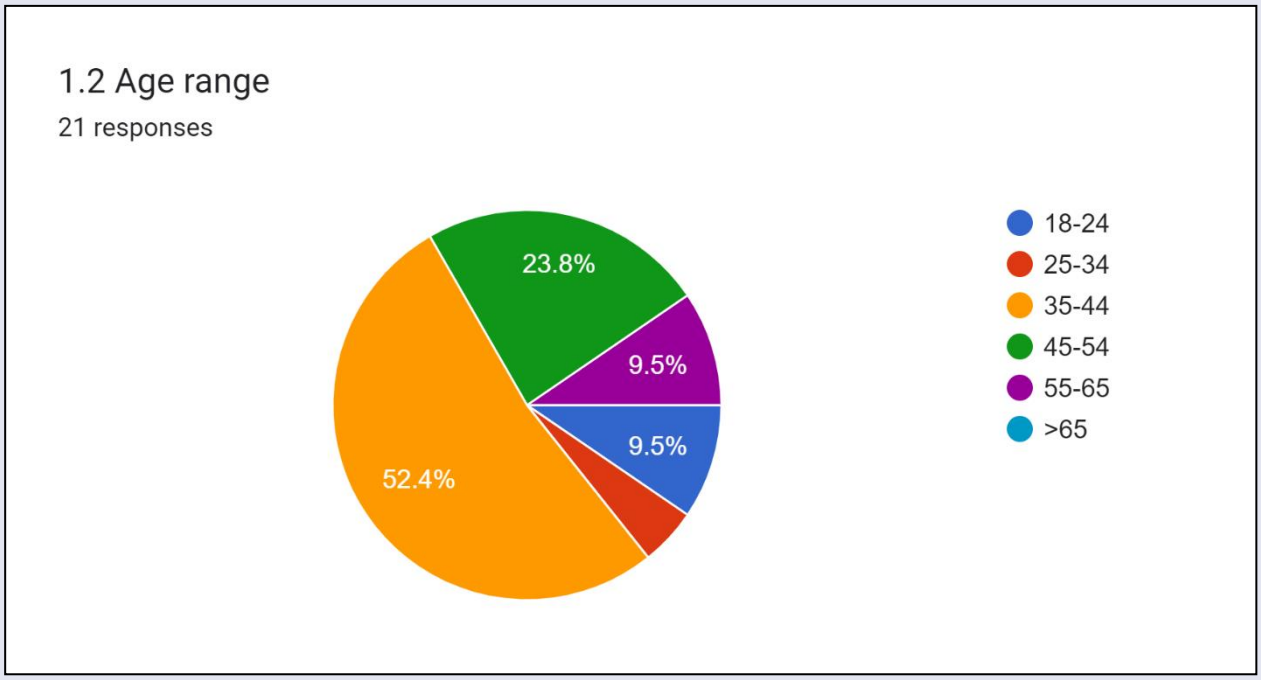

Figure 22. Graph depicting the age class of the respondents from Cyprus.

Most of the partners have a background with a master's degree (28.6%), while a significant portion of participants are high school graduates, diploma holders, or have an equivalent qualification (23.8%).

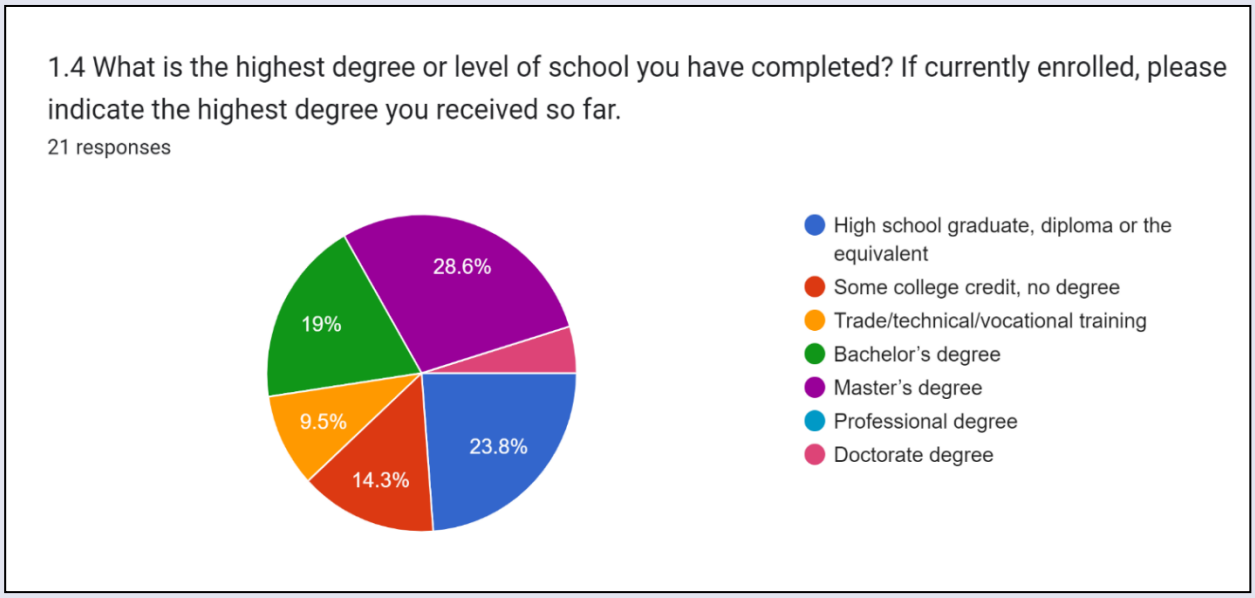

Figure 23. Education level of the respondents from Cyprus.

Majority of stakeholders are Volunteers in civil protection or other associations involved in emergencies (52.4%).

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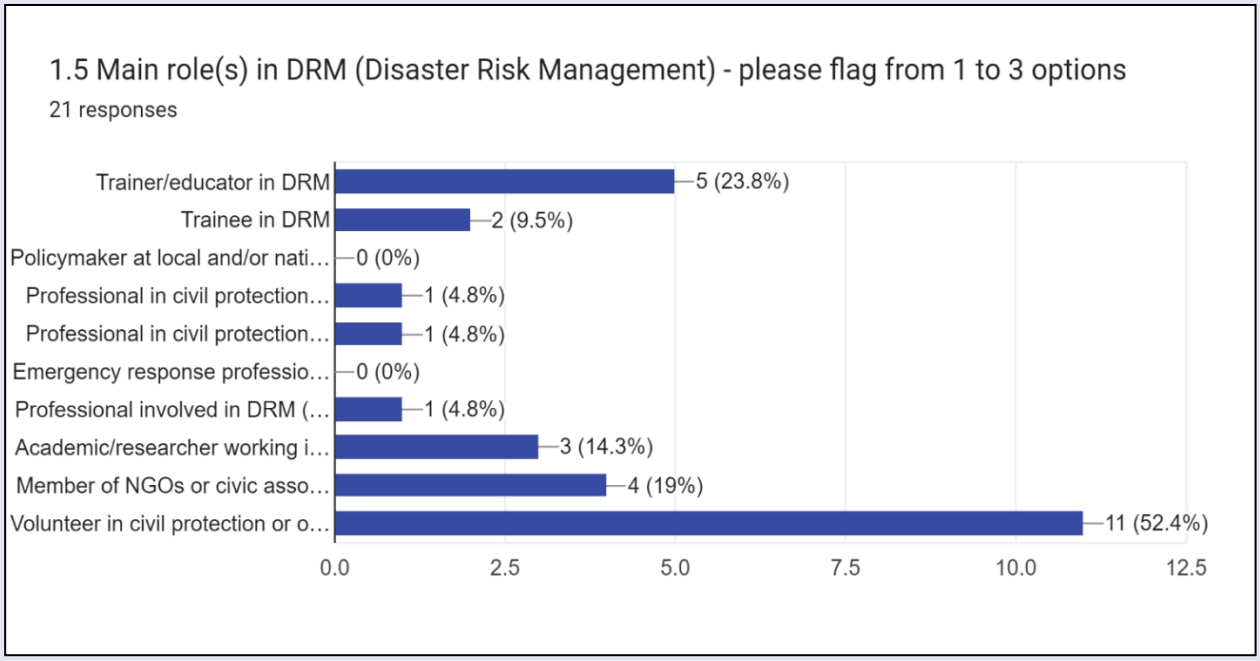

Figure 24. Role of experts from Cyprus responded to the online survey.

33.3% of respondents have been working in DRM for 1 to 5 years. Only 14.3% have more than 20 years of experience in DRM.

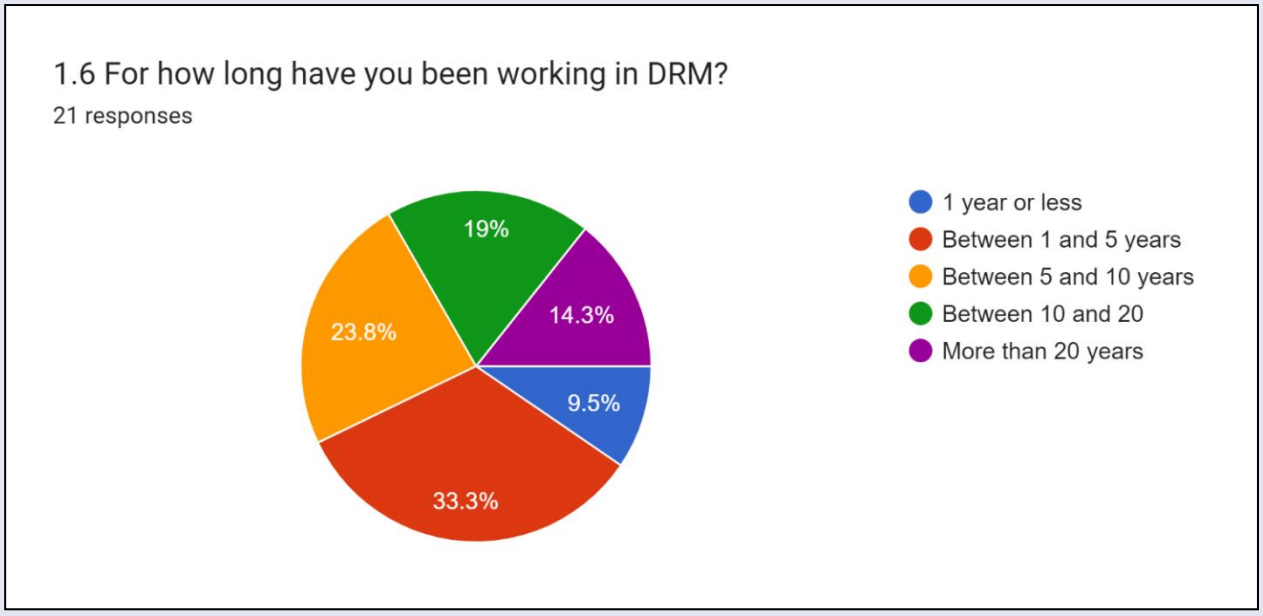

Figure 25. Years of experience of the respondents to the survey (Cyprus).

Mostly Cypriot stakeholders work in private (81%) and national (52.4%) institutions.

According to responses they have high level of experience and knowledge about disaster management on Wildfires.

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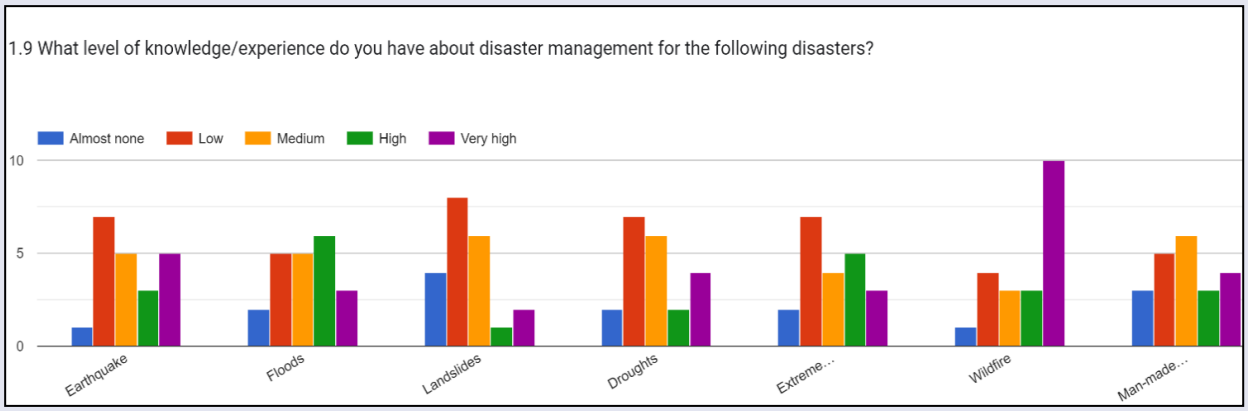

Figure 26. Level of expertise of respondents from Cyprus per disaster type.

B. Current practices in DRM (Disaster Risk Management).

Cypriot stakeholders primarily work in the areas of earthquakes and wildfires.

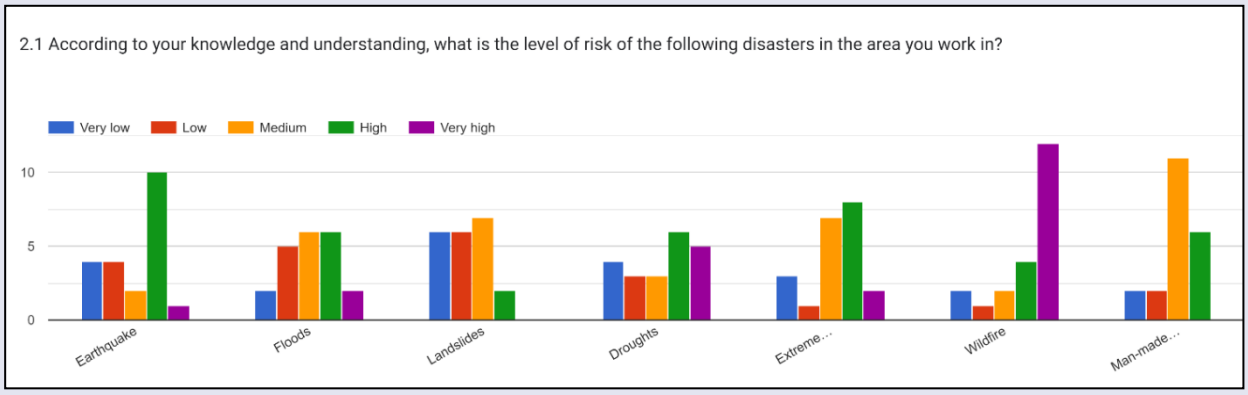

Figure 27. Most significant risks for Cyprus based on the answers given by the experts.

According to your experience/knowledge, Policymakers at local and/or national level and Emergency response professionals (e.g. firefighter) (both are 61.9%) play main role during **prevention /preparedness** (pre disaster phase)

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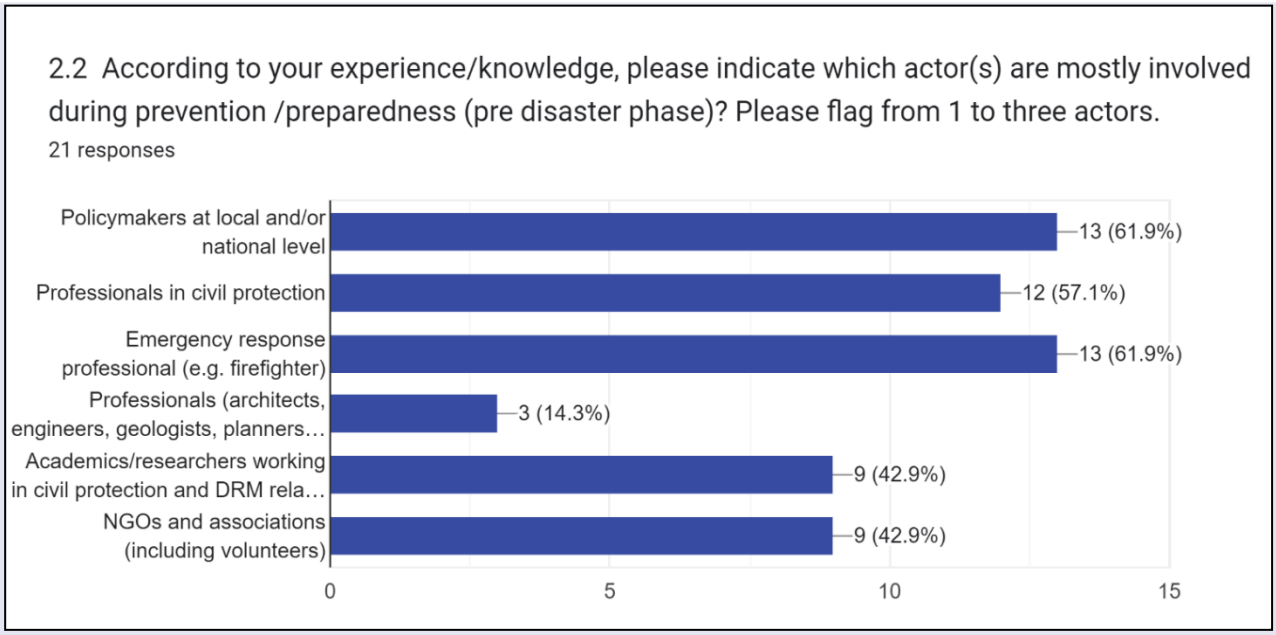

Figure 28. Actors involved in prevention and preparedness phase according to the experts from Cyprus.

During **response** (emergency phase) main actors are Emergency response professionals (e.g. firefighter) and NGOs and associations (including volunteers) (both are 85.7%).

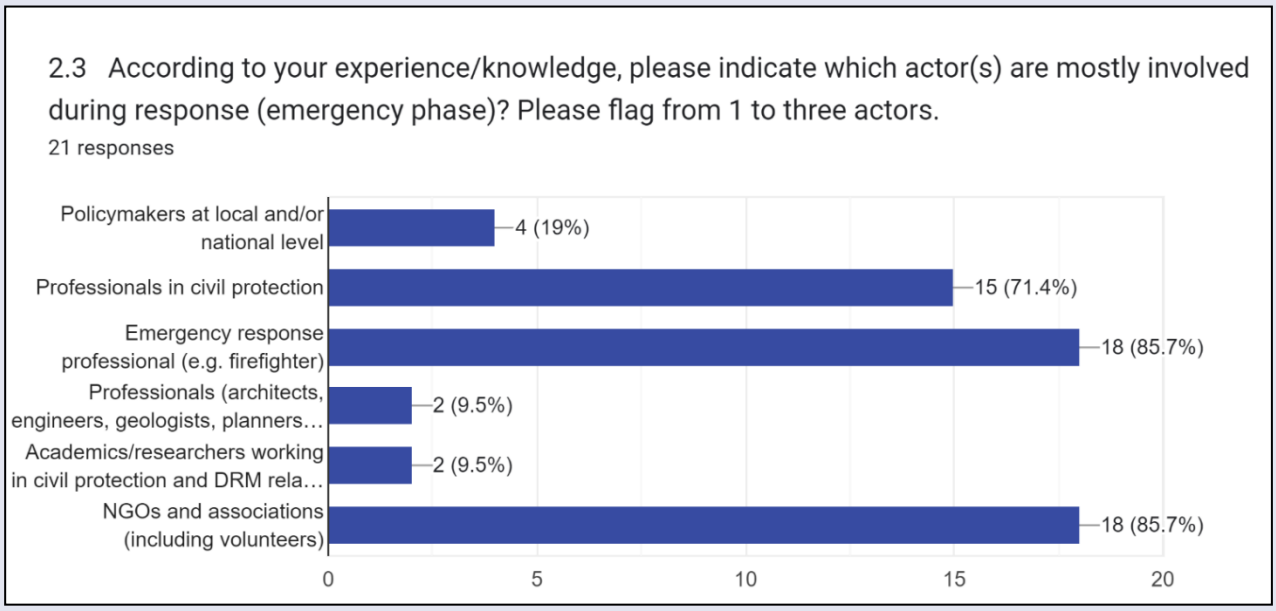

Figure 29. Actors involved in the response phase according to the experts from Cyprus.

According to stakeholders' experience/knowledge, Policymakers at local and/or national level (71.4%) involved during **rehabilitation / recovery** (post emergency phase).

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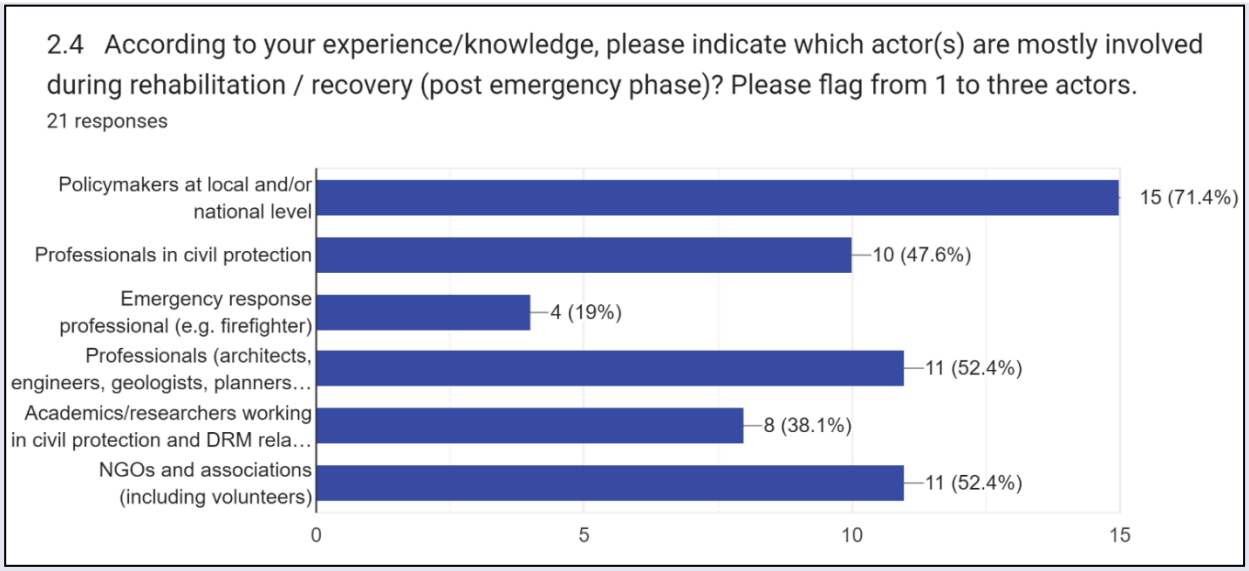

Figure 30. Actors involved in recovery and rehabilitation phase according to the experts from Cyprus.

According to participants' experience/knowledge, the main critical aspects or weaknesses of the procedures, practices in the DRM are Better Coordination and Cooperation of government bodies, Insufficient preparation and training, Education / Awareness, Wrong people in key positions / meritocracy and etc. They also think that they give approval to build buildings near rivers or in a forest and proper flood prevention or fire prevention works are not done, and there is also no quick notification of volunteer groups in the event of a fire.

Their best practices in DRM are commonly about Good, Correct, Selfless cooperation between government authorities, voluntary bodies, etc. Cultivating a sense of common goal and pure cooperation, and Empowering communities through preparedness initiatives. They also recommend Empowering communities through preparedness initiatives. This can involve investing in public education campaigns on disaster risks and safety measures. By fostering a culture of preparedness at the local level, communities can react more effectively and recover faster after a disaster.

C. Current educational offer in DRM (Disaster Risk Management)

According to the stakeholders, most of them gained the majority of their knowledge through continuous learning during their professional careers (VET) and through direct, practical experience (non-formal/informal learning).

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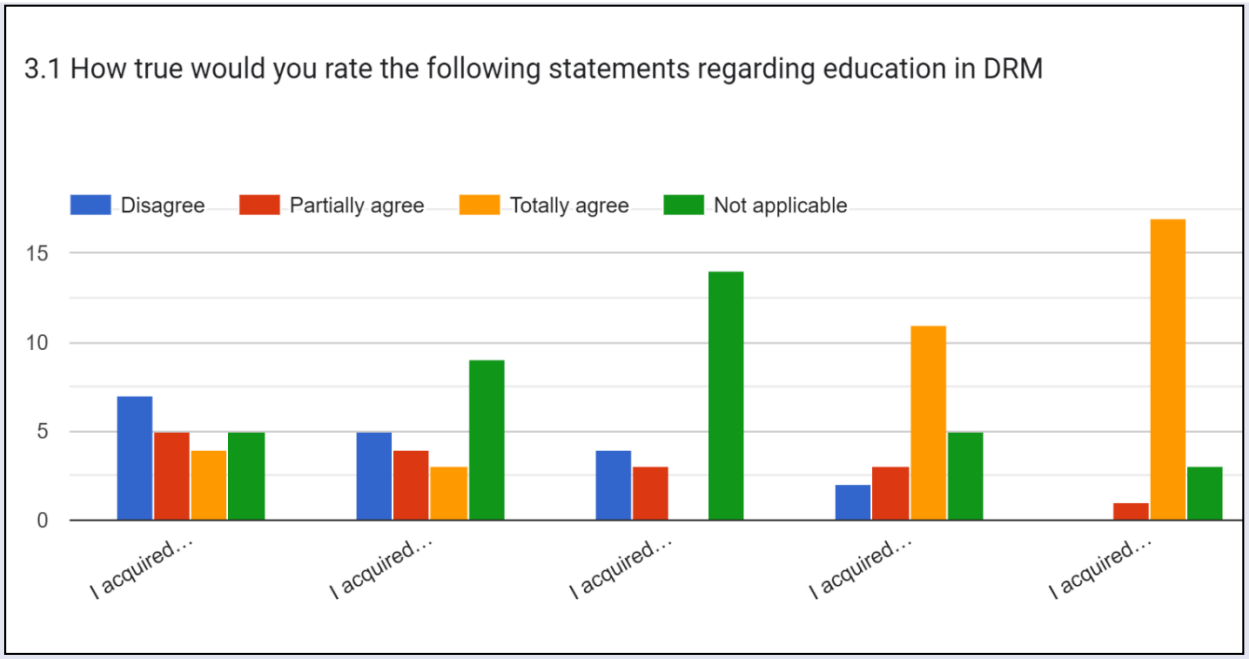

Figure 31. How knowledge on DRM was acquired according to Cypriot respondents.

According to the respondents, a bachelor's degree (57.1%) and technical/vocational training (52.4%) are considered the most crucial for addressing issues in DRM.

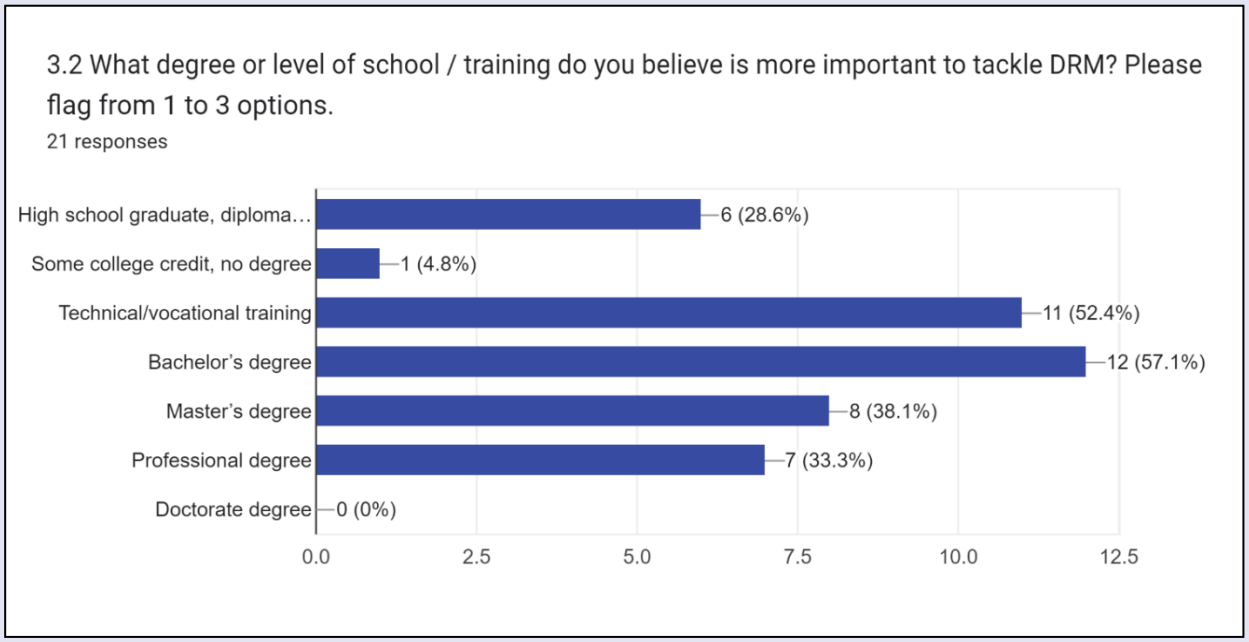

Figure 32. Optimal educational level for personnel to tackle DRM according to experts from Cyprus.

66.7% of participants from Cyprus are familiar with regional, national, or international educational and/or professional training programs in DRM. They indicated many national and international educational and/or professional training programs such as MSc Risk, Crisis & Disaster Management, Leicester University UK, Interreg, RescEU, and other related programmes.

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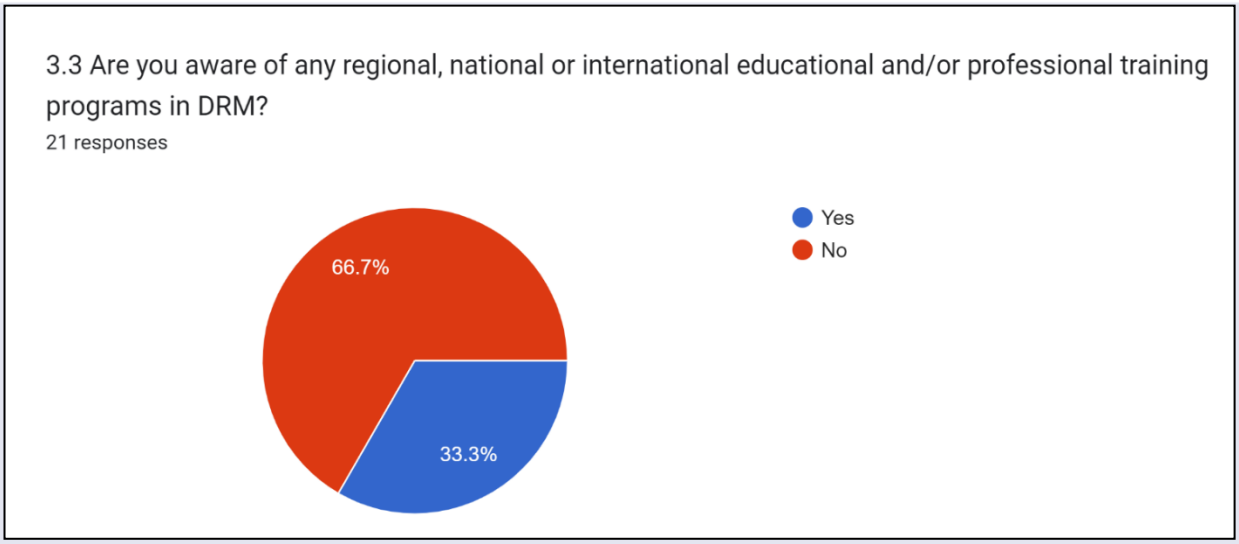

Figure 33. Awareness level on educational and/or professional training programs in DRM (Cyprus case).

For most stakeholders, informal training practices such as civil protection exercises are considered very important (71.4%).

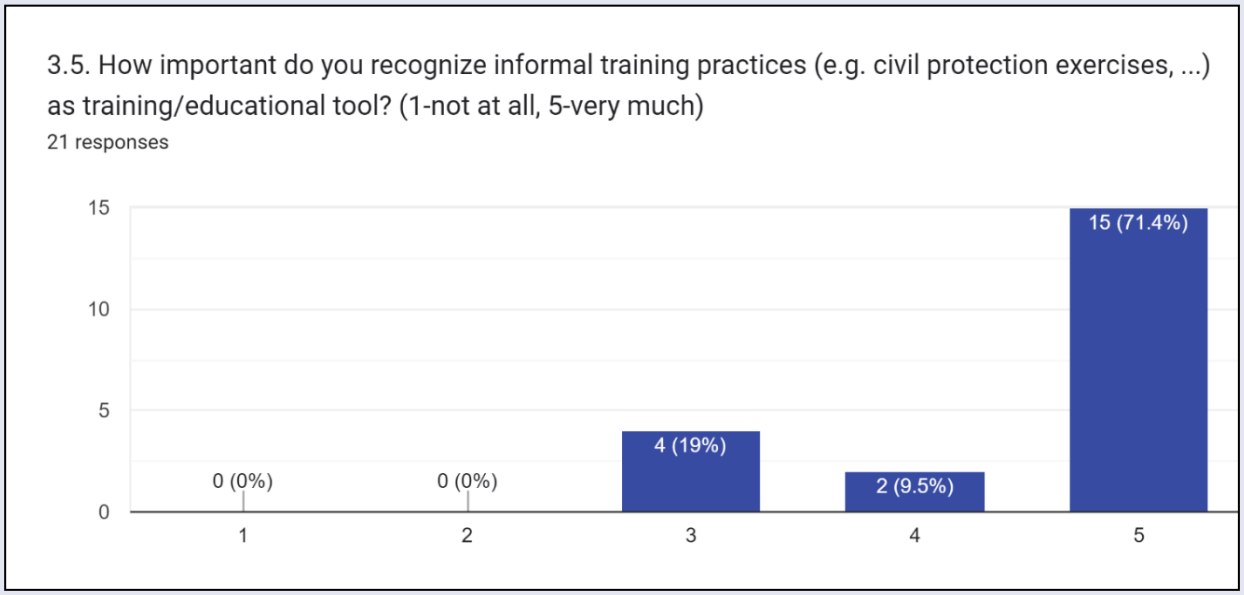

Figure 34. Level of importance of informal training practices as training/educational tool according to Cypriot experts.

Only 19% of respondents frequently participate in civil protection exercises, while 33% participate occasionally.

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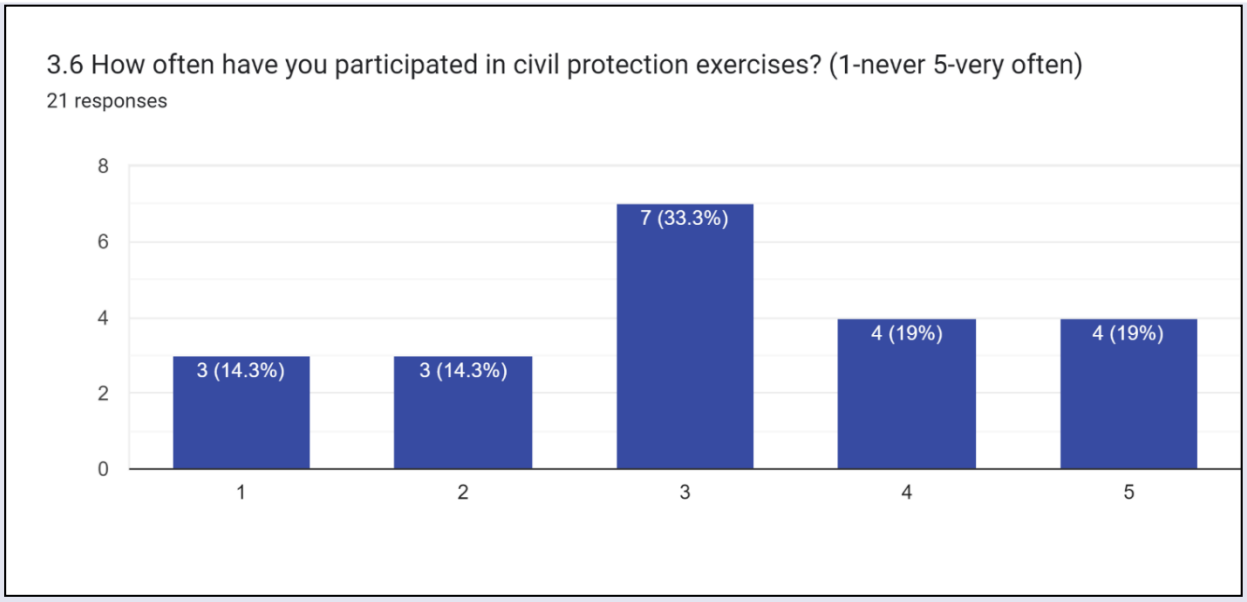

Figure 35. Frequency of participation in training exercises of Cypriot respondents.

According to participants involved in civil protection exercises, the majority participated as players (62.5%), while 31.3% participated as observers.

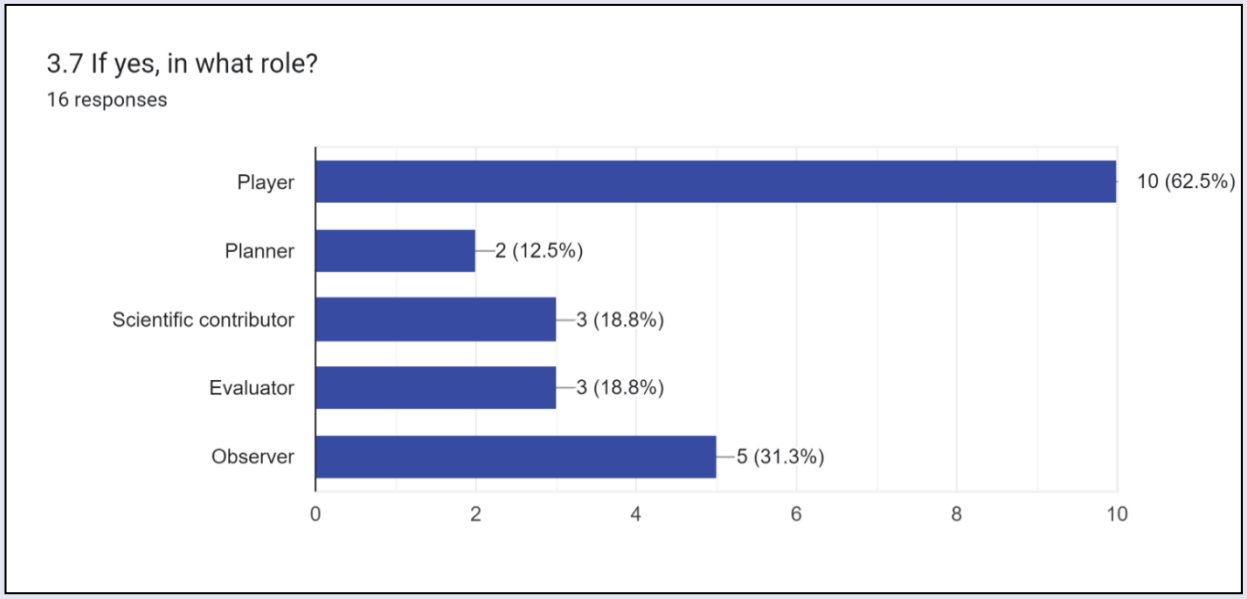

Figure 36. Role in the participation of exercises (experts from Cyprus).

57.1% of stakeholders' institutions mandate informal training practices such as civil protection exercises, while only 33.3% of institutions conduct these practices 3-5 times per year. Additionally, 42.9% of institutions only conduct them 1-2 times per year.

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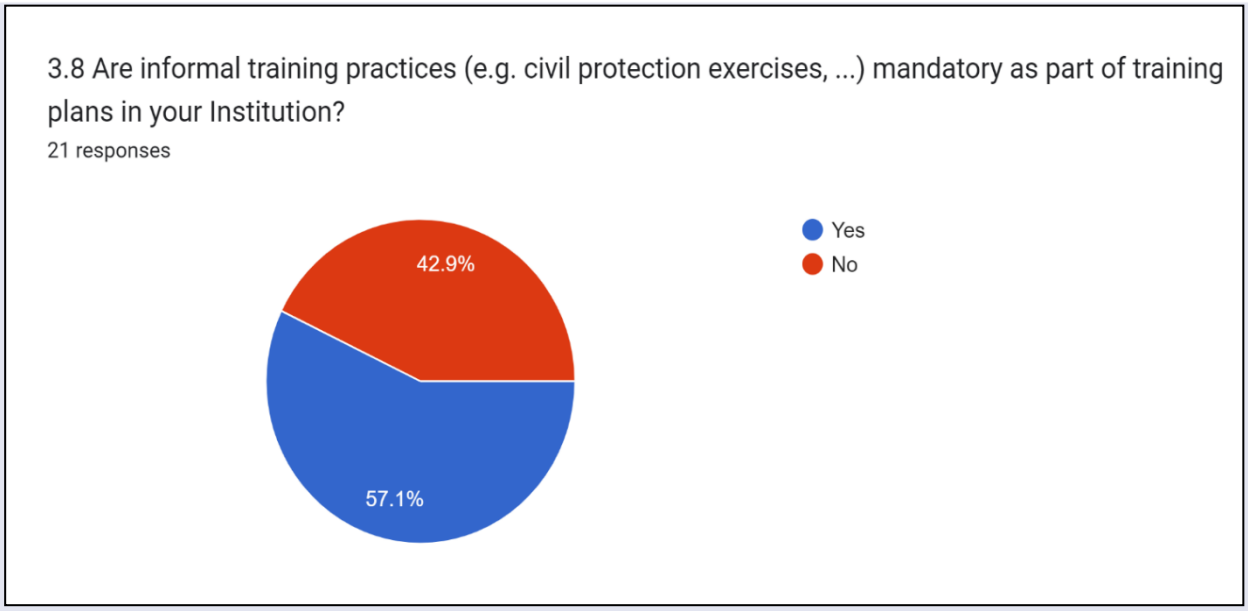

Figure 37. Percentage of mandatory informal training exercise at institutional level according to Cypriot respondents.

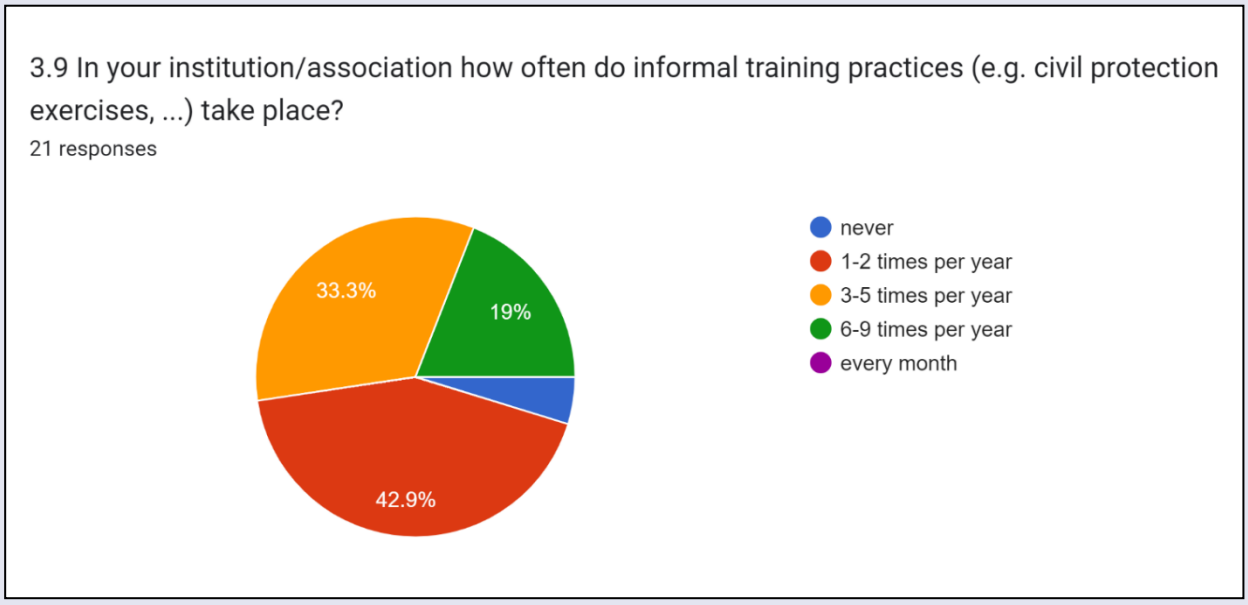

Figure 38. Frequency of informal training practices (experts from Cyprus).

Stakeholders recommend integrating training sessions into health and safety initiatives and utilizing Virtual Reality (VR) technologies as exemplary practices in DRM education. They propose developing training tools where individuals involved in risk management must pass specialized exams, ensuring they possess the necessary knowledge. This approach aims to enhance preparedness and effectiveness in managing disasters and emergencies.

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D. Emerging required skills and emerging training needs in DRM (Disaster Risk Management)

Cypriot partners strongly believe that DRM demands practical experience, emphasizing the need for educational programs to incorporate practical examples and training activities. They view DRM as a specialized technical field requiring sector-specific expertise. According to their perspective, all stakeholders involved in DRM must acquire specific knowledge and skills in communication and public engagement. Furthermore, they stress the importance of training all stakeholders in the psychological and sociological aspects related to disasters.

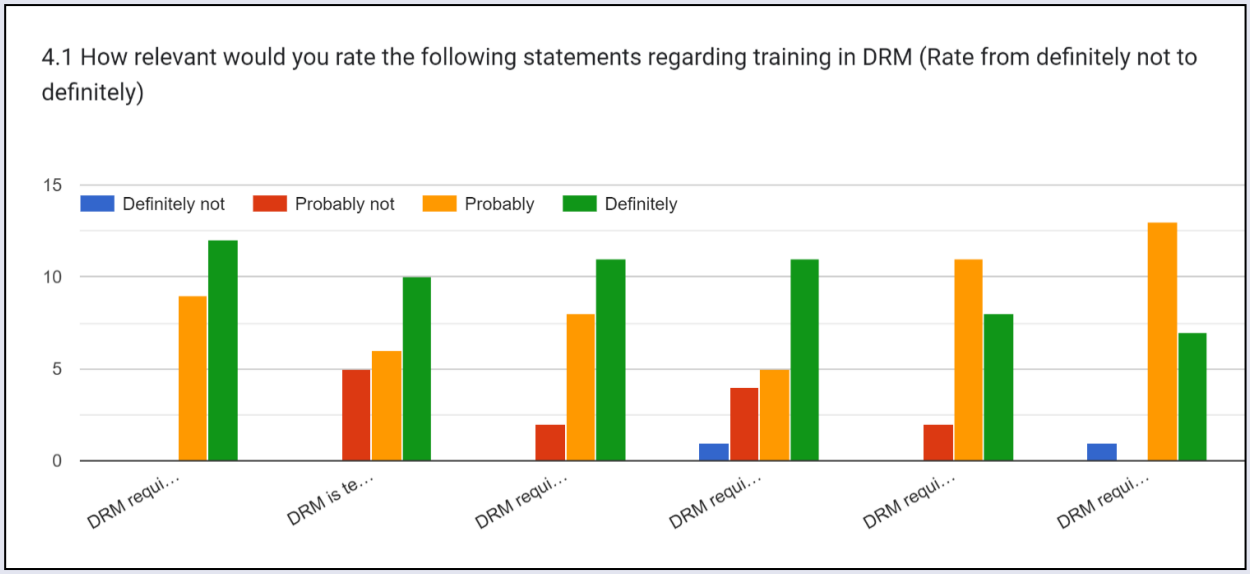

Figure 39. Training methods required in DRM according to Cypriot respondents.

According to participants **Creative thinking** (66.7%) and **Problem-solving** (57.1%) are the most relevant skills for prevention/preparedness (pre-disaster phase).

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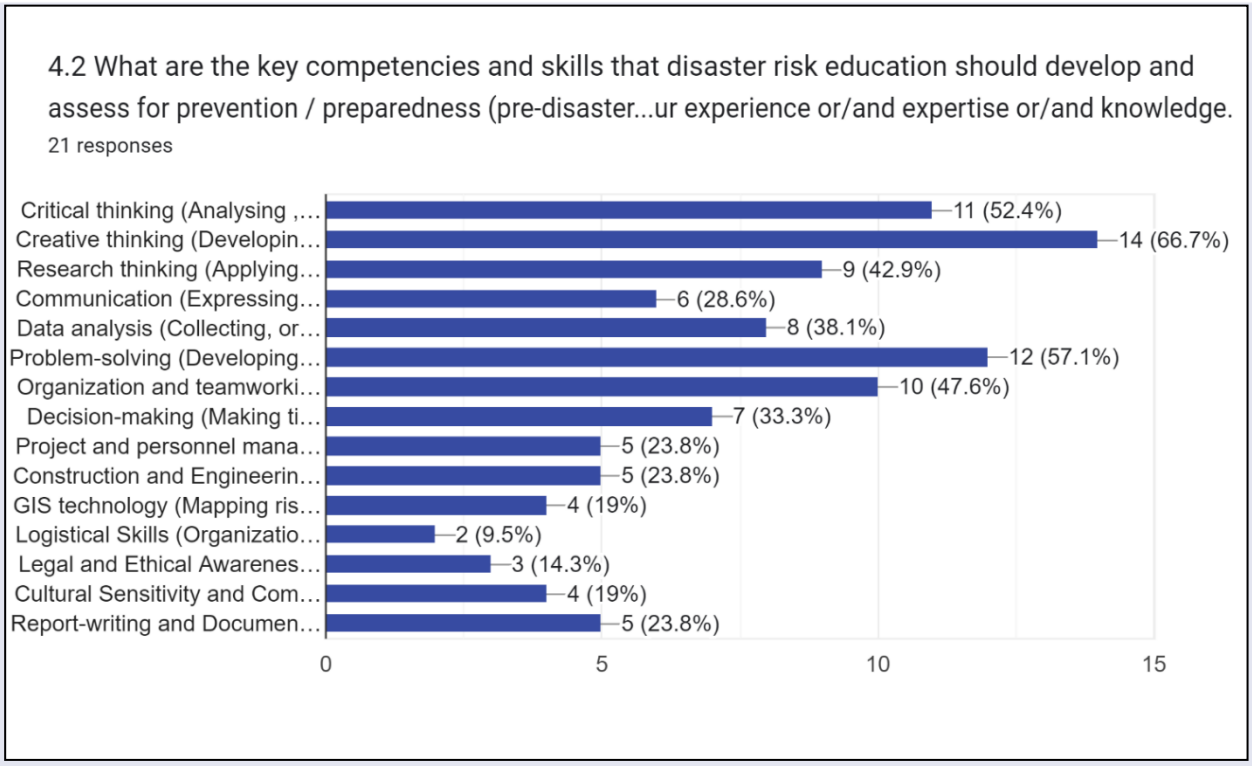

Figure 40. Key skills and competences that should be developed for the pre-disaster phase (according to experts from Cyprus).

During the **response** (emergency phase), the majority of responders consider **problem-solving** (71.4%) to be the primary key skill. Additionally, 61.9% of participants believe that **critical thinking**, **organization and teamwork** are also highly relevant skills in responding to emergencies.

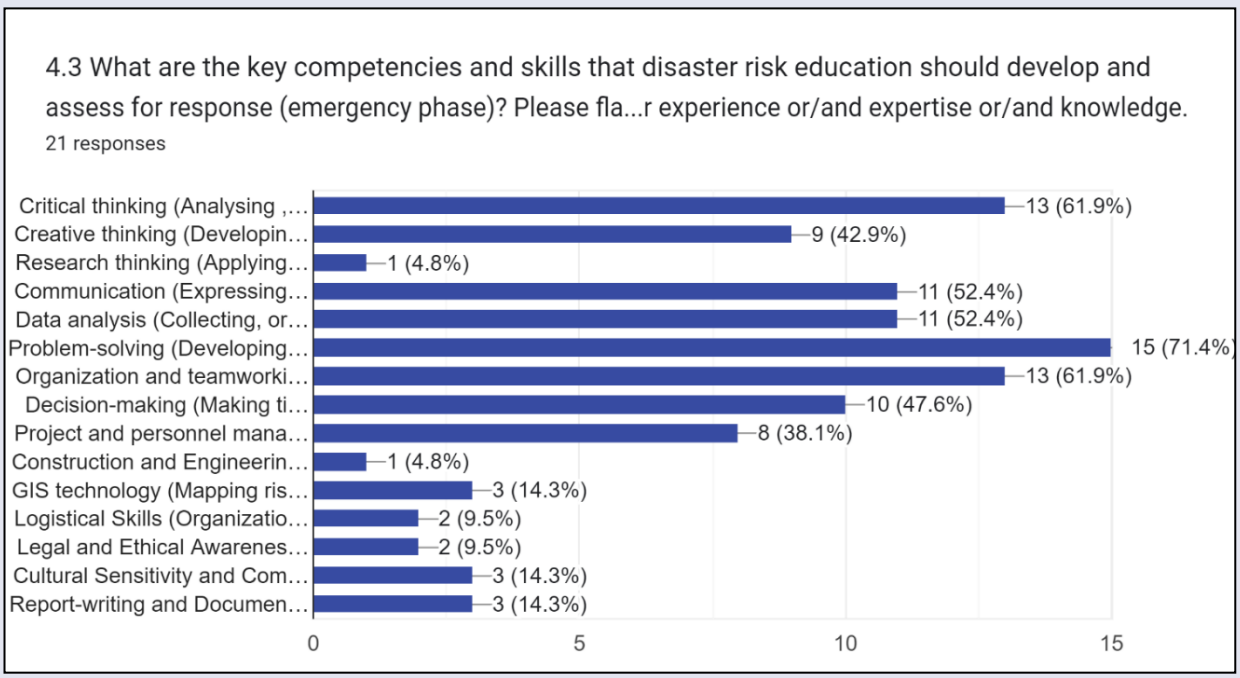

Figure 41. Key skills and competences that should be developed for the response phase (according to experts from Cyprus).

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In the rehabilitation/recovery phase following an emergency, stakeholders believe that **data analysis** is crucial, with 57.1% emphasizing its importance. This is followed by **organization and teamwork** skills at 47.6%, and **problem-solving** skills at 42.9%. These skills are seen as pivotal in effectively managing the aftermath of emergencies and facilitating recovery efforts.

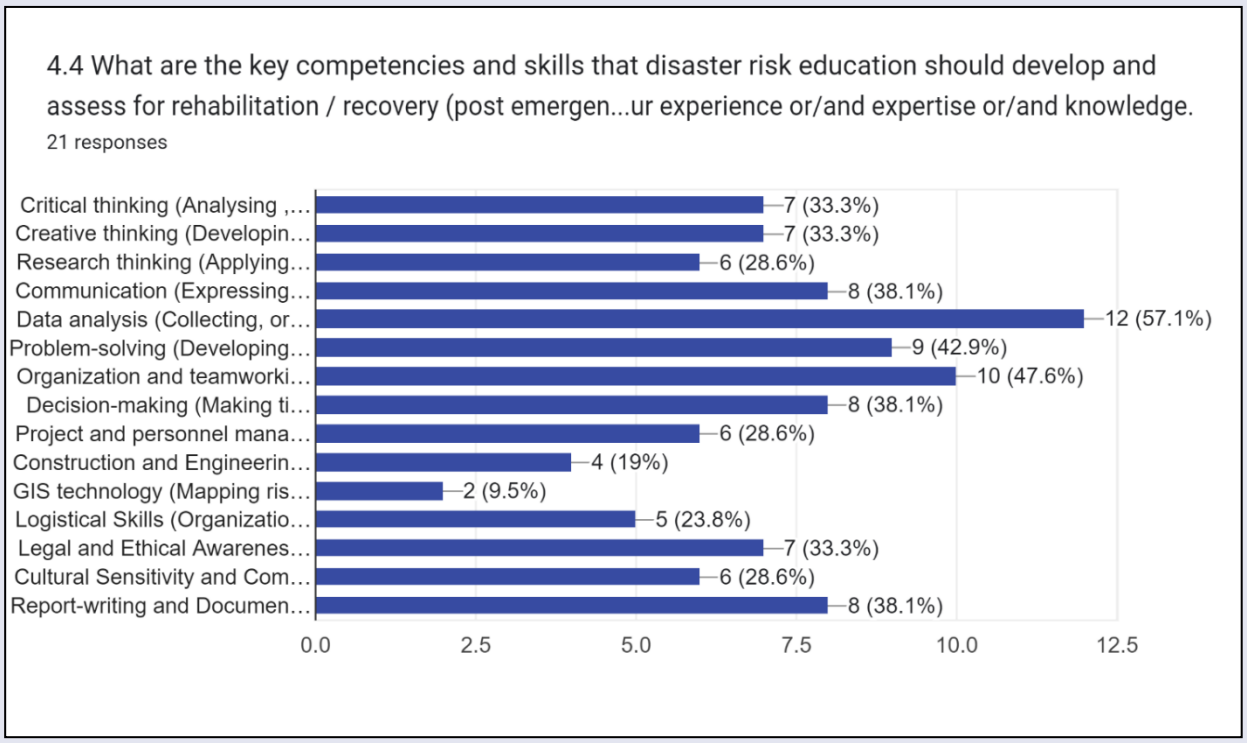

Figure 42. Key skills and competences that should be developed for the recovery phase (according to experts from Cyprus).

According to participants' experience and expertise, **organization and teamwork** (66.7%) are considered the most suitable skills to be developed through formal learning approaches. **Critical thinking**, along with **project management and personnel coordination** (both at 52.4%), are also recognized as significant skills based on respondents' feedback.

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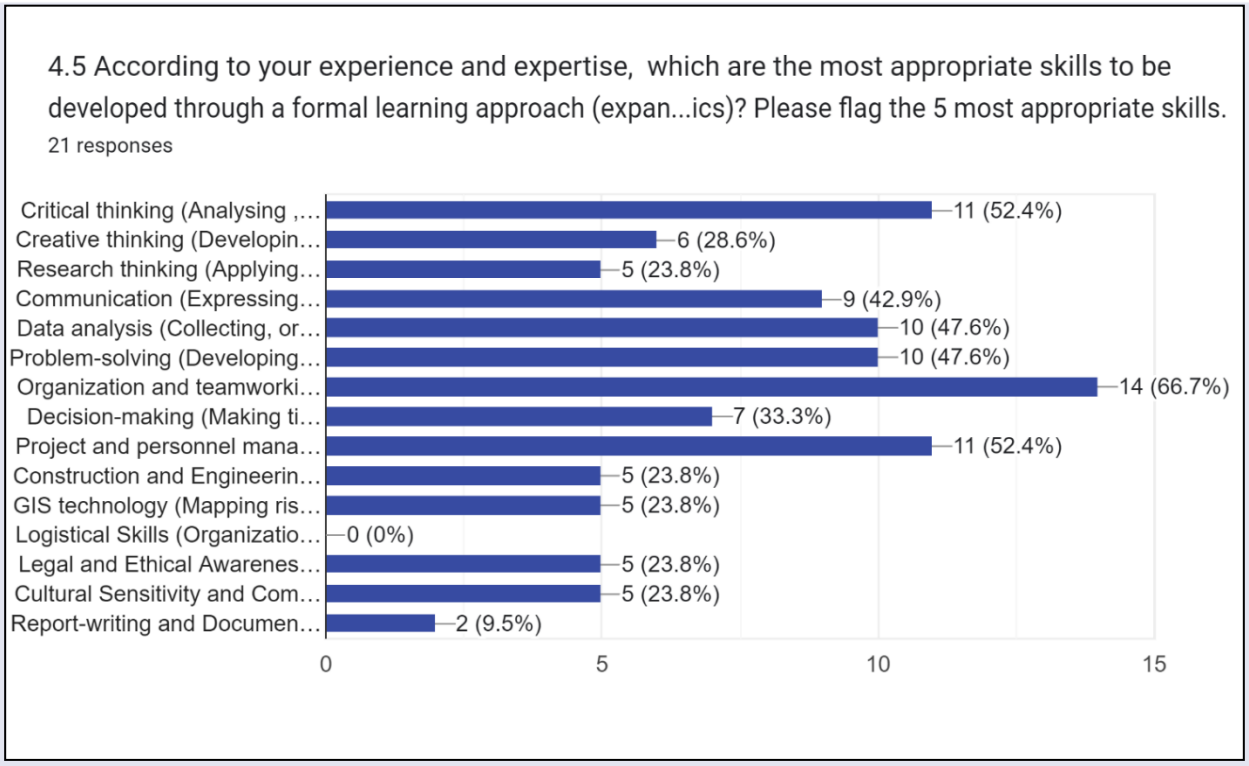

Figure 43. Skills to be developed through a formal learning approach (input from Cyprus).

Data analysis (66.7%) and **critical thinking** (57.1%) emerge as the most pertinent skills developed through problem-based learning, according to the data provided.

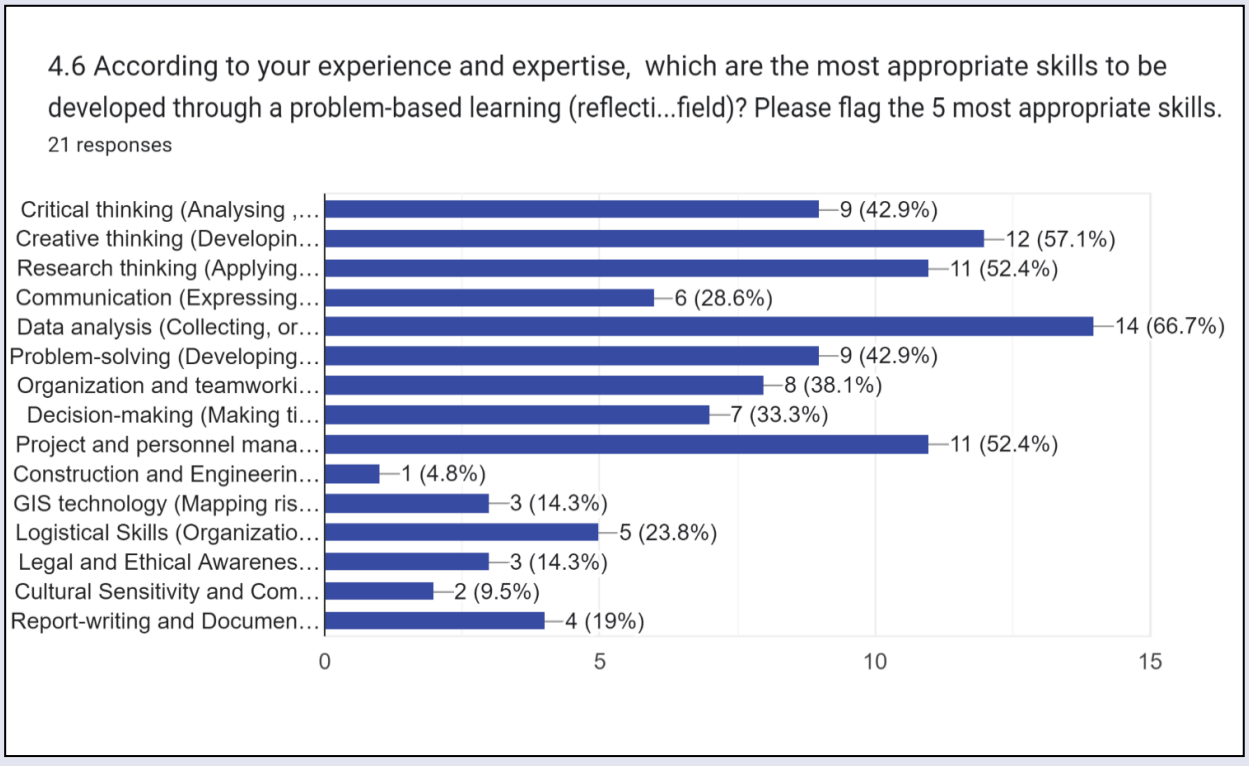

Figure 44. Skills to be developed through a problem-based learning (input from Cyprus).

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Problem-solving (76.2%) and **organization and teamwork** (66.7%) skills are deemed the most suitable for development through a learning-by-doing or experiential learning approach, according to the respondents' perspectives.

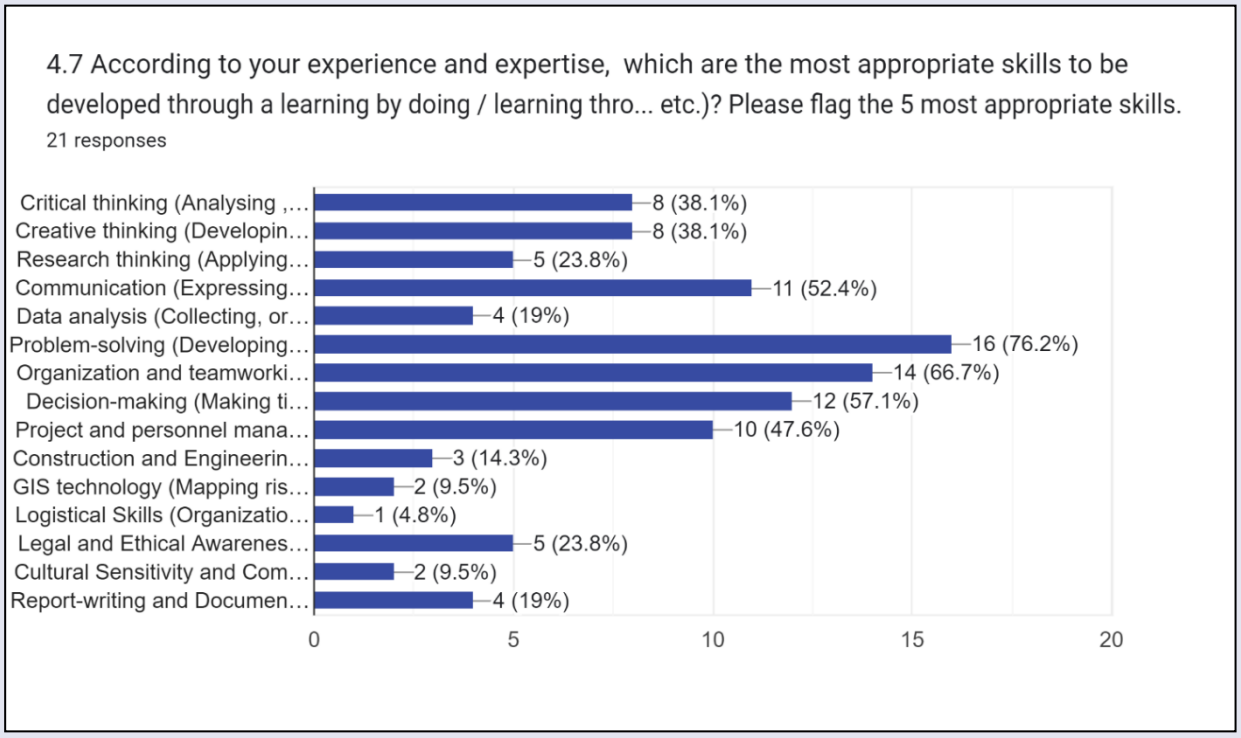

Figure 45. Skills to be developed through a learning by doing or other approach (input from Cyprus).

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Questionnaire answers from Greece

A total of 56 responses from Greek stakeholders have been collected.

A. Personal data and role in the DRM (Disaster Risk Management)

During our survey, we received 56 responses from stakeholders in Greece.

The age range of stakeholders from Greece is varied. Most are between 35-44 years (42.9%), followed by 45-54 years (30.4%), and 55-65 years (14.3%).

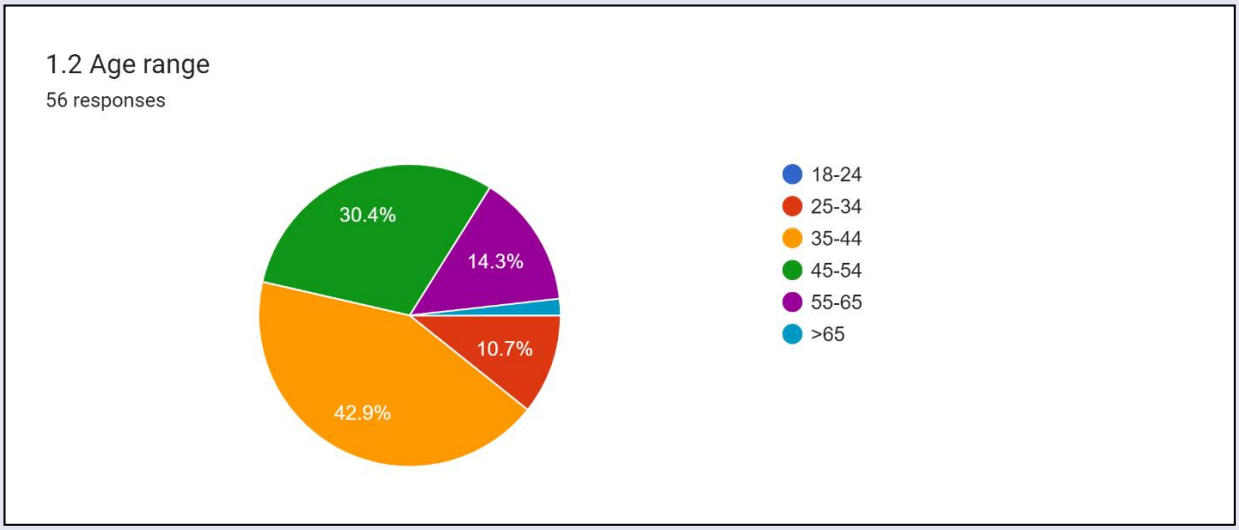

Figure 46. Graph depicting the age class of the respondents from Greece.

Among the stakeholders, 75% are male, and 25% are female.

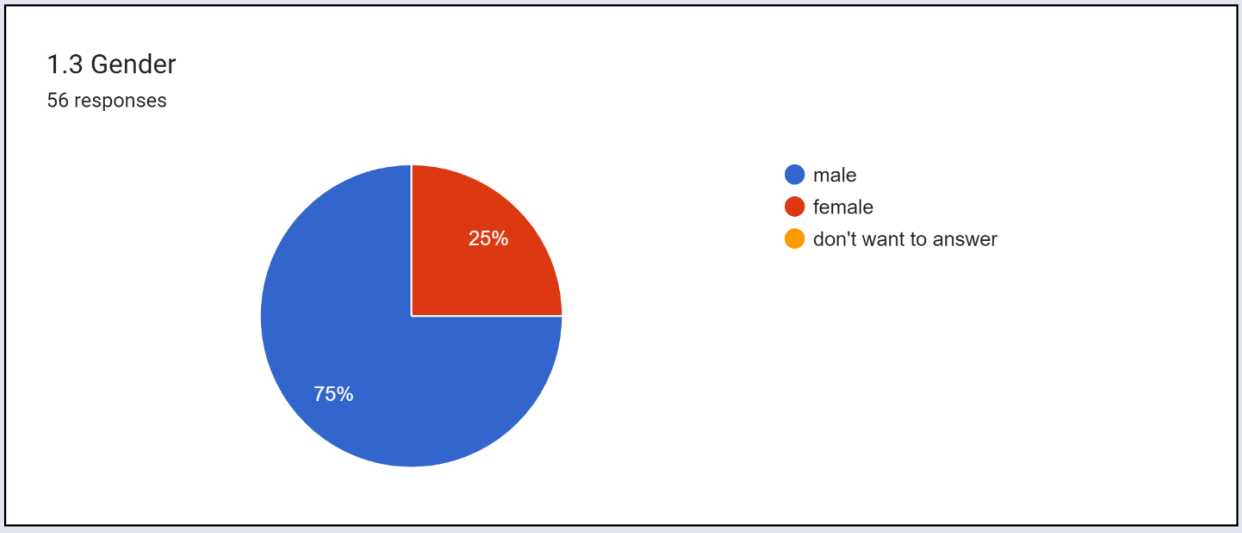

Figure 47. Gender balance among the answers received from the Greek respondents.

Results of participants' the highest level which they completed are mainly master's degree (26.8%), Bachelor degree (19.6%) and High school graduate (21.4%).

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Most of the respondents are emergency response professionals (39.3%). Additionally, a considerable number are volunteers in civil protection, or other associations involved in emergencies (28.6%), and trainers/educators in DRM (17.9%).

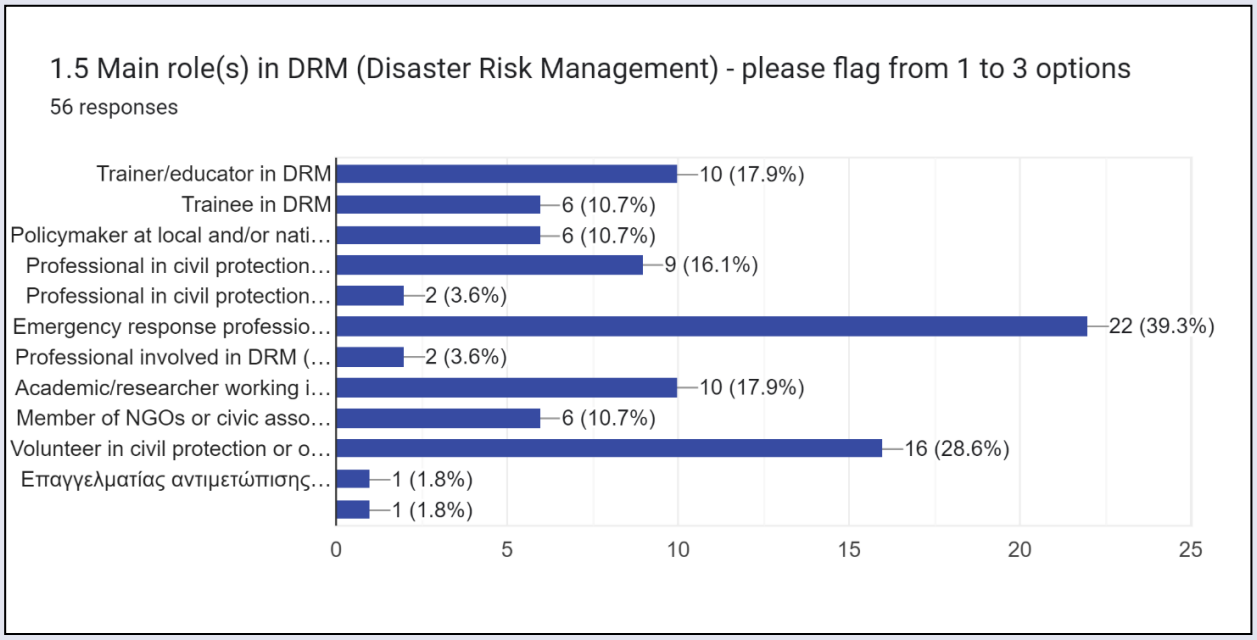

Figure 48. Role of experts from Greece responded to the online survey.

Among the participants, the majority have been working in DRM for more than 20 years (39.3%). Additionally, 23.2% of participants have been working in DRM for 5-10 years.

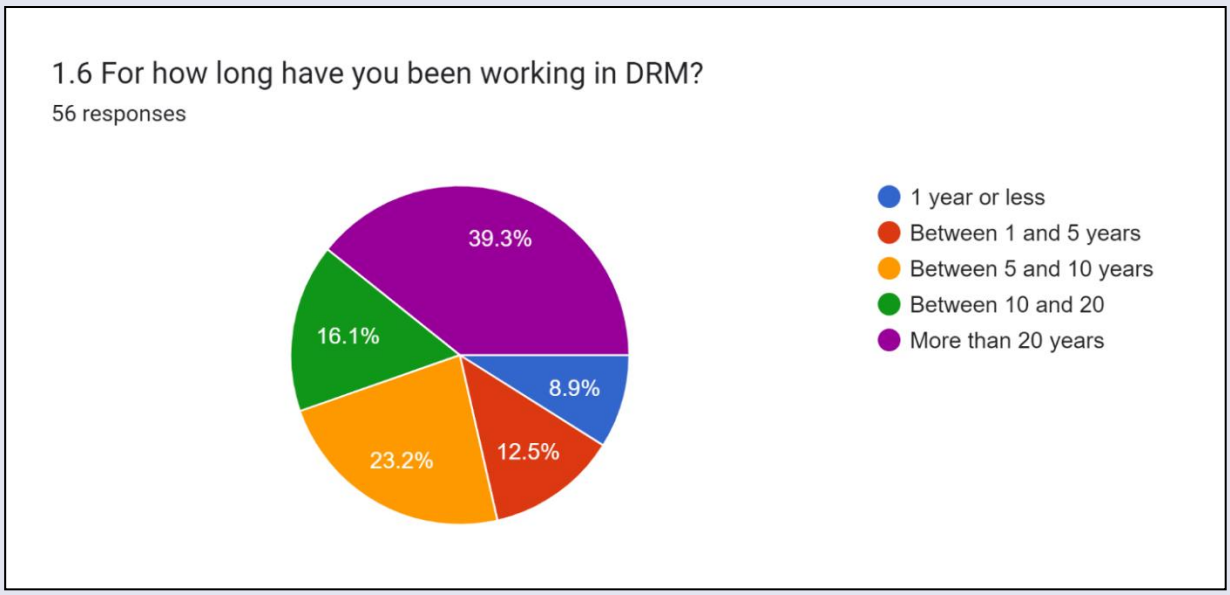

Figure 49. Years of experience of respondents to the survey (Greece).

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Of the 56 responders from both countries, most (67.9%) work in public institutions. Additionally, 53.6% of these institutions have national territorial jurisdiction.

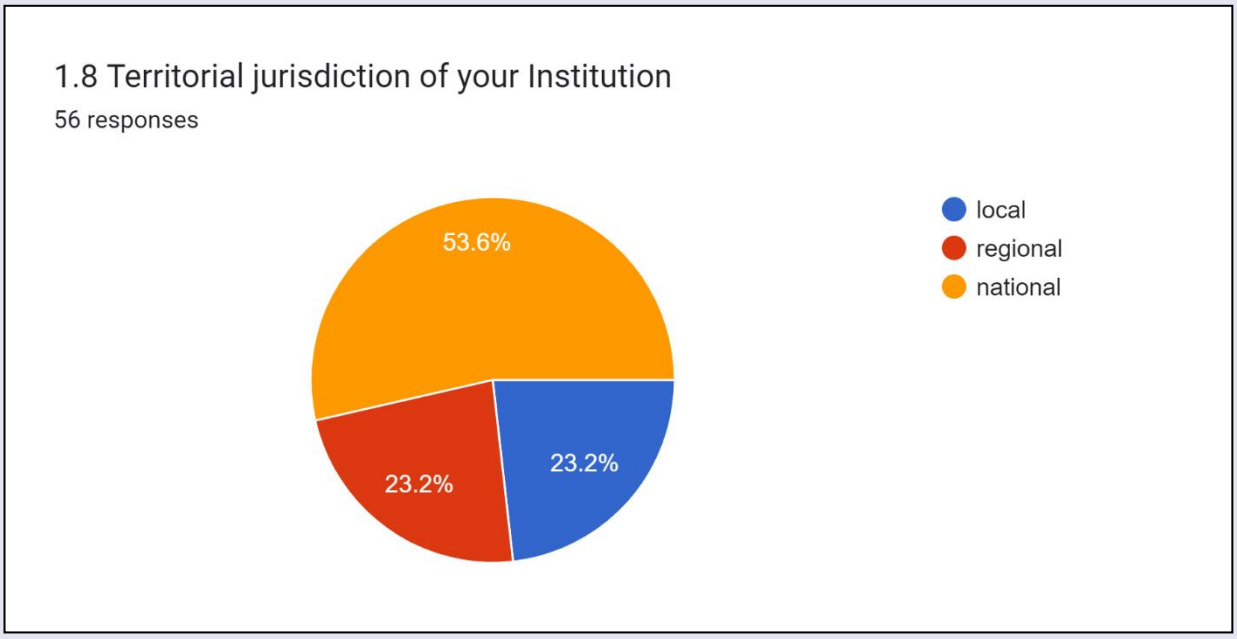

Figure 50. Territorial jurisdiction of the organizations of the Greek respondents.

The participants' level of knowledge and experience about disaster management primarily revolves around wildfires and Man-made hazards (e.g. technological accident, CBRN incident, accident of transportation of dangerous goods).

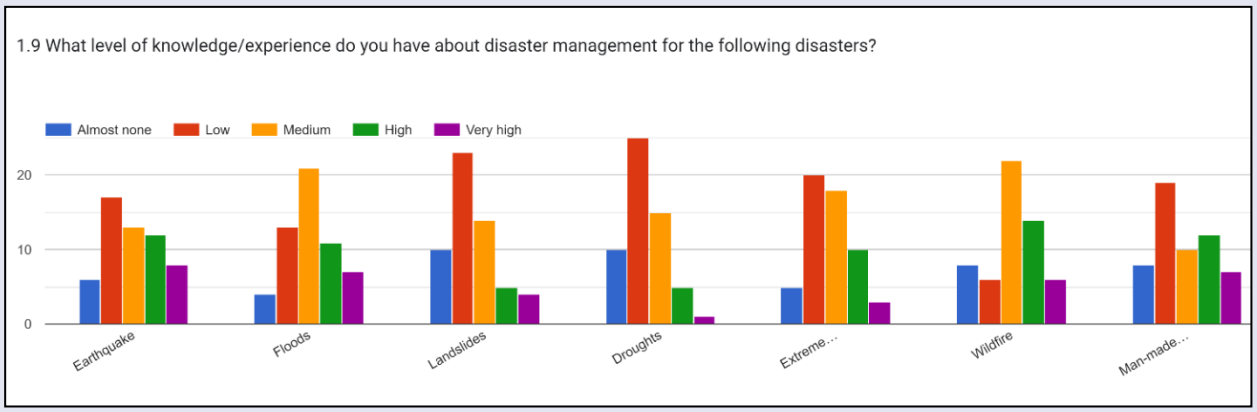

Figure 51. Level of expertise of respondents from Greece per disaster type.

B. Current practices in DRM (Disaster Risk Management)

For Greek and stakeholders, wildfires, Extreme meteorological events (windstorms, hailstorms, …), floods and earthquakes are identified as the highest level of risk in their respective work areas.

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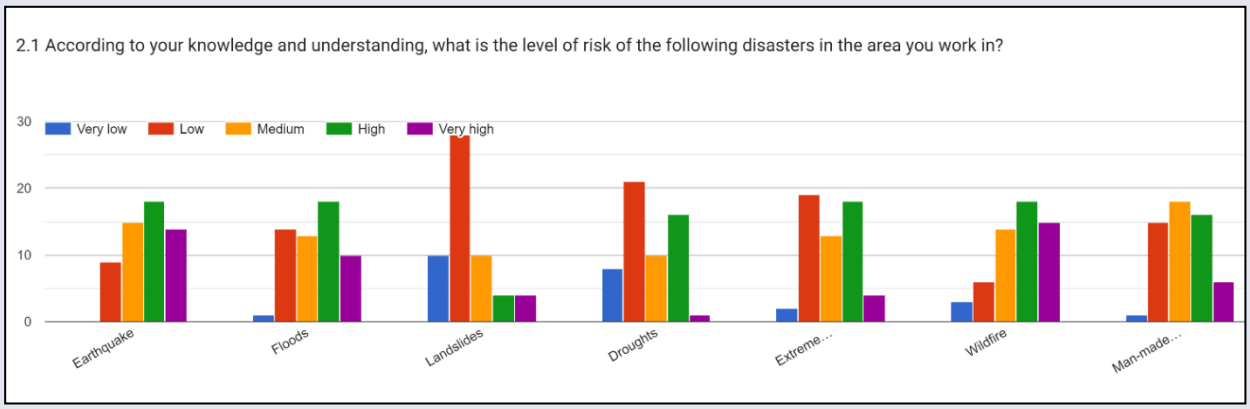

Figure 52. Most significant risks for Greece based on the answers given by the experts.

According to attendees, policymakers at the local and/or national level should be involved during the **prevention/preparedness** (pre-disaster) phase, as indicated by 71.4% of respondents.

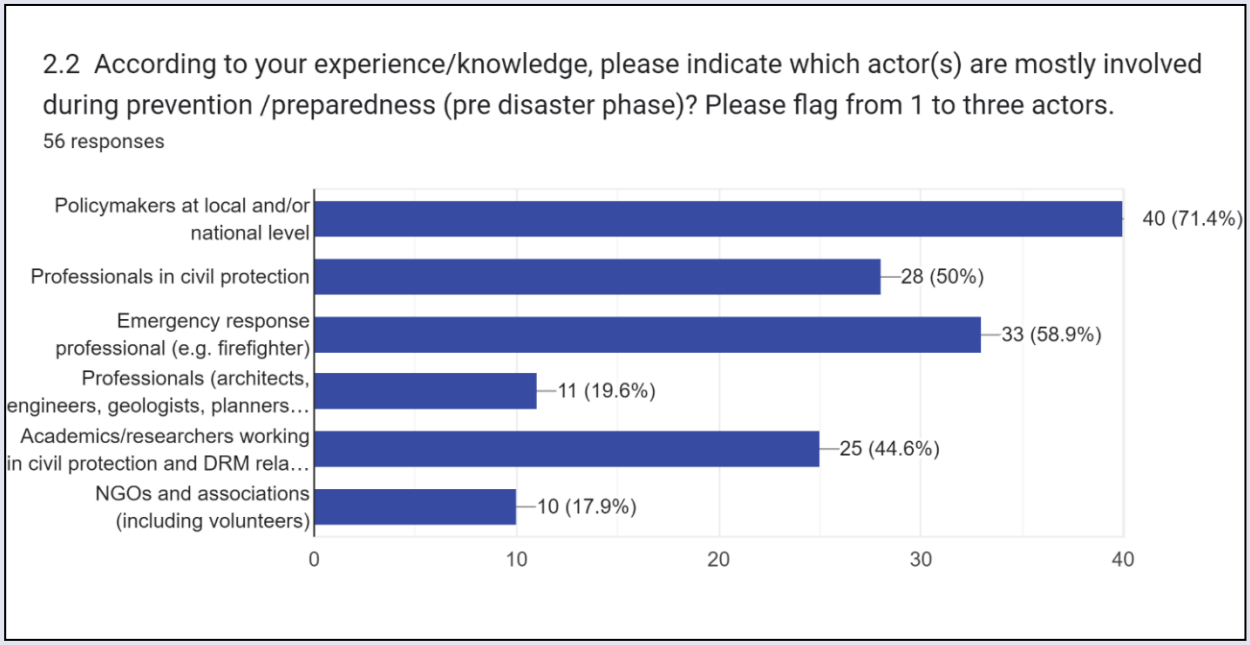

Figure 53. Actors involved in prevention and preparedness phase according to the experts from Greece.

During the **response** (emergency phase), attendees believe that emergency response professionals, such as firefighters, are the main actors (91.1%).

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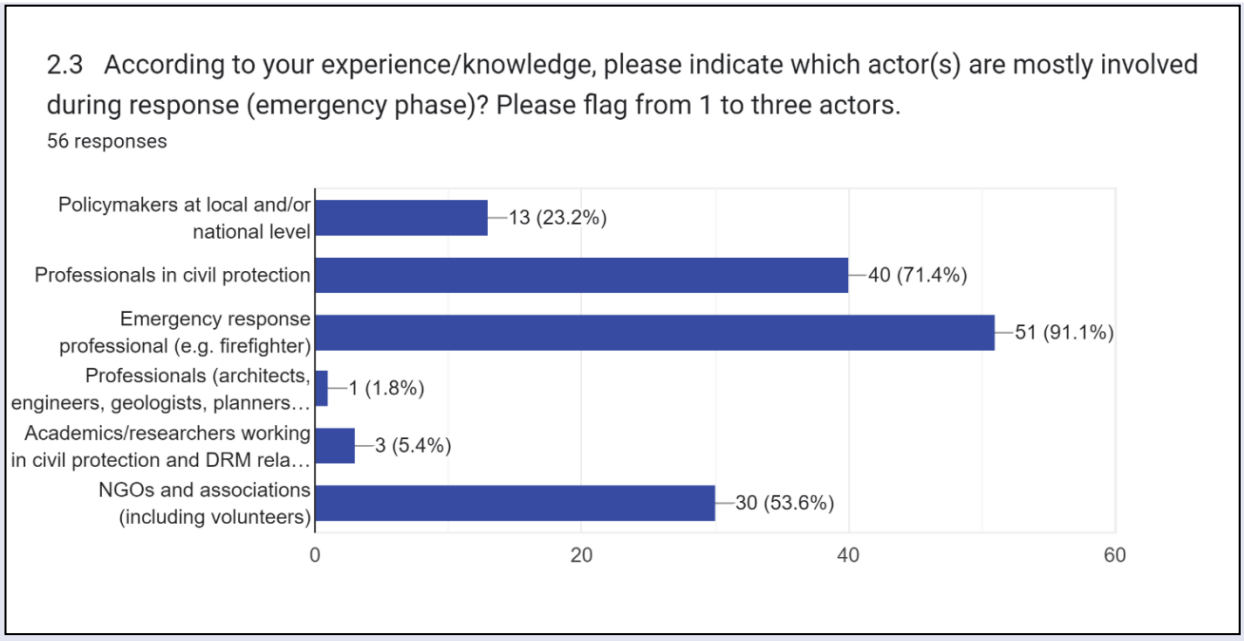

Figure 54. Actors involved in the response phase according to the experts from Greece.

Stakeholders believe that during the **rehabilitation/recovery** (post-emergency phase), Professionals (architects, engineers, geologists, planners...) (58.9%) and professionals in civil protection (50%) play crucial roles.

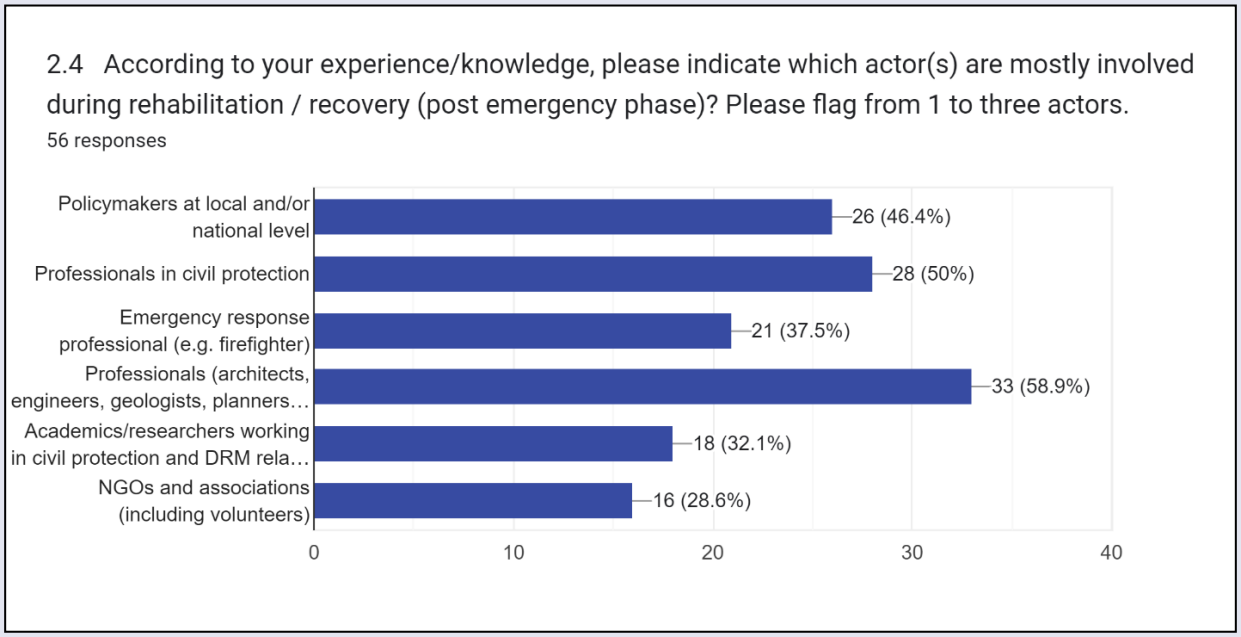

Figure 55. Actors involved in recovery and rehabilitation phase according to the experts from Greece.

According to their experience and knowledge, the main critical aspects or weaknesses of the procedures and practices in DRM include communication and coordination issues between the various groups involved, as well as the lack of a comprehensive plan to coordinate all available resources. Additionally, some stakeholders perceive weaknesses in inadequate training, dysfunction in coordinating disaster response agencies, underutilization of technology, failure to leverage available data, incomplete vulnerability risk mapping, and a lack of information provided to citizens.

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Stakeholders have diverse recommendations regarding best practices in DRM. One participant suggested that Civil Protection should be fully autonomous, providing all disaster response agencies, whether private or public, with their own links for optimal coordination, support services, and materials for immediate intervention. They emphasise the importance of distinct roles and clear, controllable decisions and actions. Additionally, effective communication with society about disaster response protocols is deemed necessary, along with the activation of specific groups of citizens through training programs and simulations. Furthermore, raising awareness and engaging specific populations with unconventional lifestyles are considered crucial. Meanwhile, some stakeholders believe that enhancing training, providing better equipment, improving command and control (C2) procedures, and prioritizing standardization are crucial pillars of interoperability in DRM.

C. Current educational offer in DRM (Disaster Risk Management)

Stakeholders have acquired most of their knowledge directly through practical experience, which falls under non-formal or informal learning. They have also engaged in continuous learning throughout their professional careers, often through vocational education and training (VET).

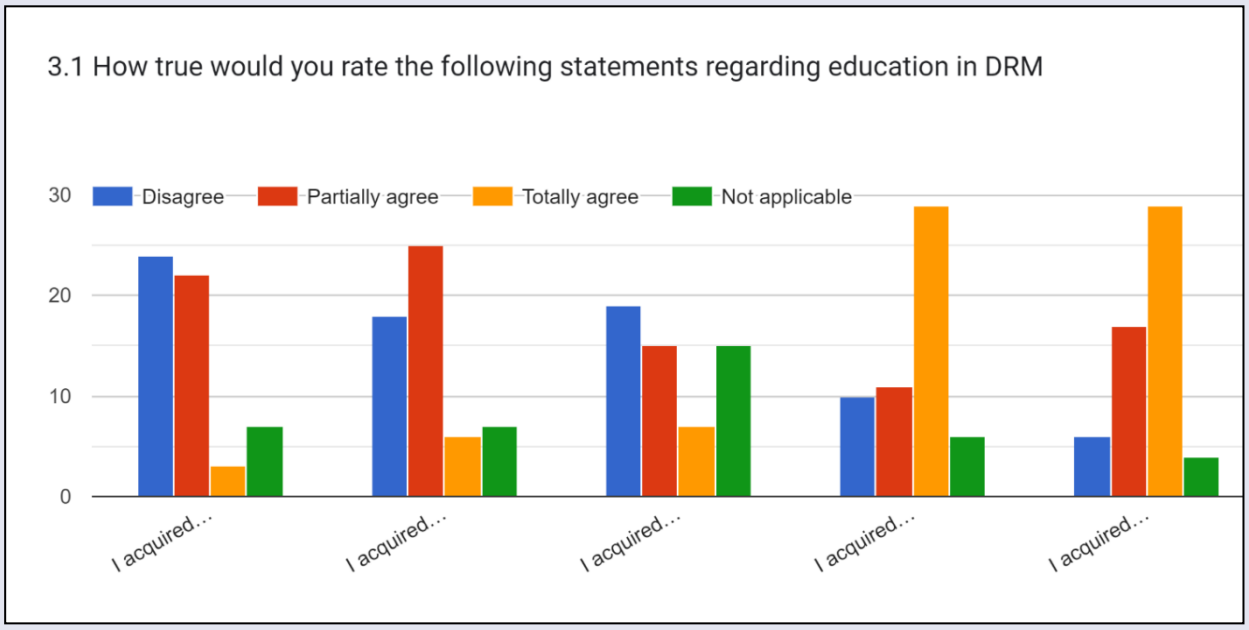

Figure 56. How knowledge on DRM was acquired according to Greek respondents.

Most participants from Greece believe that technical/vocational training (55.4%), followed by master's degrees (39.3%) and professional degrees (35.7%), are the most important credentials for addressing DRM.

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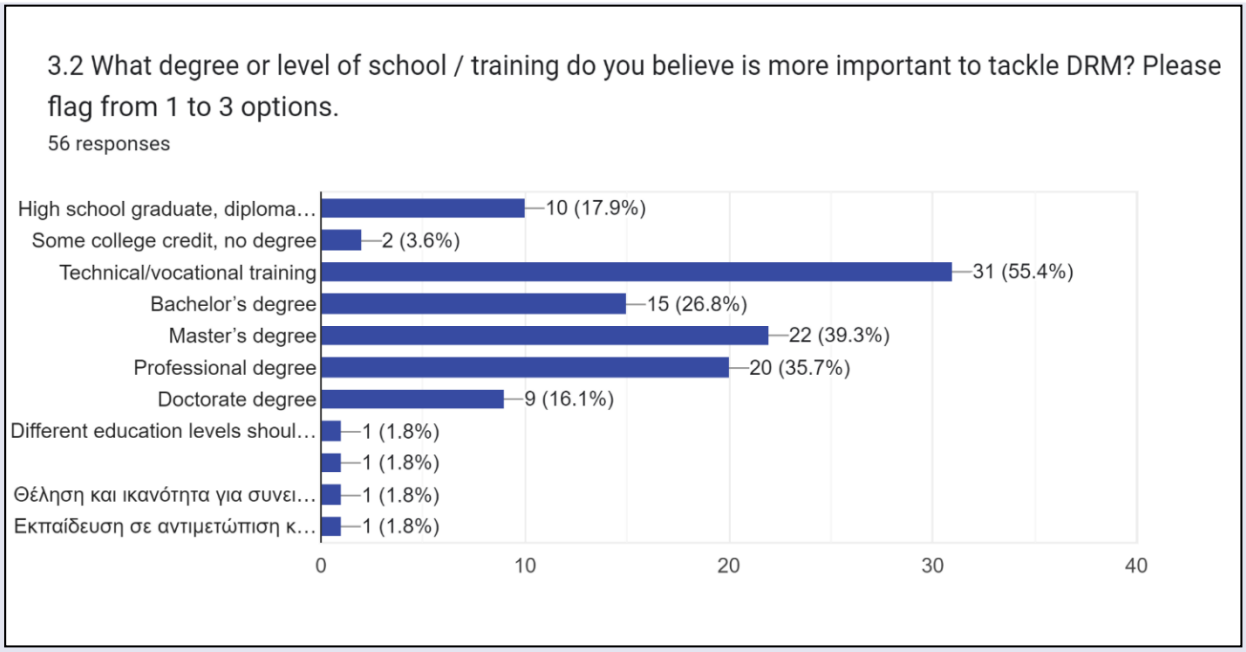

Figure 57. Optimal educational level for personnel to tackle DRM according to experts from Greece.

Only 39.3% of questionnaire participants are aware of any regional, national, or international educational and/or professional training programs in DRM.

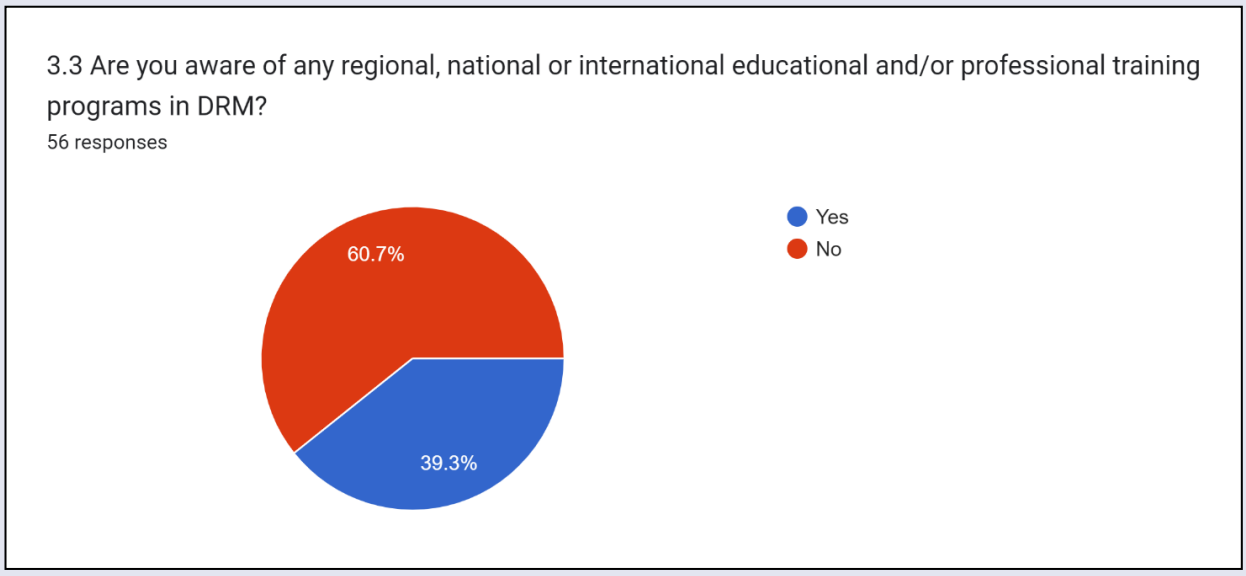

Figure 58. Awareness level on educational and/or professional training programs in DRM (case of Greece).

Stakeholders' 39.3% have participated in various training programs such as the training program of the Greek Police Officers School, courses like "Political Emergency Planning (P.S.E.A.)," and the Master's Degree Program "Environmental, Disaster, and Crisis Management Strategies" by the National and Kapodistrian University of Athens, MSc in Analysis and Management of Manmade and Natural Disasters co-organized by the International Hellenic University (IHU) and the Fire Academy among others.

55.4% of participants recognize informal training practices as very important.

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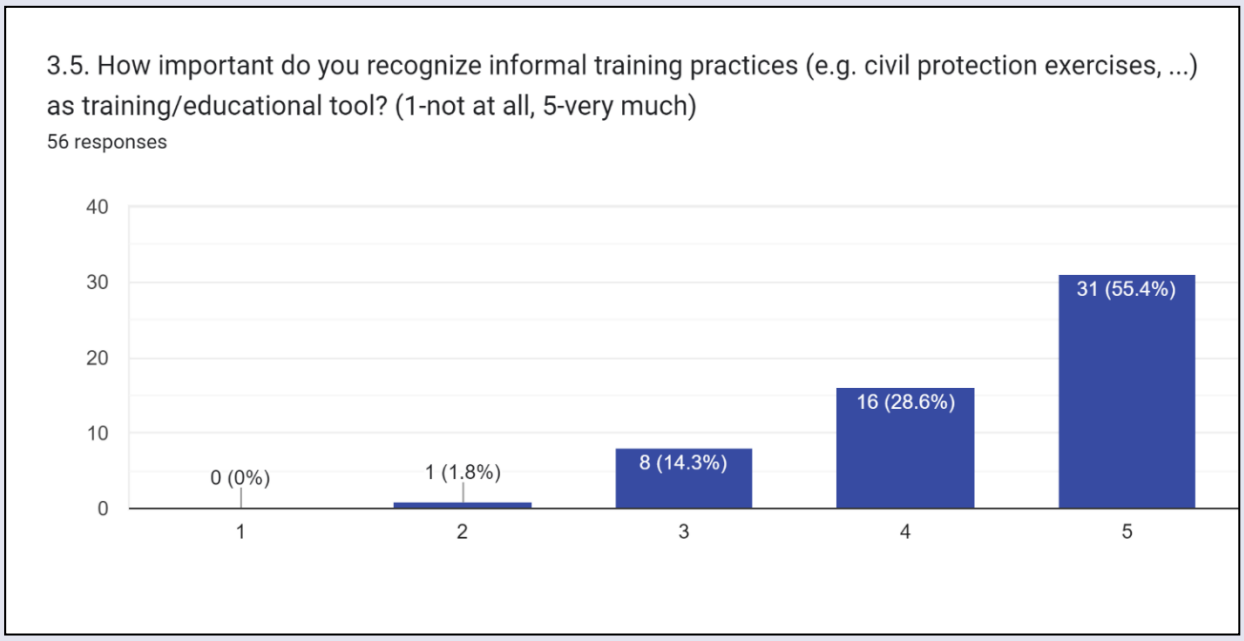

Figure 59. Level of importance of informal training practices as training/educational tool according to the Greek experts.

Responders of questionnaires often participated in civil protection exercises, comprising 26.8% of the respondents. Mostly, they participated as players (59.2%), while some also took on the roles of planner (34.7%) and observer (26.5%).

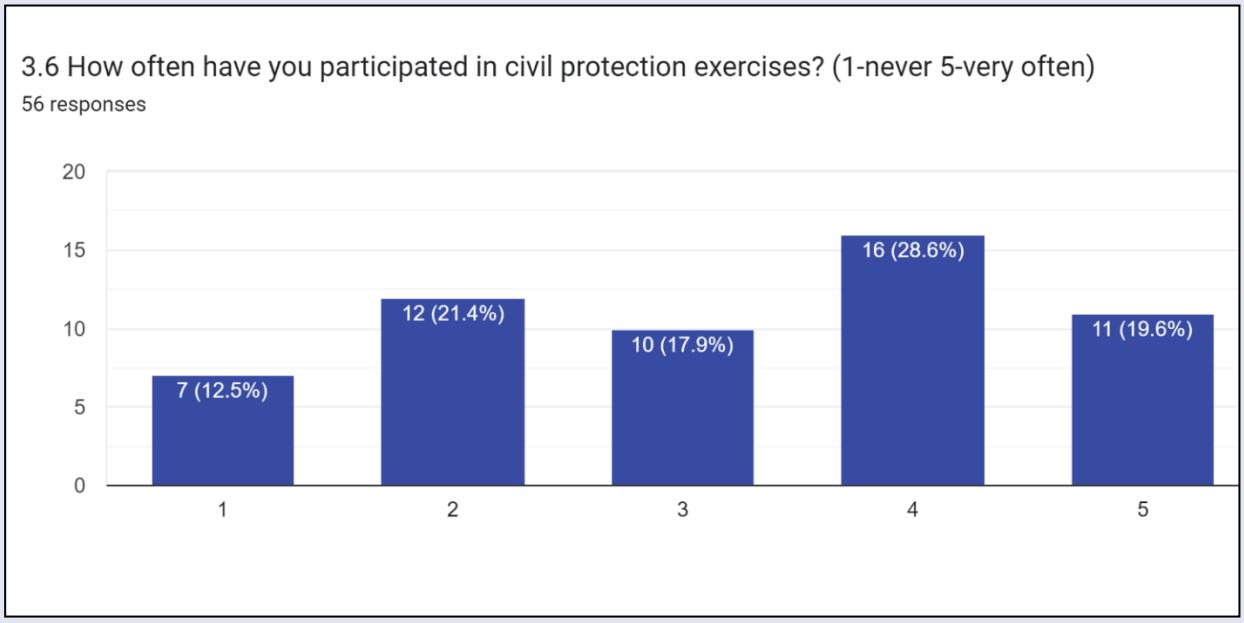

Figure 60. Frequency of participation in training exercises of the Greek respondents.

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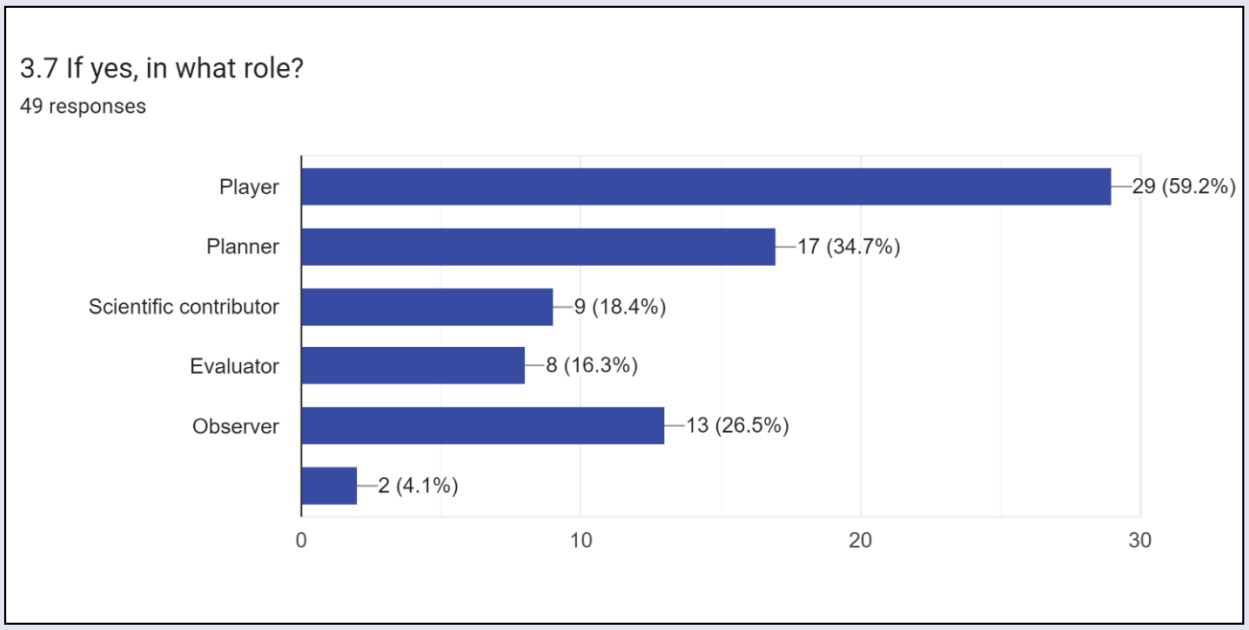

Figure 61. Role in the participation of exercises (experts from Greece).

Informal training practices, such as civil protection exercises, are mainly mandatory as part of training plans in participants' institutions, with 64.3% indicating this requirement.

The majority of stakeholders (53.6%) attend informal training sessions provided by the institutions 1-2 times per year. Additionally, 17.9% of participants never attended this training by their institutions.

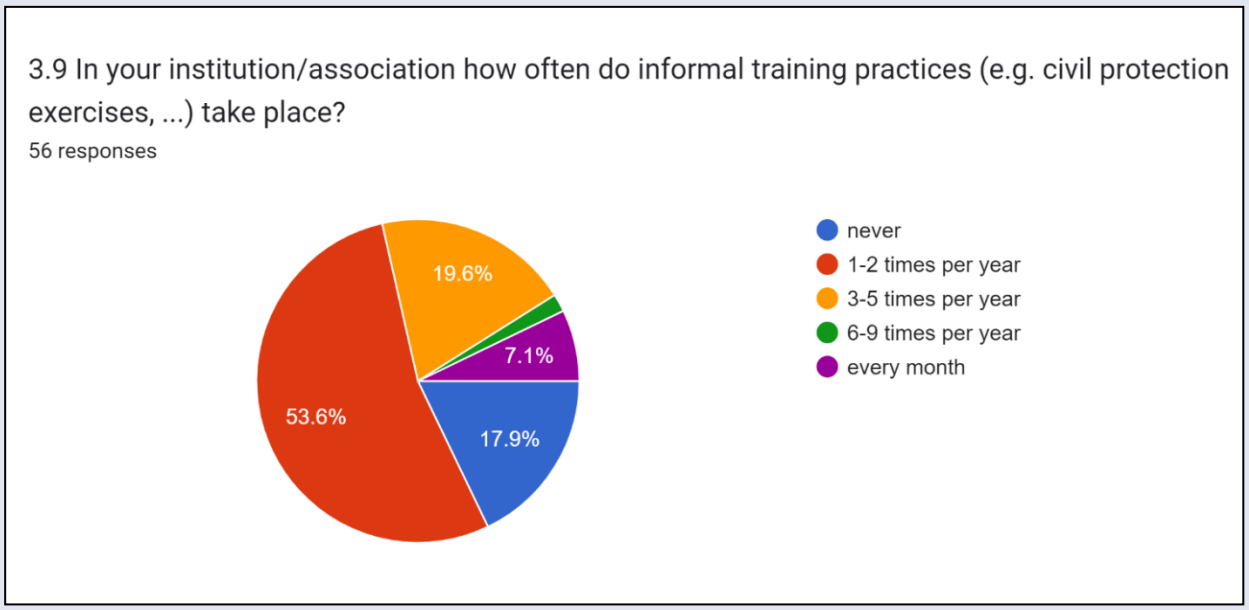

Figure 62. Frequency of informal training practices (experts from Greece).

Stakeholders suggested that the best practices in DRM education include easy access to knowledge through interaction, such as educational platforms, and practical training with realistic assessment of achievement. They also emphasize the importance of exercises in civil protection for professionals, volunteers, and individuals, as well as other training exercises. Additionally, stakeholders mentioned One

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best practice in DRM education is to incorporate interactive and experiential learning methods. This can include simulations, games, and drills that mimic real-life disaster scenarios, allowing participants to practice decision-making and response in a controlled environment.

D. Emerging required skills and emerging training needs in DRM (Disaster Risk Management)

Most stakeholders believe that DRM requires experience, so education should offer practical examples and training activities. Additionally, they emphasize that DRM requires all stakeholders involved to acquire specific knowledge and skills in communication and public engagement.

51.8% of participants think that the key competencies and skills that disaster risk education should develop and assess for prevention/preparedness (pre-disaster phase) is **organization and teamwork** (planning, coordinating, or implementing multiple elements at different levels of the DRM chain). Additionally, half of stakeholders consider **Communication** (Expressing information clearly, concisely, and empathetically in risk-prone areas and disaster-related situations.) as important skills.

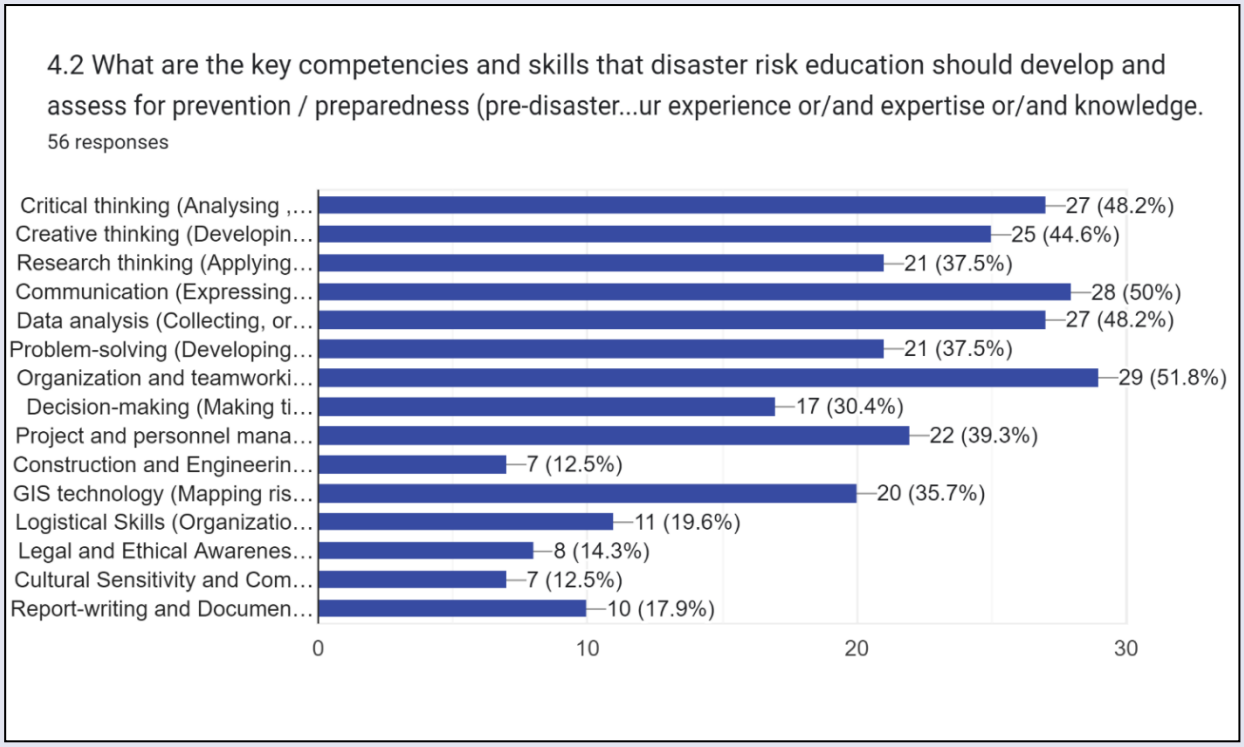

Figure 63. Key skills and competences that should be developed for the pre-disaster phase (according to experts from Greece).

For the response (emergency phase), according to responders, important skills include **problem-solving** (developing effective and efficient solutions to address issues in risk-prone areas and disaster-related situations) (66.1%) and **decision-making** (making timely and effective choices in risk-prone areas and disaster-related situations) (64.3%). Additionally, **communication** (expressing information clearly, concisely, and empathetically in risk-prone areas and disaster-related situations), **organization and teamwork** and **Project and personnel management and coordination** play a main role in the emergency phase, as noted by 58.9% of respondents.

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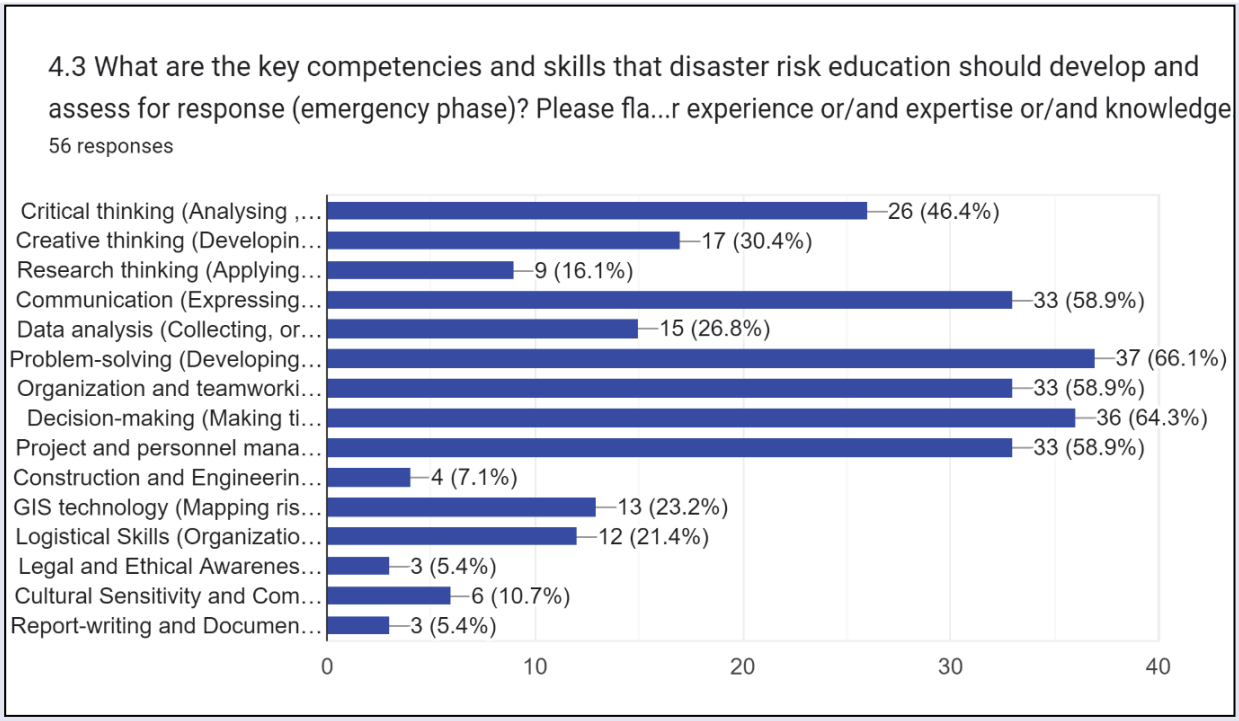

Figure 64. Key skills and competences that should be developed for the response phase (according to experts from Greece).

As for rehabilitation and recovery (post-emergency phase), stakeholders believe that **problem-solving** (51.8%) should be primarily developed and assessed. Additionally, **data analysis** (46.4%) and **Construction and Engineering** (Using knowledge of basic construction and engineering principles in risk-prone areas and disaster-related situations.) (48.2%) are among the main key competences believed by responders.

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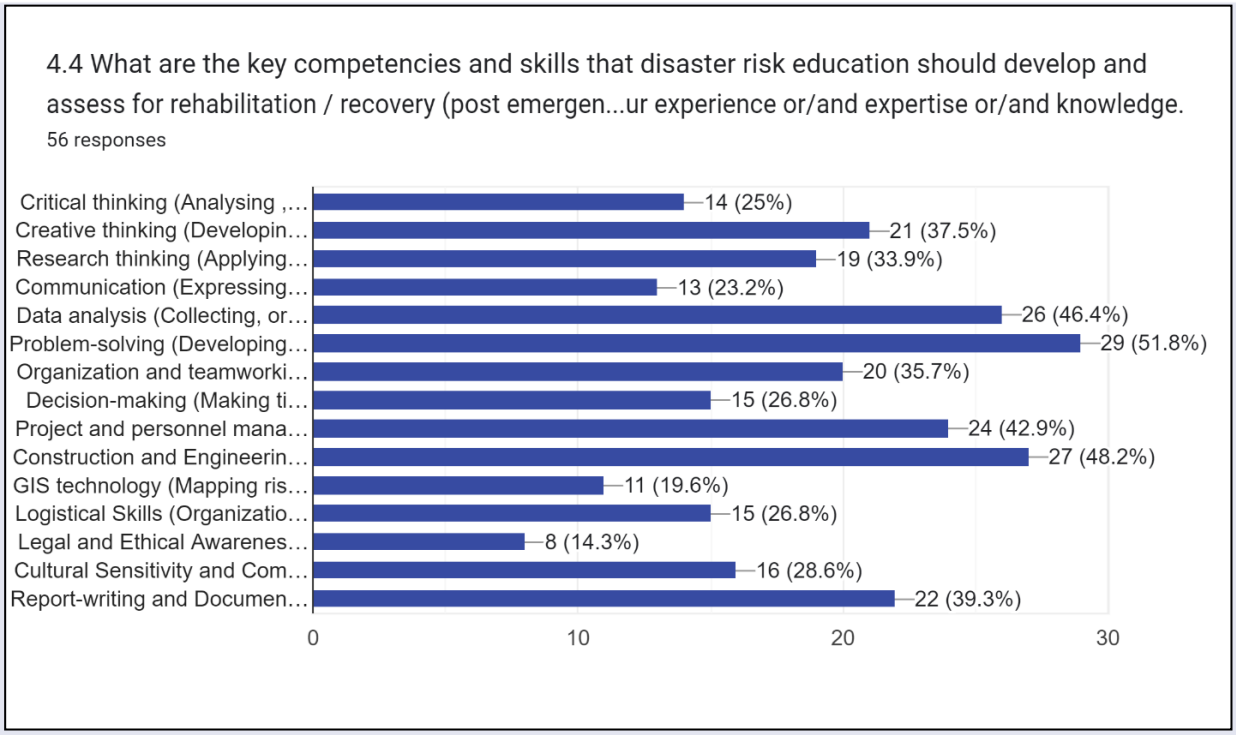

Figure 65. Key skills and competences that should be developed for the recovery phase (according to experts from Greece).

According to stakeholders' experience and expertise, **data analysis** and **creative thinking** are deemed the most appropriate skills to be developed through a formal learning approach, involving expanding career knowledge by taking classes with educators, trainers, and academics (both are 53.6%). **Critical thinking** is the second most common choice among attendees (50%).

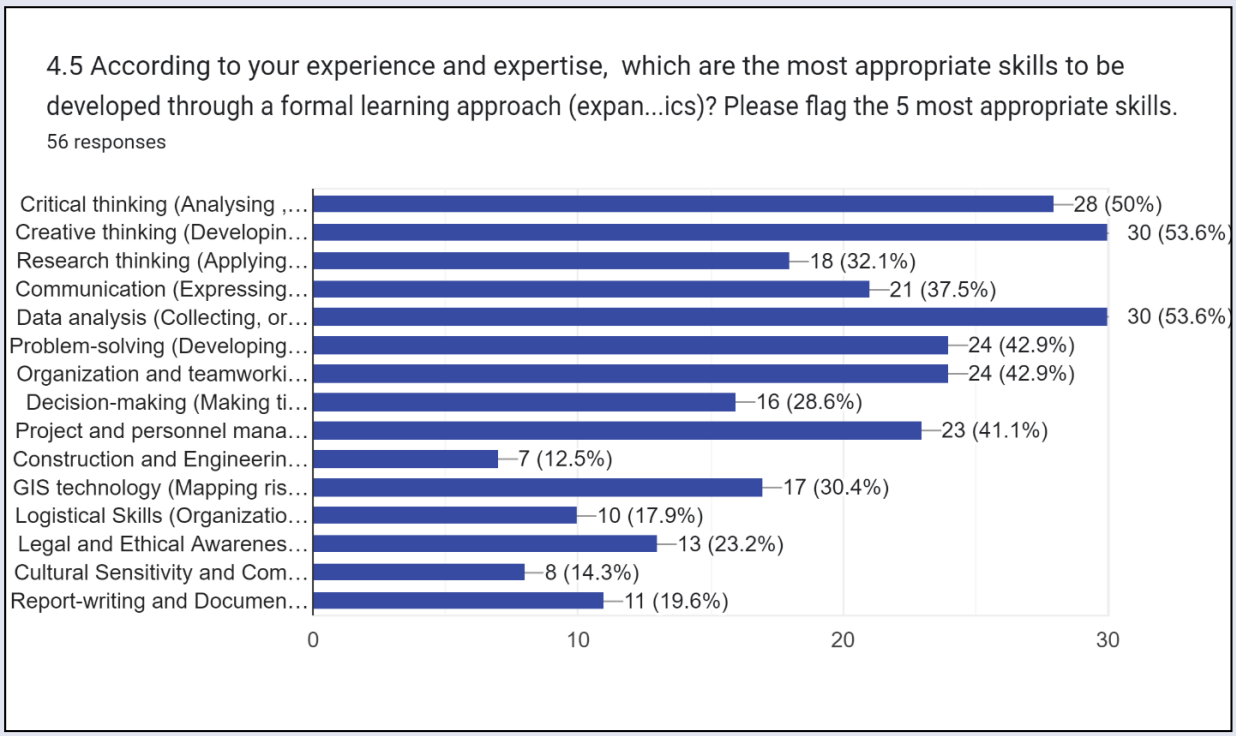

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Figure 66. Skills to be developed through a formal learning approach (input from Greece).

According to stakeholders, **problem-solving** (Developing effective and efficient solutions to address issues in risk-prone areas and disaster-related situations.), which involves developing effective and efficient solutions to address issues in risk-prone areas and disaster-related situations, is considered the most appropriate skill to be developed through problem-based learning, as indicated by 58.9% of respondents.

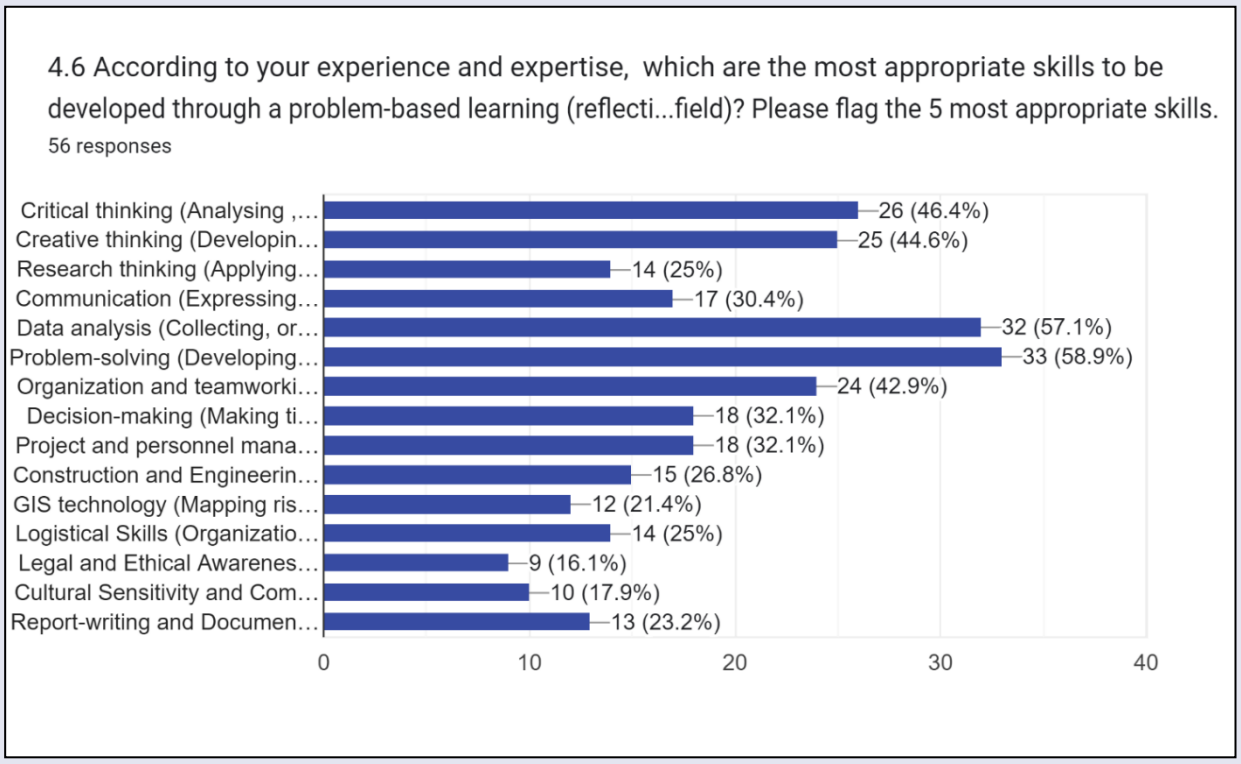

Figure 67. Skills to be developed through a problem-based learning (input from Greece).

Organisation and teamwork, which encompasses planning, coordinating, or implementing multiple elements at different levels of the DRM chain, is considered the most relevant skill to be developed through a learning-by-doing, learning-through-action, or experiential learning approach, according to 64.3% of stakeholders. In second place is **data analysis** (50%).

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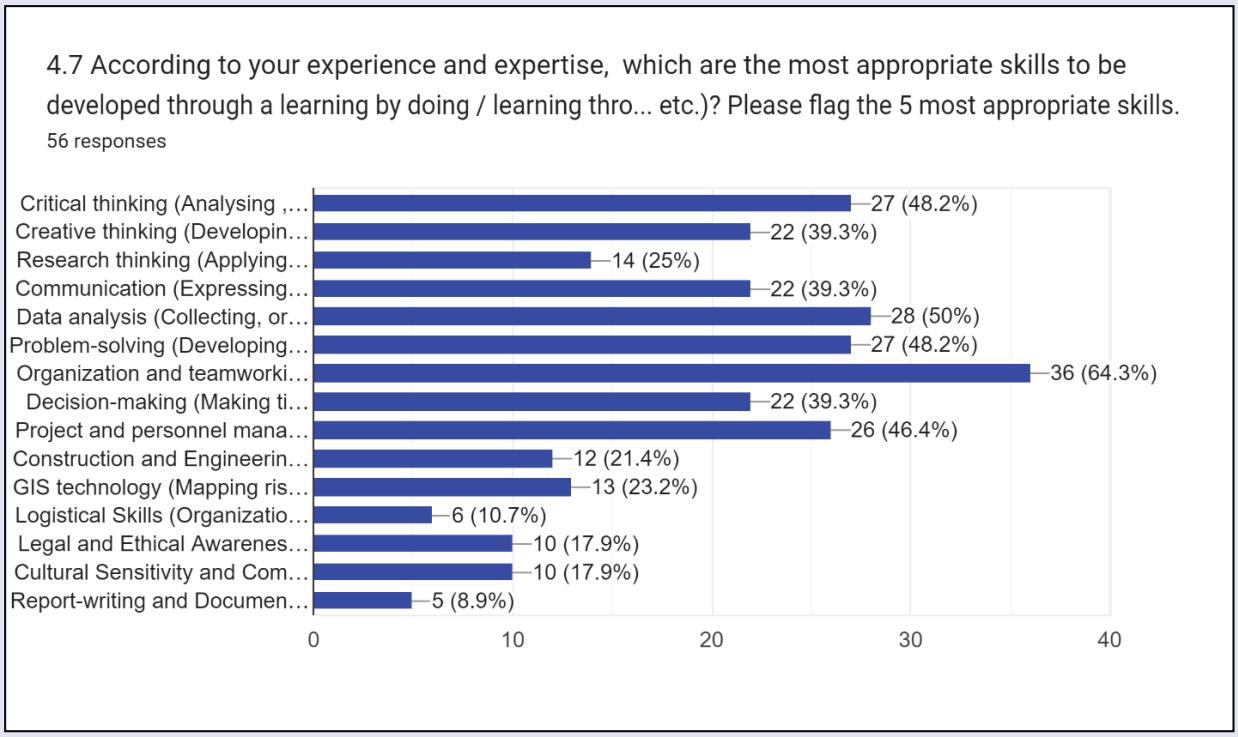

Figure 68. Skills to be developed through a learning by doing or other approach (input from Greece).

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Questionnaire answers from Italy

A total of 42 responses from Italian stakeholders have been collected.

A. Personal data and role in the DRM (Disaster Risk Management)

In terms of gender distribution, a slight majority was represented by males (57%), while females accounted for 43%. Regarding the highest degree held by the respondents, the majority (62.1%) held a master's degree. The following degrees were also represented: doctorate degree (23.8%), college graduate (7.1%), high school graduate (4.8%), and professional degree (2.4%).

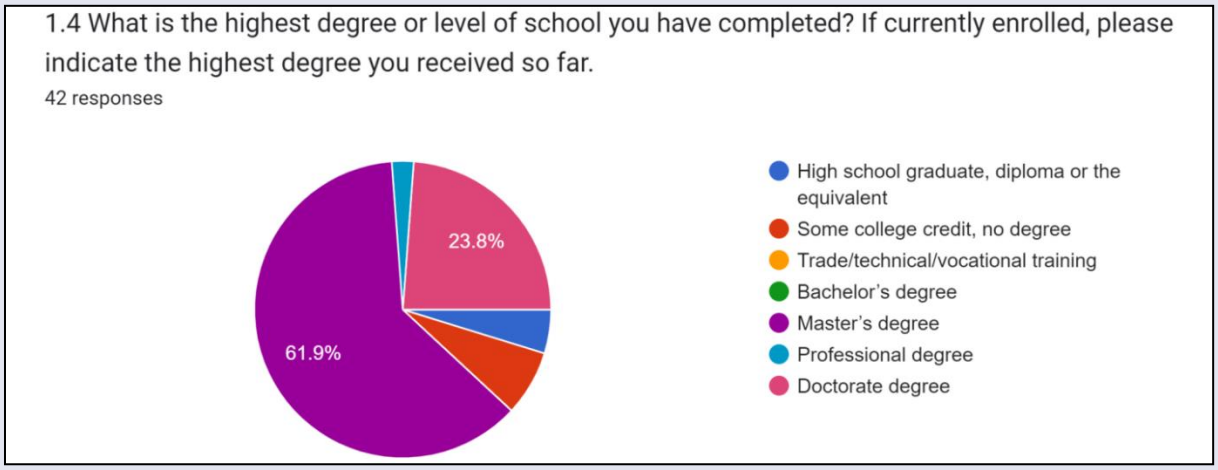

Figure 69. Education level of the respondents from Italy.

The majority of participants are professionals such as architects, engineers, geologists, and planners (35.7%), followed by policymakers at the local and/or national level (23.8%), and academics / researchers focused on civil protection and disaster risk management topics.

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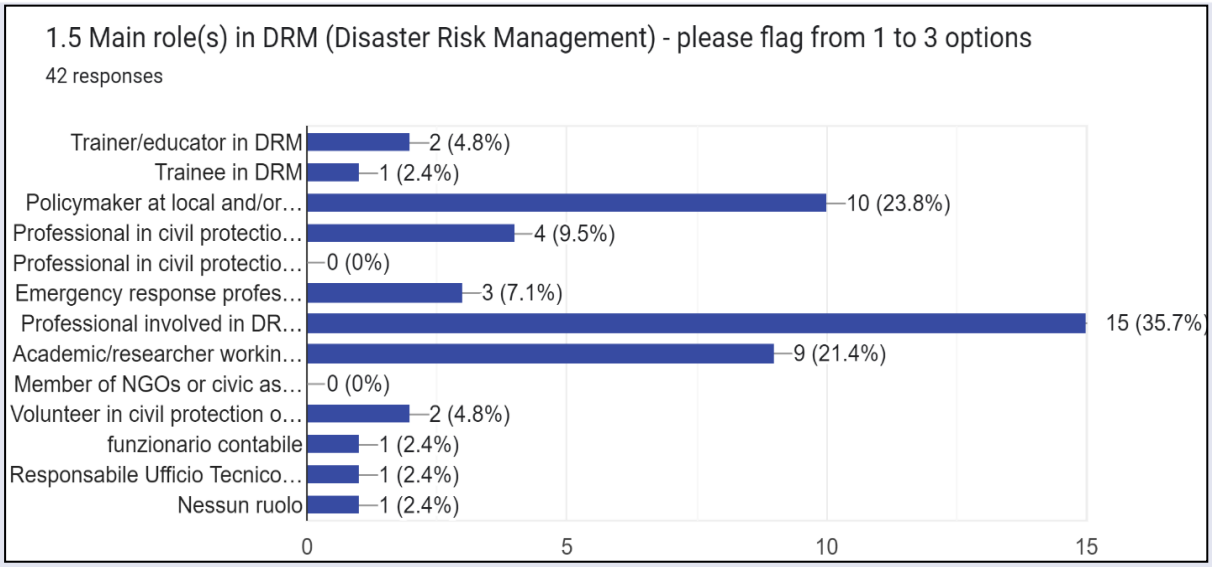

Figure 70. Role of experts from Italy responded to the online survey.

Italian stakeholders have a wide range of experience in DRM. This pie chart illustrates that among the Italian respondents there are both newcomers to the field and seasoned professionals with years of experience. This remarkable diversity will greatly enhance the next stages of the DRM-FRAME project.

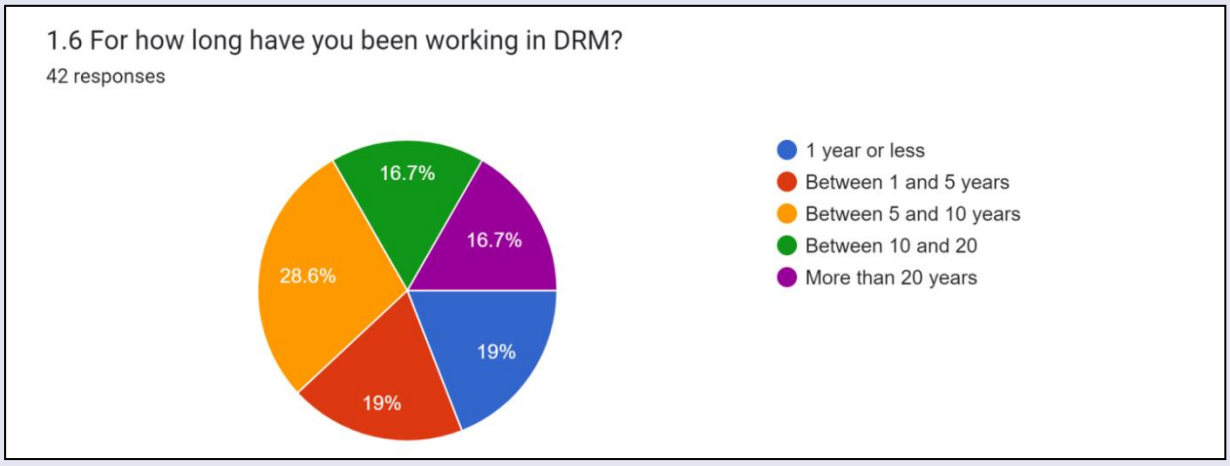

Figure 71. Years of experience of the respondents to the survey (Italy).

81% of the respondents work in public institutions. The territorial jurisdiction of these institutions is primarily local (40.5%), with participants coming from national institutions in second place (33.3%) and those from regional institutions in third position (26.2%).

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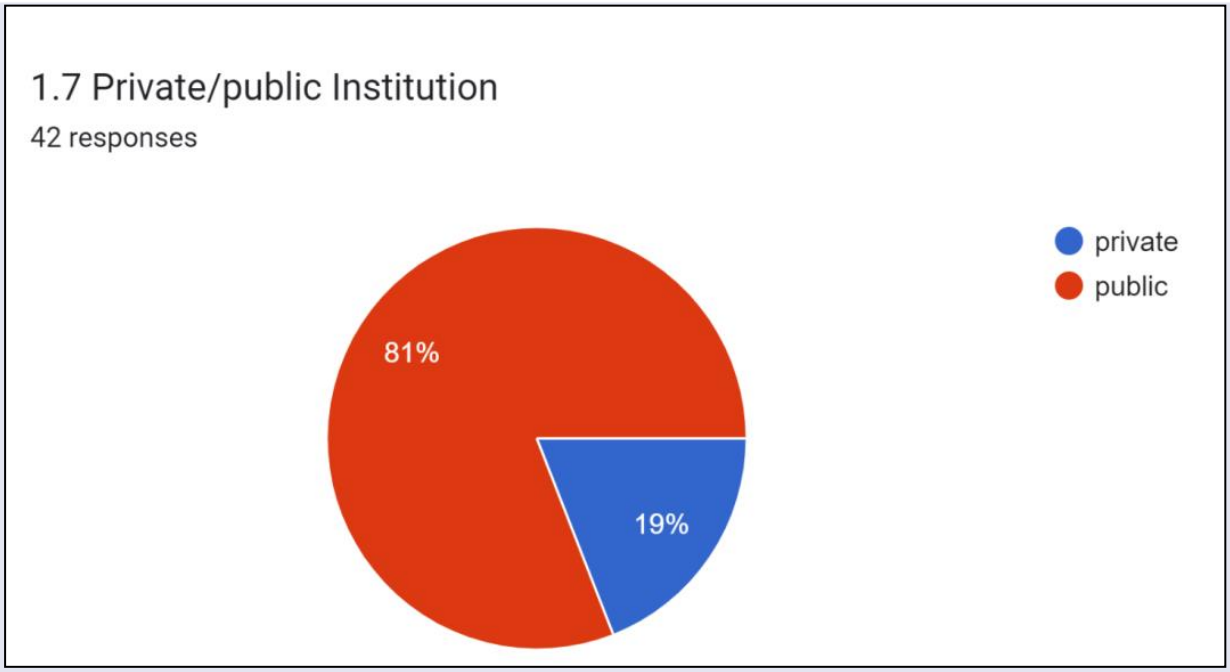

Figure 72. Type of organizations of the respondents from Italy.

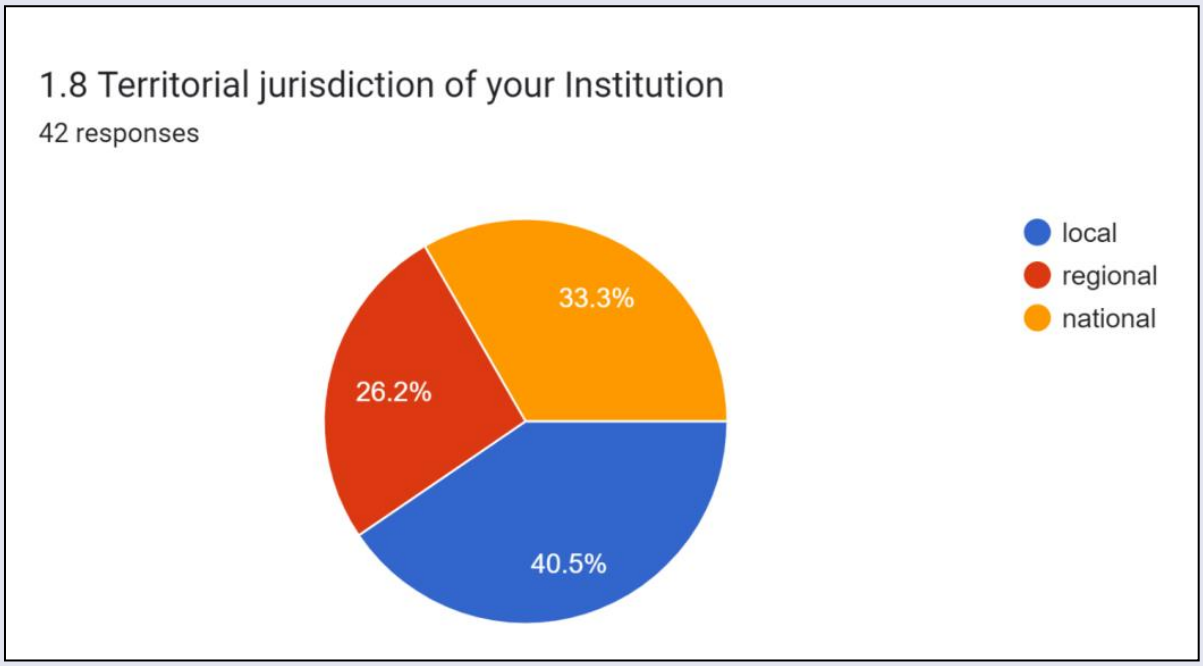

Figure 73. Territorial jurisdiction of the organizations of the Italian respondents.

From their responses, we found that most Italian stakeholders have substantial knowledge and experience in managing disasters such as earthquakes and floods. This is not coincidental, given that a

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large portion of Italy is seismically active and the overall geomorphology of the country is quite rough and traversed by numerous rivers.

In stakeholders' opinion, earthquakes, floods and landslides are posing the main threats in their working area.

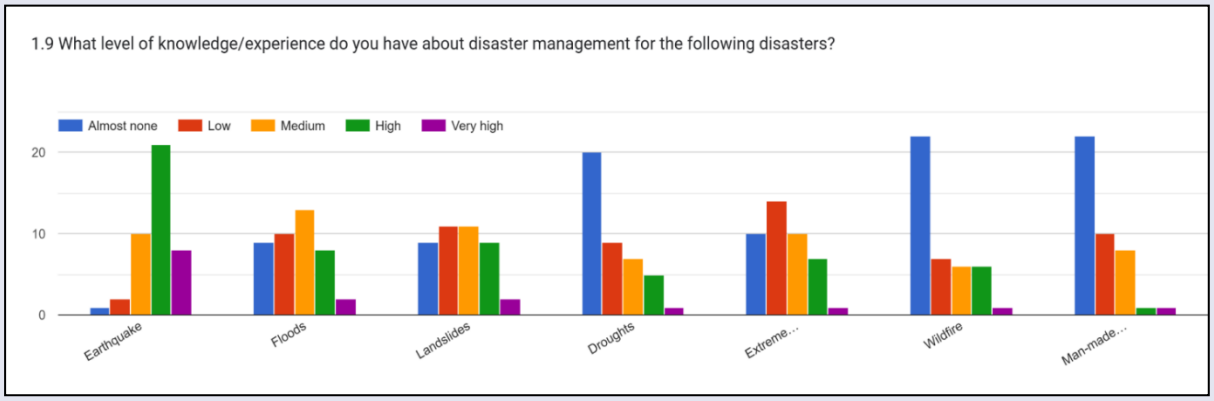

Figure 74. Level of expertise of respondents from Italy per disaster type.

B. Current practices in DRM (Disaster Risk Management)

By asking our stakeholders which actors are primarily involved in prevention, mitigation and preparedness activities during the **pre-disaster phase**, it resulted that policymakers at the local and/or national level (76%) are the most crucial players in this respect. They also consider professionals in civil protection (66.7%) and emergency response professionals, such as firefighters (45%), to be important in this phase.

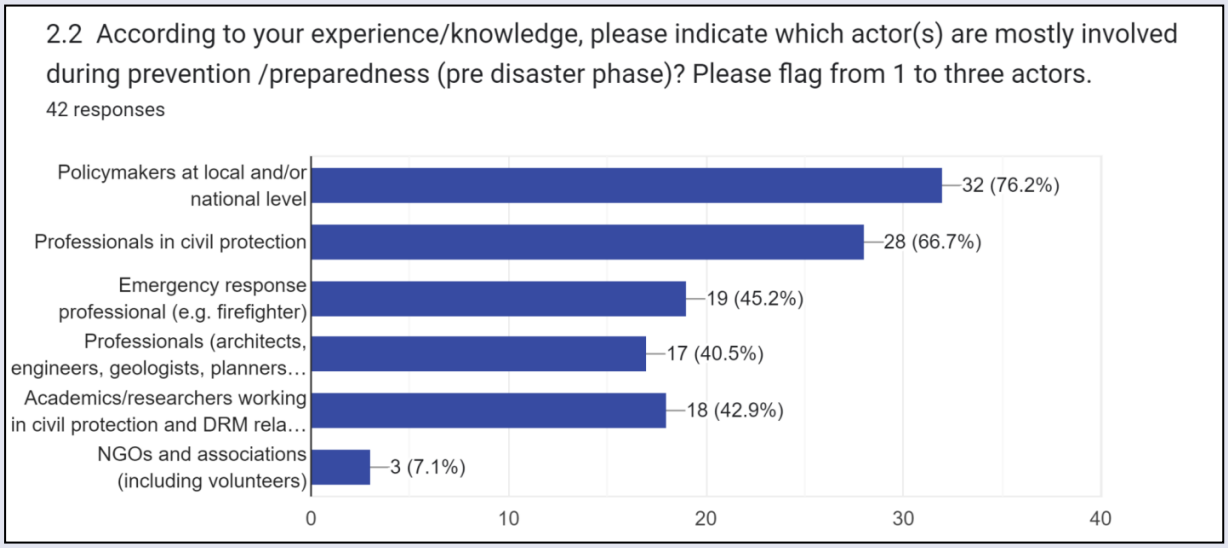

Figure 75. Actors involved in prevention and preparedness phase according to the experts from Italy.

During the **response phase (or emergency phase-which is the aftermath of the disaster)**, stakeholders believe that the primary responsibility lies within emergency response professionals, such as firefighters (93%), and professionals in civil protection (81%).

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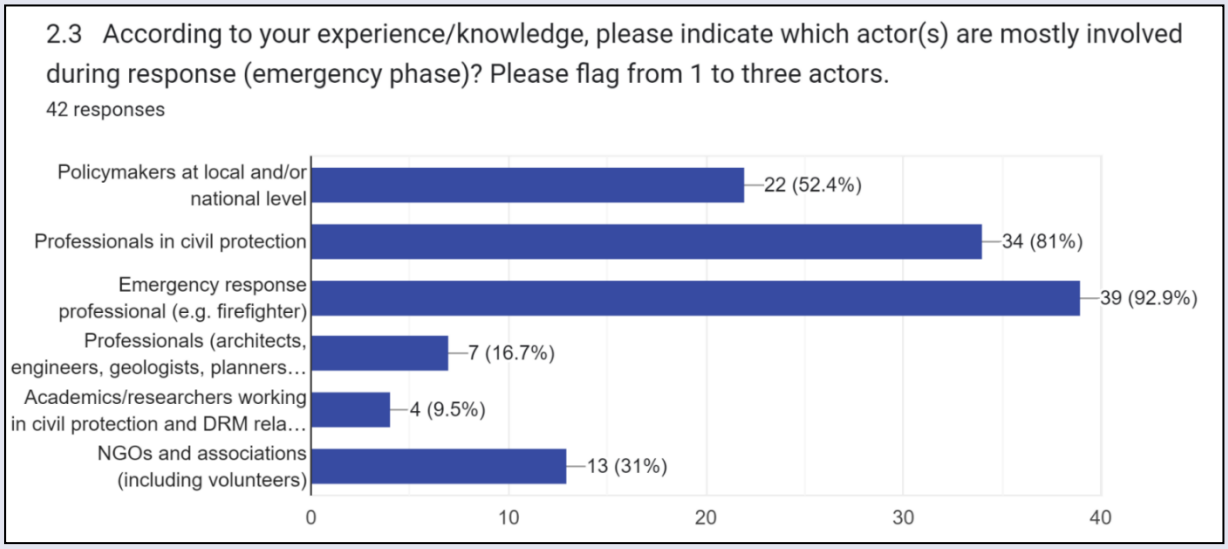

Figure 76. Actors involved in the response phase according to the experts from Italy.

According to participants, during the **rehabilitation / recovery phase** (post-disaster emergency phase), professionals such as architects, engineers, geologists, and planners are the most involved, with 83% of respondents indicating their significant role. Additionally, policymakers are also considered crucial figures during this phase, with 81% of respondents acknowledging their importance.

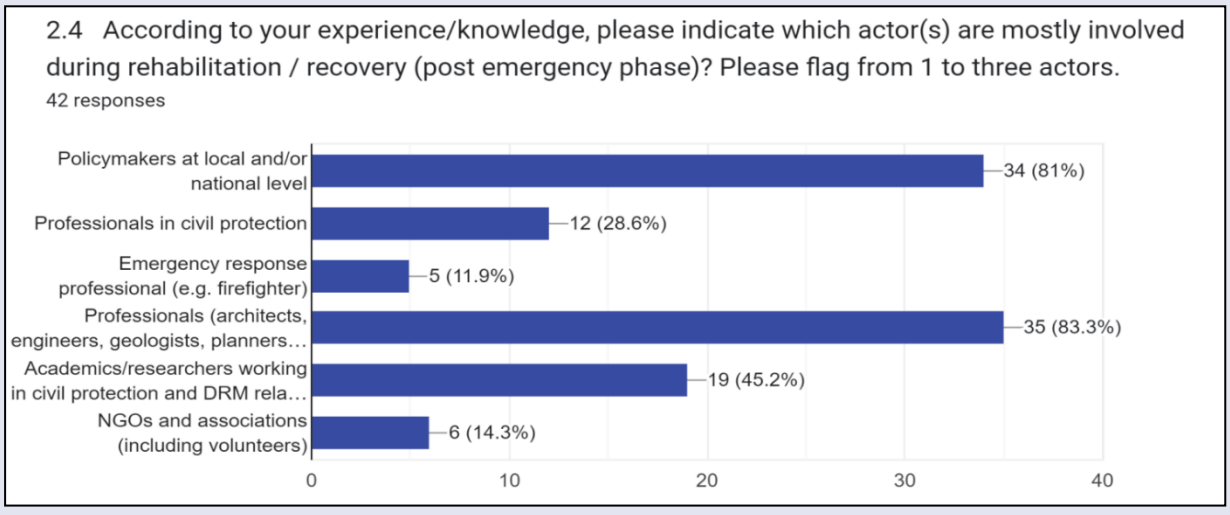

Figure 77. Actors involved in recovery and rehabilitation phase according to the experts from Italy.

The main critical aspects or weaknesses of the procedures / practices in DRM are subject to debate, with various perspectives among the 42 responders. However, most of them highlighted concerns about heavy bureaucracy with slow timing and a lack of coordination between researchers and civil protection professionals, as viewed especially by institutional representatives. These issues result in a significant lack of planning.

Stakeholders have recommended various effective practices in DRM. These include collaboration in drafting organic rules and promoting the adoption of design solutions that replicate ecosystem services provided by natural systems integrated in resilient, multifunctional landscapes. Additionally, planning

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and education are highlighted as key aspects, suggesting a remarkable need for preparedness and knowledge dissemination.

C. Current educational offer in DRM (Disaster Risk Management)

Stakeholders from various professional backgrounds in the survey have gained their knowledge of DRM at different stages throughout their careers. The majority of respondents have also acquired their knowledge directly through practical experience in the field.

Participants in our survey believe that both master's degrees (64%) and professional degrees (45%) are crucial for addressing DRM. Additionally, technical or vocational training (35%) is also considered to play an important role in DRM efforts.

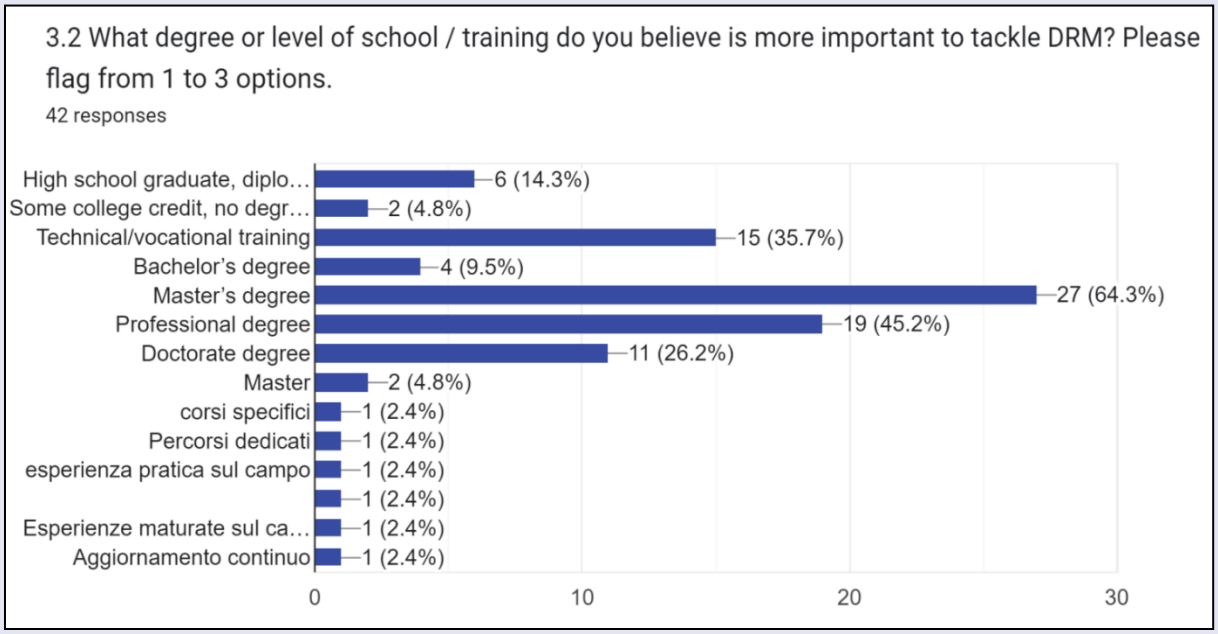

Figure 78. Optimal educational level for personnel to tackle DRM according to experts from Italy.

Actually, only 28% of survey participants are aware of any educational and/or professional training programs in DRM at the regional, national, or international level. Few participants could mention indeed any training programs in DRM. Some of these are provided by the Centre for Training and Research on Reduction of Seismic Risk (ROSE) in Pavia (inside the University School for Advanced Studies of Pavia - IUSS), the Research Consortium REDI (Reducing risks of natural DIsasters in Camerino), and the Polytechnic University of Marche Region (with the Bachelor's and Master's Degrees in Environmental Sciences and civil protection).

Informal training practices are deemed to be highly significant for stakeholders, with 52% acknowledging their importance as a training and educational tool.

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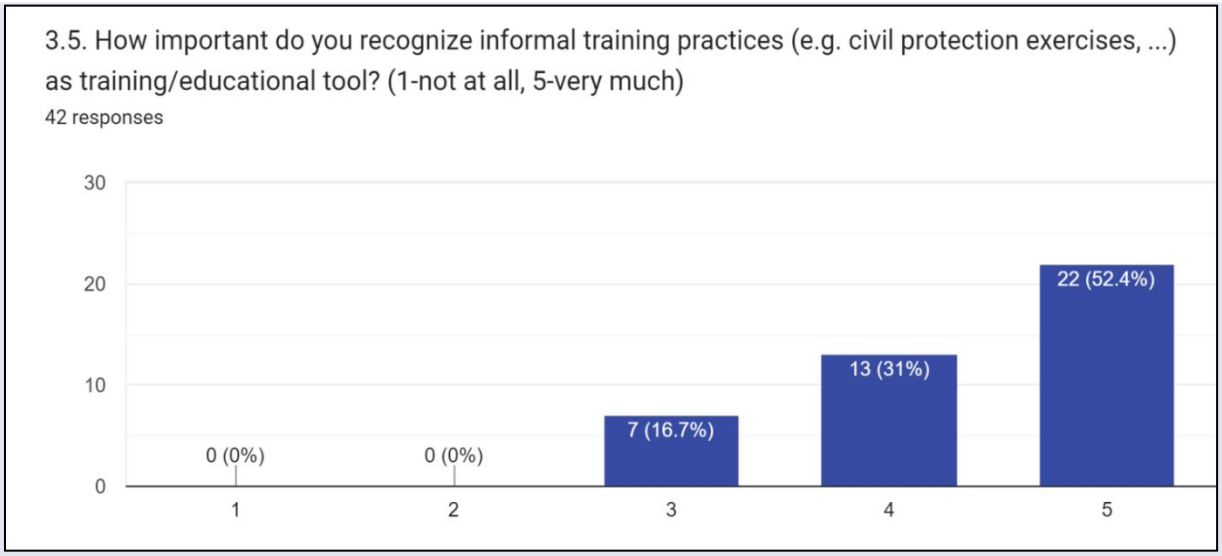

Figure 79. Level of importance of informal training practices as training/educational tool according to the Italian experts.

Remarkably, as a matter of fact, only 12% of attendees have often participated in civil protection exercises, and up to 35% of stakeholders have never attended such exercises. The rest have participated in such activities with some intermediate frequency.

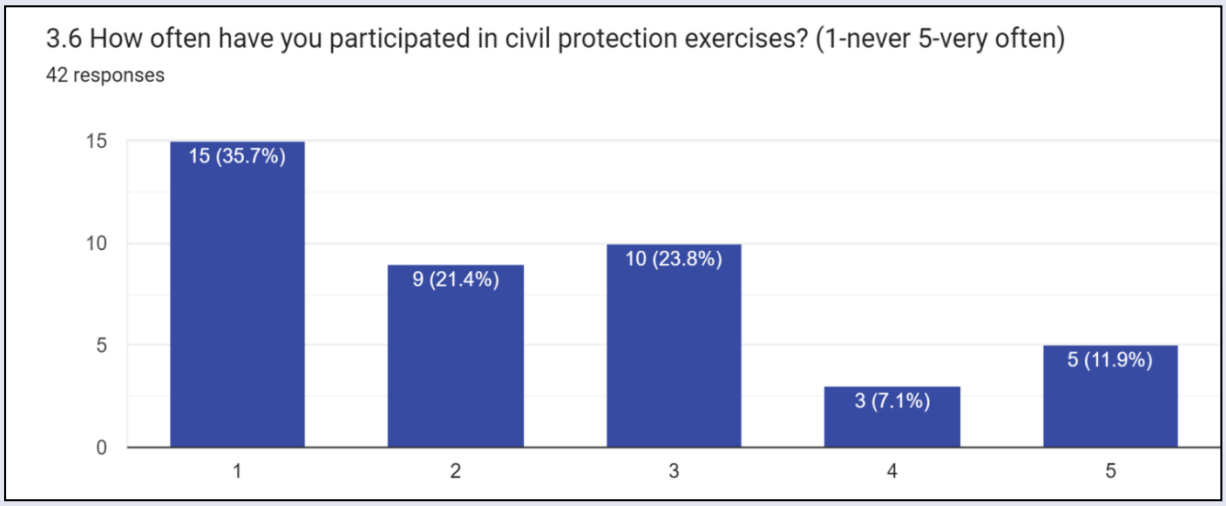

Figure 80. Frequency of participation in training exercises of the Italian respondents.

Most participants involved in civil protection exercises were primarily **observers**, (46% of the group), while some 30% of stakeholders actively participated as **players**.

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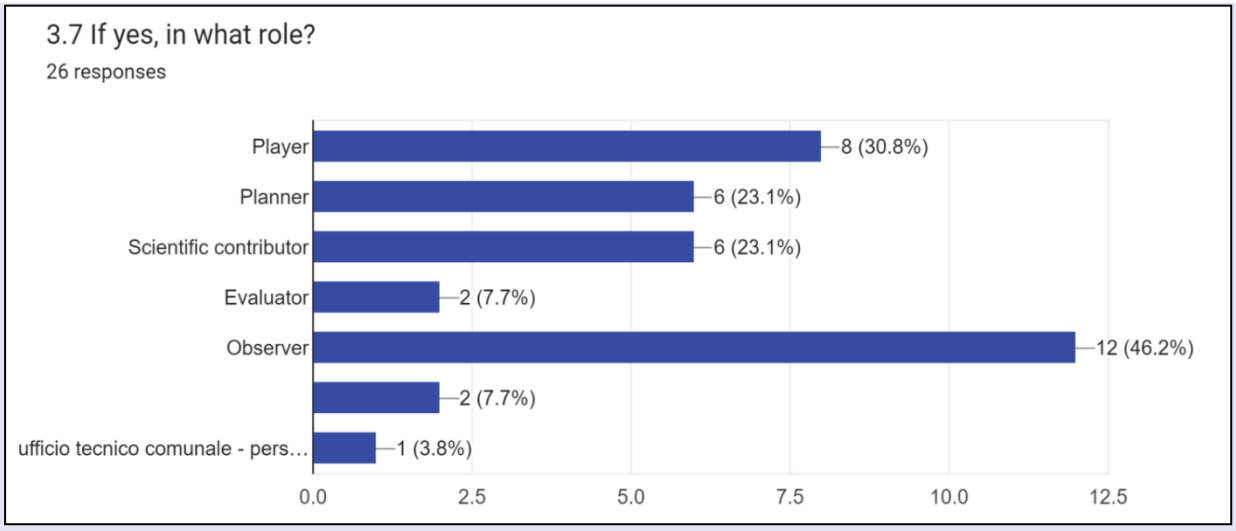

Figure 81. Role in the participation of exercises (experts from Italy).

Informal training practices, such as civil protection exercises, are mandatory as part of the training plans in their institutions for 61.9% of participants.

According to stakeholders' answers, half of their institutions never engage in informal training practices, such as civil protection exercises. 43% of participants conduct these practices 1-2 times per year.

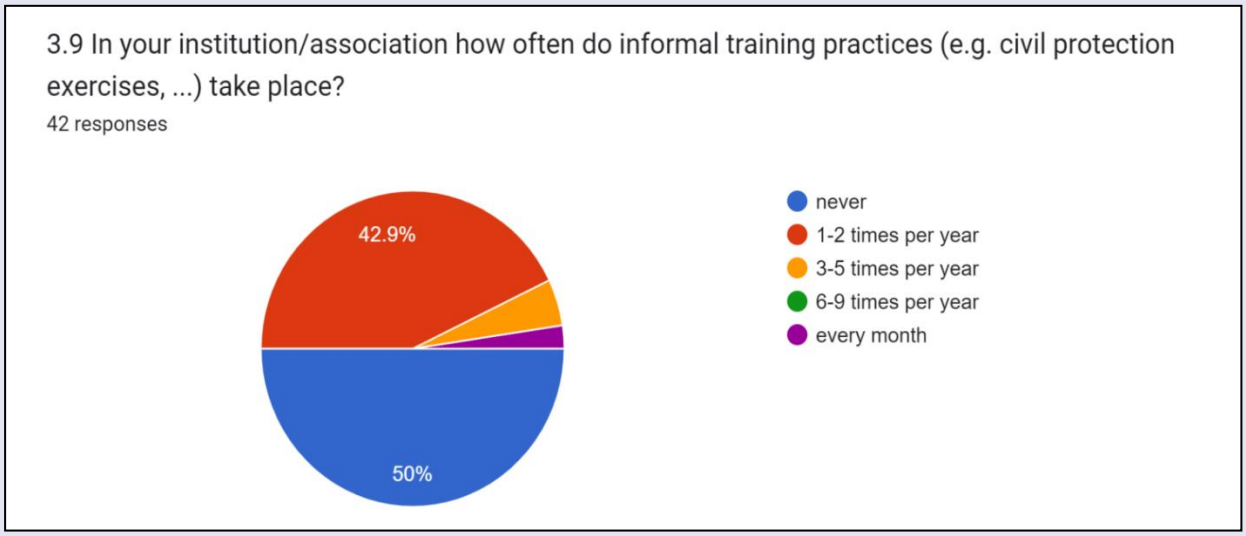

Figure 82. Frequency of informal training practices (experts from Italy).

D. Emerging required skills and emerging training needs in DRM (Disaster Risk Management)

Most participants agree that DRM requires experience, so education should include practical examples and training activities. According to stakeholders' responses, DRM likely necessitates all stakeholders acquiring specific knowledge and skills in communication and public engagement.

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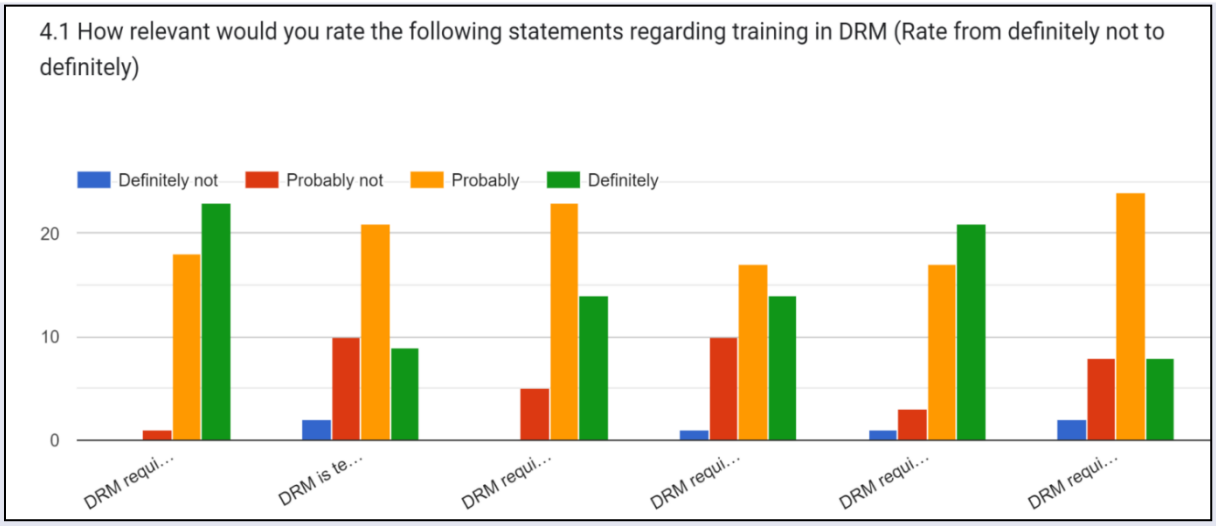

Figure 83. Training methods required in DRM according to Italian respondents.

According to stakeholders, the key competencies and skills that disaster risk education should develop and assess for prevention, mitigation and preparedness (pre-disaster phase) include primarily; **critical thinking** (59%), which involves analysing, evaluating, and synthesising information systematically and objectively, especially in multi-hazard and complex situations; and **data analysis** (52%), which is the collection, organisation, and use of relevant information to extract meaningful insights, identify patterns and support decision-making processes in risk-prone areas and disaster-related situations.

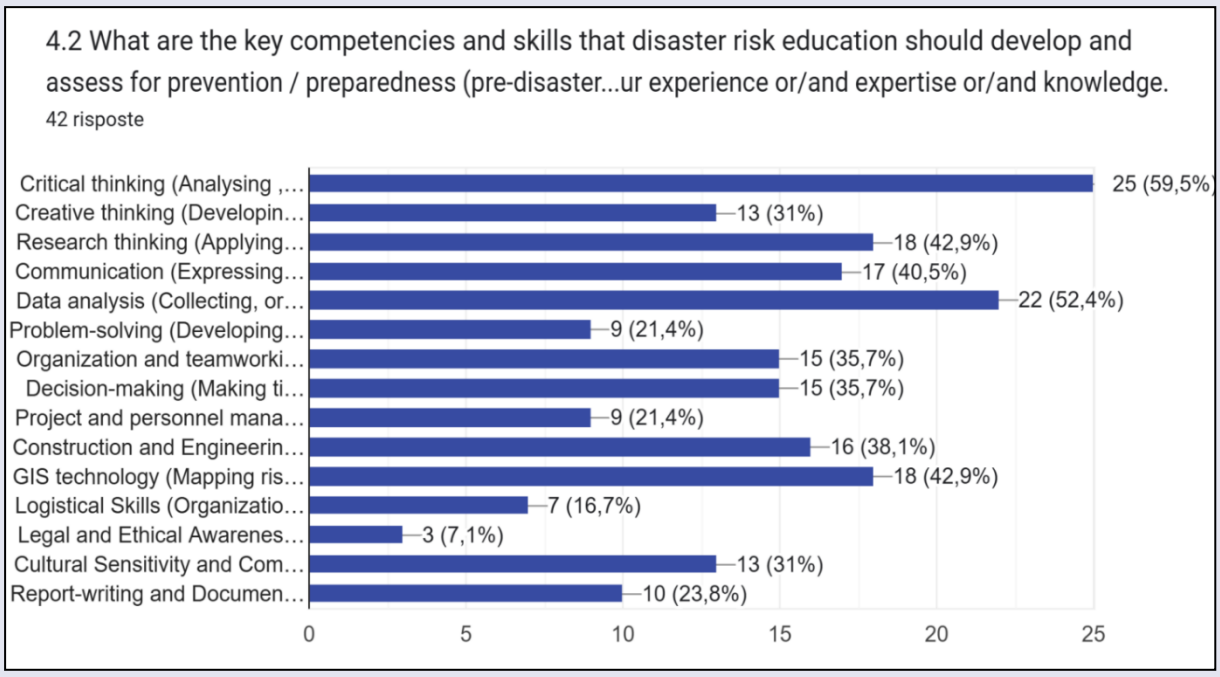

Figure 84. Key skills and competences that should be developed for the pre-disaster phase (according to experts from Italy).

As for the response (emergency phase), participants think that the key competencies and skills mostly involved are: **problem-solving** (85%), which involves creating effective and efficient solutions to address

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issues in risk-prone areas and disaster-related situation; **organisation and teamwork** (69%); and **decision-making** (59.5%).

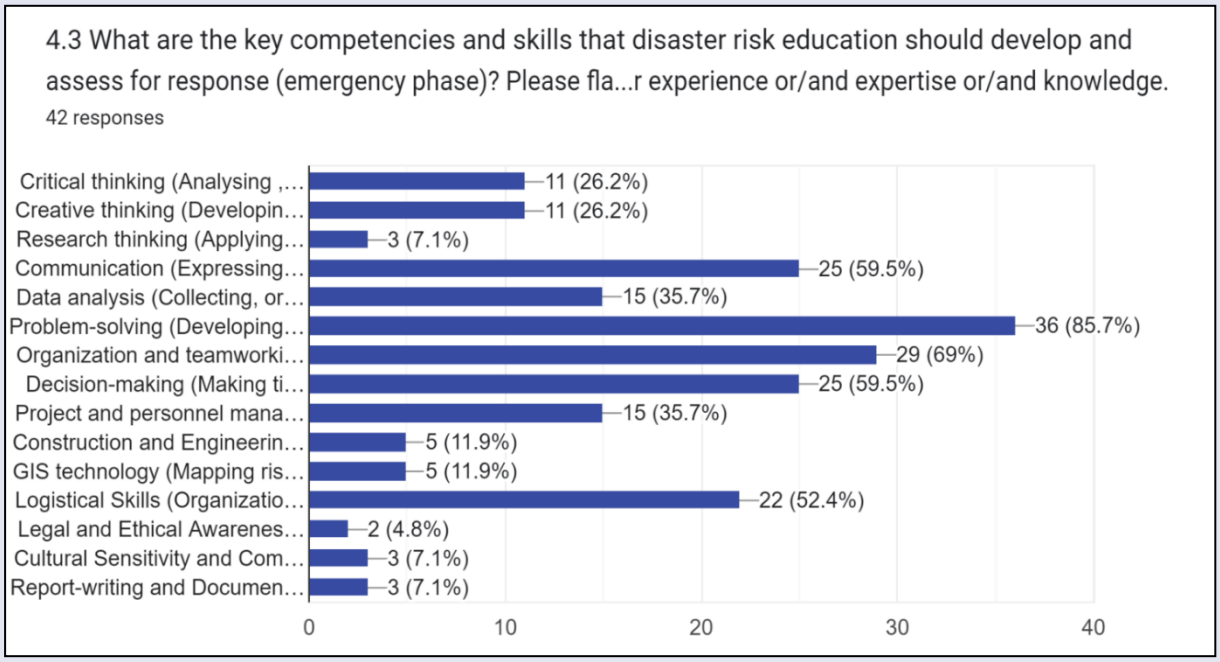

Figure 85. Key skills and competences that should be developed for the response phase (according to experts from Greece).

As for rehabilitation and recovery (post-emergency phase), stakeholders believe that **data analysis** (47%) should be primarily developed and assessed. In addition, they consider **construction and engineering** skills (45.2%) and **cultural sensitivity and community engagement** skills (45.2%) to be equally important for effective recovery efforts.

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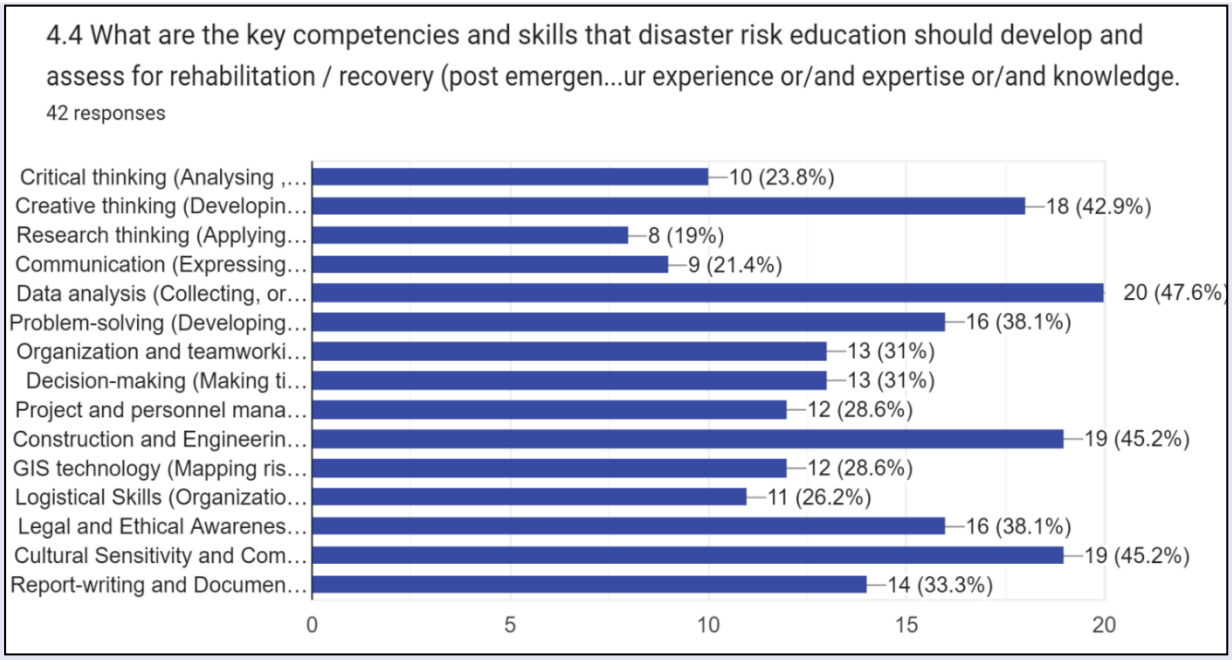

Figure 86. Key skills and competences that should be developed for the recovery phase (according to experts from Italy).

According to stakeholders' experience and expertise, **data analysis** (67%) is the most appropriate skill to be developed through a formal learning approach. Participants' responses also indicate that **critical thinking, creative thinking**, and **research thinking** are equally important, with each being prioritised by 47.6% of respondents.

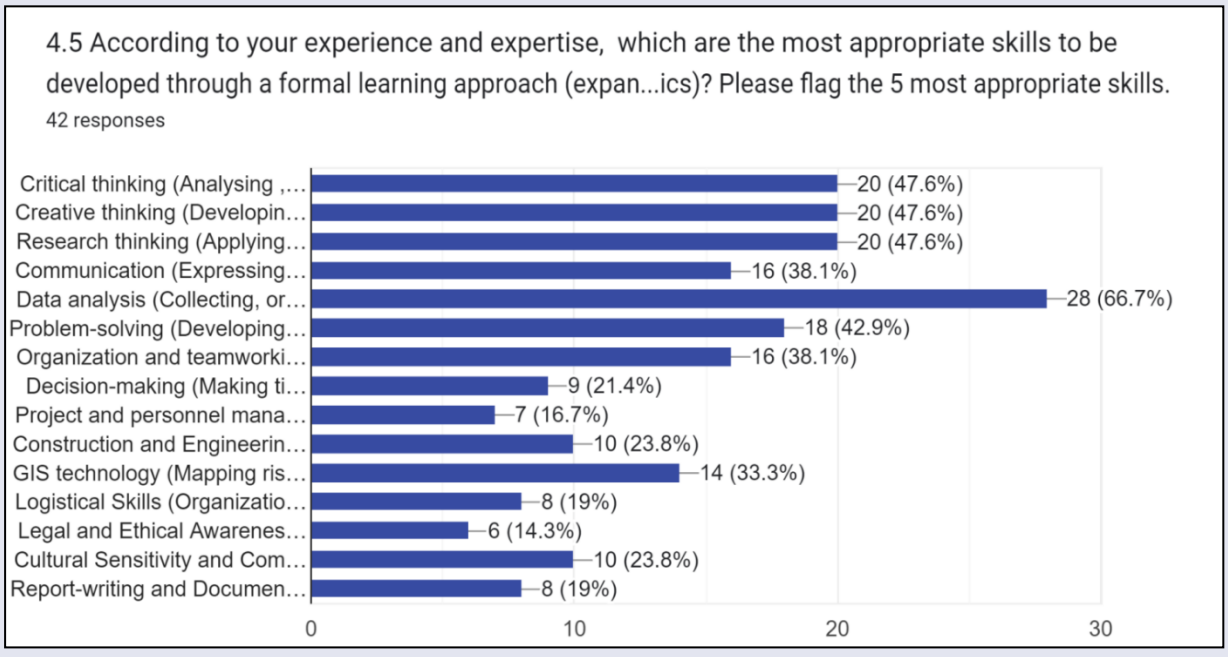

Figure 87. Skills to be developed through a formal learning approach (input from Italy).

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Stakeholders believe that **problem-solving** (67%), which involves developing effective and efficient solutions for issues in risk-prone areas and disaster-related situations, is the primary skill that should be developed through problem-based learning. They consider **critical thinking** (59.5%) to be the second most important skill, followed by **data analysis** (54%) and **decision-making** skills (50%).

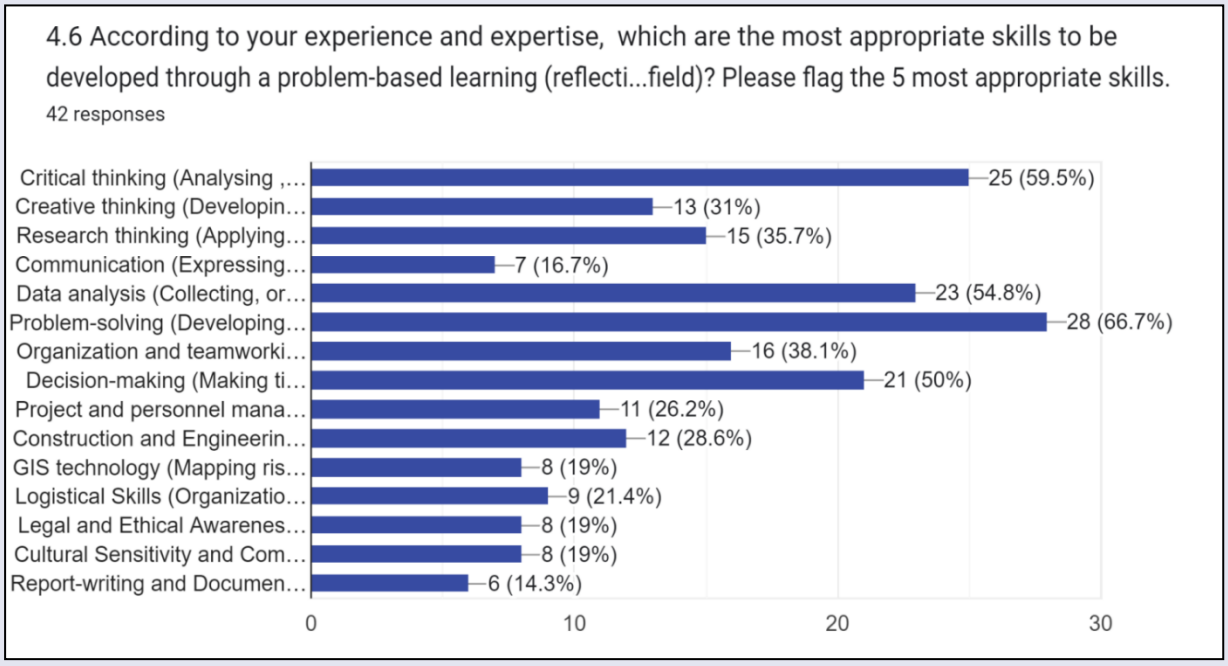

Figure 88. Skills to be developed through a problem-based learning (input from Italy).

Stakeholders believe that **organisation and teamwork** (67%), which involves planning, coordinating, and implementing multiple elements at different levels of the DRM chain, is the most appropriate skill to be developed through a learning-by-doing, learning-through-action, or experiential learning approach. They also think that **problem-solving** (52.4%) benefits from this approach, along with **decision-making** and **project and personnel management and coordination** skills (both 45.2%).

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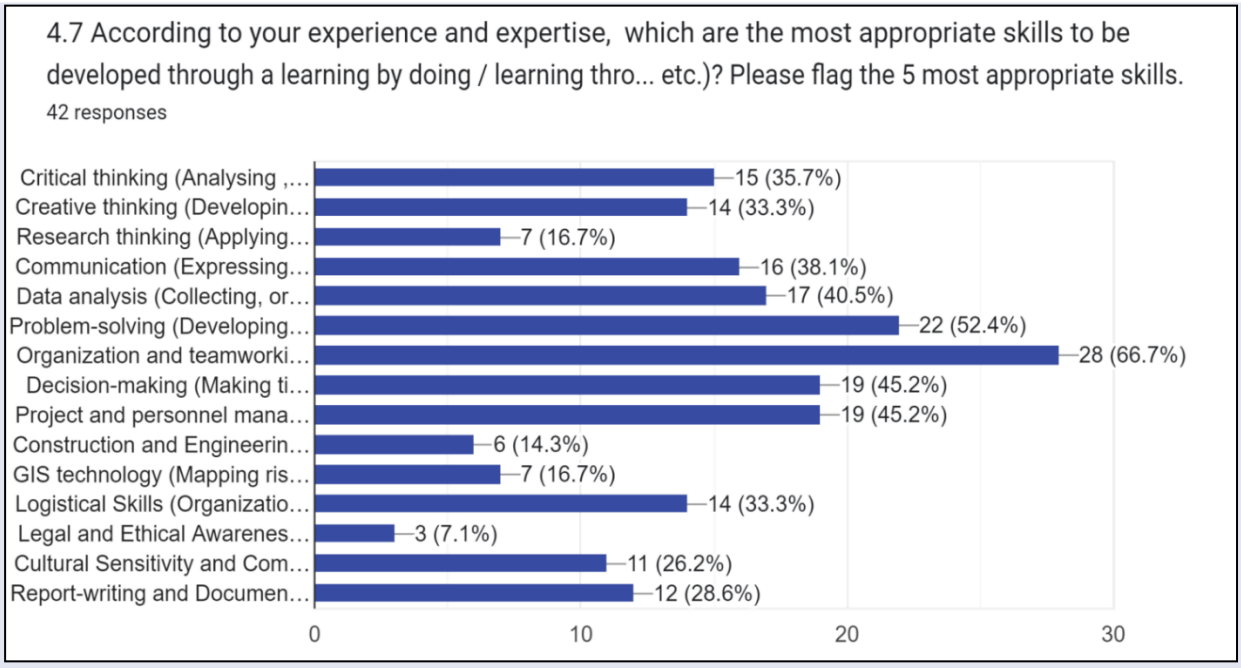

Figure 89. Skills to be developed through a learning by doing or other approach (input from Italy).

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Questionnaire answers from Slovakia

A total of 47 responses from Slovakian stakeholders have been collected.

A. Personal data and role in the DRM (Disaster Risk Management)

Only 1 stakeholder is from the Czech Republic. Most participants from Slovakia are between the ages of 18-24, comprising 40% of the respondents.

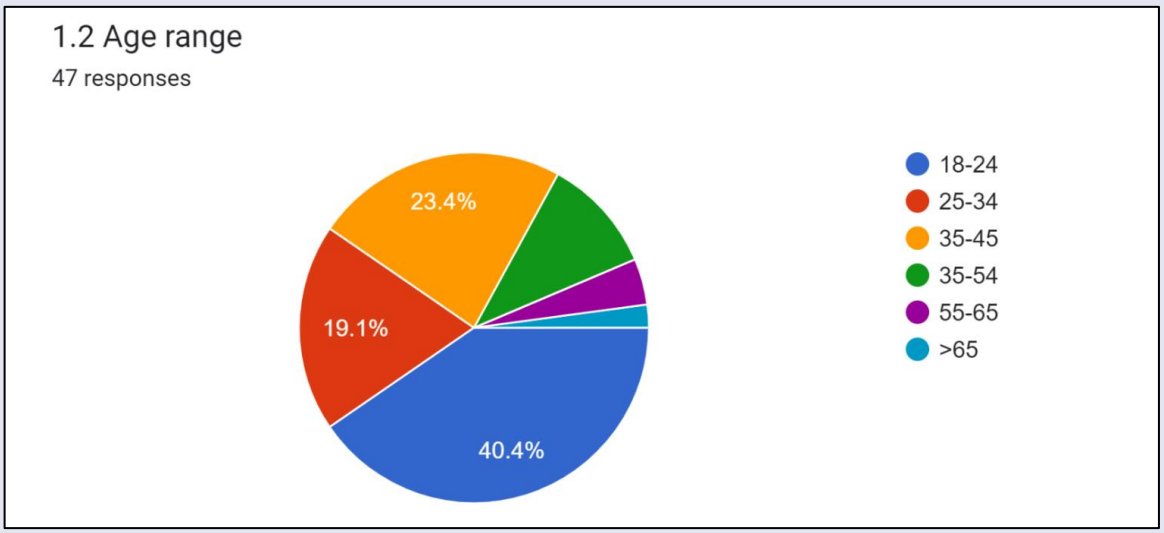

Figure 90. Graph depicting the age class of the respondents from Greece.

In terms of gender distribution, there was a slight majority of males represented, accounting for 61.7% of the respondents, while females accounted for 38.3%.

38.3% of respondents hold a high school diploma or its equivalent, while 31.9% of participants have master's degree diplomas.

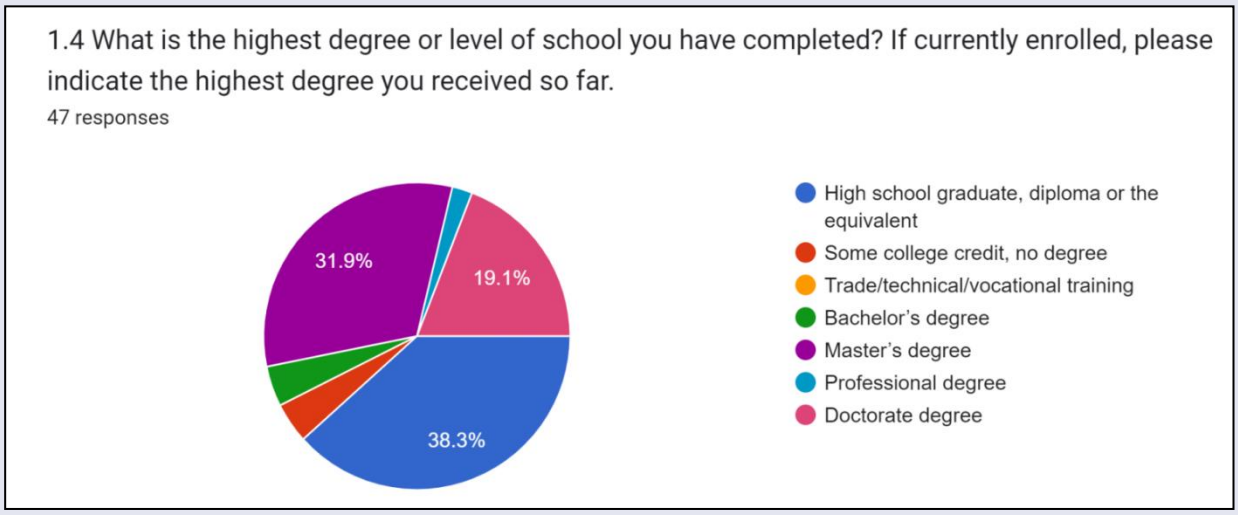

Figure 91. Education level of the respondents from Slovakia.

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Members of NGOs or civic associations directly/indirectly related to emergencies (31.9%) and volunteers in civil protection or other associations involved in emergencies (31.9%) make up the majorities in the questionnaires.

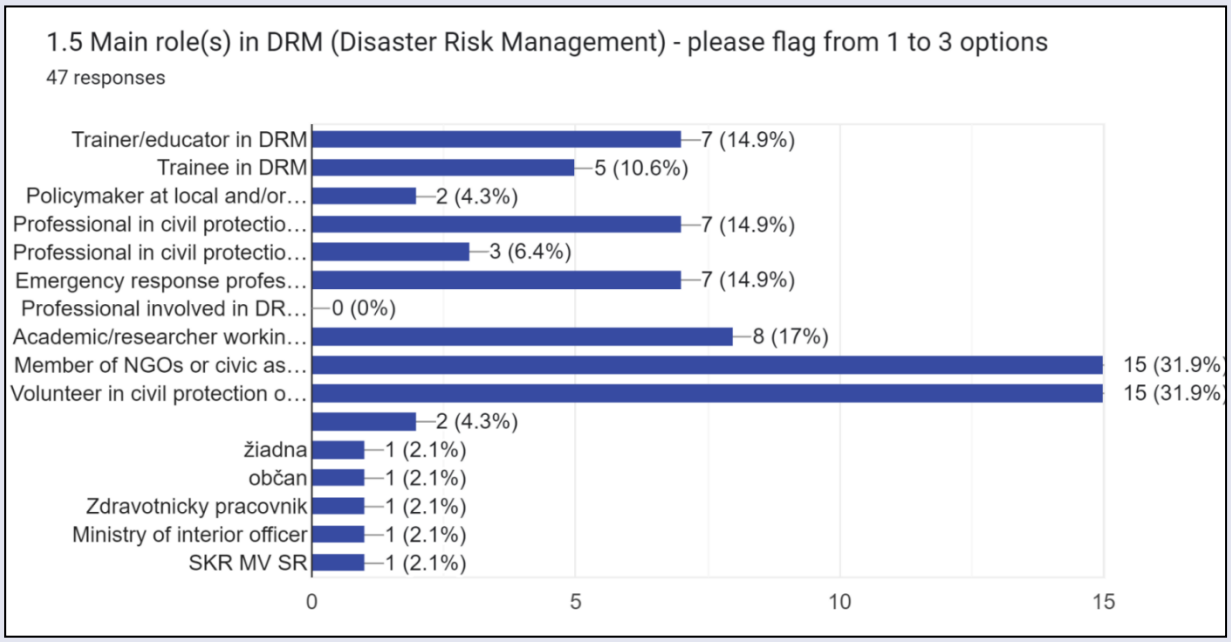

Figure 92. Role of experts from Slovakia responded to the online survey.

29.8% of Slovakian participants have been working between 1 and 5 years in DRM. This suggests that the majority of participants are relatively new to DRM, while 21.8% of them have been working between 10 and 20 years.

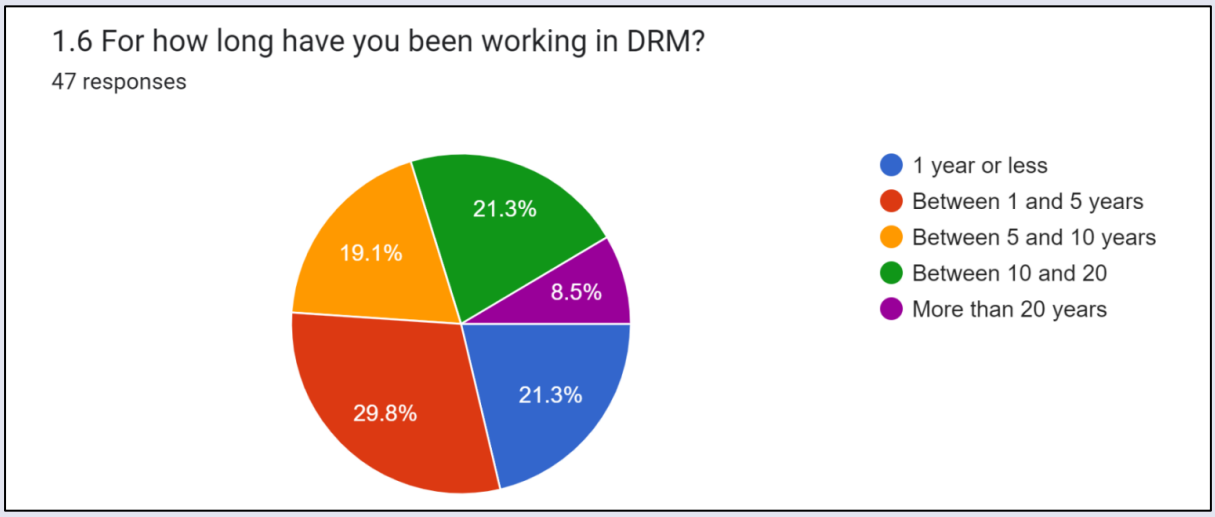

Figure 93. Years of experience of the respondents to the survey (Slovakia).

The vast majority of participants work in public institutions (87.2%), with 40.4% of these institutions being national. The participants' level of knowledge and experience about disaster management primarily focuses on droughts, floods and Extreme meteorological events (windstorms, hailstorms, …).

B. Current practices in DRM (Disaster Risk Management)

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According to stakeholders, droughts, floods, and extreme meteorological events are identified as the highest level of risk in their respective work areas.

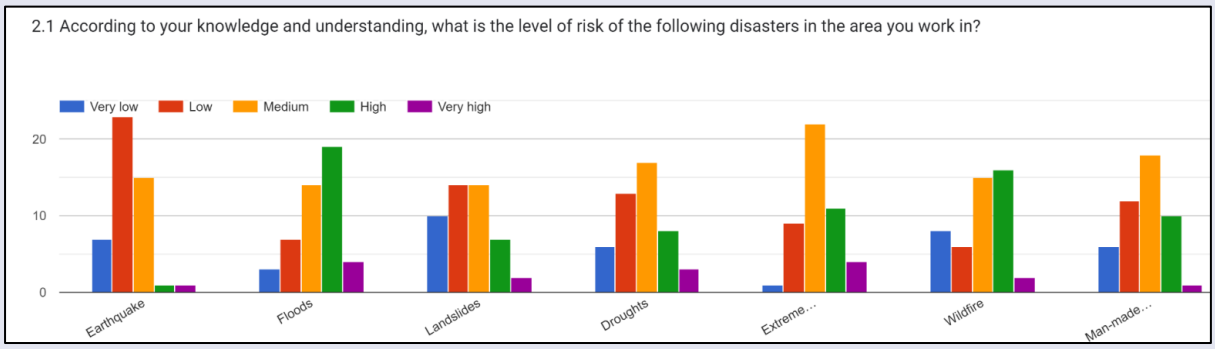

Figure 94. Most significant risks for Slovakia based on the answers given by the experts

Professionals in civil protection (66%) and emergency response professionals, such as firefighters (63.8%), play important roles during the **prevention, preparedness and mitigation** (pre-disaster) phase.

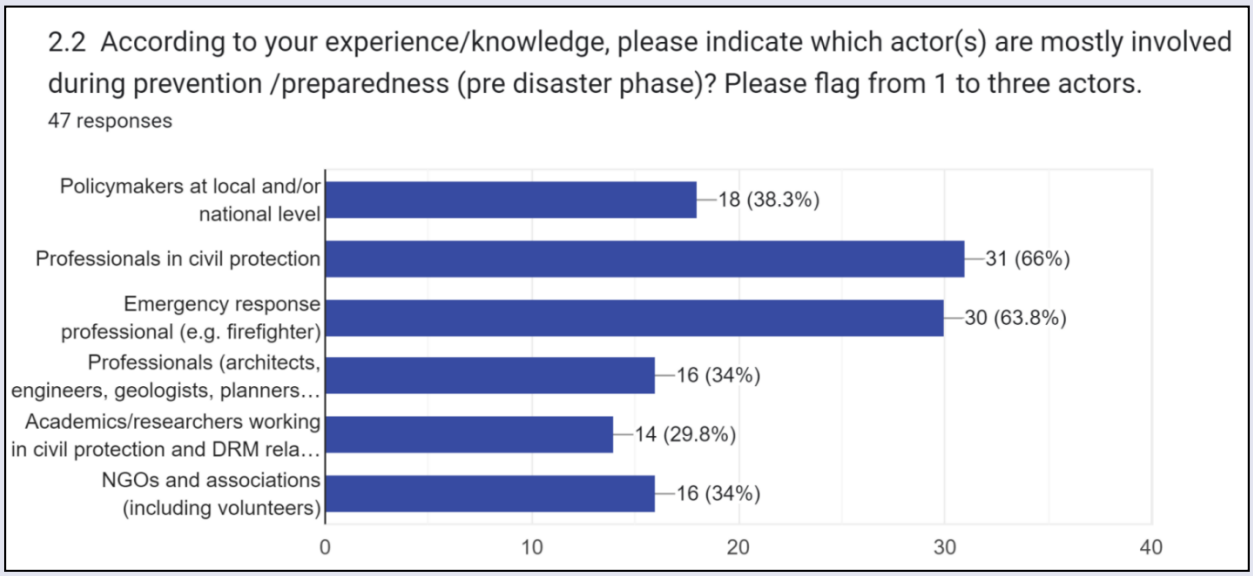

Figure 95. Actors involved in prevention and preparedness phase according to the experts from Slovakia.

Participants believe that during **the response** (emergency) phase, emergency response professionals, such as firefighters, are mostly involved (97%). They also consider professionals in civil protection to be important in this phase (68.1%).

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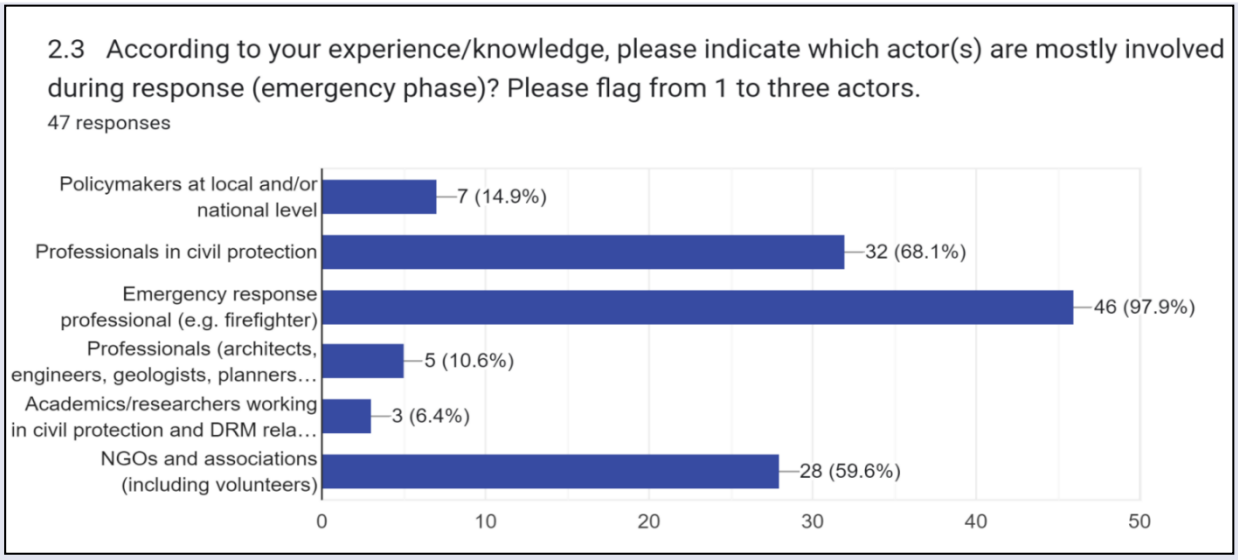

Figure 96. Actors involved in the response phase according to the experts from Slovakia.

According to stakeholders, the rehabilitation and recovery (post-emergency) phase is primarily led by professionals such as architects, engineers, geologists, and planners (55.3%), as well as policymakers at the local and/or national level (46.8%).

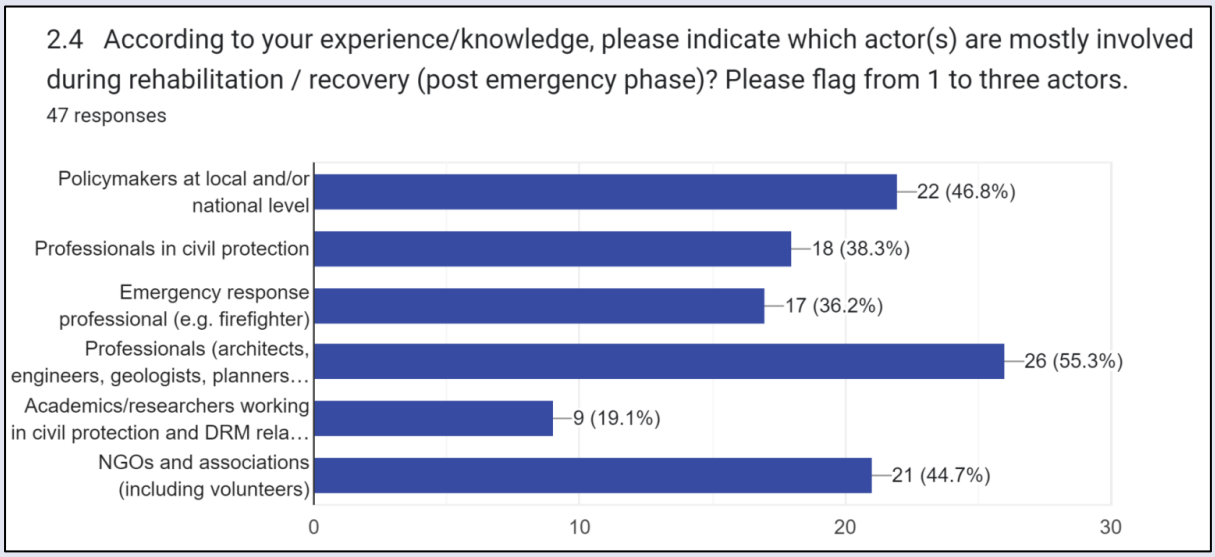

Figure 97. Actors involved in recovery and rehabilitation phase according to the experts from Slovakia.

Slovakian stakeholders believe that the main critical aspects or weaknesses in the procedures and practices of DRM are connected to problematic legislation (some of which need amendments) and procedures. They also point out inadequate training, insufficient communication between organizations, the ignorance of volunteers during interventions, lack of cooperation among actors, non-communication and non-sharing of information, late reactions from the state, among other issues.

They recommended Fault Tree Analysis (FTA) and Event Tree Analysis (ETA) methods, along with analytical and deductive input methods, exercises, preparation, sufficient funding, simulations, and adequate supplies.

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Additionally, they emphasized the importance of training for cooperation and communication between the intervening components as best practices in DRM.

E. Current educational offer in DRM (Disaster Risk Management)

Most stakeholders acquired the majority of their knowledge on DRM during their graduate studies (Master's degree or similar) and post-graduate studies (PhD or similar). According to participants, a Master's degree is the most important qualification for tackling DRM, with 70% indicating its significance.

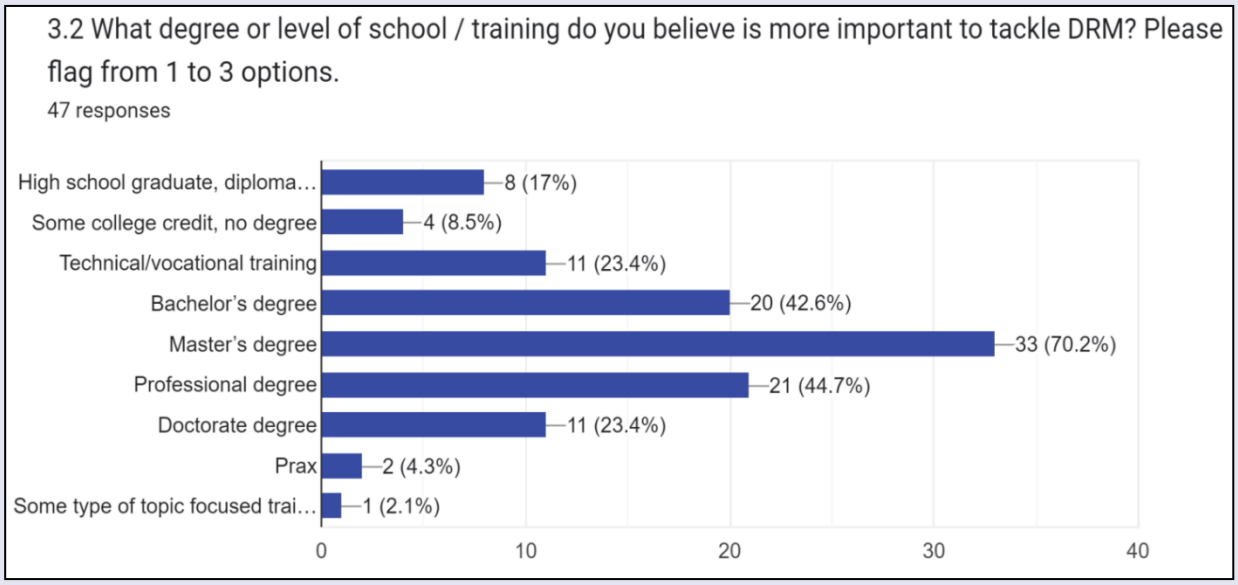

Figure 98. Optimal educational level for personnel to tackle DRM according to experts from Slovakia.

85% of participants are not aware of any regional, national, or international educational and/or professional training programs in DRM.

14.9% of stakeholders have participated in regional, national, or international educational and/or professional training programs. These programs include Crisis Management at the Faculty of Security Engineering, University of Žilina, Master's Degree in Disaster Risk Management and Climate Governance at Structuralia, University of Zilina - FBI, Red Cross, Civil Defence, and others.

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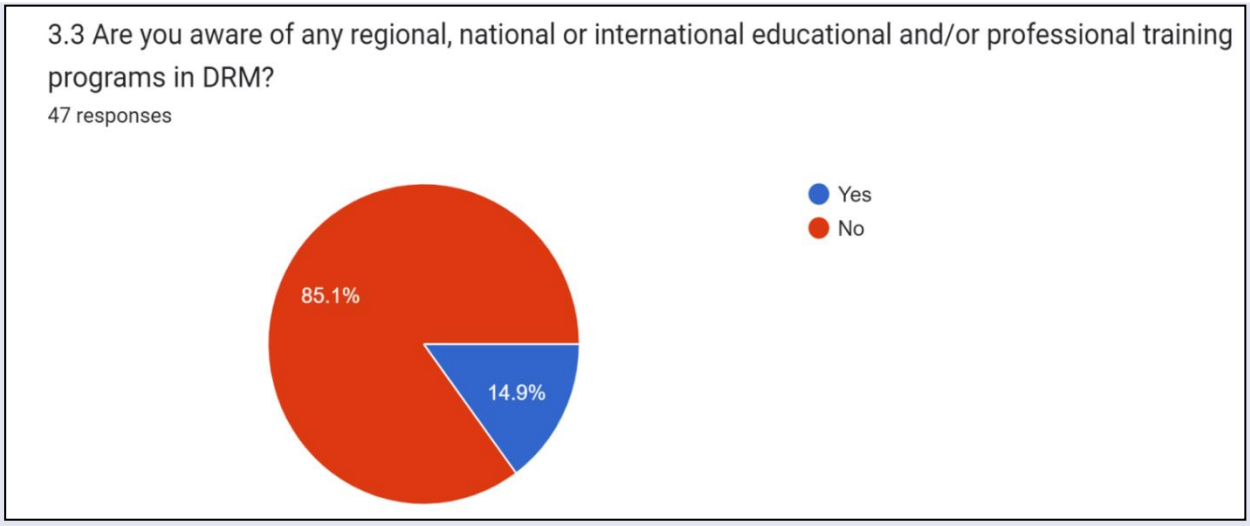

Figure 99. Awareness level on educational and/or professional training programs in DRM (Slovakia).

Most stakeholders recognize **informal training practices** (e.g. civil protection exercises) as very important training/educational tools, with 55% expressing this view.

Figure 100. Level of importance of informal training practices as training/educational tool according to Slovakian experts.

In civil protection exercises, 29.8% of participants rarely participate, while 27.7% of stakeholders occasionally participate.

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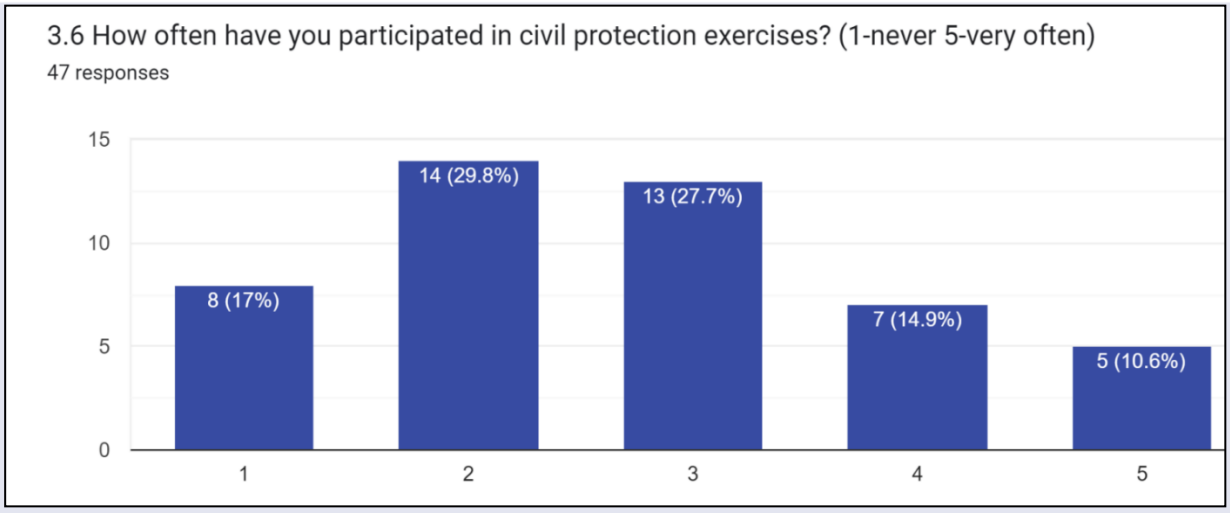

Figure 101. Frequency of participation in training exercises of Slovakian respondents.

Mainly, they take part as players in civil protection exercises (56.4%) and as observers (51.3%).

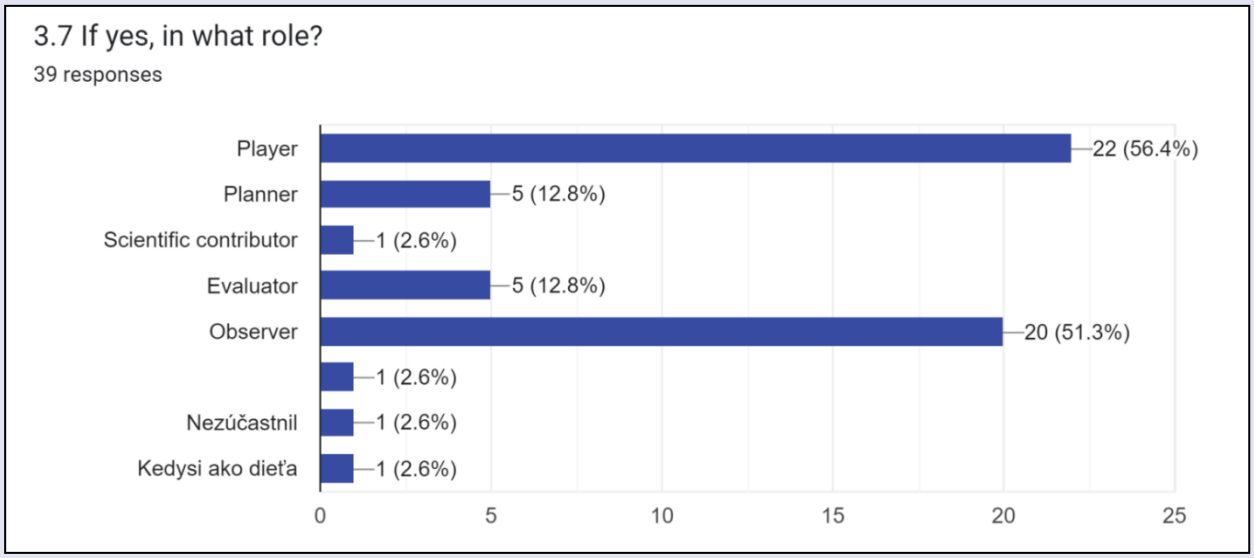

Figure 102. Role in the participation of exercises (experts from Slovakia).

44.7% of the institutions represented by participants require informal training practices, such as civil protection exercises, to be included as mandatory components of their training plans.

A majority of institutions (53.2%) engage in informal training practices 1-2 times per year, whereas 34% of institutions never incorporate such practices.

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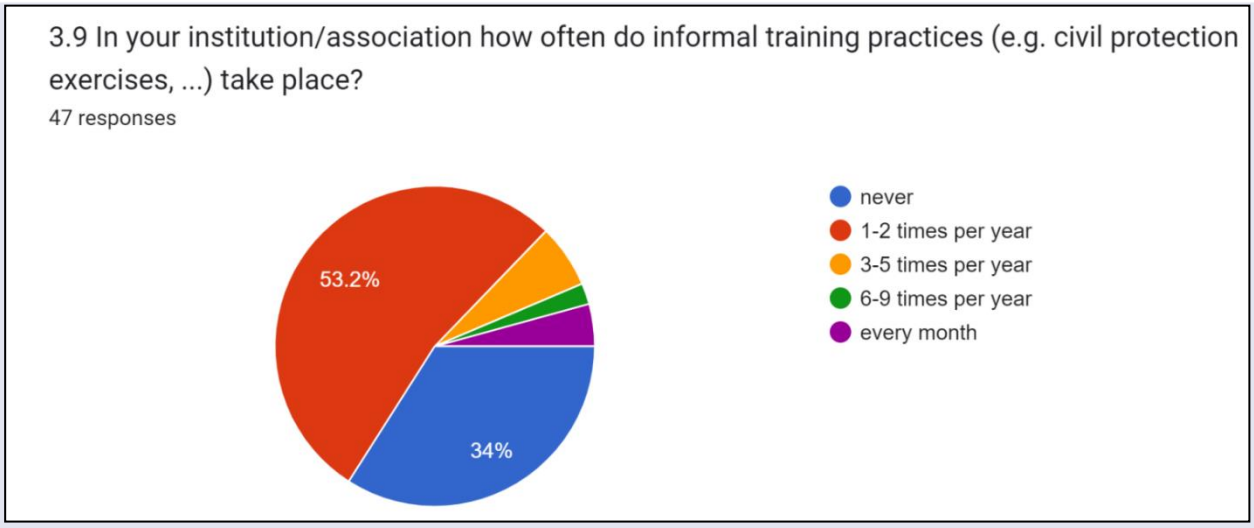

Figure 103. Frequency of informal training practices (experts from Slovakia).

Participants suggest utilizing virtual, mixed, and augmented reality technologies, along with a blend of theoretical and hands-on training approaches. They also recommend hosting professional seminars to share experiences in addressing practical and specific issues, such as emergency events. Additionally, they advocate for the creation and implementation of simulations or case studies, among other innovative educational resources, as best practices in DRM education and training.

D. Emerging required skills and emerging training needs in DRM (Disaster Risk Management)

According to stakeholders, they firmly believe that DRM necessitates hands-on experience. Therefore, they emphasise that education should provide practical examples and training activities to effectively prepare individuals in this field.

According to participants, critical thinking, identified by 74.5% of respondents, holds significant importance in disaster risk education, particularly in fostering skills for prevention, preparedness and mitigation during the pre-disaster phase. Following critical thinking, 63.8% prioritise data analysis skills, and 61.7% emphasise the importance of communication skills in this context.

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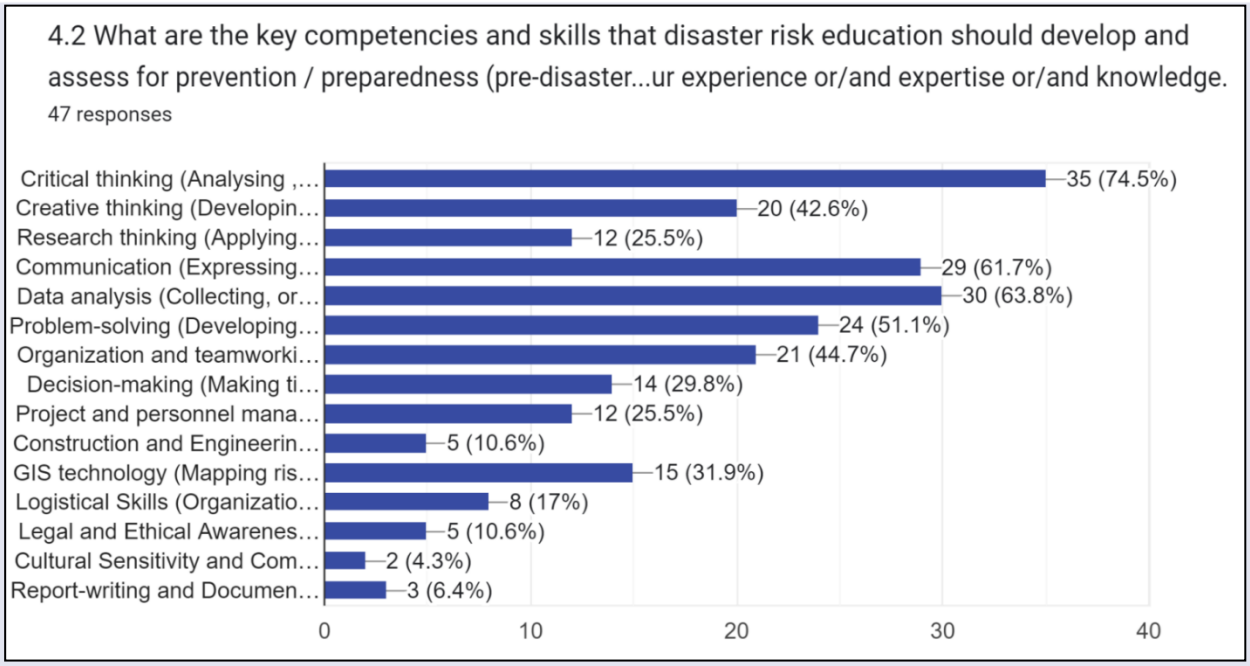


Figure 104. Key skills and competences that should be developed for the pre-disaster phase (according to experts from Slovakia).

A majority of responders, 76.6%, consider **problem-solving** to be a crucial competence during the response phase of emergencies. Additionally, **decision-making** skills are also highly regarded, with 72.3% of respondents emphasising their importance in this context.

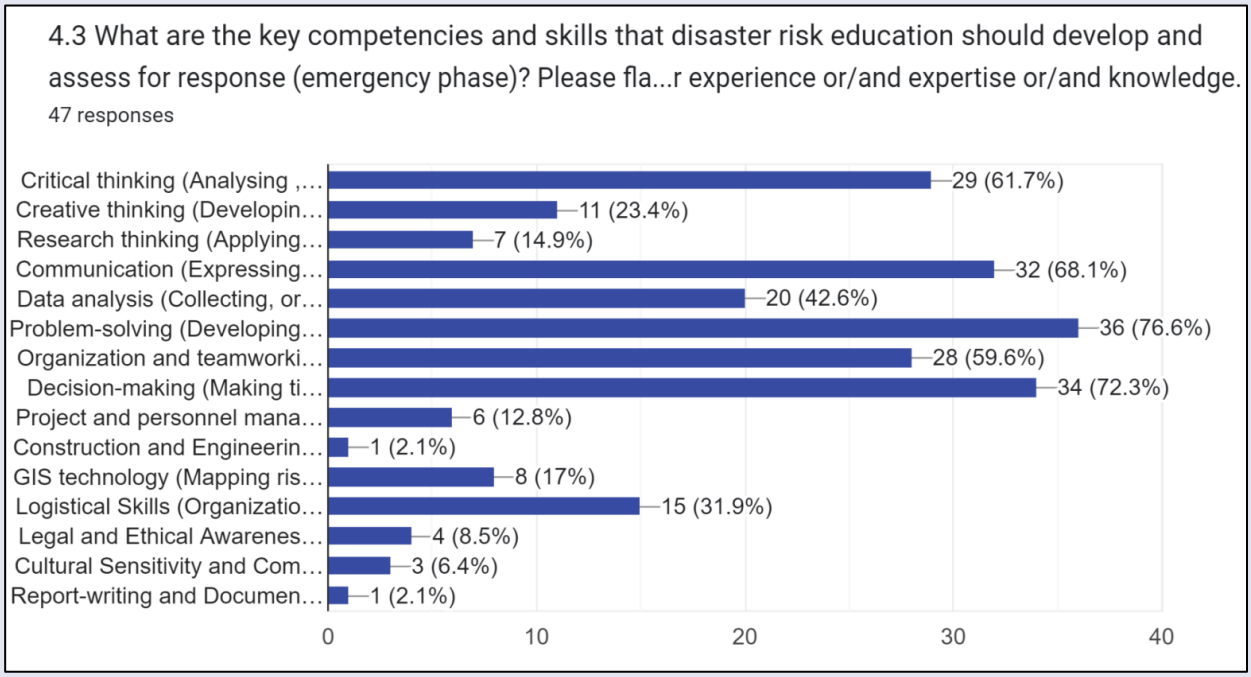


Figure 105. Key skills and competences that should be developed for the response phase (according to experts from Slovakia).

Co-funded by the European Union

Based on participants' responses, **construction and engineering** skills, which involve applying basic construction and engineering principles in risk-prone areas and disaster-related situations, are identified as the primary competency for rehabilitation and recovery (post-emergency phase), with 48.9% of respondents acknowledging their importance. Additionally, creative thinking skills emerge as significant, with 46.8% considering them essential in this phase.

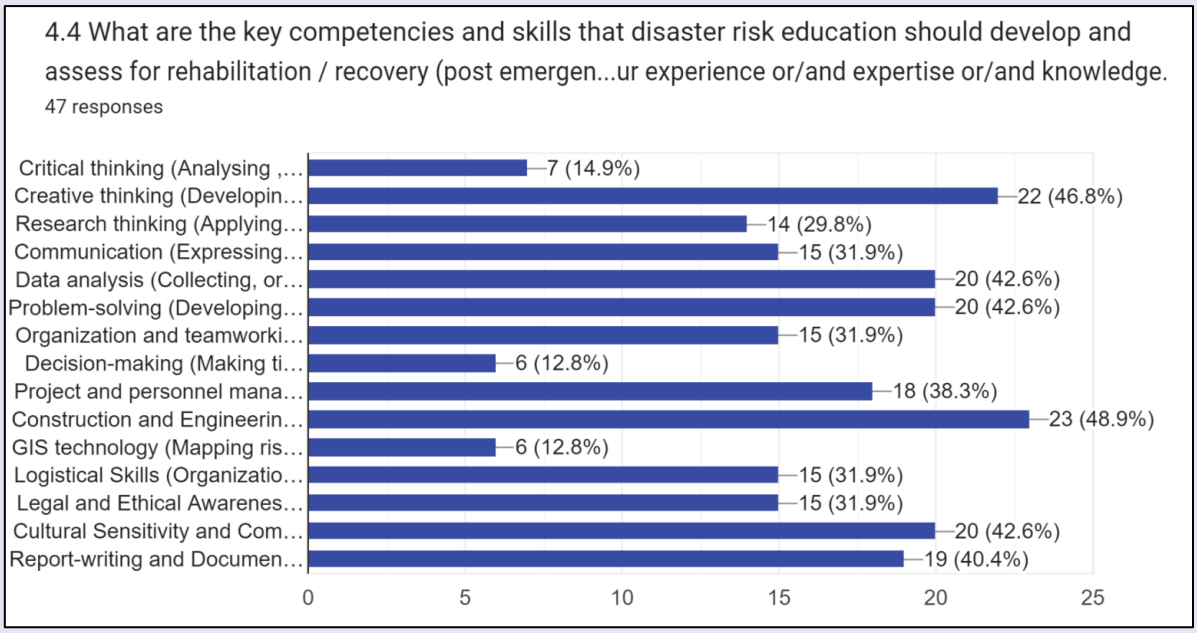
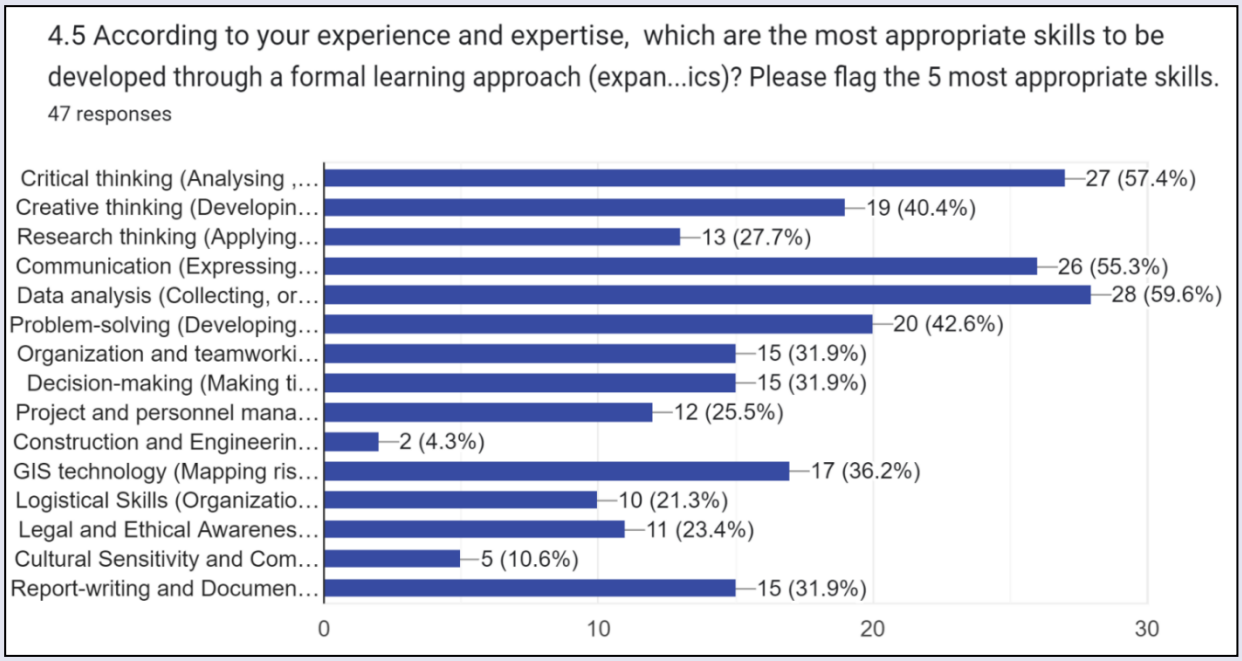


Figure 106. Key skills and competences that should be developed for the recovery phase (according to experts from Slovakia).

Data analysis and **critical thinking** are deemed the most suitable skills to be cultivated through a formal learning approach, with 59.6% and 57.4% of respondents, respectively, recognizing their importance.



Co-funded by the European Union

Figure 107. Skills to be developed through a formal learning approach (input from Slovakia).

According to stakeholders, **data analysis** (68.1%), **problem-solving** (66%), and **critical thinking** (63.8%) skills are considered the most suitable for development through problem-based learning.

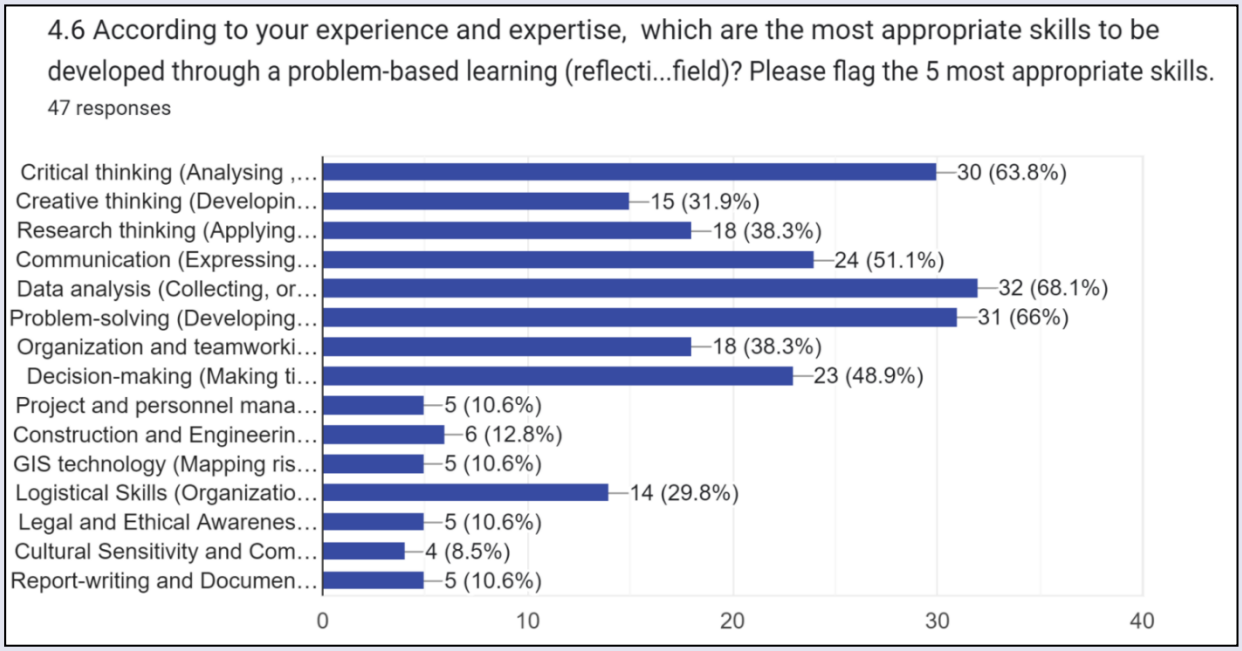


Figure 108. Skills to be developed through a problem-based learning (input from Slovakia).

According to stakeholders, 61.7% consider **problem-solving** to be the most crucial skill to be developed through a "learning by doing", "learning through action," or experiential learning approach. Additionally, 55.3% of participants believe that communication, organization and teamwork skills are similarly enhanced through this approach.

Co-funded by the European Union

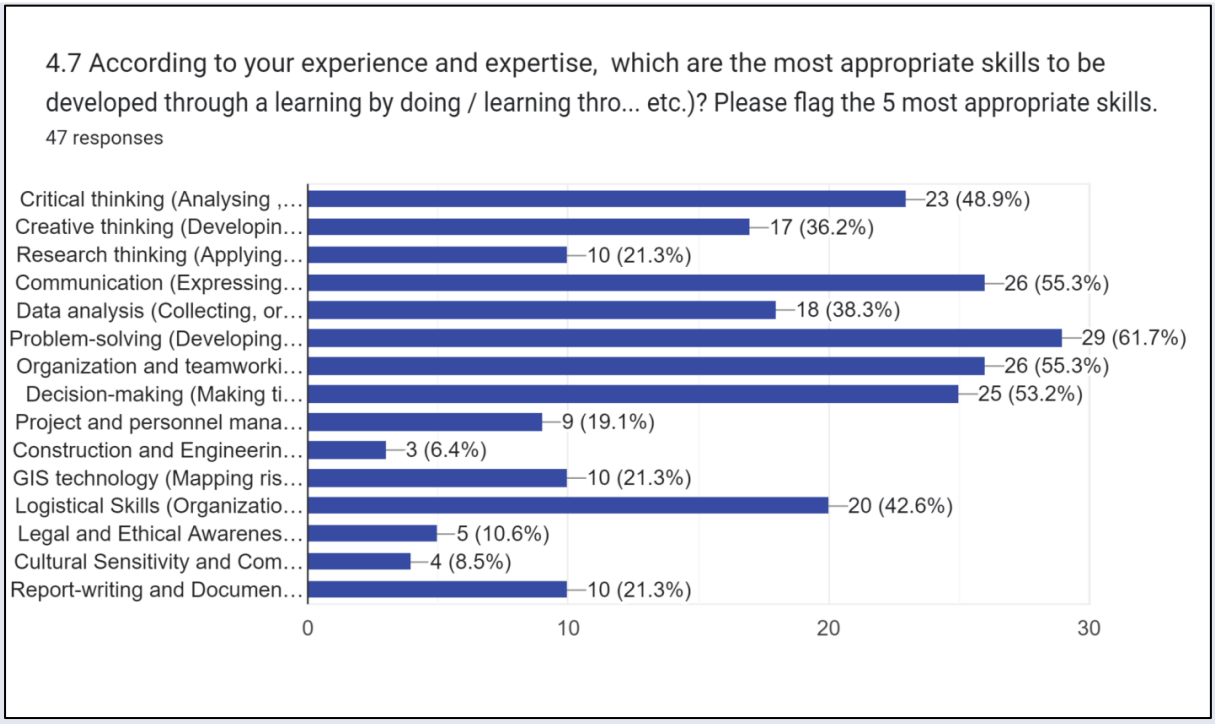


Figure 109. Skills to be developed through a learning by doing or other approach (input from Slovakia).

Co-funded by the European Union

Annex 2 – Educational Offer

Educational offer – Belgium

A.Educational and Academic Offers on Disaster Management and Civil Protection in Belgium

-1-

Title (EN)	**Disaster medicine**
Educational Degree	MSc
Link	https://www.vub.be/en/studying-vub/all-study-programmes-vub/bachelors-and-masters-programmes-vub/disaster-medicine
Discipline	Faculty of medicine and pharmacy
School(s)	Vrije Universiteit Brussel
Duration	2 semesters
Teaching Language	English
Teaching Methods	A one-year e-learning course, a two-week residential session in Novara (IT), a final online examination and writing of a Master's thesis based on a research study
ECTS	60
Cost (euro)	8032€
Number of students per academic year	
Undergraduate degree of students	Degree in Medicine or Master's degree in health related studies

Specialisation in	Disaster management generic
Informal trainings (field trips, exercises, visits, etc.)	Two-week residential session
Educational Curriculum	1. A one-year online course (self-directed study under faculty guidance) composed of 10 units. The didactic contents and activities are provided on the EMDM e-learning platform. This will allow the student: • to learn the core content of the program and to decide what to study in a greater detail at different levels; • to interact with the Faculty and facilitators for a better understanding of difficult points; • to collaborate with other students to learn how to deal with team-work; 2. A two-week face-to-face training period (the EMDM residential session) during which the students meet the faculty and fellow students to interact in debates, practical exercises and simulations. The objective is to drive the students to deepen and apply the knowledge acquired by distance learning and to equip them with the specific technical and nontechnical skills necessary to efficiently address and coordinate the medical preparedness and response during disasters and humanitarian emergencies. The location and date of the EMDM residential course will be fixed by the Strategic Management Board. 3. A Final online examination provided on the EMDM e-learning platform, consisting of an electronic simulation exercise and a multiple-choice questionnaire on the content of the programme units. 4. The writing of a Master's thesis on a topic approved by the Education Committee and under the supervision of a thesis supervisor, chosen among the Faculty.

-2-

Title (EN)	**Disaster Management**
Educational Degree	MSc
Link	https://www.uantwerpen.be/en/study/programmes/all-programmes/postgraduate-disaster-management/study-programme/

Discipline	Multidisciplinary degree	
School(s)	University of Antwerp together with Campus Vesta, Vrije Universiteit Brussel, Ghent University and KU Leuven, the Royal Military School and the Flemish Professional Organization for Nurses (NVKVV)	
Duration	2 semesters, flexibility for completion within a maximum of 5 academic years	
Teaching Language	Dutch	
Teaching Methods		
ECTS	Accredited by The Institute of Risk Management (IRM)	
Cost (euro)	1200 € per module. Additional fee: 100 euros annually for registration, insurance, and administrative processes	
Number of students per academic year	50-100	
Undergraduate degree of students	Fire and police commanders, doctors and nurses, safety officers of companies, hospitals and healthcare institutions, policy makers from different policy levels, emergency planning officials, volunteers and employees with a coordinating role within crisis management	
Specialisation in	Disaster management generic	
Informal trainings (field trips, exercises, visits, etc.)	Working visits, practical exercices and a large scale disaster exercise	
Educational Curriculum	Two mandatory courses (M) and two optional (O)	Final project and disaster exercise (M)
		General framework and legislation (M)
		Medical techniques (O)
		Crisis communication (O)

		Information management (O)
		Management (O)
		Technological disasters (O)
		Psychosocial assistance (O)
		Event management (O)
		Humanitarian assistance (O)

-3-

Title (EN)	**International Humanitarian Aid**
Educational Degree	MSc
Link	https://uclouvain.be/en-prog-2023-huma2mc-contacts
Discipline	Faculty of Economic, Social and Political Sciences and Communication
School(s)	UniversiteCatholique de Louvain
Duration	2 semesters
Teaching Language	French
Teaching Methods	The teaching activities will combine the expertise of academics and practitioners. Additionally, simulation exercises in each module will allow students to put into practice the theoretical concepts covered in the courses and develop their analytical skills in situations relevant to humanitarian action.
ECTS	60
Cost (euro)	

Number of students per academic year	
Undergraduate degree of students	
Specialisation in	Disaster management generic
Informal trainings (field trips, exercises, visits, etc.)	
Educational Curriculum	Humanitarian action in international relations
	Humanitarian actions in conflict situations
	States' humanitarian action
	Conflict resolution and transitional justice
	International law for person protection
	International law for person protection I
	International law for person protection II
	Seminar on international law for person protection
	Negotiation in tense situations
	Challenges, management and ethical dilemmas
	Introduction to epidemiology
	MSc Thesis

-4-

Title (EN)	**Postgraduate Certificate in Global Risk Analysis and Crisis Management**
Educational Degree	Some college credit, no degree
Link	https://brussels-school.be/education/postgraduate-certificate-global-risk-analysis-and-crisis-management-gracm/admission
Discipline	
School(s)	Brussels School of Governance
Duration	3 months
Teaching Language	English
Teaching Methods	The Postgraduate Certificate in Global Risk Analysis and Crisis Management (GRACM) consists of 5 intensive modules spread over a period of 3 months, from October until December. Each module includes weekend sessions with intensive training, lectures, exercises, and case studies, followed by a policy round-table discussion with senior officials. Participants can select and register for individual modules.
ECTS	
Cost (euro)	3500 €
Number of students per academic year	
Undergraduate degree of students	Master's degree, or a Bachelor's degree plus the equivalent of 3 years' work experience
Specialisation in	Disaster management generic
Informal trainings (field trips, exercises, visits, etc.)	
	Module 1: Understanding risks, grasping uncertainty

Educational Curriculum	Module 2: Analysing risks, preparing for uncertainty
	Module 3: Open-source intelligence: tools and techniques
	Module 4: A new information environment: media, conflict and crisis communication
	Module 5: Global Crisis Monitoring, Conflict Analysis & Early Warning

-5-

Title (EN)	**International Master of Science in Fire Safety Engineering**
Educational Degree	MSc
Link	https://studiekiezer.ugent.be/2024/international-master-of-science-in-fire-safety-engineering-EMFISA-en
Discipline	Faculty of Engineering and Architecture
School(s)	Ghent University
Duration	4 semesters
Teaching Language	English
Teaching Methods	The teaching methods in the IMFSE program include lectures, laboratory work, case studies, workshops, seminars, project work, field visits, and internships, providing students with both theoretical knowledge and practical skills in fire safety engineering.
ECTS	120
Cost (euro)	1092 €/year
Number of students per academic year	

Undergraduate degree of students	Bachelor's in chemistry, Bachelor's in Physics, Bachelor's in Physics and Astronomy
Specialisation in	Wildfires
Informal trainings (field trips, exercises, visits, etc.)	
Educational Curriculum	Explosions and Industrial Fire Safety
	Fire Dynamics
	Data-Driven Management of Fire Incidents
	Thermodynamics, Heat and Mass Transfer
	Material Behaviour at Ambient and Elevated Temperatures
	Active Fire Protection I: Detection and Suppression
	Active Fire Protection II: Smoke and Heat Control
	Fire Safety and Legislation
	Passive Fire Protection
	Performance-Based Design

B.Professional Training Programmes and Seminars

-1-

Title (EN)	**Belgian Generic Training (BGT) in Civilian Crisis Management.**
Link	https://www.egmontinstitute.be/training/civilian-crisis-management-training/courses-in-ccm/
Provider	

Duration	2 weeks
Training Language	English
Training methods	Lectures by expert trainers, practical exercises for hands-on learning, case studies to analyze real-life scenarios, group discussions for interaction and exchange of ideas, role-playing and simulations for immersive experiences, workshops for skill-building, field visits to relevant organizations or sites, guest speakers sharing expertise and insights, e-learning modules for supplementary resource
Cost (euro)	
Brief description of the programme	The Belgian Generic Training (BGT) in Civilian Crisis Management is a comprehensive program designed to prepare experts for deployment in civilian missions abroad, particularly in the context of the European Union's Common Security and Defence Policy, the United Nations, or the Organization for Security and Co-operation in Europe. This intensive training covers various aspects of civilian crisis management, including theoretical knowledge and practical skills necessary for effective fieldwork. The program features lectures by expert trainers, practical exercises, case studies, group discussions, role-playing, workshops, field visits, guest speaker sessions, and e-learning modules. Participants, including federal police officers, magistrates, civil servants, and external experts, are equipped with the essential knowledge and competencies required to address the challenges of crisis management missions. The training is conducted in English and typically spans over two weeks, providing a dynamic and interactive learning experience.

-2-

Title (EN)	**DRMKC Annual Seminar**
Link	https://drmkc.jrc.ec.europa.eu/events-news/drmkc-annual-seminars
Provider	Disaster Risk Management Knowledge Centre and Union Civil Protection Knowledge Network
Duration	1 day-seminar
Training Language	English

Training methods	A series of activities designed to engage participants and foster meaningful discussions. The proposed format includes panel discussions featuring diverse perspectives on disaster resilience, scientific support to risk assessment process, including lessons learned, key challenges and innovative approaches. Participatory workshop sessions on risk communication, early warning systems and DRM governance to tap into collective intelligence and foster engagement and knowledge exchange among participants. Examples from projects showcasing good practices related to disaster resilience. Networking sessions to facilitate collaboration and partnerships among participants.
Cost (euro)	
Brief description of the programme	The program is a comprehensive event organized by the Disaster Risk Management Knowledge Centre (DRMKC) and the Union Civil Protection Knowledge Network. It brings together government officials, policymakers, researchers, practitioners, and other stakeholders to discuss and advance the EU's resilience agenda in the face of climate and disaster risks. The program includes panel discussions, participatory workshops, project showcases, and networking sessions aimed at sharing good practices, fostering collaboration, and identifying innovative solutions for disaster resilience. Additionally, related events such as online sessions on cascading climate risks and clustering events on wildfire risk management will be held before and after the seminar.

Educational offer – Cyprus

A.Educational and Academic Offers on Disaster Management and Civil Protection in Cyprus

-1-

Title (EN)	**Disaster risk reduction and security management**
Title (GR)	Διαχείριση ελάττωσης κινδύνου καταστροφών και ασφάλειας
Educational Degree	MSc
Link	https://euc.ac.cy/el/programs/master-disaster-risk-reduction-security-management/#tab-program-of-study
Discipline	Natural hazards
School(s)	European University Cyprus
Duration	3 semesters
Teaching Language	English or Greek
Teaching Methods	Physical presence
ECTS	90
Cost (euro)	8460 €
Number of students per academic year	
Undergraduate degree of students	Undergraduates in fields of science, or of a variety of academic subjects with relevant professional experience in fields related to the academic subject.
Specialisation in	Disaster management generic
Informal trainings (field trips, exercises, visits, etc.)	

Educational Curriculum	1st semester		Risk assessment, management and communication
			Research methods
			Crisis management
	2nd semester		Management of man-made disasters and security threats
			Planning and exercising for natural hazards disasters
			Management of communication and leadership in disasters
			Elective activities
			MSc Thesis
	3rd semester	Specialisation-Emergency management	International disaster management & humanitarian response
			Impacts of climate change on natural disasters
			Sociology of disasters
			MSc Thesis
		Specialisation-Security management	International security &defence institutions and legislation
			Assessing new security threats and challenges in the Mediterranean
			Security sector reform
			MSc Thesis

-2-

Title (EN)	**MSc in risk, crisis and disaster management**
Title (GR)	Διαχείριση κινδύνων, κρίσεων και καταστροφών
Educational Degree	MSc
Link	http://www.savvideseducation.com/english/MSc%20in%20Risk,%20Crisis%20and%20Disaster%20Management.htm
Discipline	Natural disasters, risk management-governance, man-made risks including climate change and terrorism
School(s)	Savvides Institute in collaboration with the University of Leicester UK- School of Business
Duration	4-5 semesters
Teaching Language	English
Teaching Methods	Distance learning
ECTS	Accredited by The Institute of Risk Management (IRM)
Cost (euro)	Approximately 13988 €
Number of students per academic year	50-100
Undergraduate degree of students	A good honours degree in a relevant field (2:2 or above, from a recognised HE institution) or its equivalent or at least three years of work experience in a related field plus completion of a practice assignment. IELTS 6.5 or equivalent.
Specialisation in	Disaster management generic
Informal trainings (field trips, exercises, visits, etc.)	

Educational Curriculum	1st year	Theories of risk & crisis
		Managing risk and crisis
		Research methods
		Case studies in risk, crisis and disaster management
	2nd year	Models of risk, crisis & disaster
		Emergency planning management
		MSc dissertation

-3-

Title (EN)	**Master of Public Health (MPH)**
Title (GR)	Δημόσια Υγεία
Educational Degree	MSc
Link	https://www.med.unic.ac.cy/education/master-of-public-health-mph/#tab-introduction
Discipline	Preparedness in disaster risk reduction, prevention, response and recovery in areas of diseases
School(s)	University of Nicosia- Medical School
Duration	3 semesters
Teaching Language	English
Teaching Methods	Distance learning
ECTS	90
Cost (euro)	12060 €

Number of students per academic year			
Undergraduate degree of students	A Bachelor's degree from an institution recognised in the country where it operates. A degree in medicine, health sciences, biological sciences, social sciences or environmental sciences is an advantage. IELTS 6.5 or equivalent.		
Specialisation in	Disaster management generic		
Informal trainings (field trips, exercises, visits, etc.)			
Educational Curriculum	1st semester		Principles of Epidemiology and Public Health
			Health protection: Safeguarding wellbeing in populations
			Health promotion: Maintaining wellbeing in populations
			Epidemiology and prevention of non-communicable and infectious diseases in a global context
	2nd semester		Applied statistics for epidemiology and public health
			Health policy, management and leadership
			Health economics in the context of health services and systems: global perspectives
	3rd semester (student to choose one of the two options)	Option 1	Research methodology in public health
			MSc Thesis
		Option 2 (1 mandatory course (M)	Research methodology in public health (M)
			Environmental and occupational health

		and two optional courses (O))	Health inequality within and between countries
			Population ageing and health
			Public health nutrition
			Social and behavioural dimensions of health
			Ethical and legal dimensions of public health

B.Professional Training Programmes and Seminars

-1-

Title (EN)	**Crisis & Emergency Management with Reference to Standards**
Title (GR)	Διαχείριση Κρίσεων & Αντιμετώπισης Καταστάσεων Έκτακτης Ανάγκης με Αναφορά στα Πρότυπα
Link	https://www.myseminars.com.cy/news-detail/diaxeirish-krisewn-antimetwpishs-katastasewn-ektakths-anagkhs-me-anafora-sta-protypa
Provider	Cyprus Organization for Standardization, HRDA
Duration	7 hours
Training Language	Greek
Training methods	Remote teaching
Cost (euro)	Costs can be covered through Human Resource Development Authority Cyprus
Brief description of the programme	The programme is addressed to Directors, Executives, Heads of Departments, Project Managers, businesses and non-governmental organizations in crisis management, rescuers, practitioners, first-responders etc. It looks into topics of EU Political, Legislative Framework and International Challenges, Security Research and Innovation, Standardization in the field of Security, Standards, Specifications,

	Instructions, Technical Capability Documents, leadership in emergency situations etc. also involving practical exercises and assessments.

-2-

Title (EN)	**Crisis Management – Dealing with Emergency Situations**
Title (GR)	Διαχείριση Κρίσεων – Αντιμετώπιση Έκτακτων καταστάσεων
Link	https://empmedic.com/05-crisis-management/
Provider	EMPMEDIC FIRST AID, HRDA
Duration	14-21 hours
Training Language	Greek and English
Training methods	Physical presence
Cost (euro)	Costs can be covered through Human Resource Development Authority Cyprus
Brief description of the programme	The seminar is addressed to professionals in organisations working in crisis management areas such as duty officers, supervisors, safety committee members, evacuation teams, firefighters and security personnel to improve their know-how on contingency plans to be activated in the event of a potential threats.

-3-

Title (EN)	**Crisis Management – Dealing with Emergency Situations- Action Plans**
Title (GR)	Διαχείριση Κρίσεων – Αντιμετώπιση Έκτακτων καταστάσεων- Σχέδια Δράσης
Link	https://anaplasis.com/?page_id=1321
Provider	Anaplasis Business Consultants

Duration	7 hours
Training Language	Greek
Training methods	Physical presence
Cost (euro)	Costs can be covered through Human Resource Development Authority Cyprus
Brief description of the programme	The seminar is addressed to pofessionals in organizations working in the crisis management areas and aims to improve skills, competencies and attitudes for designing effective action plans in a crisis.

Educational offer – Greece

A.Educational and Academic Offers on Disaster Management and Civil Protection in Greece

Title (EN)	**Environmental, Disaster, and Crisis Management Strategies**
Title (GR)	Στρατηγικές Διαχείρισης Περιβάλλοντος – Καταστροφών – Κρίσεων
Educational degree	master'sdegree
Link	https://edcm.edu.gr/en/
Discipline	Natural and man-made hazards
School(s)	Faculty of Science, National and Kapodistrian University of Athens
Duration	3 semesters
Teaching Language	Greek
Teaching methods	e-class, asynchronous distance learning, synchronous distance learning, limited physical presence
ECTS	90
Cost (euro)	4800
Number of students per academic year	210
Undergraduate degree of students	Holders of higher education degrees from Greece, EU countries and recognised third country higher education degrees. Moreover, graduates of military schools, police schools, fire academy, port corps, public administration schools of higher education, with a variety of academic subjects, who have a special interest or experience in fields related to the academic subject, are accepted.
Specialisation in	disaster management generic

Informal trainings (field trips, exercises, visits, etc.)	1 Applied Field Seminar		
Educational Curriculum	Specialisation in disaster and crisis management strategies in the administrative and development sectors	1st semester (all mandatory courses)	Disaster and crisis management
			Geophysical disasters
			Hydrometeorological disasters and climate change
			Humanitarian crises and biological hazards
			Technological and NaTech disasters
		2nd semester (5 courses of the student's choice)	Economic crises
			Local, national and international disaster and crisis management
			Economic and social impact of disasters
			Mass and social impact of disasters
			Psychological and social implications of disasters and crises
			State of the Art technologies – research and management tools
			International organisations and crisis management
			Negotiations and crisis resolution
			Communication, leadership and social influence
			Risk and psychological impact management in school environments
			Risk management in touristic infrastructures and hotels

			Risk management in business and industries
		3rd semester	MSc Thesis
	Specialisation in environmental management strategies and environmental training	1st semester	Planet Earth
			Earth systems and natural resources
			Ecology and biodiversity
			Manmade environment
			Climate change
		2nd semester (5 courses of the student's choice)	Environmental management – protection and restoration
			Environmental institutional framework
			Environmental economics
			Environmental impact assessment
			Environmental education
			State of the Art technologies – research and management tools
			Environmental ethics
		3rd semester	MSc Thesis
	Specialisation in sustainable development strategies in local government	1st semester	Administration and institutions – local government
			Administration strategies, electronic governance and local government
			Economy and sustainable development

			Local and regional sustainable development – regional operational planning
			Climate change
		2nd semester (5 courses of the student's choice)	Environmental management – protection and restoration
			Environmental institutional framework
			Environmental economics
			Natural resources
			Economic sectors and development tools
			Social and educational policy in local government
			State of the Art technologies – research and management tools
		3rd semester	MSc Thesis

-2-

Title (EN)	**Natural Hazards and Disaster Mitigation**
Title (GR)	Φυσικοί Κίνδυνοι και Αντιμετώπιση Καταστροφών
Educational degree	master'sdegree
Link	https://hazards.aegean.gr/
Discipline	Natural hazards (geological, meteorological hazards)
School(s)	University of Aegean, Aristotelian University of Thessaloniki, National Observatory of Athens
Duration	3 semesters

Teaching Language	Greek	
Teaching methods	Synchronous distance learning, limited physical presence	
ECTS	90	
Cost (euro)	1500	
Number of students per academic year	25	
Undergraduate degree of students	Graduates of Departments of Geography, Geology, Environment, Forestry, and Polytechnic Schools of Greek Universities and recognised foreign institutions.	
Specialization in	disaster management generic	
Informal trainings (field trips, exercises, visits, etc.)	>1 Field Trips - Field exercises	
Educational Curriculum	1st semester (3 mandatory courses (M) plus 2 mandatory courses of the student's choice (OM) and 1 course of the student's choice (C))	Environmental changes and natural hazards (M)
		Geostatistical analysis of hazards and extreme events (M)
		Meteorological hazards and disasters (OM)
		Fire weather and wildfire behavior (OM)
		Geological hazards – Quarternary geology and neotectonics (OM)
		Seismic hazard and seismicity of Greece (OM)
		Seminar of geological – meteorological hazards and disasters (M)
		Volcanology and volcanic hazard (O)

		Pollution of ground and surface waters (O)
		Geosites of natural disasters (O)
	2nd semester 3 mandatory courses (M) plus 3 courses of the student's choice (C))	Disaster theory – hazard assessment – vulnerability (M)
		GIS and cartography in hazard management (M)
		Seminar of geological – meteorological hazards and disasters (M)
		Microzonation studies (O)
		Landslides (O)
		Erosion – desertification (O)
		Floods – drought (O)
		Climate change and extreme events (O)
		Forest dires: ecology and management (O)
		Satellite remote sensing for hazard management (O)
		Human geography of disasters (O)
		Education for natural hazard mitigation (O)
	3rd semester	MSc Thesis
		Graduate internship

-3-

Title (EN)	**Prevention, management and remediation of the effects of natural disasters and climate change on the built environment**
Title (GR)	Πρόληψη, διαχείριση και αποκατάσταση επιπτώσεων των φυσικών καταστροφών και της κλιματικής αλλαγής στο δομημένο περιβάλλον
Educational degree	master'sdegree
Link	https://grad.civ.uth.gr/el/
Discipline	Natural hazards and climate change impact on built environment
School(s)	Civil Engineering School of University of Thessaly
Duration	3 semesters
Teaching Language	Greek
Teaching methods	Synchronous distance learning, limited physical presence
ECTS	90
Cost (euro)	2700
Number of students per academic year	25
Undergraduate degree of students	Graduates of Polytechnical or Technological Schools of relevant fields
Specialization in	disaster management generic

Informal trainings (field trips, exercises, visits, etc.)		
Educational Curriculum	1st semester (4 courses of the student's choice)	Engineering geological and geotechnical parameters for the design of civil engineering projects against geohazards
		Data Science and Natural Disaster Forecasting
		Pre and post-earthquake retrofitting of existing structures
		Meteorology-Hydrometeorology, Meteorological Hazards and Environmental Changes
		Modelling of floods and flood protection works
		Design of marine structures against extreme loads or oversizing
	2nd semester (4 courses of the student's choice)	Risk, vulnerability and resilience of infrastructure systems against natural hazards
		Resilient transport planning
		Advanced construction material
		Integrated design structures against fire
		Natural disasters and water resources management
		Management and forecasting of hydrometeorological hazards
	3rd semester	MSc Thesis

-4-

Title (EN)	**Analysis and Management of Anthropogenic and Natural Disasters**
Title (GR)	Ανάλυση και Διαχείριση Ανθρωπογενών και Φυσικών Καταστροφών
Educational degree	master'sdegree
Link	http://mandisastermsc.teiemt.gr/index.php
Discipline	Engineering studies, Earth studies, environment studies, financial-business studies and operational experience
School(s)	International Hellenic University and Fire Academy
Duration	3 semesters
Teaching Language	Greek
Teaching methods	Physical presence and synchronous distance learning
ECTS	90
Cost (euro)	3000
Number of students per academic year	
Undergraduate degree of students	Officers of Fire Corps and of other Law Enforcement Agencies and Armed Forces – higher education graduates, non-uniformed citizens and especially civil protection and health service officials
Specialization in	disaster management generic
Informal trainings (field trips, exercises, visits, etc.)	Visits at operational centres, industries and other

Educational Curriculum	1st semester (all mandatory courses)	Analysis and management of risks, crises and disasters
		Natural disasters and hazards
		Geoinformatics & natural disasters
		The human factor in risk, crisis and disaster management
		Economic consequences of risks, crises and disasters
		Research methodology and thesis writing
	2nd semester (all mandatory courses)	Natural disasters and risks II
		Technological disasters and environmental hazards
		Response and management of electromechanical plant fires and public transport accident fires
		Coping with the spread of oil spills and fires caused by burning hydrocarbons
		Technical interventions to deal with natural disasters and risks
		Use of new technologies for training in risk and disaster response
	3rd semester	MSc Thesis

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Title (EN)	**Applied Geography and Spatial Planning – Stream A: Management of Natural and Human Induced Disasters**
Title (GR)	Εφαρμοσμένη Γεωγραφία και Διαχείριση του Χώρου - Κατεύθυνση Α: Διαχείριση Φυσικών και Ανθρωπογενών Κινδύνων και Καταστροφών
Educational degree	master'sdegree
Link	https://www.geo.hua.gr/en/studies/postgraduate-studies/
Discipline	Natural and Man-made Hazards and Disasters, their physical processes, social and economic impacts, rescue, rehabilitation and reconstruction
School(s)	Harokopeio University - Georgraphy Department
Duration	3 semesters (or 6 for part time students)
Teaching Language	Greek
Teaching methods	Physical presence
ECTS	90
Cost (euro)	2400
Number of students per academic year	60
Undergraduate degree of students	Graduates of Schools and Departments of Greek Universities and Technological Institutes and equivalent foreign Universities, in the relevant scientific fields
Specialization in	disaster management generic
Informal trainings (field trips, exercises, visits, etc.)	Educational trips and visits, academic exchanges, seminars with professionals, 2 months Internship e.g., Erasmus placement

Educational Curriculum	1st semester (all mandatory courses)	Environmental risks and security
		Natural processes, hazards and disasters
		Vulnerability and risk: prevention, preparedness and mitigation
		Social and economic impacts of disasters
		Scientific research methods in Geography
		Environmental change: observation and prediction
	2nd semester (all mandatory courses)	Emergency planning
		Disaster recovery and reconstruction planning
		Coastal zones natural hazards
		Local sustainable development: programmes and social resistance
		Geoinformatics for disaster management
		Applied spatial analysis
		Governance of environmental risk
		Institutions and security policy in European space
	3rd semester	MSc Thesis
		Placement
		Seminar

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Title (EN)	**World Health - Disaster Medicine**
Title (GR)	Παγκόσμια Υγεία – Ιατρική των Καταστροφών
Educational degree	master'sdegree
Link	https://crisis.med.uoa.gr/
Discipline	Disaster medicine and World Health
School(s)	Medicine School - National Kapodistrian University of Athens
Duration	4 semesters
Teaching Language	Greek (partially English)
Teaching methods	Physical presence, asynchronous distance learning by 35%
ECTS	120
Cost (euro)	4000
Number of students per academic year	100 (for both directions)
Undergraduate degree of students	Doctors, nurses, rescuers and other health workers who want to deal with this subject in Public Health or Civil Protection Services in European and international organisations or in international development cooperation services as well as in organisations providing assistance to victims of disasters. Also to graduates of other schools and scientists of other fields such as lawyers, social anthropologists, economists, social scientists and executives who already serve in aid organisations and wish to acquire specializ ed knowledge in matters of International Cooperation, Civil Protection, International Humanitarian Law and Implementation of Development Aid Programs in the developing world.
Specialization in	disaster management generic
Informal trainings (field trips, exercises, visits, etc.)	scenario exercises, practical education in collaboration with specialized institutes

Educational Curriculum	1st semester (all mandatory courses)		Field epidemiology – Public health
			Community medicine
			Methodology and ethics of medicobiological research
	2nd semester (all mandatory courses)	"Disaster medicine – Health crisis management" direction	Disaster Medicine
		"Global health – Health crisis management" direction	International medicine
			Humanistic medicine
	3rd and 4th semester		Seminars
			Hands on courses on disaster medicine or on global health
			MSc Thesis

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Title (EN)	**Humanitarian Logistics and Crisis Management**
Title (GR)	
Educational degree	master'sdegree
Link	https://st.ihu.gr/studies/postgraduate/hlcm
Discipline	Technological, theoretical and managerial knowledge, humanitarian logistics, crisis management, emergency management and business continuity

School(s)	Department of Balkan, Slavic and Oriental Studies of the University of Macedonia and Department of Science and Technology of the University Center of International Programmes of Studies of the International Hellenic University	
Duration	3 semesters (or 6 for part time students)	
Teaching Language	English	
Teaching methods	Physical presence	
ECTS	90	
Cost (euro)	3200	
Number of students per academic year	40	
Undergraduate degree of students	Graduates of Schools and Departments of Greek Universities and Technological Institutes and equivalent foreign Universities, in the relevant scientific fields. Also graduates of Higher Military Schools, Greek Police Officer School, Coast Guard - Hellenic Coast Guard Officer School, Fire Brigade Officer School are accepted. In addition, it is addressed to executives of the Public Administration, of the competent Ministries related to the subject matter, civil protection services, executives of international humanitarian organizations, executives of businesses and organizations, executives of Local Governments, executives of diplomatic corps, executives of NGOs and other professionals.	
Specialization in	disaster management generic	
Informal trainings (field trips, exercises, visits, etc.)		
Educational Curriculum	1st semester (3 mandatory courses (MC) and 2 courses of the student's choice (C))	Anthropology for a world in crisis (OM)
		Humanitarian logistics (OM)

		Crisis and emergency management (OM)
		Ethnographic field methodologies and digital humanities in times of crises (O)
		International development, poverty and sustainability (O)
		Social transformation and migration (O)
		Project management under crisis (O)
	2nd semester (3 mandatory courses (MC) and 2 courses of the student's choice (C))	Humanitarian decision-making methods (OM)
		Humanitarian law and ethics (OM)
		Anthropology and humanitarian aid emergency (OM)
		History and politics of humanitarian interventions (18th – 21st centuries) (O)
		Tools and technology in humanitarian logistics and crisis management (O)
		Environmental hazard management (O)
		Social and solidarity economy in times of crisis (O)
	3rd semester	MSc Thesis
		Consulting project (O)

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Title (EN)	**Emergency Planning Policy**
Title (GR)	Εκπαιδευτικό πρόγραμμα της Σχολής Αξιωματικών Ελληνικής Αστυνομίας, ως ενισχυτικό μάθημα χωρίς βαθμό στο 4ο Έτος Εκπαίδευσης, μάθημα: «Πολιτική Σχεδίαση Έκτακτης Ανάγκης (Π.Σ.Ε.Α.)»
Educational degree	master'sdegree
Link	https://www.astynomia.gr/elliniki-astynomia/anthropino-dynamiko/ekpaidefsi/astynomiki-akadimia/scholi-axiomatikon-ellinikis-astynomias1/theoritiki-kai-praktiki-ekpaidefsi/
Discipline	Greek Police-Citizen Protection
School(s)	School of Greek Police Officers
Duration	1 semester (4th year of study)
Teaching Language	Greek
Teaching methods	Physical presence
ECTS	
Cost (euro)	
Number of students per academic year	
Undergraduate degree of students	Postgraduates of School of Greek Police Officers
Specialization in	disaster management generic

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Title (EN)	**Modern Environmental Risk Management Technologies**
Title (GR)	Σύγχρονες Τεχνολογίες Διαχείρισης Περιβαλλοντικών Κινδύνων

Educational degree	master'sdegree
Link	https://stedipek.uth.gr/index.php/el/
Discipline	
School(s)	Departments of Agriculture, Fisheries and Aquatic Environment (supervisor), Energy Systems and Forestry, Wood Science and Design of the University of Thessaly
Duration	2 semesters
Teaching Language	Greek
Teaching methods	Compulsory postgraduate courses, 13 weeks each with 13 two-hour lectures, with the possibility of distance learning up to a maximum of 35%.
ECTS	70
Cost (euro)	2000
Number of students per academic year	30
Undergraduate degree of students	The students must be graduates of the Departments of Universities in Greece and similar recognized institutions abroad, as well as graduates of the Departments of TEI of the following subjects: agriculture, forestry, civil engineering, environmental engineering and other related subjects, other Departments of Universities and TEI, Departments of Engineering of A.S.PAIT.T.E. of related subjects, Environmental Sciences. Other Departments with five (5) years of experience in a subject related to the subject of the MSc.
Specialization in	disaster management generic
Informal trainings (field trips, exercises, visits, etc.)	

Educational Curriculum	1st semester (all mandatory courses)	Geoinformatics And Geographic Information Systems Applications In Environmental Risk Management
		Water Resources Management - Hydrologic Risk
		Flood and Erosion Risk Management
		Applied Geotechnics – Landslides Management
		Environmental Monitoring, Simulation and Climate Change
	2nd semester (all mandatory courses)	Artificial Intelligence Applications for Environmental Risks Management
		Protection and Management of Soil Resources
		Risk Management of Road Infrastructures in The Frame of Natural Phenomena
		Economic Valuation of Climate Risks for Businesses and Organizations
		MSc Thesis

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Title (EN)	**Crisis and Disaster Management and Public Health Nursing**
Title (GR)	Διαχείριση Κρίσεων και Μαζικών Καταστροφών και Νοσηλευτική Δημόσιας Υγείας
Educational degree	master'sdegree
Link	https://www.nurs.uoa.gr/metaptychiakes_spoydes/diacheirisi_kriseon_kai_mazikon_katastrofon_kai_nosileytiki_dimosias_ygeias/

Discipline	Public Health, community nursing, c**risis management in health sector**	
School(s)	School of Health Sciences, Faculty of Nursing, National and Kapodistrian University of Athens	
Duration	4 semesters	
Teaching Language	Greek	
Teaching methods	Physical presence	
ECTS	120	
Cost (euro)	2000	
Number of students per academic year	36 (12 from public health, 12 from community nursing and 12 from crisis management in health sector)	
Undergraduate degree of students	Applications for one of the above specializations [1. Public Health, 2. Community Nursing, 3. Crisis Management in Health Sector]can be submitted by holders of a degree of the first cycle of the Departments of Health Sciences (Nursing, Medicine, Dentistry, Pharmacy, School of Nursing Officers of the Armed Forces), and corresponding Departments of related cognitive subject of the Universities of the Greek Federation or recognized similar institutions abroad. Also, graduates of the Departments of Nursing and other Departments of the Faculties of Health Sciences of TEI, of relevant subject matter, are accepted. Especially for the specialization "Crisis Management in the Health Sector", graduates of Military Schools and Security Corps Schools are accepted as relevant to the specific cognitive subject.	
Specialization in	disaster management generic	
Informal trainings (field trips, exercises, visits, etc.)	Clinical exercise (120 hours) and a compulsory five-week internship	
Educational Curriculum	1st semester (4 mandatory courses (MC) and 1 course of the student's choice (C))	Biostatistics (OM)
		Communication – Impersonal relations (OM)
		Research methodology (OM)

		E-health and its applications (OM)
		The Law of health (O)
		Intercultural health (O)
	2nd semester (4 mandatory courses (MC) and 1 course of the student's choice (C))	Techniques of writing a scientific paper (OM)
		Epidemiology (OM)
		Prevention (OM)
		Travel health (OM)
		Demographics (O)
		Psychosocial support for refugees and immigrants (O)
	3rd semester (6 mandatory courses (MC) and 1 course of the student's choice (C))	Organising Community Education Programmes (OM)
		Public Opinion Management in Crisis and Emergency Situations (OM)
		Health at work (OM)
		Intensive Care and Mass Trauma (OM)
		Incidents from deliberate release of harmful agents (OM)
		Management of Health Problems in Mass Disasters (OM)
		Epidemiology of Mental Disorders (O)
		Mass Disasters: Children and Vulnerable Populations (O)
	4th semester	MSc Thesis

		Clinical exercise (120 hours)

B.Professional Training Programmes and Seminars

-1-

Title (EN)	**Civil Protection Academy**
Title (GR)	Ακαδημία ΠολιτικήςΠροστασίας
Link	https://civilprotection.gov.gr/akadimia-politikis-prostasias-apop
Provider	General Secretariat of Civil Protection
Duration	
Training Language	Greek
Training methods	
Cost (euro)	
Addressed to	Volunteers - members of volunteer organisations, public sector employees
Brief description of the programme	1. School of Civil Protection Volunteers and Voluntary Organizations 2. School of Staff and Executives OTA first and second grade 3. School of Public Administration Executives 4. School of Citizens

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Title (EN)	**Training of the trainer in e-learning - Civil Protection**

Title (GR)	Εκπαίδευση εκπαιδευτών στην ηλεκτρονική μάθηση - Πολιτική Προστασία
Link	https://elearning.ekdd.gr/course/view.php?id=499
Provider	EKDDA – National Centre for Public and Local Administration
Duration	
Training Language	Greek
Training methods	Remote-online
Cost (euro)	
Addressed to	Public employees
Brief description of the programme	The purpose of this training is to present the way of organization and operation of the international and national Civil Protection system, through the individual examination and interpretation of the bodies that plan and implement civil protection actions at regional, national and international level. On this basis, the organisational structure and the mode of operation of the National Civil Protection System are analysed, while the special role of the Fire Corps is described, as the operational arm of the country's Civil Protection.

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Title (EN)	**Emergency management**
Title (GR)	Διαχείριση εκτάκτων αναγκών
Link	https://www.ekdd.gr/ekdda/custom/seminars/pdf/50_1_24.pdf
Provider	EKDDA – National Centre for Public and Local Administration
Duration	35 hours
Training Language	Greek

Training methods	Remote-online
Cost (euro)	
Addressed to	Primarily to professional firefighters, medical emergency and the police
Brief description of the programme	The purpose of this training is to present the way of organization and operation of the international and national Civil Protection system, through the individual examination and interpretation of the bodies that plan and implement civil protection actions at regional, national and international level. On this basis, the organisational structure and the mode of operation of the National Civil Protection System are analysed, while the special role of the Fire Corps is described, as the operational arm of the country's Civil Protection.

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Title (EN)	**Contemporary Crisis Management by State Agencies**
Title (GR)	Διαχείριση Σύγχρονων Κρίσεων από Κρατικούς Φορείς
Link	https://elearningekpa.gr/courses/diaxeirisi-sugxronon-kriseon-apo-kratikous-foreis
Provider	National and Kapodistrian University of Athens
Duration	65 hours
Training Language	Greek
Training methods	Online
Cost (euro)	286 euros (Discounts up to 40% on tuition fees)
Addressed to	Officials of the Ministry of Citizen Protection, the General Secretariat for Civil Protection, the Ministry of National Defence, the Ministry of Interior, the Decentralised Administration (Regions, Municipalities), the Ministry of Migration and Asylum, the Ministry of Maritime Affairs and Insular Policy (Hellenic Coast Guard), the Ministry of Environment and Energy and to those who want to be trained and broaden their knowledge on "Crisis Management" issues, such as Volunteers - Voluntary Organizations, etc.

Brief description of the programme	The aim of the programme "Contemporary Crisis Management by State Agencies" is to introduce trainees to the field of Crisis Management.From migration and refugee crises to health crises, with the recent example of the pandemic (COVID-19), states through their competent agencies are called upon to manage these new, often unprecedented, situations. Through the study of relevant phenomena (refugee and migration crises, ecological and health crises, asymmetric threats), as well as the scientific and technical solutions that have been studied and proposed, trainees will learn to analyse the crisis and to manage the everyday problems created by the crises of our time. Particular emphasis is placed on familiarising the trainees with the crisis environment and how they will work together, analyse the problem, make the appropriate decision each time and resolve a problematic situation. Finally, the concept of urgency and the factor of cooperation at all levels of government services are key themes of the programme.

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Title (EN)	**Handling of issues related to disaster management from natural phenomena and technological accidents at local, regional or national level**
Title (GR)	Χειρισμός θεμάτων που αφορούν την αντιμετώπιση καταστροφών από φυσικά φαινόμενα και τεχνολογικά ατυχήματα σε τοπικό, περιφερειακό ή εθνικό επίπεδο
Link	http://www.ypa.gr/profile/organization/headquarters/administrative-support-management/civil-emergency-planning-division/
Provider	Training programme of the Civil Aviation Autonomous Service, Division of Emergency Planning Policy (EPP) - Department of CPEA/B Division OF Natural and Technological Disaster Protection Policy
Duration	
Training Language	Greek
Training methods	Physical presence
Cost (euro)	
Addressed to	Training of civil aviation personnel

Brief description of the programme	Training of staff on civil protection issues in the aviation sector

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Title (EN)	**Emergency Planning Policy**
Title (GR)	Εξ ολοκλήρου εκπαιδευτικό πρόγραμμα της Σχολής Πολιτικής Σχεδίασης Εκτάκτου Ανάγκης
Link	https://www.e-nomothesia.gr/kat-politike-prostasia-psea-pallaike-amyna/proedriko-diatagma-67-2019-phek-107a-28-6-2019.html
Provider	Training programme of the School of Civil Emergency Planning is organically part of the Civil Defence Service, Civil Emergency Planning of the Ministry of Citizen Protection
Duration	The duration of each training series may not exceed 20 working days. The daily teaching includes 6 hours of instruction according to the training programme
Training Language	Greek
Training methods	Physical presence
Cost (euro)	
Addressed to	The School is periodically invited for training, on the basis of the programmes drawn up by the Ministry of Citizen Protection: a. Officers of the Armed Forces, the Security Corps and the Coast Guard. B. NCOs and civilian employees of the Armed Forces, Security Corps and Coast Guard. C. Civilian employees of Ministries, legal entities under public and private law, local government bodies, organisations and enterprises of all kinds.
Brief description of the programme	The objective of the training is the theoretical and practical training of the trainees in Emergency Planning (Civil Defence-Civil Mobilisation) in such a way that they can respond to their work in a war situation.

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Title (EN)	**Disaster and crisis management**
Title (GR)	Διαχείριση καταστροφών και κρίσεων
Link	https://www.epimorfosiekpa.gr/index.php/ekpaideftika-programmata/thematiko-pedio-2-perivallon-klimatiki-allagi-diaxeirisi-katastrofon-kai-kriseon-geoepistimes/item/117-disaster
Provider	National and Kapodistrian University of Athens
Duration	80 hours
Training Language	Greek
Training methods	Physical presence and distance learning
Cost (euro)	Subsidised employee programme- 360 €
Addressed to	Employees
Brief description of the programme	The aim of the programme is to provide and acquire the knowledge and skills required for the effective management of natural and technological disasters and crises. In this context, trainees will become familiar with the basic concepts and principles of disaster and crisis management and will acquire the necessary know-how to understand the different types of disasters and crises and to effectively implement a response plan.Programme modules:. 1.Disasters, 2. Technological disasters, 3. Crisis management strategies, 4. Emergency response.

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Title (EN)	**Disaster and crisis management**
Title (GR)	Διαχείριση καταστροφών και κρίσεων
Link	https://acta-edu.gr/certificate/pistopoiimenos-ypefthynos-dioikisis-sti-diacheirisi-kriseon-apo-fysikes-kai-technologikes-katastrofes-ccm/
Provider	ACTA

Duration	8 thematic sections
Training Language	Greek
Training methods	
Cost (euro)	
Addressed to	The Certification is addressed to individuals, employees of private and public organisations regardless of job position, security managers of private and public organisations as well as security managers of high-ranking persons.
Brief description of the programme	The aim of the programme "Crisis Management from Natural and technological disasters" is to provide certified specialized knowledge and recognition of the skills and competences in emergency management issues incident management. The identification of emergencies, whether natural or technological, and how to deal with them, are essential professional skills for the staff in public and private organisations. The certified person acquires an important skill for rational assessment and effective management of an emergency incident.

Educational offer – Italy

A.Educational and Academic Offers on Disaster Management and Civil Protection in Italy

-1-

Title (EN)	**Geoenvironmental Resources and Risks**
Educational Degree	MSc
Link	https://international.unicam.it/sites/d7.unicam.it.international/files/geologia_mag_EN.pdf
Discipline	Geoscience and related natural hazards
School(s)	School of Science and Technology, Geology Division, University of Camerino, MC
Duration	4 semesters
Teaching Language	English
Teaching Methods	Physical presence and distance learning
ECTS	120
Cost (euro)	Approximately 2000 € (1000 € / year)
Number of students per academic year	Between 10 and 15
Undergraduate degree of students	Graduates of Geology, Environmental Sciences, Physical Sciences and Technologies, Chemical Sciences and Technologies, Technologies for the conservation and restoration of cultural heritage, Civil and environmental engineering, Agricultural and Forestry Sciences and Technologies
Specialisation in	Disaster management generic
Informal trainings (field trips, exercises, visits, etc.)	Field Trips, exercises and visits

Educational Curriculum	1st year	Environmental chemistry
		Groundwater resources and hydrological hazard
		Advanced field geology
		Geomaterials
		Petroleum geology
		Geostatistics
		Elective activity
	2nd year	Seismic hazard
		Volcanic hazard
		Geophysical prospection
		Elective activities
		MSc Thesis

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Title (EN)	**Environmental Sciences and Civil Protection**
Title (IT)	Corso di Laurea in Scienze Ambientali e Protezione Civile
Educational Degree	BSc
Link	https://www.univpm.it/Entra/Ateneo/Bandi_concorsi_e_gare/Offerta_formativa_1/Undergraduate_degree_in_Environmental_Sciences_and_Civil_Protection/L/1
Discipline	Environmental Science and Natural Hazards

School(s)	Sciences and technologies for the environment and nature, Marche Polytechnic University, AN	
Duration	6 semesters	
Teaching Language	Italian	
Teaching Methods	Physical presence and distance learning	
ECTS	180	
Cost (euro)	Approximately 4500 € (1500 € / year)	
Number of students per academic year	Approximately 50	
Undergraduate degree of students		
Specialisation in	Disaster management generic	
Informal trainings (field trips, exercises, visits, etc.)	Field Trips, exercises and visits	
Educational Curriculum	1st year	Mathematics and statistics
		Chemistry (General chemistry & organic chemistry)
		Physics
		Fundamentals of earth sciences
		Fundamentals of zoology
		Fundamentals of biology and microbiology (Fundamental of biology & Environmental microbiology)
		English

		Data analysis (for optional credits)
	2nd year	Geography of risk and disasters
		Environmental energetics
		Fundamentals of ecological systems analysis
		Fundamentals of oceanography, meteorology and climate
		Fundamentals of botany
		Civil protection organisation
		Environmental geology (Cartography and soil mapping & Geomorphology and Hydrology)
		Ecotoxicology
		ICT for emergency and environmental protection
		Law and environmental legislation
	3rd year	Environmental remediation (Applied ecotechnology & Environmental recovery techniques)
		Emergency management in civil protection
		Chemical monitoring
		Biological and physical monitoring
		Laboratory of environmental analysis (Laboratory of analytical chemistry, biological and physical analysis)
		Courses for optional credits (analysis of pollutants, GIS applications, start-up and business plans, technical

		response in health emergencies, safety issues in working environments).

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Title (EN)	**Environmental Sciences and Civil Protection**
Title (IT)	Corso di Laurea in Scienze Ambientali e Protezione Civile
Educational Degree	MSc
Link	https://www.univpm.it/Entra/Ateneo/Bandi_concorsi_e_gare/Offerta_formativa_1/Undergraduate_degree_in_Environmental_Sciences_and_Civil_Protection/L/1
Discipline	Environmental Science and Natural Hazards
School(s)	Sciences and technologies for the environment and nature, Marche Polytechnic University, AN
Duration	4 semesters
Teaching Language	Italian
Teaching Methods	Physical presence and distance learning
ECTS	120
Cost (euro)	Approximately 3000 € (1500 € / year)
Number of students per academic year	Approximately 40
Undergraduate degree of students	
Specialisation in	Disaster management generic

Informal trainings (field trips, exercises, visits, etc.)	Field Trips, exercises and visits	
Educational Curriculum	1st year	Environmental and energy sustainability (Environmental sustainability & energy resources and alternative energies)
		Chemical and industrial risk
		Biological an ecological risk
		GIS tools in environmental and civil protection
		Legislation and environmental monitoring
		Geological risk
		Climate risk
		Other activities include environmental monitoring techniques, firefighting techniques, English language advanced level
	2nd year	Disaster risk reduction
		Integrated emergency management (coordination and management of emergencies & medicine of major emergencies and disasters)
		Waste management and environmental remediation
		Nature conservation and management of protected areas

		Elective courses include fire risk and prevention, environmental certifications and regulations, internship and MSc Thesis

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Title (EN)	**Civil Engineering for Mitigation of Risk from Natural Hazards**
Educational Degree	MSc
Link	http://civrisk.unipv.it
Discipline	Natural hazards and risk reduction
School(s)	The University of Pavia and the School of Advanced Studies IUSS Pavia
Duration	4 semesters
Teaching Language	English
Teaching Methods	Physical presence
ECTS	120
Cost (euro)	Approximately 4000 € (2000 € / year)
Number of students per academic year	
Undergraduate degree of students	
Specialisation in	Disaster management generic

Informal trainings (field trips, exercises, visits, etc.)	Field Trips, exercises and visits		
Educational Curriculum	ROSE – Reduction of seismic risk	1st semester	Dynamics of structures
			Reinforced concrete structures
			Applied mathematics
			Computational mechanics
			Probability and statistics
		2nd semester	Seismic hazard and applied seismology
			Foundation engineering and Earth retaining structures
			Fundamentals of seismic design
			Nonlinear response analysis
			Geotechnical earthquake engineering
		3rd semester	Risk assessment and loss estimation
			One among: Steel structures or Geomatics and GIS
			Bridge structures
			Masonry structures
			One among: Seismic isolation and dissipation or Risk emergency management and legislation
		4th semester	MSc Thesis
		1st semester	Continuum mechanics

	HYRIS – Hydrogeological risk assessment and mitigation		Geomatics and GIS
			Applied mathematics
			Engineering geology
			Probability and statistics
			Fluvial hydraulics
		2nd semester	Hydromorphology
			Computational fluid dynamics
			Snow avalanches and related mountain natural hazards
			Geomatics and GIS
			Landslides hazard and risk
		3rd semester	Hydrological risks
			Reliable design and management of urban hydraulic infrastructures
			Structural measures for flood risk mitigation
			One among: Landslide modelling and mitigation strategies, Risk emergency management and legislation, Foundations engineering and earth retaining structures, Earth surface and processes
		4th semester	MSc Thesis

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Title (EN)	**Engineering For Natural Risk Management**

Title (GR)	Corso di Laurea in Scienze Ambientali e Protezione Civile	
Educational Degree	MSc	
Link	https://servizionline.unige.it/unige/stampa_manifesto/MF/2023/10553.html	
Discipline	Natural hazards and risk reduction	
School(s)	Polytechnic School - Department of Electrical, Electronic and Telecommunications Engineering and Naval Architecture (DITEN), University of Genoa	
Duration	4 semesters	
Teaching Language	English	
Teaching Methods	Physical presence	
ECTS	120	
Cost (euro)	Approximately 3500 € (1750 € / year)	
Number of students per academic year	Approximately 40	
Undergraduate degree of students		
Specialisation in	Disaster management generic	
Informal trainings (field trips, exercises, visits, etc.)	Field Trips, exercises and visits	
Educational Curriculum	1st year	Environmental and territorial risk laws and regulations (Basic juridical notions for environment law, Precautionary measures, liability and responsibility)
		Weather related hazards (Atmospheric dynamics and impacts of climate change, Hydro-meteorological hazards)

		Geohazards (Seismic hazard and risk, Landslide hazards)
		Environmental systems modelling (Dynamics of environmental systems, Models and methods for decision support)
		Telecommunication networks and distributed electronic systems (Communication networks for emergency and monitoring, Distributed electronic systems and technologies for environmental monitoring)
		System management for energy environment
		Random processes for information representation and decision support
	2nd year	Risk in natural environments (Impacts of disasters on coastal environments, Wildfire risk assessment and management)
		Risk assessment and management (Integrated risk assessment and management, Environmental risk assessment of chemicals)
		Advanced risk assessment (Seismic risk assessment and mitigation of the built environment, Multi-hazard impact and risk assessment)
		Critical energy infrastructures modelling and simulation
		Risk communication and perception
		Remote sensing and electromagnetic techniques for risk monitoring (Electromagnetic techniques for monitoring structures and protecting systems, Remote sensing of natural disasters)
		MSc Thesis

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Title (EN)	**Civil protection techniques and territorial safety**

Title (IT)	Laurea a Orientamento Professionale in Tecniche della Protezione Civile e Sicurezza del Territorio		
Educational Degree	BSc		
Link	https://univaq.coursecatalogue.cineca.it/corsi/2023/10365		
Discipline	Disaster risk management and civil protection		
School(s)	University of L'Aquila - Department of Civil, Construction-Architectural and Environmental Engineering		
Duration	6 semesters		
Teaching Language	Italian		
Teaching Methods	Physical presence		
ECTS	180		
Cost (euro)	Approximately 2400 € (810 € / year)		
Number of students per academic year			
Undergraduate degree of students			
Specialisation in	Disaster management generic		
Informal trainings (field trips, exercises, visits, etc.)	Field Trips, exercises, visits, professional internship		
Educational Curriculum	1st year	1st semester	Design and fundamentals of BIM
			Fundamentals of mathematics
			Fundamentals of chemistry and materials
			Fundamentals of physics

			Fundamentals of geometry and computer skills
			Applied hydrogeology and geology
	1st year	2nd semester	English language B1
			Mechanics of structures
			Transportation safety
			Territorial analysis and diagnosis techniques and GIS
	2nd year	3rd / 4th semester	Professional skills
			Real estate appraisal and administrative law
			Applied hydraulics and hydraulic structures
			Emergency management
			Fundamentals of geotechnical engineering
			Topographic surveys and cartography
			Building yard safety
			Emergency housing facilities
			Assessment and management of structural safety
	3rd year	5th / 6th semester	BSc Thesis
			Free professional internship
			Topic internship on “Risk assessment and emergency management”
			Topic internship on “Assessment and management of safety”

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Title (EN)	**MSc in Civil Engineering for Risk Mitigation**
Title (IT)	Ingegneria civile e mitigazione del rischio
Educational Degree	MSc
Link	https://www.polimi.it/en/international-prospective-students/laurea-magistrale-programmes-equivalent-to-master-of-science/programme-catalogue/civil-engineering-for-risk-mitigation
Discipline	Risk mitigation
School(s)	Polytechnic University of Milan - School off Civil, Environmental and Land Management Engineering
Duration	4 semesters
Teaching Language	English
Teaching Methods	Physical presence and remote teaching
ECTS	120
Cost (euro)	Approximately 7800 € (3898 € / year)
Number of students per academic year	
Undergraduate degree of students	
Specialisation in	Disaster management generic
Informal trainings (field trips, exercises, visits, etc.)	Field Trips, exercises, visits

Educational Curriculum	1st semester	Numerical methods for partial differential equations
		Soil structure interaction
		Tools for risk management
		Flood risk
		Structural analysis
		Fundamentals of GIS
	2nd semester	River hydraulics for flood risk evaluation
		Computational mechanics
		Structural dynamics
		Theory of plasticity
	3rd and 4th semester (3 courses of the student's choice)	Engineering structures for the environment
		Geo-engineering techniques for unstable slopes
		Emergency plans for hydrogeological risk
		Structure retrofitting
		Transport management in emergency planning
		Geospatial data processing to support seismic emergency management
		The final project is devoted to the solution of a field case.

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Title (EN)	**Methods and techniques for governing resilient cities. Towards integrated risk management (Specializing Master's Programmes)**
Title (IT)	Master di II livello in: "Metodi e tecniche per il governo di territori resilienti. Verso la gestioneintegratadeirischi".
Educational Degree	Other
Link	http://www.r3c.polito.it/sites/default/files/allegati_edu/master_r3c_brochure.pdf
Discipline	Urban resilience and risk management
School(s)	Polytechnic University of Turin and INPS (National Social Security Institute), R3C Responsible Risk Resilience Centre
Duration	1 year
Teaching Language	Italian
Teaching Methods	Remote teaching
ECTS	60
Cost (euro)	Approximately 3000 €
Number of students per academic year	25 maximum
Undergraduate degree of students	Students and professionals with Master's degree in: architecture and building engineering; civil, building systems and environmental and territorial engineering; urban and environmental territorial planning; chemical sciences; agricultural, forestry and environmental sciences and technologies; geological sciences and technologies; economic sciences for the environment and culture; legal sciences.
Specialisation in	Disaster management generic
Informal trainings (field trips, exercises, visits, etc.)	Exercises, internship

Educational Curriculum	Territorial planning and resilience. From international strategies to the national project
	The Sustainable Development Goals (SDGs). National and regional declinations of the European Agenda 2030
	Measuring resilience
	Cultural heritage, risk and resilience
	Local plans and strategic environmental assessment in relation to adaptation plans
	Seismic risk and protection of built heritage
	Industrial risk and territory: mutual interaction for adaptation
	Maintenance for the resilience of the building stock
	Resilient heritage design
	The design for the resilience of urban and territorial systems
	Social participation for resilience
	Communicating resilience. Digital resilience and practices in social media
	Decision support models for assessing resilience
	GIS: open data, monitoring and interpretation of territory dynamics
	Internship / Project work

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Title (EN)	**Master in Analysis, Evaluation and Reduction of Seismic Risk (AVRIS)**
Title (IT)	Master di II livello in: "Analisi, Valutazione e Riduzione del Rischio Sismico" (AVRIS)

Educational Degree	Other		
Link	https://web.uniroma1.it/masteravris/home		
Discipline	Seismic risk		
School(s)	University La Sapienza of Rome, Department of Earth Sciences - DST Department of Structural and Geotechnical Engineering - DISG Department of Civil, Construction and Environmental Engineering - DICEA Department of Astronautical, Electrical and Energy Engineering - DIAEE Department of History, Design and Restoration of Architecture - DSRA		
Duration	1 year		
Teaching Language	Italian		
Teaching Methods	Physical presence and remote teaching		
ECTS	60		
Cost (euro)	3000 €		
Number of students per academic year	30 maximum		
Undergraduate degree of students	Students and professionals with Master's degree		
Specialisation in	Earthquakes		
Informal trainings (field trips, exercises, visits, etc.)	Field trips, exercises, visits		
		Module I	Context analysis

Educational Curriculum	The second-level Master's Course aims to train professional figures capable of operating in the fields of seismic risk assessment, prevention, and mitigation, as well as related hydraulic and landslide risks and post-earthquake management (disaster manager).		Basic and local hazards (with reference to seismic events and associated risks such as hydraulics, landslides and liquefaction)
			Seismic microzonation
		Module II	Analysis of vulnerability, exposure to risk and fragility at the level of urban agglomeration, connection, technological and supply infrastructures, buildings, cultural heritage and community
		Module III	Risk assessment
			Prevention and mitigation strategies
			Planning of repair and local interventions
			Improvement and adaptation of passive protection
			Damage control
			Interventions on cultural heritage and interventions to mitigate the potential for liquefaction
		Module IV	Post-earthquake management: post-event management
			Post-earthquake management: materials management
			Post-earthquake management: community management

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Title (EN)	**Water and Geological Risk Engineering**

Title (IT)	Ingegneria del Rischioidraulico	
Educational Degree	MSc	
Link	https://www.unipd.it/en/educational-offer/second-cycle-degree/engineering?tipo=LM&scuola=SI&ordinamento=2021&key=IN2587&cg=engineering	
Discipline	Environmental engineering and risk management	
School(s)	Department of civil, environmental and architectural engineering, School of engineering - University of Padua	
Duration	4 semesters	
Teaching Language	English	
Teaching Methods	Physical presence	
ECTS	120	
Cost (euro)		
Number of students per academic year		
Undergraduate degree of students	Students with 1st level degree in class L-7 "Civil and Environmental Engineering" ex DM270/04 or a degree in class 8 "Civil and Environmental Engineering"	
Specialisation in		
Informal trainings (field trips, exercises, visits, etc.)		
Educational Curriculum	1st year (7 mandatory classes (M), 1 mandatory course of the student's choice (OM) and one optional course (O))	Geological and geotechnical engineering (M)
		River hydraulics from the hillslopes to the estuary (M)

		Hydrology and climate: modelling and change (M)
		Fluvial-coastal dynamics and hazard (M)
		Remote sensing for water resources (M)
		Engineering geomorphology (M)
		River basin modelling: forecasting and prediction (M)
		Italian language (OM)
		English language B2 (productive skills) (OM)
		Groundwater hydrology (O)
		Coastal management and protection (O)
		Environmental economics and resource valuations (O)
	2nd year (4 mandatory courses and 1 optional course)	Water and geological risk mitigation (M)
		Drainage and irrigation under a changing climate (M)
		Valuation and management of water-related risk (M)
		Water scarcity, agroecosystems and pollutants (M)
		Underground fluids energy and environment (O)

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Title (EN)	**Inner areas. Recovery after natural disaster: designing with communities**
Title (IT)	Master di II livello in: "Aree interne. La rinascita post disastro naturale: progettare con le comunità"
Educational Degree	Other
Link	https://www.unipd.it/en/educational-offer/second-cycle-degree/engineering?tipo=LM&scuola=SI&ordinamento=2021&key=IN2587&cg=engineering
Discipline	Regional planning and building back better
School(s)	School of Architecture and Design, University of Camerino
Duration	2 semesters
Teaching Language	Italian
Teaching Methods	Physical presence
ECTS	60
Cost (euro)	
Number of students per academic year	
Undergraduate degree of students	Students and professionals with Master's degree
Specialisation in	
Informal trainings (field trips, exercises, visits, etc.)	

Educational Curriculum	Policies for cohesion and local development in the EU
	Protected areas and internal areas
	Landscapes, natural resources, tourism and heritage
	Legislative instruments
	Natural disasters
	Community, identity, places
	Participatory and communicative methodologies for planning with communities: health and services
	Urban sociology, settlement dynamics and local communities
	Representation of urban and territorial spaces: community maps
	Social networks, governance, economic development
	Green digital transition
	Nature-city relationship for a new development model, in one heal vision
	Internship
	Final test

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Title (EN)	**Natural Hazards and Disaster Risk Reduction (NHDRR)**
Educational Degree	PhD
Link	https://www.redi-research.eu/research/
Discipline	Risk science

School(s)	Consortium REDI (REducing risk of natural DIsasters) is composed of: National Institute of Geophysics and Volcanology (INGV), National Institute for Nuclear Physics (INFN), Gran Sasso Science Institute (GSSI) University of Camerino (UNICAM)
Duration	3 years
Teaching Language	English
Teaching Methods	Physical presence
ECTS	
Cost (euro)	
Number of students per academic year	5-6 PhD students
Undergraduate degree of students	Students and professionals with Master's degree
Specialisation in	Disaster management generic
Informal trainings (field trips, exercises, visits, etc.)	Field trips, exercises, visits

Educational Curriculum	REDI is a research consortium for innovation and training. Its mission is to contribute to interdisciplinary research-actions to boost community disaster preparedness, response and recovery speed. The knowledge-for-action approach implies a strong commitment to make the virtuous circle between knowledge and innovation run continuously and smoothly, so that science advancement and technological progress positively feedback on each other to maximise their respective impacts, including at societal level. The REDI consortium offer 3-year planning cycle PhD fellowships, in compliance with the corresponding Italian legislation. The doctoral training programme includes a mandatory component of mobility among the partner institutions and a mandatory period in an institution from a country different from that where the enrolling University is based. Overall, these mobility periods should amount to at least 12 months. At REDI, monthly doctoral seminars are held under the supervision of the team of leading scientists and with the participation of invited guests, allowing all doctoral candidates to discuss the advancement of their projects. The doctoral candidates are invited to take part to training opportunities offered by the partner institutions and are encouraged to make the best possible use of European and international research infrastructures. The REDI partner institutions offer free access to their research facilities (e.g. laboratories, libraries, etc.) to the doctoral candidates enrolled into the REDI Doctoral Programme.

B.Professional Training Programmes and Seminars

-1-

Title (EN)	**Civil Protection Courses**
Title (IT)	Corsi per la Protezione Civile
Link	https://corsiprotezionecivile.it/robertoluberti/corsi/corsi-di-protezione-civile/
Provider	Independent organization
Duration	The duration of the course varies according to the regional regulations
Training Language	Italian

Training methods	Physical presence	
Cost (euro)	75€ / h	
Brief description of the programme	Basic course on primary safety and security measures (16 hours or more)	
	Specialisation courses	Training of trainers and Team Leader training
		Management of animals in rescue and seizure activities in Civil Protection events
		Elements of tactical medicine and bleeding control
		Search for missing persons and dog teams
		Topography and orientation
		Meteorology for Civil Protection
		Courses for Mayors and public administrators
		Responsibilities and tasks of the COC members (Centro Operativo di Comunale - Municipal Operative Centre)
		Protection of cultural heritage
		Emergency planning and activities in support of Civil Defence
		USAR (Urban Search And Rescue) with INSARAG (International Search And Rescue Advisory Group) protocol
		Emergency manager, especially for ROC (ResponsabileOperativo Comunale - Municipal Operative Coordinator)
		Water Rescue
		Radio communications (with the issue of the corresponding certificate)
		Transport of dangerous materials (ADR - Agreement concerning the International Carriage of Dangerous Goods by Road)

		Chemical biological radiological nuclear defense (CBRNe)
		Emergency communication and information for people
		Water, hydrogeological and meteorological risk
		Management of events with significant local impact, in collaboration with the local police
		Emergency psychology
		Evacuation of school and public buildings

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Title (EN)	**Courses for the Local Police**
Title (IT)	Corsi per la Polizia Locale
Link	https://corsiprotezionecivile.it/robertoluberti/corsi/corsi-polizia-locale-comunale-vigili/
Provider	Independent organization
Duration	The duration of the course varies according to the regional regulations
Training Language	Italian
Training methods	Physical presence
Cost (euro)	75€ / h
Brief description of the programme	Elements of tactical medicine
	Search for missing persons
	Civil protection and civil defence tasks for local police

	ADR (Agreement concerning the International Carriage of Dangerous Goods by Road) and CBRNe (Chemical biological radiological nuclear defense) for police forces
	Crime scene management
	Weapons regulations
	Operational techniques course (with practical part)
	Road accidents (with practical part)
	Ceremonies and deployments
	Management of animals in rescue and seizure activities

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Title (EN)	**The Italian School for Civil Protection**
Title (IT)	La Scuola Italiana Protezione Civile APS
Link	https://www.scuolaitalianaprotezionecivile.it/
Provider	Social Promotion Association
Duration	The duration of the course varies according to the regional regulations
Training Language	Italian
Training methods	Physical presence
Cost (euro)	
Brief description of the programme	It is a training school committed daily to the growth and organisation of an increasingly modern and efficient Civil Protection system aimed at mayors, councilors, public officials, volunteers, professional

	associations and all public and private institutions that participate in the "National System of Civil Protection". Many courses are provided.

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Title (EN)	**The National Higher Institute for Operational Training of Civil Protection**	
Title (IT)	L'Istituto Nazionale Superiore Formazione Operativa di Protezione Civile	
Link	https://insfopc.it/	
Provider	Non-profit, apolitical and non-profit organisation governed by private Italian law	
Duration	The duration of the course varies according to the regional regulations	
Training Language	Italian	
Training methods	Physical presence	
Cost (euro)		
Brief description of the programme	The I.N.S.F.O. PC. carries out the following activities, for the exclusive pursuit of social solidarity purposes, however related and connected to its purposes.	Carry out activities in favour of citizens, municipalities and public administrations, subject to high risks of a geological, hydrogeological, environmental nature and in general to highly dangerous events, promoting study, research and prevention activities of such emergency situations, as well as activities study of intervention plans in the context of the defence of the territory and citizens in a state of danger,

		Within the activity directly connected to the institutional one, carry out training and professional orientation activities in the field of prevention activities in the event of catastrophic or potentially dangerous events for citizens, as well as dissemination of the culture of protection and diffusion of municipal and supra-municipal emergency planning.
		Carry out other activities directly connected to institutional activities, in any case within the limits established by Legislative Decree 4 December 1997, n.460. The INSFO also has as its primary objective the spread of the culture of Civil Protection in Italy by intervening in the training of professionals, public and private bodies, associations and operational structures.

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Title (EN)	**Professional training (seminar) on the civil protection system**
Title (IT)	PRC – Seminario di aggiornamento del sistema di Protezione Civile
Link	https://corsifadcentrostudicng.it/corsi/seminario-di-orientamento-sul-sistema-di-protezione-civile/
Provider	National Council of Geologists
Duration	4
Training Language	Italian
Training methods	Remote teaching
Cost (euro)	

Brief description of the programme	The seminar, organised by the National Technical Structure, aims to provide guidance on the Civil Protection system and, in particular, on the management activities of emergency events referred to in Article 7 of the new Civil Protection Code (Legislative Decree no. 1/2018). The seminar, lasting four hours of lessons plus verification tests, is divided into six lessons according to the following programme.	The national technical structure (STN-StrutturaTecnica Nazionale): organization and competencies
		The National Civil Protection Service
		The civil protection model in the regions
		Emergency psychology
		The culture of prevention
		Ethics and professional ethics in operating in emergencies

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Title (EN)	**Minimum standards for training of Civil Protection volunteers on safety and self-protection behaviour**
Title (IT)	Standard minimi per le formazione del volontariato di Protezione Civile in materia di sicurezza e comportamenti di autotutela (Capitolo 3, estratto dall'Allegato A, della GR 1193/14)
Link	https://protezionecivile.regione.emilia-romagna.it/volontariato/formazione/gli-strumenti-della-formazione
Provider	Emilia Romagna region. Territorial Security Agency and civil protection
Duration	4
Training Language	Italian
Training methods	

Cost (euro)			
Brief description of the programme	On 21 July 2014 (Council Resolution 1193), Emilia Romagna Region approved the guideline "Minimum standards for the training of Civil Protection volunteers on safety and self-protection behaviours". This document contains all the training models formalised by the Agency. The training program responds to the need to combine the protection of the health and safety of volunteers engaged in civil protection activities with the pursuit of the objectives for which the National Civil Protection Service was established.	Level 1 – Basic Training	1.1 - Basic Civil Protection Course
			1.2 - Continuing education on safety for volunteers
		Level 2 – Practical Technical Training	2.1 – Course for forest fire workers and forest fire spotting workers
			2.2 – Course for hydraulic emergency workers
			2.3 – Course for emergency secretarial staff
			2.4 – Course for warehouse workers
			2.5 – Course for emergency kitchen, canteen and food warehouse workers
			2.6 – Course for dog handlers and support volunteers in the search for missing people
			2.7 – Short course in cartography and orientation
			2.8 – Short first aid course
			2.9 – Short course in emergency psychology
			2.10 - Short radio communications course
			2.11 - Continuing education on safety refresher course for team leaders
			2.12 - Continuing education on safety for hydraulic emergency workers
			2.13 – Continuing education on safety for spotting and forest firefighting workers (AIB)

		Level 3 – Training for organisational responsibilities	3.1 – Course for team leaders
			3.2 – Course for volunteer coordinators
			3.3 – Course for logistics manager
			3.4 – Course for kitchen, canteen and emergency meal distribution managers

Educational offer - Slovakia

A.Educational and Academic Offers on Disaster Management and Civil Protection in Slovakia

-1-

Title (EN)	Department of crisis management
Educational Degree	BSc
Link	https://fbi.uniza.sk/en/pracoviska/kkm
Discipline	Crisis management
School(s)	The Faculty of Security Engineering, University of Žilina
Duration	6 semesters
Teaching Language	Slovak
Teaching Methods	Full-time, part-time, individual study plan
ECTS	180
Cost (euro)	3000 €
Number of students per academic year	75 full-time and 15 part-time students
Undergraduate degree of students	Complete completion of secondary education, secondary school leaving certificate from Slovakia, or the equivalent from EU countries and from third countries.
Specialisation in	Disaster management generic

Informal trainings (field trips, exercises, visits, etc.)	Excursions, exercises, visits with an emphasis on organisations and experts providing crisis management, civil protection and risk management	
Educational Curriculum	1st semester (consisting of mandatory courses (M) and mandatory courses of the student's choice (OM))	Mathematics (M)
		Management (M)
		Work environment (M)
		Economy and economics (OM)
		Mathematical seminar (OM)
		Introduction to the study of crisis management (OM)
		Introduction to the Information technologies (OM)
		Physical education 1 (OM)
	2nd semester (consisting of mandatory courses (M) and mandatory courses of the student's choice (OM))	Risk management (M)
		Quality management (M)
		Probability theory (M)
		Crisis communication (OM)
		Logistics of a manufacturing company (OM)
		First Aid (OM)
		Firefighting Sport (OM)
		Topography and GIS applications (OM)
		Physical education 2 (OM)

	3rd semester	Management of occupational safety and health (M)
		Civil protection (M)
		Process management (M)
		English language 1 (OM)
		German language 1 (OM)
		Small and Medium Business (OM)
		Creation of technical documents (OM)
		Introduction to legal English (OM)
		Dangerous substances (OM)
		Physical education 3 (OM)
	4th semester	Methods and techniques of risk management (M)
		Managerial statistics (M)
		Professional practice (M)
		English language 2 (OM)
		German language 2 (OM)
		Environment management (OM)
		Survival course (OM)
		Evacuation (OM)
		Management of Information Security (OM)

		Crises situations solutions and extraordinary events (OM)
		Physical education 4 (OM)
	5th semester	Crisis management (M)
		Reliability of human factor (M)
		Public administration (M)
		Professional practice, abroad (OM)
		Bachelor´s works methods (OM)
		Marketing (OM)
		Information security management (OM)
		Fire protection (OM)
		Organisation integration rescue system (OM)
		Physical Education 5 (OM)
	6th semester	Information systems in crisis management and economic mobilisation (M)
		Bachelor Thesis seminar (M)
		Bachelor´s Thesis defence (M)
		Special Transport (OM)
		Ergonomics (OM)
		Insurance industry (OM)
		Technical security in crisis situations (OM)

		Physical Education 6 (OM)

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Title (EN)	Department of crisis management
Title (SK)	Katedra krízovéhomanažmentu
Educational degree	MSc
Link	https://fbi.uniza.sk/en/pracoviska/kkm
Discipline	Crisis management
School(s)	The Faculty of Security Engineering, University of Žilina
Duration	4 semesters
Teaching Language	Slovak
Teaching methods	Full-time, part-time, individual study plan
ECTS	120
Cost (euro) (part-time)	2400
Number of students per academic year	30 full-time and 15 part-time students
Undergraduate degree of students	Holders of higher education master´s degrees from Slovakia, EU countries and recognised third country higher education degrees
Specialisation in	Disaster management generic

Informal trainings (field trips, exercises, visits, etc.)	Excursions, exercises, visits with an emphasis on organisations and experts providing crisis management, civil protection and risk management	
Educational Curriculum	1st semester	Management of Operational Processes and Technologies (M)
		Operational Analysis (M)
		Forensic Engineering (M)
		English Language 1 (OM)
		German Language 1 (OM)
		Personal Management (OM)
		Project Management (OM)
		Financial Management (OM)
		Solving crisis situations in the economy (OM)
		Radiological, Chemical and Biological Protection (OM)
		Physical Education 1 (OM)
	2nd semester	International Crisis Management (M)
		Professional Practice (M)
		English Language 2 (OM)
		German Language 2 (OM)
		Industrial Risks (OM)
		Change Management (OM)

		Development of work teams (OM)
		Protection of Critical Infrastructure (OM)
		Probabilistic models of operational analysis (OM)
	3rd semester	Integrated risk management (M)
		Emergency planning (M)
		Crisis management in infrastructure (OM)
		Data analysis (OM)
		Business risks (OM)
		Psychology and crisis intervention (OM)
		Professional practice, abroad (OM)
		Business continuity management (OM)
		Management of rescue services (OM)
		Physical education 3 (OM)
	4th semester	Master´s Thesis Defence (M)
		Final Thesis Seminar (OM)
		Case studies in crisis management (OM)
		Enterprise Crisis Management (OM)
		Disaster Medicine (OM)
		Crisis Management (OM)
		Industrial Safety (OM)

		Prevention of Corporate Crisis (OM)
		General Data Protection (OM)
		Modern Information Technologies (OM)

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Title (EN)	Department of crisis management
Title (SK)	Katedra krízovéhomanažmentu
Educational degree	PhD
Link	https://fbi.uniza.sk/en/pracoviska/kkm
Discipline	Crisis management
School(s)	The Faculty of Security Engineering, University of Žilina
Duration	6 semesters
Teaching Language	Slovak
Teaching methods	Full-time, part-time, individual study plan
ECTS	180
Cost (euro) (part-time)	3600
Number of students per academic year	1 full-time and 2 part-time students
Undergraduate degree of students	Holders of higher education master´s degrees from Slovakia, EU countries and recognized third country higher education degrees

Specialisation in	Disaster management generic	
Informal trainings (field trips, exercises, visits, etc.)	Excursions, exercises, visits with an emphasis on organisations and experts providing crisis management, civil protection and risk management	
Educational Curriculum	1st year	Academic English Communication I
		Academic English Communication II
		Scientific and publication activities I
		Dissertation project I
		Probability and Statistic
		Methodology research
		Systems analysis and operational research
		Applications of crisis management methods
		Applied industrial safety
		Risk assessment of critical infrastructure functionality
		Application of methods and techniques in the risk management process
		Business risk management
	2nd year	Dissertation exam
		Foreign scientific research internship
		Scientific and publication activities II
		Dissertation project II

	3rd year	Scientific and publication activities III
		Dissertation project III
		Elaboration and defence of dissertation Thesis

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Title (EN)	**Department of fire engineering**
Title (SK)	Katedra požiarnehoinžinierstva
Educational degree	BSc
Link	https://fbi.uniza.sk/en/pracoviska/kpi
Discipline	Rescue services
School(s)	The Faculty of Security Engineering, University of Žilina
Duration	6 semesters
Teaching Language	Slovak
Teaching methods	Full-time, part-time, individual study plan
ECTS	180
Cost (euro) (part-time)	3000 €
Number of students per academic year	75 full-time and 15 part-time students
Undergraduate degree of students	Secondary education certificate from Slovakia, or the equivalent from EU countries and from third countries.
Specialisation in	Other

Informal trainings (field trips, exercises, visits, etc.)	Excursions, exercises, visits with an emphasis on organisations and experts providing crisis management, civil protection and risk management	
Educational Curriculum	1st semester	Mathematics
		Management
		Introduction to rescue services
		Work environment
		Economy and economics
		Mathematical seminar
		Introduction to the Information Technologies
		Physical education 1
	2nd semester	Risk management
		Probability theory
		Chemistry
		Quality management
		Crisis communication
		First aid
		Firefighting sport
		Construction and material solutions of buildings
		Physical education 2
	3rd semester	Creation of technical documents

		Fire and extinguishing chemistry, extinguishing substance supply
		Fire brigade and rescue service
		English language 1
		German language 1
		Management of occupational safety and health
		Civil protection
		Fire protection
		Dangerous substances
		Physical education 3
	4th semester	Dynamics of development of fire
		Technique and technical means of firefighting units
		Professional practice
		English language 2
		German language 2
		Managerial statistics
		Environment management
		Survival course
		Topography and GIS applications
		Fire safety devices

		Fire protection documentation
		Crises situations solutions and extraordinary events
		Physical education 4
	5th semester	Fire prevention of technologies
		Basics of fire protection of buildings
		Firefighting tactics
		Small and medium business
		Crisis management
		Introduction to legal English
		Organisation integration rescue system
		Operation and maintenance of firefighting equipment
		Professional practice, abroad
		Physical education 5
	6th semester	Fire investigation
		BSc Thesis seminar
		BSc Thesis defence
		Accident prevention and emergency preparedness
		Information systems in crisis management and economic mobilisation
		Special transport

		Technical security in crisis situations
		Professional activities in the Fire Department
		Physical education 6

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Title (EN)	**Department of fire engineering**
Title (SK)	Katedra požiarnehoinžinierstva
Educational degree	MSc
Link	https://fbi.uniza.sk/en/pracoviska/kpi
Discipline	Rescue services
School(s)	The Faculty of Security Engineering, University of Žilina
Duration	4 semesters
Teaching Language	Slovak
Teaching methods	Full-time, part-time, individual study plan
ECTS	120
Cost (euro)	2400 €
Number of students per academic year	75 full-time and 15 part-time students
Undergraduate degree of students	Secondary education certificate from Slovakia, or the equivalent from EU countries and from third countries.
Specialisation in	Other

Informal trainings (field trips, exercises, visits, etc.)	Excursions, exercises, visits with an emphasis on organizations and experts providing crisis management, civil protection and risk management	
Educational Curriculum	1st semester	Operational analysis
		Firefighting management
		English language 1
		German language 1
		Personal management
		Project management
		Fire safety in buildings
		Radiological, chemical and biological protection
		Materials and heat release
		Physical education 1
	2nd semester	Professional Practice
		Rescue Equipment
		English Language 2
		German Language 2
		Industrial Risks
		Development of work teams
		probabilistic models of operational analysis
		Testing in Fire Protection

		resistance of structures
		Physical Chemistry and Explosion Kinetics
		Rescue Work Technologies
		Physical Education 2
	3rd semester	Design and Solving Construction Fire Safety
		Management of Rescue Services
		Forensic Engineering
		Data Analysis
		Psychology and Crisis Intervention
		Design Fire Safety Devices
		Professional Practice, Abroad
		Comprehensive Care of Rescue Equipment
		Experimental Works and Research Projects
		Physical Education 3
	4th semester	MSc Thesis Defence
		Disaster Medicine
		General Data Protection
		Fire Engineering and Fire Modelling
		Final Thesis Seminar
		Explosion Suppression Prevention

		Applied Industrial Safety
		Expert Fire Cause Detection Procedures
		OHAS in Rescue Services
		Fire Prevention and Emergency Readiness
		Technique and Tactics in Rescue Services

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Title (EN)	**Department of fire engineering**
Title (SK)	Katedra požiarnehoinžinierstva
Educational degree	PhD
Link	https://fbi.uniza.sk/en/pracoviska/kpi
Discipline	Rescue services
School(s)	The Faculty of Security Engineering, University of Žilina
Duration	6 semesters
Teaching Language	Slovak
Teaching methods	Full-time, part-time, individual study plan
ECTS	180
Cost (euro)	3600 €
Number of students per academic year	1 full-time and 2 part-time students

Undergraduate degree of students	Holders of higher education master´s degrees from Slovakia, EU countries and recognised third country higher education degrees	
Specialisation in	Other	
Informal trainings (field trips, exercises, visits, etc.)	Excursions, exercises, visits with an emphasis on organizations and experts providing crisis management, civil protection and risk management	
Educational Curriculum	1st year	Academic English communication I
		Academic English communication II
		Scientific and publication activities I
		Dissertation project I
		Probability and statistics
		Methodology of research
		Systems analysis and operational research
		Fire safety in buildings
		Technology safety and industrial accidents
		Management and technologies of rescue work
		Comprehensive care of equipment in rescue services
		Material research and testing
	2nd year	Dissertation exam
		Foreign scientific – research internship
		Scientific and publication activities II

		Dissertation project II
	3rd year	Scientific and Publication Activities III.
		Dissertation Project III
		Elaboration and Defence of Dissertation Thesis
		Technique and Tactics in Rescue Services

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Title (EN)	**Department of fire protection**
Title (SK)	Katedra protipožiarnejochrany
Educational degree	BSc
Link	https://kpo.tuzvo.sk/en/about-department
Discipline	Rescue services
School(s)	Faculty of Wood Sciences and Technology, Technical University in Zvolen
Duration	6 semesters
Teaching Language	Slovak
Teaching methods	Full-time, part-time, individual study plan
ECTS	180
Cost (euro)	3600 €
Number of students per academic year	100 full-time and 60 part-time students

Undergraduate degree of students	Secondary education certificate from Slovakia, or the equivalent from EU countries and from third countries.	
Specialisation in	Other	
Informal trainings (field trips, exercises, visits, etc.)	Excursions, exercises, visits with an emphasis on organizations and experts providing crisis management, civil protection and risk management	
Educational Curriculum	1st semester	Physics in fire protection and safety (M)
		Mathematics I. (M)
		Legal regulations in fire protection and safety (M)
		Technical imaging in fire protection and safety (M)
		Introduction to fire protection (M)
		Basics of economics (M)
		English language – professional style grammar (OM)
		German language – professional style grammar (OM)
		French language – professional style grammar (OM)
		Introduction to physics (Voluntary course)
	2nd semester	Applied physics in fire protection and safety
		Informatics in fire protection and safety
		Mathematics II.
		Materials in fire protection and safety
		Paramedic psychohygiene

		Construction mechanics
		Construction structures and systems
		English language – professional communication of fire safety and protection (OM)
		German language – professional communication of fire safety and protection (OM)
		French language – professional communication of fire safety and protection (OM)
		Introduction to organic chemistry (Voluntary course)
		Selected chapters from physics (Voluntary course)
		Selected chapters from mathematical analysis (Voluntary course)
	3rd semester	Hydrodynamics and thermodynamics
		Operational analysis
		Organization of the integrated rescue system and fire brigades
		General and inorganic chemistry
		Basics of prevention in fire protection and safety
		Electrical engineering in fire safety and protection (OM)
		Professional service and physical training (OM)
		Basics of GIS for fire safety and protection (OM)
		Introduction to undergraduate chemistry (Voluntary course)

	4th semester	Management
		Organic chemistry
		Flexibility and strength
		Technical means in fire protection and safety / Machine parts
		Introduction to resolution of crisis situations
		Firefighting sport (OM)
		Management of the fire and rescue service (OM)
		Basics of technical measurements in fire safety and protection (OM)
	5th semester	Chemistry of combustion and extinguishing
		Health protection and safety at work
		Fire safety of buildings
		Fire safety of technological processes
		Tactics during interventions and fires
		Evaluation of flammable substances (OM)
		Fire and its development (OM)
		Technology of extinguishing agents (OM)
	6th semester	Dangerous substances
		Anti-explosion prevention
		Finding the causes of accidents and fires

		Rescue technology
		Bachelor's thesis and defence of the bachelor's thesis
		State examination of fire protection and safety
	Physical and sports education	These are voluntary courses lasting from the 1st to the 6th semester
	Elective sport and health	

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Title (EN)	**Department of fire protection**
Title (SK)	Katedra protipožiarnejochrany
Educational degree	MSc
Link	https://kpo.tuzvo.sk/en/about-department
Discipline	Rescue services
School(s)	Faculty of Wood Sciences and Technology, Technical University in Zvolen
Duration	4 semesters
Teaching Language	Slovak
Teaching methods	Full-time, part-time, individual study plan
ECTS	120
Cost (euro)	2800 €
Number of students per academic year	60 full-time and 20 part-time students

Undergraduate degree of students	Holders of higher education master´s degrees from Slovakia, EU countries and recognised third country higher education degrees	
Specialisation in	Other	
Informal trainings (field trips, exercises, visits, etc.)	Excursions, exercises, visits with an emphasis on organizations and experts providing crisis management, civil protection and risk management	
Educational Curriculum	1st semester	Hazardous substances in fire protection and safety
		Fire and extinguishing in buildings
		Heat and substance transfer
		Handling of combustibles
		Rescue technique and technology
		Prevention and emergency planning (OM)
		Spatial and building acoustics (OM)
		Statistical evaluation of data (OM)
		English language – academic communication in fire protection and safety (OM)
		German language – academic communication in fire protection and safety (OM)
		French language – academic communication in fire protection and safety (OM)
	2nd semester	Solving crisis situations
		Applied FCH in fire protection and safety

		Controlled evacuation
		Fire safety solutions for buildings
		Testing in fire protection and safety
		Applied electronics in fire protection and safety (OM)
		CBRNE (OM)
		Air conditioning equipment (OM)
		English language – professional communication in rescue services (OM)
		German language – professional communication in rescue services (OM)
		French language – professional communication in rescue services (OM)
	3rd semester	Firefighting equipment
		Organization of managerial work
		Management and organization of the integrated rescue system and the fire brigade
		Smoke control
		Specialized buildings
		Emergency services
	4th semester	Theory of risks
		Tactics for fires and interventions

		Diploma thesis and thesis defence
		State examination of fire protection and safety
		Occupational and environmental safety
		Logistics in fire protection and safety
		Controlled explosions
	Physical and sports education	These are voluntary courses lasting from the 1st to the 6th semester
	Elective sport and health	

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Title (EN)	**Department of fire protection**
Title (SK)	Katedra protipožiarnejochrany
Educational degree	PhD
Link	https://kpo.tuzvo.sk/en/about-department
Discipline	Rescue services
School(s)	Faculty of Wood Sciences and Technology, Technical University in Zvolen
Duration	6 semesters
Teaching Language	Slovak
Teaching methods	Full-time, part-time, individual study plan
ECTS	180
Cost (euro)	3600 €

Number of students per academic year	3	
Undergraduate degree of students	Holders of higher education master´s degrees from Slovakia, EU countries and recognised third country higher education degrees	
Specialisation in	Other	
Informal trainings (field trips, exercises, visits, etc.)	Excursions, exercises, visits with an emphasis on organizations and experts providing crisis management, civil protection and risk management	
Educational Curriculum	1st semester	English language – scientific and professional communication
		Methods of scientific work
	2nd semester	Combustion theory and fire dynamics
	3rd semester	Dissertation exam
	6th semester	Dissertation and defence of the dissertation
	Applied physical-chemical analytical methods	These are voluntary courses lasting from the 2nd to the 3th semester
	Impacts of climate change on people and the environment	
	Electronic and communication systems and means in security sciences	
	Crisis management and tactical rescue operations	
	Modelling and Simulation in Safety Sciences	

	Operational analysis in security sciences	
	Fire and safety-technical characteristics of materials	
	Prevention and solution of industrial accidents	
	Fire safety of buildings and design of fire engineering equipment	
	Technical security of rescue works	
	technical equipment and safety of technological systems	
	Theoretical and legal aspects of management of rescue activities	
	Theory and management of security risks	
	Thermodynamic processes at high temperatures	
	Toxicology in Safety Sciences	
	Multivariate statistical methods in security sciences	

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Title (EN)	**Faculty of mining, ecology, process control and geotechnologies**
Title (SK)	FAKULTA BANÍCTVA, EKOLÓGIE, RIADENIA A GEOTECHNOLÓGIÍ
Educational degree	MSc

Link	https://studium.tuke.sk/wps/portal/studium/fakulty/fberg/!ut/p/z1/hc_BCoJAEAbgZ-ng1RnbWLTbQmGEQXbR5hIq2yqoK-vWvn5SXYKyuf3D98MMEORAfXFvVGEb3RftlM_ELzwKMGYrPMRJsMF0meIp5jsWJQyyJ8AfIxDoX5_mCBd8HuCWvcHMDXsg1ery9Y_oSxYqICOv0kjj38y0rq0dxrWHHjrnfKW1aqVf6c7Db5VajxbyTwlDl2Nz7LJwFIsH1x97eg!!/dz/d5/L0lDUmlTUSEhL3dHa0FKRnNBLzROV3FpQSEhL2Vu/	
Discipline	Rescue, Fire and Safety Technics	
School(s)	Faculty of Mining, Ecology, Process Control and Geotechnologies of the Technical University of Košice	
Duration	4 semesters	
Teaching Language	Slovak	
Teaching methods	Full-time	
ECTS	120	
Cost (euro)		
Number of students per academic year	20	
Undergraduate degree of students	Holders of higher education master´s degrees from Slovakia, EU countries and recognised third country higher education degrees	
Specialisation in	Disaster management generic	
Informal trainings (field trips, exercises, visits, etc.)	Excursions, exercises, visits with an emphasis on organizations and experts providing crisis management, civil protection and risk management	
Educational Curriculum	1st semester	Semestral project
		Mathematics I
		Geophysics in geotechnics

		Emergency services and rescue services
		Hazardous substances
		Measurement and measuring systems (OM)
		Applied geotechnics (OM)
		Computer modelling of flow and visualisation (OM)
	2nd semester	Prevention of Major Industrial Accidents
		Fire safety of transport tunnels
		BTT (Integrated Rescue System)
		Materials for fire protection
		Semester Project II
		Industrial explosives and blasting (OM)
		Geotechnical monitoring (OM)
		Monitoring systems (OM)
	3rd semester	Hygiene and safety at work
		Semester Project III
		Legislation of fire protection
		Education for occupational safety and health II
		Civil protection and emergencies
		Ventilation and air conditioning of the underground (OM)
		Automatized systems of projecting (OM)

		Foundations of technical cybernetics (OM)
	4th semester	Technical means of activities Fire and Rescue Corps
		Rescue practice II
		Diploma thesis
		Block teaching – selected lectures from practice (OM)
		Urban underground construction (OM)

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Title (EN)	**Academy of the Police Force in Bratislava**
Title (SK)	Akadémia Policajného zboru v Bratislave
Educational degree	BSc
Link	https://www.akademiapz.sk/en/akademia/o-akademii/vseobecne-informacie/v%C5%A1eobecn%C3%A9-inform%C3%A1cie
Discipline	Security legal services in public administration
School(s)	Academy of the Police Force in Bratislava
Duration	6 semesters
Teaching Language	Slovak
Teaching methods	Full-time, part-time, individual study plan
ECTS	180
Cost (euro)	2700 €

Number of students per academic year	60 full-time and 60 part-time students	
Undergraduate degree of students	Secondary education certificate from Slovakia, or the equivalent from EU countries and from third countries.	
Specialisation in	Other	
Informal trainings (field trips, exercises, visits, etc.)	Excursions, exercises, visits with an emphasis on organizations and experts providing crisis management, civil protection and risk management	
Educational Curriculum	1st semester	Constitutional law of the Slovak Republic
		Theory of the state and law
		History of the state and law
		Psychology
		Sociology
		Informatics 1
		Psychosocial work (OM)
		Professional ethics (OM)
		Practical informatics (OM)
		Physical education I (OM)
	2nd semester	Development of public administration
		Administrative law 1
		Civil law I/1

		Substantive criminal law
		Management
		Economy
		Security services of the Slovak Republic (OM)
		Protection of human rights (OM)
		Physical education I/2 (OM)
		Foreign language I AJ, NJ, RJ – Introduction to professional communication (OM)
		Political science seminar (OM)
		PROFESSIONAL PRACTICE I/1 (OM)
	3rd semester	Administrative law 2
		Civil law I/2
		Labor law 1
		Foreign language 1 AJ, NJ, RJ – Professional communication 1
		Public order protection system
		Criminal procedural law
		Commercial law (OM)
		Crime prevention (OM)
		Social communication (OM)
		Physical education I/3 (OM)

		Introduction to criminology (OM)
	4th semester	Administrative law 3
		Crisis management 1
		Environmental law
		Labor law 2
		European Union law
		Foreign language 1 AJ, NJ, RJ – Professional communication 2
		Information systems of crisis management (OM)
		Protection against hazardous substances (OM)
		Penology (OM)
		Physical education I/4 (OM)
		Modern methods of information processing (OM)
		Crisis communication and psychological support of the intervention of the integrated rescue system (OM)
		PROFESSIONAL PRACTICE 1/2 (OM)
	5th semester	Government management
		Crisis management 2
		Public administration of EU countries
		Public Administration of the Slovak Republic 1
		Protection of the population 1

		Fire protection and rescue services 1
		Seminar for bachelor's thesis
		Firefighting and rescue work (OM)
		Civil protection system 1 (OM)
		The theory of creation of legal norms (OM)
		Foreign language I AJ, NJ, RJ – Written communication (OM)
		National news 1 (OM)
	6th semester	Public Administration of the Slovak Republic 2
		Protection of the population 2
		Fire protection and rescue services 2
		Informatics 2
		Public Administration of the Slovak Republic 3
		Civil protection system 2
		Fire protection and rescue services 3
		National news 2
		State exams: Development of a bachelor's thesis and its defence
		State exams: Administrative law
		State exams: Crisis management
		Mandatory optional subject of the state exam: Theory and practice of public administration/Theory and practice of civil protection/Theory and practice of fire protection

	Elective subjects taught in English	Administrative Law
		International and European Labour Law
		European Criminal law
		Company Law
		General Criminality
		International Organization
		Crisis Management
		English Language
		Physical Education and Sport-Self-defence
		International Security
		Financial and Tax Law
		Administrative Law

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Title (EN)	**Academy of the Police Force in Bratislava**
Title (SK)	Akadémia Policajného zboru v Bratislave
Educational degree	MSc
Link	https://www.akademiapz.sk/en/akademia/o-akademii/vseobecne-informacie/v%C5%A1eobecn%C3%A9-inform%C3%A1cie
Discipline	Security legal services in public administration

School(s)	Academy of the Police Force in Bratislava	
Duration	4 semesters	
Teaching Language	Slovak	
Teaching methods	Full-time, part-time, individual study plan	
ECTS	120	
Cost (euro)	2000 €	
Number of students per academic year	60 full-time and 60 part-time students	
Undergraduate degree of students	A graduate of a bachelor's degree at the PZ Academy in Bratislava, who is a graduate of the bachelor's degree in the study program security legal services in public administration in the field of study security services/science. A graduate of a bachelor's degree in the security legal services study program in public administration.	
Specialisation in	Other	
Informal trainings (field trips, exercises, visits, etc.)	Excursions, exercises, visits with an emphasis on organizations and experts providing crisis management, civil protection and risk management	
Educational Curriculum	1st semester	Economics and finance of the public sector
		Legislation of crisis situations
		International law
		Financial law
		International security
		Philosophy and ethics

		Security and protection of classified information (OM)
		Information security (OM)
		Foreign language II AJ, NJ, RJ – Basics of communication 1 (OM)
		Physical education II/1 (OM)
		Project management and financing (OM)
	2nd semester	Special administrative procedure
		Tax law
		Civil law II
		Commercial law PP
		Social communication
		Political science
		Fire engineering (OM)
		Criminal law protection of society against corruption (OM)
		Foreign language II AJ, NJ, RJ – Basics of communication 2 (OM)
		Physical education II/2 (OM)
		Modelling the protection of classified information in public administration (OM)
		PROFESSIONAL PRACTICE II (OM)
	3rd semester	Theory of security risks 1
		Crisis management in public administration 1
		Information management

		Asylum law and migration policy
		Criminology
		Foreign language I AJ, RJ, NJ – Specialized preparation
		Diploma thesis seminar
		Theory of public administration 1 (OM)
		Theory of civil protection 1 (OM)
		Theory of fire protection 1 (OM)
		Public procurement 1 (OM)
		International organizations (OM)
	4th semester	Theory of security risks 2
		Crisis management in public administration 2
		Managerial methods and techniques
		Theory of public administration 2 (OM)
		Theory of civil protection 2 (OM)
		Theory of fire protection 2 (OM)
		Public procurement 2 (OM)
		State exams: Development of a diploma thesis and its defence (OM)
		State exams: Theory of security risks (OM)
		State exams: Management (OM)

		Mandatory optional subject of the state exam: Civil law/Financial and tax law (OM)

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Title (EN)	**Academy of the Police Force in Bratislava**
Title (SK)	Akadémia Policajného zboru v Bratislave
Educational degree	PhD
Link	https://www.akademiapz.sk/en/akademia/o-akademii/vseobecne-informacie/v%C5%A1eobecn%C3%A9-inform%C3%A1cie
Discipline	Security legal services in public administration
School(s)	Academy of the Police Force in Bratislava
Duration	8 semesters
Teaching Language	Slovak
Teaching methods	Full-time
ECTS	180
Cost (euro)	3200 €
Number of students per academic year	8 part-time students
Undergraduate degree of students	Acquired II. degree of higher education, in the study program "Security-law protection of persons and property" or in the study program "Security-law services in public administration" or in a study program accredited in a related field of study, or in another study program, if the applicant in the study program Security-law protection of persons and property" or in the study program "Security-law services in public

	administration" or in a study program accredited in a related field of study and corresponding professional experience	
Specialisation in	Other	
Informal trainings (field trips, exercises, visits, etc.)	Excursions, exercises, visits with an emphasis on organizations and experts providing crisis management, civil protection and risk management	
Educational Curriculum	1st semester	Methodology of science
		Concepts of security systems of EU countries (OM)
		Statistical methods (OM)
		Methodology of sociological research (OM)
		Security research methodology (OM)
		Concept of development of public administration systems (OM)
	2nd semester	Strategic management
		Modelling of security systems (OM)
		Scientific propaedeutic (OM)
		Critical infrastructure of the EU and Slovakia (OM)
		Concepts of the development of an integrated rescue system (OM)
	3rd and 4th semester	Legal regulation of resolution of crisis situations in public administration
		Security risk management
		Publication activity 1

		Management of Student Scientific and Professional Activities (OM)
		Management and opposition of the final theses of the bachelor's thesis study 1 (OM)
		Active participation in solving project 1 (OM)
		Membership and activities in organizational and other committees of scientific events 1 (OM)
		Active pedagogical activity in direct teaching (OM)
	5th and 6th semester	Dissertation exam
		Publication activity 2
		Management of Student Scientific and Professional Activities 2 (OM)
		Management and opposition of the final theses of bachelor's studies 2 (OM)
		Active participation in the solution of the project 2 (OM)
		Membership and activities in organizational and other committees of scientific events 2 (OM)
		Active pedagogical activity in direct teaching (OM)
	7th and 8th semester	Elaboration of the dissertation and its defence
		Publication activity 3
		Management of Student Scientific and Professional Activities 3 (OM)
		Management and opposition of the final theses of bachelor's studies 3 (OM)
		Active participation in the solution of the project 3 (OM)

		Membership and activities in organizational and other committees of scientific events 3 (OM)
		Active pedagogical activity in direct teaching (OM)

B.Professional Training Programmes and Seminars

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Title (EN)	**Crisis management module course**
Title (SK)	MODULOVÝ KURZ KRÍZOVÝ MANAŽMENT
Link	https://www.fbi.uniza.sk/stranka/modulovy-kurz-krizovy-manazment
Discipline	Security legal services in public administration
Responsible organisation	Department of Crisis Management, Faculty of Safety Engineering, University of Žilina in Žilina
Duration	10 hours
Teaching Language	Slovak, English
Teaching methods	Full-time
Cost (euro)	150 €
Information about module	The graduate of the module is familiar with the legal environment in the field of crisis management with emphasis on the definition of competences and tasks of local state authorities' administration, as well as regional and local self-government in the process of prevention of and dealing with the consequences of emergencies, as well as crisis phenomena of a larger the scope of the crisis. It is familiar with the structure

	of the Security System of the Slovak Republic, its forces and means, as well as the position of local state and local government in it. Knows the methods of and procedures for risk assessment, their gradual reduction and implementation preventive measures. Knowledge of the principles of analysis of the security environment and, on the basis of its results, decides on the adoption of measures to reduce the negative consequences of crisis phenomena, with emphasis on with emphasis on saving human lives, material values and the environment. Knows the tasks and measures of the economic mobilisation system and its importance in the process of material, technical and personnel support for crisis resolution. Knowledge of information systems to support decision-making in a crisis management and crisis planning and the principles of their use in practice.
Specialisation in	Disaster management generic

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Title (EN)	**Crisis management, Integrated rescue system of the Slovak Republic and civil protection**
Title (SK)	Krízovýmanažment, Integrovanýzáchrannýsystém SR a civilnáochrana
Link	https://www.aos.sk/clanok/katedra-bezpecnosti-a-obrany-odborne-kurzy
Discipline	Crisis management, Integrated rescue system of the Slovak Republic and civil protection
Responsible organisation	The Security and Defence Department, Armed Forces Academy of General Milan Rastislav Štefánik
Accredited	The Ministry of Education, Research, Development and Youth of the Slovak Republic
Duration	2 days
Teaching Language	Slovak, English
Teaching methods	full-time
Information about module	The aim of the course is to clarify the basic concepts related to crisis management, the functions of crisis management and the basic principles of crisis management in dealing with crises at the national level. The acquired knowledge is the basis for more effective crisis management as well as for rational cooperation

	with relevant entities involved in crisis management (Integrated Rescue System of the Slovak Republic and civil protection). In addition to the theoretical part, the course also includes the acquisition of certain practical skills in the context of solving some projects in support of crisis management. Course content: • Definition of basic terms (security, security environment, crisis, crisis phenomena...). • The main tasks of crisis management. • Social-psychological aspects of crisis situations. • Organisational structure of crisis management. • Current legislative framework of crisis management. • Projects to support crisis management. • Training activities of crisis management staff.
Specialisation in	disaster management generic

-3-

Title (EN)	**Company training: "Crisis management and crisis decision-making, crisis management processes"**
Title (SK)	Firemnéškolenie: "Krízovýmanažment a krízovériadenie | procesykrízovéhomanažmentu"
Link	https://www.tvojkouc.sk/firemne-kurzy-manazerske-skolenia/firemne-vzdelavanie-seminare/kurz-krizovy-manazment-krizove-riadenie
Discipline	Crisis management and crisis decision-making
Responsible organisation	EducationCenter
Duration	1 day
Teaching Language	Slovak
Teaching methods	Full-time, individual, online
Cost (euro)	550 € / group

Information about module	Objectives of the educational activity: • Prepare management and executors for managing crisis situations, starting with setting goals, determining the way and method of achieving them, through organizing the means to achieve them - both in terms of quantitative content and qualitatively acceptable standards - to controlling, deciding, regulating the results achieved and coordinating further development • To provide participants with a comprehensive system of knowledge from the basics of crisis management and its connection to the tasks of security services • To prepare the management and executors for: fulfilling the main tasks of crisis management, primarily for the ability to develop variants of the development of the crisis (evaluate the strengths and weaknesses of the crisis),prevention, preventing the emergence of crises and crisis situations, the ability to analyse variants from a systemic point of view and from the point of view of the participation of individual subjects in the crisis (negative impact of the consequences of the crisis), the ability to adopt adequate solutions that would be used in the event of a crisis, the ability to bring the crisis under control and minimize losses, creating prerequisites for management, adequate responses to emerging crises and crisis situations, preparedness for intervention at all levels (the managing and executive elements of crisis management must immediately react to the identified facts), assessment of possible risks and the ability to analyze the conditions for the emergence of crises and crisis situations, formulation of the expected development and course of the crisis • To teach participants to plan, make decisions and lead people in the event of a crisis situation • To achieve in the participants of the course the ability to apply the acquired knowledge in solving crisis situations • To provide participants with all relevant information on crisis management
Specialisation in	disaster management generic

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Title (EN)	**CBRN-E security and safety**
Title (SK)	CBRN ochrana a bezpečnosť
Link	https://www.isemi.sk/sk_SK/courses/

Discipline	MODULE 4 Crisis management of hazmat and CBRN-E incidents
Responsible organisation	ISEMI – International Security and Emergency Management Institute
Accredited	The Ministry of Education, Research, Development and Youth of the Slovak Republic
Duration	1 day (module 4): 10 hours
Teaching language	Slovak, English
Teaching methods	full-time
Information about module	• Theoretical model of crisis management • Prevention of hazmat and CBRN-E incidents • Incident management, integrated rescue system and protection and safety zones in event of a release of hazardous substances • Innovative technologies and simulations in crisis management for decision support • Case studies of hazardous substance spill modelling using software tools • Innovation forms of education in crisis management (virtual reality, augment reality, XVR, AI…) • Crisis management communication during hazmat/CBRN incidents (with the republic and among responding forces)
Specialisation in	Man-made hazards

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Title (EN)	**MBA program Crisis Management**
Title (SK)	Program MBA Krízovýmanažment
Link	https://www.ifbs.sk/programy/mba-krizovy-management/?gad_source=1&gclid=Cj0KCQjwqdqvBhCPARIsANrmZhN8DrlupA5L4hRCFCSOcwAUhG5dKLIwxWz9YSa-fFbR3iqmk-gvWVgaAvtWEALw_wcB

Discipline	Crisis management
Responsible organisation	Institute of Forensic Sciences and Security-Legal Studies
Duration	12-18 months
Teaching language	Study in the Slovak language with acceptance of English
Teaching methods	Online
Cost	1400 €
Information about module	The study of the professional program MBA Crisis Management aims to expand not only theoretical and practical knowledge in planning and managing crisis events and situations, but also to expand the knowledge of individual employees of the departments that deal with issues of crisis management and planning. Studying the program is suitable for everyone who wants to learn more not only about crisis management and thereby deepen their knowledge, but also for those who want to increase their value on the labor market by studying this program. It is a very prestigious program that is professionally focused on the needs and issues of those bodies that emphasize the protection of the population and the prevention of crisis situations and events. Graduates will be able to formulate anti-crisis measures and create early warning systems to manage and prevent crises, as a crisis usually does not arise suddenly, but develops gradually and this process can be divided into several stages. They will find application primarily in public administration, in the positions of professional workers or in management functions that deal with crisis management. Upon successful completion of the MBA at the Institute of Forensic Sciences and Security Legal Studies, you will receive the prestigious professional title of MBA, which is listed after your name. You will also receive a diploma on completing your studies in Slovak and English. Semester 1: • Integrated Rescue System • Crisis communication • Crisis management • Risk management • Semester 2: • Legislative security assurance and crisis management • Psychology, leadership and management of people

	• Right to information and protection of personal data • Graduation: • Diploma thesis
Specialisation in	Disastermanagementgeneric

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Title (EN)	**PROFESSIONAL COMPETENCE IN THE SECTION OF CIVIL PROTECTION OF THE POPULATION**
Title (SK)	ODBORNÁ SPÔSOBILOSŤ NA ÚSEKU CIVILNEJ OCHRANY OBYVATEĽSTVA
Link	https://www.minv.sk/?osvco
Discipline	Civil protection
Responsible organisation	Crisis management section of the Ministry of the Interior of the Slovak Republic
Duration	2 weeks
Teaching language	Slovak
Teaching methods	Full-time
Cost	Vocational training for obtaining professional competence is carried out for payment of 104 €; this applies to employees of the Ministry, other central state administration body, other central state body, district office, self-governing region and municipality. The payment corresponds to the scope of all costs and is income of the state budget.
Information about module	Vocational training for the acquisition of professional competence is carried out in accordance with § 18 and the Act of the NR SR no. 42/1994 Coll. on civil protection of the population as amended and Decree of the Ministry of the Interior of the Slovak Republic no. 7/2012 Coll., which establishes the details of professional competence in the area of civil protection of the population. Professional competence is the sum of theoretical knowledge and practical skills that are necessary for:

	• development and updating of the population protection plan, • development and updating of the plan for the protection of employees and persons under care, • educational activity in the field of civil protection.
Specialisation in	Other

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Title (EN)	**Basic course for specialists in the prevention of serious industrial accidents**
Title (SK)	Základnýkurzšpecialistovnaprevenciuzávažnýchpriemyselnýchhavárií
Link	https://www.adapt.sk/havarie_1.htm
Discipline	Prevention of serious industrial accidents
Responsible organisation	ADAPT
Responsible organization for professional competence	Ministry of the Environment of the Slovak Republic
Duration	4 weeks – 160 hours
Teaching language	Slovak
Teaching methods	Full-time
Cost	850 €
Information about module	The subject of the convention, which was adopted in 1992 by the United Nations Economic Commission for Europe, is not only to deal with the transboundary consequences of accidents, but above all to prevent

	accidents by means of a systemic approach to accidents on the entire territory of the state in the sense of EU Council Directive 96/82/EC "SEVESO 2". By Council Decision of March 23, 1998 no. 998/685/EC, the European Union as a whole acceded to this convention and at the same time enabled EU partner countries to speed up their processes of ratification and acceptance of this convention. The key SEVESO II directive is incorporated into the Slovak legal system by the Act on the Prevention of Serious Industrial Accidents No. 261/2002 Coll., which is approved in Slovakia with effect from 1 July 2002. Act 128/2015 has been in force since 1 August 2015, which fully replaces the previous laws. Due to the obligations arising from this law for companies with potentially dangerous operations, professional training in the field of risk management is also urgent in connection with our membership in the European Union. Nationwide courses are aimed at training experts from industrial enterprises that operate dangerous technological activities, from professional institutions that prepare professional documentation and from the State Administration of Industrial and Environmental Safety, which provides state expert supervision in the field of industrial accident prevention. We assume that the action of trained experts (specialists) will achieve a substantial reduction in damages arising from the operation of potentially dangerous technological activities. According to the law, professional training is mainly focused on knowledge of: • legal regulations in the field of preventing and coping with serious accidents and limiting their consequences on the life and health of people, the environment and property • risk assessment • characteristics of hazards and prevention of serious accidents in physical and chemical processes • emergency planning, including the creation of emergency scenarios to calculate the area of danger and determine the forces and means to deal with serious accidents • the meaning, development and use of the security report
Specialisation in	Man-made hazards

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