

## Disaster Risk Management and Civil Resilience

### DRM-FRAME

#### Activity 3.1: Core structure of the curriculum (definition of aim, objectives, expected outcomes, skills and competences)

**Work Package:** WP3- Proposal for a Disaster Risk Management framework

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1.0	12/08/2024	Draft version to be discussed and reviewed by the consortium
1.1	1/10/2024	Comments from the consortium addressed

## 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 and other stakeholders.

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, national and EU level.

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
AB	Advisory Board
EU	European Union
KoM	Kick-Off Meeting
MCT	Management and Coordination Team
PSC	Project Steering Committee
QET	Quality Evaluation Team
WP	Work Package

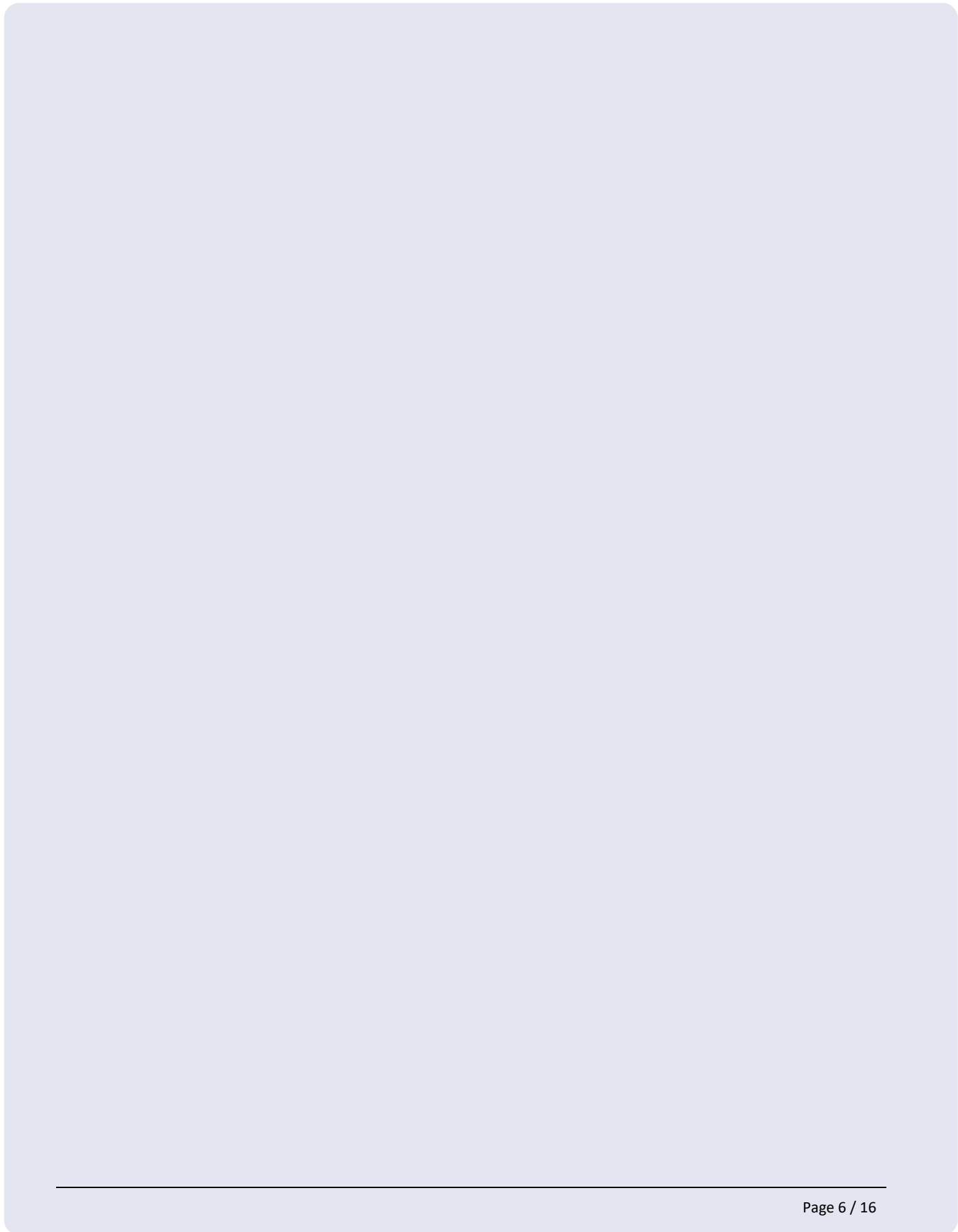
## Executive Summary

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This document outlines the core structure of the DRM-FRAME curriculum. It provides detailed information about its core components, including the aim of the curriculum, the target audience and the needs it should address. Furthermore, the document focuses on the expected impact at different levels.

This document follows up on the results of WP2 final report and forms the basis for the subsequent in-depth development of the DRM-FRAME curriculum. It is the first stage of developing a successful package that aims to include the knowledge gained from WP2 and progress it further by utilizing the partners' experience and expertise.

This activity aims to address the shared goals and particular needs that must be satisfied by incorporating different parameters into the design process of the curriculum. To do this, we started by precisely defining the overall aim and then thoroughly identifying the target audience. We then determined the training needs for each target group with the goal of creating a customized strategy that takes the audience's particular demands into account. Furthermore, the training objectives were classified into detailed categories to encompass various approaches, with the intention of promoting the establishment of robust and sustainable communities. Lastly, to show the similarities and differences between the three levels of predicted impact—local, regional, and national—a specific section has been elaborated in that respect.



## 1. WP2 Results as the Basis for Developing the DRM-FRAME Curriculum

Work Package 2 of the DRM-FRAME project focuses on a) the existing disaster risk management (DRM) approaches, b) identifying best practices, and c) performing a comprehensive needs analysis. The WP2 (A1, A2, A3) activities brought to light the significance of pillars that should be considered while developing disaster risk management tools and methodologies. Identifying the key areas in need of improvement, as well as recognizing the pillars that, though still highly significant, remain underappreciated, is crucial to the project's success. These pillars include the DRM tools and approaches. The WP2 report, focused also on the comparative analysis of the existing educational offer in Disaster Risk management with pointing out the most important skills upon the completion of DRM training programs and recommendations for updates of methodologies using latest ICT tools.

WP2 activities revealed that the following pillars needed to be improved in order to increase capacity, skills development and readiness in the area of disaster risk management, including the issues of prevention, preparedness, response, and recovery: **1. Procedures, 2. Tools, 3. Skills and competences, 4.VET Training.** As noted, adjustments and additional development in the field are needed for those four pillars, in DRM areas.

**1.Procedures:** It is acknowledged that the simplification of processes and the establishment of standard procedures help to improve the disaster response and the communication among experts. Furthermore, it is especially critical to improve communication between field experts and participating scientists. Emphasis should also be put on the importance of community involvement in DRM. Effective disaster management cannot be achieved without the active participation of local communities. Hands-on learning and focused field training can help achieve this. Furthermore, regarding the procedures in the DRM field, it is vital to understand the importance of combining different policy fields (e.g. urban planning, public health) in the strategies applied. This combination can help in risk reduction. Additionally, it is fascinating to point to the necessity of analyzing issues such as socioeconomic, environmental, cultural, and human rights and how they can be integrated in a DRM training program. The same applies for other special issues like improvement of well-being of professionals working in different levels of DRM sectors: local, regional, national and across different sectors, emergency logistics management and cultural heritage protection.

**2. Tools:** Important problems found in every participating country have to do with making efficient use of the tools and data at hand. The use of mapping techniques and data analysis can make a substantial contribution to the study of hazards as well as to the response and general recovery processes in areas affected by disasters. Moreover, technological advancements can improve DRM field by the proficient use of decision support systems and risk evaluation tools. The integration of advanced technology is essential for all DRM procedures. This makes necessary the in-depth training of all those directly involved in the DRM field.

**3.Skills and competences:** The skills and competences identified in WP2 that is essential to be included in the DRM-FRAME Curriculum include:

1. Problem solving and decision making;
2. Improved communication skills that will help in the information exchange between professionals and the public engagement;
3. Enhanced teamwork capabilities;

4. Data analysis and data governance;
5. Risk assessment and hazard identification skills,
6. Ethical concerns.

Except the successful disaster risk management, these skills can also contribute to the enhancement of the collaboration between stakeholders and in the improvement of public awareness, two vital conditions for success in the field.

**4.VET Training:** Enhanced practical training is vital for the successful DRM. It is important to have tailored training courses depending on the target group and their needs. Also, the integration of advanced technology in training is really important, because it can help in the development of synergies between different fields. In particular, multidimensional approaches in DRM training are highly beneficial for raising public awareness and improving the long-term effectiveness of DRM policies. These approaches promote holistic learning, which equips individuals and communities with a comprehensive understanding of disaster risks. This, in turn, enables them to make informed decisions and take proactive measures in disaster prevention, preparedness, and response.

These results now serve as the cornerstone for the project's curriculum creation phase.

## 2. Core Structure of the DRM-FRAME Curriculum

### 2.1 Aim of the DRM-FRAME Curriculum

The aim of the curriculum is to improve skills capacity and increase preparedness in DRM, in relation to all the phases of the disaster management cycle i.e., prevention and mitigation, preparedness, response, and recovery. As underlined by the WP2 report, the pillars in DRM that need to be improved are the following: 1. Procedures, 2. Tools, 3. Skills, 4. VET Training. This improvement can be achieved by creating a comprehensive curriculum, divided into different modules, based on the needs identified in the previous WP.

The DRM-FRAME curriculum will give priority to the approaches that encourage **innovation, capacity, flexibility, digital readiness and resilience**. The curriculum will promote **interactive learning with the use of digital tools** and will encourage target audience to get involved in the training in the following areas:

- Fundamental skills in DRM, with a focus on cooperation techniques and advanced technologies.
- Participatory planning and readiness for emergencies.
- DRM integration in policy making in various fields, to create cross-sectoral policies.
- DRM planning enhancement by tailoring tools and approaches to the specific spatial, social and economic factors of the regions.
- Problem solving and other skills for implementing disaster risk management measures.

### 2.2 Target Audience and Needs Identification

The target audience of the DRM-FRAME curriculum is diverse, including various individuals and organizations that can contribute to DRM. The DRM-FRAME curriculum should satisfy various needs that differ between the various target groups.

#### A. Primary Target Audience

**1. Disaster risk managers and staff in the public sector:** there is a need for coordination and communication at all levels when implementing a policy so it is vital to gain knowledge in the field and get familiar with the use of tools, qualitative and quantitative data and proactive strategies and approaches that can reduce risk and improve monitoring.

**2. Policy makers at local, regional, and national level:** the understanding of good practices, the identification of the existing capability gaps in DRM that have been identified will help in creating effective strategies that promote cooperation at different levels to prioritize community resilience and long-term sustainability.

**3. Volunteers:** training will help understand in depth the multiple needs and priorities for tailored tools and approaches when handling a case, to manage successfully a disaster.

**4. Emergency Services:** people working in the civil protection, fire brigade, police, and other first-responder organizations, are in the front line so they need to be continuously trained and kept up to date, to face at best any challenge that can occur, ensuring effective emergency response.

**5. Education and training experts, VET providers, Researchers:** there is the need to arouse interest in the field and encourage future initiatives. Especially early training from a young age can help in long-term public awareness and improve the effectiveness of DRM policies in the future.

**6. Experts in the fields of infrastructure, economy, environment, health, law:** there is the need to integrate DRM in different sectors in order to safeguard assets and create resilient strategies with reduced risk.

## B. Secondary Target Audience

**1. Media professionals:** journalists and social media managers who need to be trained because of their activity, to disseminate news in the most reliable way and be able to raise public awareness.

**2. NGOs:** NGOs in the field of health, social rights and cultural integration that need training to be able to provide help in emergencies, especially when vulnerable populations are involved.

**3. General Public:** anyone interested in DRM because of their work or because of their desire to delve deeper into the subject, for personal motives and pursuits.

### 3. Specific objectives and related expected outcomes in terms of skills and competences

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The curriculum in Disaster Risk Management (DRM) aims to equip the target audience with the knowledge, skills, tools, training and procedures that are vital to manage successfully a disaster and help in reducing any kind of risks that stem from the disaster. The DRM curriculum is based on a dynamic approach in training, which will help in the creation of resilient and sustainable communities.

The specific objectives of the curriculum are the following:

#### 1. Improving risk perception of the trainees

- **Risk identification:** identify various natural and human hazards by analyzing reliable quantitative and qualitative data.
- **Risk evaluation:** evaluating the risk by using techniques (SWOT analysis, risk matrix, etc.) that can lead to risk identification and to risk control by prioritizing the needed actions.

#### 2. Identifying Strategies for reducing risk

- **Mitigation Strategy:** getting familiar with mitigation options and understanding the importance of dynamic adaptation to alternative measures when facing a risk (Avoidance, Reduction, Transfer, Acceptance).
- **Prevention and Preparedness Strategy:** getting familiar with strategies for disaster prevention and preparedness at local, regional, national and European levels, by focusing on good practices that have already been proved successful.

#### 3. Improving Response Capacity

- **Emergency Response:** develop problem solving, decision making, teamwork capabilities for effective and well-timed disaster response, including coordination.

#### 4. Improving Recovery Capacity

- **Recovery Planning:** understand the social and emotional impact of disasters and adopt trauma management practices.

#### 5. Strengthening Resilience and Sustainability Building

- **Community Resilience:** encourage practices that improve the resilience of communities, particularly vulnerable groups, by adapting to evolving conditions and using effectively the available resources.
- **Sustainable Development:** combine DRM strategies with the 2030 Agenda for Sustainable Development (SDG 1: No Poverty, SDG 3: Good Health and Well-being, SDG 6: Clean Water and Sanitation: No Poverty, SDG 9: Industry, Innovation, and Infrastructure, SDG 11: Sustainable Cities and Communities, SDG 13: Climate Action) to create synergies and achieve

long-term sustainability. The combination of SDGs with DRM strategies can ensure that social, economic and environmental systems are equipped to face disasters and recover from them.

## 6. Creating effective Policy, Legal, and Institutional Frameworks

- **Policy Analysis:** identify effective local, regional, national and European DRM policies, laws, and regulations that enhance the coordination and communication of the stakeholders when handling a disaster.
- **Establish shared protocols:** reduce bureaucracy and encourage quicker responses of the professionals in the field, during incidents. Understand the roles of various institutions involved in DRM, including governments, NGOs, and international agencies, and improve communication skills that will help in the information exchange between professionals.

## 7. Capacity Development and Public Engagement

- **Training and Education:** encourage practical training and drills to educate and train various stakeholders in DRM, by focusing on tailored training courses depending on the target group.
- **Integrate new resources and innovative technological tools and approaches in the training:** promote open data, innovative tools like vulnerability risk mapping, data analysis, spatial planning and participatory planning.
- **Community Awareness:** promote awareness and education programs aimed at reducing disaster risks in communities, through interdisciplinary approaches that offer easily accessible and cross-cultural programs.

## 8. Research and Innovation

- **Research Methodologies:** encourage research in the field and especially multidisciplinary research to have an overarching approach.
- **Technological Applications:** encourage the use of new technologies, such as AI and fully adopt technologies like GIS (Geographical Information Systems) and remote sensing to reduce risk.

## 9. Ethical, Social, Mental and Cultural Considerations

- **Ethics in DRM:** need for incorporating factors like human rights and sustainability in the DRM.
- **Cultural Sensitivity:** incorporate cultural and social dimensions into DRM policy to ensure inclusive risk management and understand the impact of socio-economic and cultural factors in DRM.
- **Emphasis on the mental health:** both professionals working in (DRM) and the communities that have faced severe risks should get mental support through special sections in training programs.

## 10. Cooperation Perspectives

- **International Cooperation:** study the importance of international cooperation when handling a disaster.
- **Regional Collaboration:** study the importance of regional cooperation and policies for managing disasters.
- **Local cooperation:** study the importance of local cooperation between agencies to handle a disaster.
- **Multilevel cooperation:** study the importance of a bottom-up approach when handling a disaster in order to transfer the essential information to all levels before decision making.

## 11. Continuous Evaluation and Improvement

- **Monitoring and Evaluation:** encourage continuous monitoring to have feedback throughout any incident, in order to make the needed modification in tools and approaches.
- **Continuous Learning:** emphasize the need for continuous knowledge and practices update in response to evolving risks and new challenges. Focus on the importance of following an incident, with a thorough evaluation of the response and recovery activities, which will help to understand good practices and gaps, which is critical to improving response and recovery capabilities over time.

## 4. Impact of the DRM FRAME Curriculum

The curriculum in Disaster Risk Management (DRM) is expected to have a strong impact at different levels: local, regional and national levels. In more detail, the expected impact focuses on the following:

### A. Local Impact:

- **Improved preparedness:** local communities and authorities can be better prepared to respond to disasters by understanding better the strategies and implementing tools that can help in the whole DRM process.
- **Increased resilience:** new knowledge and advanced tools, as provided in DRM training, can improve the resilience of local communities and create a safe environment for their activities, because of the strategies that can be implemented when a risk unfolds.
- **Public engagement:** community-based DRM can lead to successful cases where there is a clear shift from top-down design and there is a strong engagement of the local communities in the DRM cycle. Local communities are aware of the realistic risks in an area and are also more likely to participate in strategies that protect their area and community.
- **Capacity building:** local authorities and organizations that have the capacity to create and implement DRM policies, including metrics monitoring, spatial planning and recovery planning. This includes setting up local DRM committees.
- **Communication Systems and data sharing enhancement:** development of dependable communication channels that can function during an emergency (for both internal team communication and outward communication with stakeholders such as the general public, media and emergency services) and utilization of multiple platforms (such as social media, SMS alerts, and traditional media) to guarantee that information reaches everyone.

### B. Regional impact:

- **Coordination and Cooperation:** at the regional level, DRM training can offer great knowledge of shared protocols between different agencies that can help in the risk handling. The curriculum can also provide communication skills and tools that encourage cooperation at different levels.
- **Regional Risk Assessment:** training activities in DRM can help in the risk assessment in a region, because of the knowledge that the trainees can attain. The curriculum will encourage communication skills and geographical systems management knowledge that are important when handling a risk at regional level, because of the multilevel risks that are present in a region.
- **Resource Allocation:** the curriculum training in DRM can provide the tools and approaches that fit each region and are suitable when handling risks. All regions have different social, economic, environmental characteristics, which are to be identified to adapt strategies in the most appropriate way.

- **Policy Development:** through training, the authorities can understand the needs of each region and create strategies that fit. The policies can fill existing gaps and take advantage of opportunities that emerge.
- **Communication Systems and data sharing enhancement:** development of dependable communication channels that can function during an emergency (for both internal team communication and outward communication with stakeholders such as the general public, media and emergency services) and utilization of multiple platforms (such as social media, SMS alerts, and traditional media) to guarantee that information reaches everyone.

### C. National Impact:

- **Strengthened National Policy in DRM:** the well-trained professionals can help in designing a National DRM Framework which will apply in different sectors and regions, with the needed modifications, by the local and regional feedback.
- **Integration of DRM in various fields:** DRM can be integrated into national policies, in fields like health, environment, infrastructure, education and agriculture. This can create complex strategies that consider multifactorial perspectives.
- **Enhanced institutional capacity:** all national institutions responsible for DRM, such as ministries can have a greater capacity of handling risks and adapting in the continuous evolving condition when a disaster happens. The curricula can offer the knowledge and tools so that national agencies can not only exploit the means of handling a risk but also to adapt to the new environmental, economic and social conditions.
- **Communication Systems and data sharing enhancement:** development of dependable communication channels that can function during an emergency (for both internal team communication and outward communication with stakeholders such as the general public, media and emergency services) and utilization of multiple platforms (such as social media, SMS alerts, and traditional media) to guarantee that information reaches everyone.
- **International Cooperation:** a nation with strong DRM capacity can cooperate with international organizations and contribute to international risk reduction, especially in cases where hazards are global. In the event of a disaster with an international impact, it is possible for the threatened states to better prepare for it together and, in the event of its occurrence, solve and manage it more effectively.
- **Economic development:** by reducing the risk of disasters or their impact, a nation can achieve economic stability and reduce the economic loss of disaster recovery. This can lead to resilient nations.



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