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euROpean observAtory on Disaster risk and crisis MAnagement best Practices: way ahead

Framework for identifying and assessing GPs in DRM

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LIST OF ACRONYMS

CEO The Community for the European Observatory of Good Practices in Disaster Risk Management
DG ECHO Civil Protection and Humanitarian Aid Operations Department
DRM Disaster Risk Management
DRR Disaster Risk Reduction
EC European Commission
EU European Union
GPs Good Practices
IFRC International Federation of Red Cross and Red Crescent Societies
JRC Joint Research Centre
OECD Organisation for Economic Co-operation and Development
SDGs Sustainability Development Goals
UDRGs Union Disaster Resilience Goals
UN United Nations
UNDRR United Nations Office for Disaster Risk Reduction
UNEP United Nations Environmental Programme
WB World Bank
WMO World Meteorological Organisation

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1. INTRODUCTION

1.1 Goal of the document

This document proposes a Framework for identifying and assessing[1] Good Practices (GPs) in Disaster Risk Management (DRM) fulfilling Task3.1 of the ROADMAP2 project. In the previous ROADMAP's project first Thematic Paper (Capone et al., 2022), the project consortium chose this definition of DRM, following the United Nation's Disaster Risk Reduction glossary: *Disaster Risk Management is the application of disaster risk reduction policies and strategies to prevent new disaster risks, reduce existing disaster risk and manage residual risk, contributing to the strengthening of resilience and reduction of disaster losses* (UNDRR, 2023). The DRM cycle includes phases such as prevention, preparedness, crisis and emergency management, and post-emergency/recovery (see Figure 1). In general, DRM guarantees a systematic approach to identifying, assessing, and reducing risks associated with hazards and human activities.

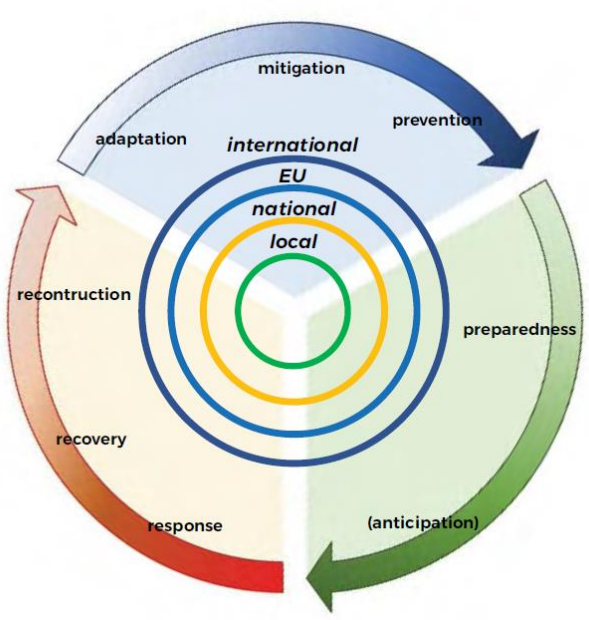

Figure 1: Example of DRM cycle (from Di Bucci et al., 2022)

This Framework is developed building upon identified gaps from the previous ROADMAP project[2] and the desk review (see Section 2 below). To identify Good Practices in Disaster Risk Management, this Framework establishes certain identification criteria stemming from the Sendai Framework for Disaster Risk Reduction (United Nations, 2015) and the Union's Disaster Resilience Goals (European Commission, 2023a; 2023b). The Sendai Framework was extensively used in the previous ROADMAP project to establish a set of criteria to identify GPs (see Capone et al., 2022; Petrenj et al., 2022; Tagliacozzo et al., 2022a; Tagliacozzo et al.,

[1] In this Report, evaluation and assessment are considered synonyms.
[2] Information about the previous ROADMAP project (2021 – 2022) is to be found on the website https://roadmap.ci3r.it/.

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2022b) and, as such, it is considered in this Framework as well. The Union's Disaster Resilience Goals, adopted in early 2023, have been added due to their relevance for the European Commission's Directorate-General for European Civil Protection and Humanitarian Aid Operations (DG ECHO).

In addition, the previous ROADMAP project cleared out the choice to use the term Good Practices rather than Best Practices by arguing that to achieve *what the best is* is very difficult or even impossible, since a single best method to identify and assess practices does not exist. Secondly, saying best practices subsumes that there is a hierarchy in the practices, but it is not always possible to rank them. Thirdly, *best* implies that the practice meets all the established evaluation criteria, but this is not always the case. Even without a perfect match with given evaluation criteria, a practice can still work. Finally, *best* suggests that a practice is better compared to other practices, but this is not always true since practices are often context driven and respond to specific needs in each situation.

The ROADMAP2 project follows the same approach. In addition, it sustains that Good Practices develop according to the aims of the organisation/institution, which uses these practices, and the socio-economic context (see Serrat, 2008; FAO 2013; WHO, 2017). In general, Good Practices are not detached from the socio-economic context and are embedded into local settings and understandings and need to be accepted by local communities. In this way, it is possible to identify and evaluate practices that not necessarily follow all the criteria proposed by this Framework, but still reach the main policy objective of Disaster Risk Management, namely Disaster Risk Reduction (DRR).

Based on an extensive literature review, considering other past experiences for identification of Good Practices, as well as relevant approaches, methods and criteria for their assessment, and on the advice from the Community for the European Observatory of Good Practices (CEO), established by the ROADMAP2 project, this document further elaborates the Good Practice concept to sustain a structured and applicable qualitative Framework for identifying and assessing Good Practices in DRM.

The end users of the ROADMAP2 Framework mainly consist of the European Union's Civil Protection and European national/regional/local civil protection authorities and first responders. In addition, through the stakeholders' engagement strategy foreseen in Work Package 4, the ROADMAP2 consortium aims to make this Framework a useful tool for actors working within Disaster Risk Management and Disaster Risk Reduction.

1.2 Definition of Good Practices from the previous ROADMAP project

During the previous project, three Thematic Papers on Good Practices were published. All the Thematic Papers considered the Sendai Framework as a reliable guideline for harvesting GPs. In the first thematic paper, *Good practices in multi-hazard risk scenarios* (Capone et al., 2022), the consortium sought to find a common understanding on what GPs are. This understanding was based on real-life scenarios, and national and regional measures and strategies to deal with the COVID-19 pandemic and other negative events simultaneously. In addition, the Thematic Paper reported tools/technologies/frameworks/guidelines used to improve DRM and/or support recommended strategies. In the second thematic paper, *Good practices in risk and crisis communication* (Tagliacozzo et al., 2022a), Good Practices related to the challenging topic of communication

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in risk and crisis management, in particular in multi-hazard risk scenarios, were mapped out. The third Thematic Paper, *Good practices in Building Back Better and Leave No one Behind* (Tagliacozzo et al., 2022b) identified Good Practices in the two important fields mentioned in the title. In addition, the previous ROADMAP project provided bulletins containing examples of relevant experiences and practical solutions adopted by civil protection decision-makers and other actors in the DRM field, to be analysed and considered as potential Good Practices[3]. ROADMAP2 foresees a more sophisticated version of bulletins, called Flash Reports, which follow the ROADMAP2 Framework to harvest Good Practices. Moreover, based on the three topics of the Thematic Papers, a tool to collect and subsequently allow to search and browse the available Good Practices was developed as a fit-for-purpose web platform, the so-called Solutions Explorer[4]. Finally, building on findings from the three Thematic Papers, a Vision Paper provided baselines for the creation of a shared European 'Doctrine on disaster risk and crisis management' (Di Bucci et al., 2022).

The working definition of Good Practices from the previous ROADMAP project was the following: *methods or techniques that are applied to solve existing problems producing effective results and bringing benefits to the users*. This definition resulted from the work conducted in the first Thematic Paper and was used throughout the project period. In addition, the first Thematic Paper acknowledged a result-oriented approach to the Good Practices, focusing on their benefits or impact. This Thematic Paper built on studies by Trucco et al. (2015) and Spencer et al. (2013) in recognising the elements of effectiveness, reach, feasibility, sustainability, and transferability as relevant for assessing Good Practices. In addition, this Thematic Paper recognised that the quality of the evidence used to assess the successfulness of a Good Practice in a specific socio-economic context must be considered (Spencer et al., 2013). In collecting Good Practices, the previous ROADMAP project followed Trucco et al.'s (2015) approach about 'dynamic' Good Practices and the necessity to adjust them as soon as the needs of the users change and/or conditions in the real application field evolve.

2. BACKGROUND INFORMATION ABOUT THE ROADMAP2 FRAMEWORK

Before building the ROADMAP2 Framework, the ROADMAP2 consortium mapped what had already been produced in terms of frameworks and/or tools concerning Good Practices in Disaster Risk Management. This mapping exercise was pursued through a desk review of publicly accessible documents and secondary scientific literature from peer reviewed journals. Due to time constraints, two research boundaries were established to perform the desk review.

Firstly, since the aim of the ROADMAP2 Framework is to support DG ECHO in its work with national civil protection authorities, the review looked specifically at frameworks/tools/measures/activities concerning Good Practices in Disaster Risk Management provided by *international* organisations and agencies. These Good Practices are usually the result of consultations among international working groups often involving national and local stakeholders, so, to some extent, they convey the experiences from different governance levels, from the local to the international.

[3] The Bulletins, as well as the Thematic Papers and the Vision Paper, are available here: https://roadmap.ci3r.it/publications/.
[4] For information, see https://solutionsexplorer-roadmap.ci3r.it/.

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Secondly, the adoption of the Sendai Framework was considered as a cut-off point to start the mapping exercise. The Sendai Framework was pivotal in the previous ROADMAP project since it was essential for the identification of the Good Practices in the three Thematic Papers.

The desk review included a literature search covering the following organisations:

- European Union EU, mainly Directorate-General for European Civil Protection and Humanitarian Aid Operations DG ECHO and the Joint Research Centre JRC
- International Federation of Red Cross and Red Crescent Societies IFRC
- Organisation for Economic Co-operation and Development OECD
- United Nations UN agencies, mainly United Nations Office for Disaster Risk Reduction UNDRR and UN Environmental Programme UNEP
- World Bank WB
- World Meteorological Organisation WMO

In addition, relevant reports from other organizations/agencies found during the literature search were included. The Horizon 2020 and Horizon Europe's projects belonging to the Societal Resilience Cluster[5] were also scanned as a reliable source of knowledge.

As described above, the literature search was limited by the following criteria:

- Only reports covering international DRM (more than one country) were included.
- Reports published before the Sendai Framework (2015) were excluded.

The literature search was conducted using a combination of searches on organisations' websites, Google searches and snowballing. The Google searches included the search words "[organization's name]", "good/best practices" AND "disaster risk management". For each organisation, the top 50 search results were filtered. While this methodology does not guarantee that all relevant reports are included, it is a manageable approach, likely to identify the most relevant reports. The table shows the literature search.

ORGANISATION	***WEBSITE USED***	***COMMENTS***
EU - DG ECHO	https://civil-protection-humanitarian-aid.ec.europa.eu/index_en	Searches for "GPs" + "DRM" 2015-2023 gave few relevant results.
EU - JRC	https://publications.jrc.ec.europa.eu/repository/	Searches for "GPs" + "DRM" 2015-2023 gave few relevant results.
IFRC	https://www.ifrc.org/evaluations?date_from=2015-01-01&date_to=2023-06-26&text=%22good+practices%22	Searches for "GPs" + "DRM" 2015-2023 gave few relevant results.

[5] The DRS01 Societal Resilience Cluster is a virtual platform inside Crisis Management Innovation Network Europe (CMINE (https://www.cmine.eu/) which hosts 8 projects: PARATUS, ENGAGE, RiskPACC, CORE, BuildERS, RESILOC, LINKS, MEDIATE.

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OECD	https://www.oecd-ilibrary.org/	Searches for "GPs" + "DRM" 2015-2023 gave 154 results. Excluded results about individual countries. Assessed relevance based on title and type of report.
UN - UNDRR	https://www.undrr.org/publications	Searches for "GPs" + "DRM" 2015-2023 gave a couple of relevant results.
UN - UNEP	https://www.unep.org/publications-data	Searches for "GPs" + "DRM" 2015-2023 gave few relevant results, mostly reports before 2015.
WB	https://www.gfdrr.org/en	Searches for "GPs" + "DRM" 2015-2023 gave few relevant results.
WMO	https://public.wmo.int/en	Searches for "GPs" + "DRM" 2015-2023 gave few relevant results.

Table 1: List of organisations and websites used for the desk review

The retrieved reports were organised in an excel working document according to the following categories stemming from the project proposal: is there a definition of Good/Best Practices? Are there clear references to the Sendai Framework? Does the document reflect a multi risk perspective? Does the document identify Good Practices? Are the Good Practices presented/organised/framed according to the DRM cycle? Which hazards/risks/threats are mentioned?

The ROADMAP2 consortium is aware that the two research boundaries mentioned above may not guarantee the inclusion of all relevant reports and documents. This is why, as mitigation measure, the excel working document is saved in the TEAMS platform of the ROADMAP2 project, as living document. This means that it will be continuously updated, also with the support of the ROADMAP2's Community for the European Observatory of Good Practices and DRM stakeholders from different countries engaged in various project's activities, such as webinars and collaborative workshops. The document will be released at the end of the project (December 2024).

The analysis based on the above categories gave the following conclusions:

- In the reports, Good Practices either refer to specific examples/cases or, on a more general level, describe methodologies/approaches/activities etc. that were recommendable (e.g., "Some organisations have established *good practices* in implementing, monitoring and reporting on their disaster risk reduction activities").
- Good Practices are labelled in several ways: standards, models, guidelines, indicators, activities, strategies, methodologies, systems, processes, techniques, and approaches.

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- The reports do not define what Good Practices are and, with very few exceptions, do not present criteria for considering specific actions or approaches to identify Good Practices.
- The reports do not include frameworks or tools which have been used for identifying Good Practices.
- Most of the reports refer to the Sendai Framework.
- Out of the hazards/risks/threats category, natural hazards were most frequently thematised in the reports, whereas biological hazards (including the Covid-19 pandemic) were the second-most frequent category. More than 50 percent of the reports mentioned or discussed the possibilities of multiple hazards.
- Only a few reports categorized Good Practices according to the DRM cycle.

3. THE ROADMAP2 FRAMEWORK FOR IDENTIFYING AND ASSESSING GPS IN DRM

3.1 Definition of Good Practices from ROADMAP2

Besides providing the ROADMAP2 Framework, this document aims at further elaborating on how to define a Good Practice, taking the understanding of Good Practices from the previous ROADMAP project as a starting point (see Introduction). Since Good Practices are the main object of discussion with the ROADMAP2 CEO and within the various project's activities, having a common working definition is key to establish this Framework. This part of the document represents an attempt to propose a ROADMAP2 working definition of Good Practices by taking into consideration and reflecting around definitions found in official EU's documents and in the literature. In addition, the working definition seeks to incorporate two important aspects:

1) Specific criteria should be met for any approach, guideline, tool, or activity to be identified as a Good Practice.
2) The identification of Good Practices relies on the quality of evidence and the soundness of assessment methodologies (see, for instance, Simmons et al., 2017; Orru et al., 2022).

These aspects are, indeed, common to many definitions of Good Practices. For instance, the European Commission's Website on Integration states the following:

"'Good practices' can be defined in multiple ways. However, a thread common to most definitions implies strategies, approaches and/or activities that have been shown through research and evaluation to be effective, efficient, sustainable and/or transferable, and to reliably lead to a desired result" (European Commission, 2021a).

In the development of the ROADMAP2 working definition, the consortium has particularly built on the following publications, including the definition above:

1) European Commission (2021b). *Commission staff working document. Better regulation guidelines*. This document does not deal directly with Good Practices as such, but includes the following general evaluation criteria applicable also to Good Practices:

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- effectiveness
- efficiency
- relevance
- coherence
- EU added value

2) OECD (2021). *Applying evaluation criteria thoughtfully*. This document, as well, does not spell out what a Good Practice is but contains criteria that overlap with those above, in addition to other criteria, such as relevance, impact, and sustainability, which are all useful to assess a Good Practice:

- relevance
- coherence
- effectiveness
- efficiency
- impact
- sustainability

According to OECD, a practice is relevant if it responds to particular needs. Impact refers to broader or longer-term effects of social, environmental, and economic character beyond the scope of the effectiveness criterion.

3) Spencer et al. (2013). *Seeking best practices: A conceptual framework for planning and improving evidence-based practices.* As mentioned above, this paper was used in the previous ROADMAP project. Spencer et al. (2013) propose the following evaluation criteria and explain them in the following terms:

- effectiveness refers to the "extent to which the practice achieves the desired outcome";
- reach refers to the "extent that the practice affects the intended and critical target population";
- feasibility refers to the "extent to which the practice can be implemented";
- sustainability refers to the "extent to which the practice can be maintained and achieve desired outcomes over time";
- transferability refers to the "extent to which the practice can be applied to or adapted for various contexts" (Spencer et al., 2013: 3-4).

Both the European Commission (2021) and OECD (2021) documents provide general evaluation criteria, but do not focus on the transferability to other contexts, as Spencer et al. (2013) do.

4) Serrat, O. (2008). *Identifying and Sharing Good Practices*. Serrat (2008: 1) defines a Good Practice as *"anything that has been tried and shown to work in some way - whether fully or in part but with at least some evidence of effectiveness - and that may have implications for practice at any level elsewhere"* and proposes three typologies of Good Practices:

- **promising** practices: practices that are still at the early stages, that need to be tested and used to prove their efficiency, for instance;
- **demonstrated** practices: practices that give positive results expected by the organisation which applies them;
- **replicated** practices: practices that are transferable (see transferability by Spencer et al., 2013)

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Incorporating the above aspects and considerations, the workable definition of GPs within DRM applied in ROADMAP2 sounds as it follows:

Good Practices include Disaster Risk Management actions that reduce disaster risks for the targeted population. These Good Practices have been shown, through research and/or practice, to be effective, reachable, environmentally sustainable[6]*, relevant, impactful, and potentially transferable to other contexts*.

This definition:

- uses the term actions as including activities, measures, procedures, methods, and tools;
- does not imply that a Good Practice must meet all six assessment criteria but, by including several criteria from the sources mentioned above, a holistic assessment of what constitutes a Good Practice is allowed;
- emphasises the importance of evidence, whether through research or practice. This evidence-based approach is crucial for ensuring that Good Practices are not merely theoretical concepts but have proven to work;
- ultimately depends on its application and how well it serves the specific needs and goals of the ROADMAP2 Framework in the context of civil protection and DRM.

Besides the main target group (DG ECHO and European national/regional/local civil protection authorities and first responders), stakeholders working within Disaster Risk Management and Disaster Risk Reduction can benefit from this Framework by applying this Framework to find Good Practices and feeding the Solutions Explorer.

3.2 Building the ROADMAP2 Framework

The Framework is organised according to two phases. Each phase contains so-called Building Blocks, which show the progression followed in the Framework. Phase 1 is the *identification phase* and requires knowing the setting or general premises within which Good Practices are harvested. Once the general premises are clear, a certain amount of identification criteria is established, stemming from these general premises. Phase 2 is the *assessment phase*, where identified Good Practices are assessed.

3.2.1 PHASE 1: IDENTIFICATION

Phase 1 includes three Building Blocks: 1.1. Setting; 1.2 Identification criteria; 1.3 Community for the European Observatory of Good Practices in DRM (CEO).

[6] In general, assessing sustainability allows determining if a GP's benefits would last financially, economically, socially, and environmentally. In this Framework, the ROADMAP2 consortium, in agreement with the Project Officer and following the advice of the CEO, decided to treat sustainability in a more concise way, as environmental sustainability. Thus, this assessment criterion concerns how a GPs increases capacity to prevent, prepare and respond to disasters impacting the environment (e.g. water contamination, forest fires, CBRN…) and/or to develop greener capacities such as reducing waste and CO_2 footprint.

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BUILDING BLOCK 1.1 - SETTING

This Building Block consist of laying the setting or general premises of the Framework within which the Good Practices are identified according to the ROADMAP2 project: Good Practices within DRM should 1) adhere to the Sendai Framework; 2) embrace a multi-risk perspective. In addition, following the latest EU policy developments, these Good Practices should serve 3) the objectives of the Union Disaster Resilience Goals, which were developed by the European Commission to improve the civil protection work following the EU legal framework on civil protection.

1) Global: Sendai Framework for Disaster Risk Reduction

The Sendai Framework states the objective of achieving a *"substantial reduction of disaster risk and losses in lives, livelihoods and health and in the economic, physical, social, cultural and environmental assets, persons, businesses, communities and countries"* by 2030[7]. Sendai's four priorities and seven targets are used as identification criteria (Building Block 1.2). In addition, interlinkages between the Sendai Framework and the Sustainability Development Goals (SDGs) are important for the Framework's assessment criteria of the Good Practices. All seven global targets of the Sendai Framework intertwine with the 17 Sustainable Development Goals, which, in turn, are related to DRR.

2) European: EU legal framework on civil protection

Since the launch of the Lisbon Treaty, the EU has constantly worked to develop a civil protection policy. This policy is supported by a series of Regulations, Directives and Decisions that represent the context within which the ROADMAP2 framework has been developed[8].

The founding law of the European Civil Protection is the **Decision** No 1313/2013/EU of the European Parliament and of the Council of 17 December 2013 **on a Union Civil Protection Mechanism**, as amended in 2018, 2019 and 2021[9]. It states that "the Union Civil Protection Mechanism ("the Union Mechanism") shall aim to strengthen the cooperation between the Union and the Member States and to facilitate coordination in the field of civil protection in order to improve the effectiveness of systems for preventing, preparing for and responding to natural and man-made disasters". It also states that "the Commission, in cooperation with Member States, shall establish and develop Union disaster resilience goals in the area of civil protection, and adopt recommendations to define them as a non- binding common baseline to support prevention and preparedness actions in the event of disasters which cause or are capable of causing multi-country transboundary effects" (art. 6, paragraph 5).

[7] The Sendai Framework underwent a Mid-Term Review in spring 2023. This Review is an important source of information, especially the part about Good Practices in Disaster Risk Reduction (see https://sendaiframework-mtr.undrr.org/publication/report-midterm-review-implementation-sendai-framework-disaster-risk-reduction-2015-2030).
[8] The website https://civil-protection-humanitarian-aid.ec.europa.eu/who/about-echo/legal-framework_en lists all relevant documents.
[9] Decision 1313/2013/EU of the European Parliament and of the Council of 17 December 2013 on a Union Civil Protection Mechanism. Amended by: Regulation (EU) 2018/1475 of the European Parliament and of the Council of 2 October 2018; Decision (EU) 2019/420 of the European Parliament and of the Council of 13 March 2019; Regulation (EU) 2021/836 of the European Parliament and of the Council of 20 May 2021.

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Accordingly, on 8 February 2023, the European Union officially launched the **Union Disasters Resilience Goals (UDRGs)**, after their adoption following the European Commission Recommendation C(2023)400 final *Union Disaster Resilience Goals* (European Commission, 2023a) and the European Commission Communication COM(2023)61 *European Union Disaster Resilience Goals: Acting together to deal with future emergencies* (European Commission, 2023b).

The UDRGs focus on 5 key strategic areas or goals of civil protection action to achieve more disaster resilience at the EU level and in Member States by improving the civil protection system, consisting of the EU Mechanism and the Member States' national civil protection authorities. These goals include:

i) Anticipate: improve risk assessment, anticipation, and planning.
ii) Prepare: increase risk awareness and preparedness of the population.
iii) Alert: enhance early warning.
iv) Respond: enhance the capacity of the civil protection at national and at EU level.
v) Secure: ensure a robust civil protection system.

A description of each goal is reported in Appendix 1 following the text of EC Recommendation C(2023)400 (European Commission, 2023a: 1-9).

In addition, several EU's Regulations and Directives deal with DRM. For instance:

- **Directive** 2007/60/EC of the European Parliament and of the Council of 23 October 2007 **on the assessment and management of flood risks;**
- **Directive** (EU) 2022/2557 of the European Parliament and of the Council of 14 December 2022 **on the resilience of critical entities** and repealing Council Directive 2008/114/EC.

3) Multi-risk perspective

In the previous ROADMAP project, the multi-risk perspective was a common trait through the three ROADMAP Thematic Papers (Capone et al., 2022; Tagliacozzo et al., 2022a; Tagliacozzo et al., 2022b; see also Petrenj et al., 2022). The ROADMAP Vision Paper (Di Bucci et al., 2022) and the ROADMAP bulletins, as well, followed this approach. The main take from the previous ROADMAP project is that, despite the increase of multiple risks, practices in managing these risks remain in many cases focused on one risk at the time, as, for instance, in the EC Staff Working Document *Overview of natural and man-made disaster risks the European Union may face*, which selects 12 disaster risks in the EU (European Commission, 2020).

The multi-risk perspective argues for the presence, in a certain area and in the same period, of different risks, which can become concurrent, cascading, or cumulative over time. These risks can trigger a chain of natural and man-made events with different spatial and temporal scales. The chain of events has a general meaning and does not necessarily have to be intended as a domino or cascading effect. On the other side, interactions[10],

[10] Interactions relate to the effects two or more risks have on each other.

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established through cascading effects, can concern different components of the risk, for instance, vulnerability[11] or exposure[12]. However, whenever domino effects or compounded disasters occur, unexpected issues in DRM may arise and embracing a multi-risk perspective helps approaching crises and emergencies by considering that consolidated Good Practices cannot work anymore, and we need to look for *new* ones. As such, the guiding question in identifying Good Practices is: *within the DRM cycle, which Good Practices follow a multi-risk perspective?*

BUILDING BLOCK 1.2 – IDENTIFICATION CRITERIA

The identification criteria stem directly from the Building Block 1.1 and the general approach of the ROADMAP2 project. A Good Practice should:

- *cover the DRM cycle (e.g., have been realised in prevention, preparedness, response and/or recovery phases)*

- *adhere to priorities and targets of the Sendai Framework for DRR*

The Sendai Framework identifies four priorities: (i) Understanding disaster risk; (ii) Strengthening disaster risk governance to manage disaster risk; (iii) Investing in disaster reduction for resilience; and (iv) Enhancing disaster preparedness for effective response, and to Build Back Better in recovery, rehabilitation, and reconstruction (United Nations, 2015: 14). In the pursuit of these four priorities, the Sendai Framework lays out several targets:

- Target (a): Substantially reduce global disaster mortality by 2030, aiming to lower the average per 100,000 global mortality rate in the decade 2020-2030 compared to the period 2005-2015;
- Target (b): Substantially reduce the number of people affected globally by 2030, aiming to lower the average global figure per 100,000 in the decade 2020-2030 compared to the period 2005-2015;
- Target (c): Reduce direct disaster economic loss in relation to global gross domestic product (GDP) by 2030;
- Target (d): Substantially reduce disaster damage to critical infrastructure and disruption of basic services, among them health and educational facilities, including through developing their resilience by 2030;
- Target (e): Substantially increase the number of countries with national and local disaster risk reduction strategies by 2020;
- Target (f): Substantially enhance international cooperation to developing countries through adequate and sustainable support to complement their national actions for implementation of the present Framework by 2030;
- Target (g): Substantially increase the availability of and access to multi-hazard early warning systems and disaster risk information and assessments to people by 2030 (United Nations, 2015: 12).

[11] Vulnerability: "The conditions determined by physical, social, economic, and environmental factors or processes which increase the susceptibility of an individual, a community, assets, or systems to the impacts of hazards" (UNDRR, 2017).
[12] Exposure: "The situation of people, infrastructure, housing, production capacities and other tangible human assets located in hazard-prone areas" (UNDRR, 2017).

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- *adhere to the UDRGs*

The UDRGs are very broad and mainly concern the improvement of civil protection capabilities at EU and Member States level. In addition, the goals foresee a varied and rich set of objectives and sub-objectives to be fulfilled. Within these objectives and sub-objectives, there are endless possibilities to identify GPs. The ROADMAP2 consortium acknowledged that it was impossible to cover every objective and sub-objective and made a selection guided by the context of the ROADMAP2 project. This selection resulted in so-called *areas of relevance* stemming from the five goals of the UDRGs to provide better focus and guidance for the identification of GPs.

Goal Anticipate: improve risk assessment, anticipation, and planning. *Areas of relevance* to look for GPs:

- Risk assessments, which include analyses on key and emerging risks, and/or their cascading effects (possibly in a multi-risk setting), or analyses on vulnerable areas and individuals
- Risk management planning, which also considers the effects of climate change, the cascading effects of disasters and the specific needs of vulnerable groups
- Scenario-building, which builds on anticipation and anticipatory capabilities, Disaster Risk Reduction strategies, risk management planning and response activities

Goal Prepare: increase risk awareness and preparedness of the population. *Areas of relevance* to look for GPs:

- Civil protection campaigns for the improvement of population risk awareness for prevention and preparedness
- Risk awareness campaigns where the population engages and participates
- Improved public access to disaster risk information and improved population's understanding and capacity to react upon disaster risk information, considering also vulnerable people

Goal Alert: enhance early warning. *Areas of relevance* to look for GPs:

- Coordination for transboundary and cross-border risks, and integration and interoperability of Early Warning Systems (e.g., monitoring and detection)
- Public warning systems that include delivering warnings to the population, but also actions to be taken by the population
- Methodologies for the inclusiveness of early and public warning systems (e.g., multilingual, adapted to the specific needs of vulnerable groups, etc.)

Goal Respond: enhance the capacity of the civil protection at national and at EU level. *Areas of relevance* to look for GPs:

- Search and rescue responses and other responses able to intervene also in case of multi-risk settings
- Coordination between national and EU civil protection response capacities, including host nation support

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Goal Secure: ensure a robust civil protection system. *Areas of relevance* to look for GPs:

- National cross-sectoral coordination among the operational rooms of civil protection authorities, service providers, scientific institutions, etc.
- Cross-border coordination between national civil protections and the Emergency Response Coordination Centre (ERCC)
- Bilateral and multilateral cooperation among national civil protections
- Dissemination and implementation of lessons-learnt after a disaster strikes, covering the entire DRM cycle
- Civil protection authorities fostering partnerships with civil society and volunteers to ensure a robust Civil Protection System

    - *consider a multi-risk perspective*
    - *through research and/or practice, have been applied and work in a real context in achieving outcomes and results (evidence)*
    - *involve different types of stakeholders (international, national, local, but also different professions)*

BUILDING BLOCK 1.3 - COMMUNITY FOR THE EUROPEAN OBSERVATORY OF GOOD PRACTICES IN DRM (CEO)

The ROADMAP2 project has established a Community for the European Observatory of Good Practices in DRM as the main *tool* expected to help identifying GPs. The CEO's composition encompasses competencies from academia and research institutions, international and national organisations and from the field which cover the main topics of the ROADMAP2 project. The CEO offered advice on the Framework's structure as well.

- *The CEO proposes actual GPs identified according to Building Block 1.2, and/or*
- *The CEO indicates sources that ROADMAP2 consortium can use to retrieve GPs according to Building Block 1.2*

3.2.2 PHASE 2: ASSESSMENT

This phase aims at assessing the Good Practices resulting from the identification phase. The ROADMAP2 Framework proposes certain assessment criteria stemming from the sources presented in Section 3.1, followed by a triangulation of methods, derived from activities proposed by the ROADMAP2 project, that should guarantee the reliability of the Good Practices within the general premises of the Framework (see Building Block 1.1).

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BUILDING BLOCK 2.1 – GPs ASSESSMENT CRITERIA

Based on the ROADMAP2 definition of GPs, also referring to the approach by Spencer et al. (2013) mentioned before, the Framework sets the following assessment criteria:

- ***Effectiveness**: the "extent to which the practice achieves the desired outcome" → for instance, the desired outcome is to minimise material damages on the population and the GP achieves this*
- ***Reach**: the "extent that the practice affects the intended and critical target population" → for instance, the GP helps to reduce vulnerability among a population hit by floods*
- ***Environmental sustainability**: the extent to which the GP addresses environmental issues raising from the disasters and climate change challenges → for instance, the GP sustains climate change adaptation by modifying processes of production that reduce the impact in the local ecosystem, such as reduced contamination, reduced deforestation, usage of alternative fuels other than oil etc.*
- ***Relevance**: the extent to which the good practice responds to a persistent/dramatically felt problem and to population's needs and priorities → for instance, the GP improves Early Warning Systems due to the increase of several hazards in a certain area*
- ***Impact**: the extent to which the GP has broader or longer-term positive effects of social, environmental, and economic character according to the targets and priorities of the Sendai Framework → for instance, the GP achieves capacity building, and develops social capital (social networks and trust) or improves economic conditions of a population*
- ***Transferability**: the "extent to which the practice can be applied to or adapted for various socio-economic contexts" → for instance, the GP is used by national civil protection authorities, but is adapted by local civil protection authorities in their local context to meet the needs of the local community*

BUILDING BLOCK 2.2 – METHODS OF ASSESSMENT OF GPs

The ROADMAP2 project foresees three main methods of assessing the Good Practices resulting from the identification phase: 1) webinars, 2) collaborative workshops with DRM stakeholders, and 3) local exercises. Since these methods are proposed by this project, several other methods can be applied. This, however, does not jeopardize the functionality of the ROADMAP2 Framework, which can be used with or without Building Block 2.2.

- *Webinars with DRM and civil protection stakeholders*

ROADMAP2 is elaborating a stakeholders engagement strategy (due in December 2023) to involve DRM stakeholders into the assessment. Between December 2023 and September 2024, the project will run three webinars where the invited stakeholders will be briefed about the Framework and encouraged to assess some GPs. The CEO will continue to be a reliable source of advice also in the assessment phase.

- *Collaborative workshops with DRM and civil protection stakeholders*

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In parallel with the webinars, the project is running two collaborative workshops. The aim of the collaborative workshops is to discuss the outcome of T3.2, example scenarios for Good Practices assessment, together with stakeholders. The previous ROADMAP project's Vision Paper contains examples of theoretical scenarios. Within ROADMAP2, the consortium aims to further elaborate those scenarios that could be used to exemplify the application of Good Practices in different phases of DRM. Scenarios are a way to support the demonstration of the use of a Good Practice (e.g., what happens applying or not a GP) along certain storylines that are developed to describe the scenarios. Scenarios will be used in local exercises, the third method of assessment. Stakeholder participating in the collaborative workshops will help in scouting Good Practices on topics related to the scenarios and will be asked to discuss Good Practices to feed the Solutions Explorer.

- *Local Exercises with DRM and civil protection stakeholders*

The ROADMAP2 project foresees to organise exercises at local level. Here, scenarios are used to test Good Practices with local civil protection and DRM representatives, since they are the ones closest to the population. The exercises will be organised in the country of each partner and will be in local language. In this way, the project also aims to shed light on the socio-economic context and to what extent it can contribute to the sustainability and transferability of Good Practices.

Thus, it is very important to clearly define the type of stakeholders attending the local exercises. Indeed, shaping a scenario for the end user requires a consideration of the audience, its background knowledge, and resource allowance. In this way, it is possible to test the relevance of a Good Practice in the perspective of the stakeholders attending the local exercise.

BUILDING BLOCK 2.3 – FEEDING THE SOLUTIONS EXPLORER WITH GPs

The GPs resulting from the work in the previous Building Blocks are finally uploaded in the Solutions Explorer.

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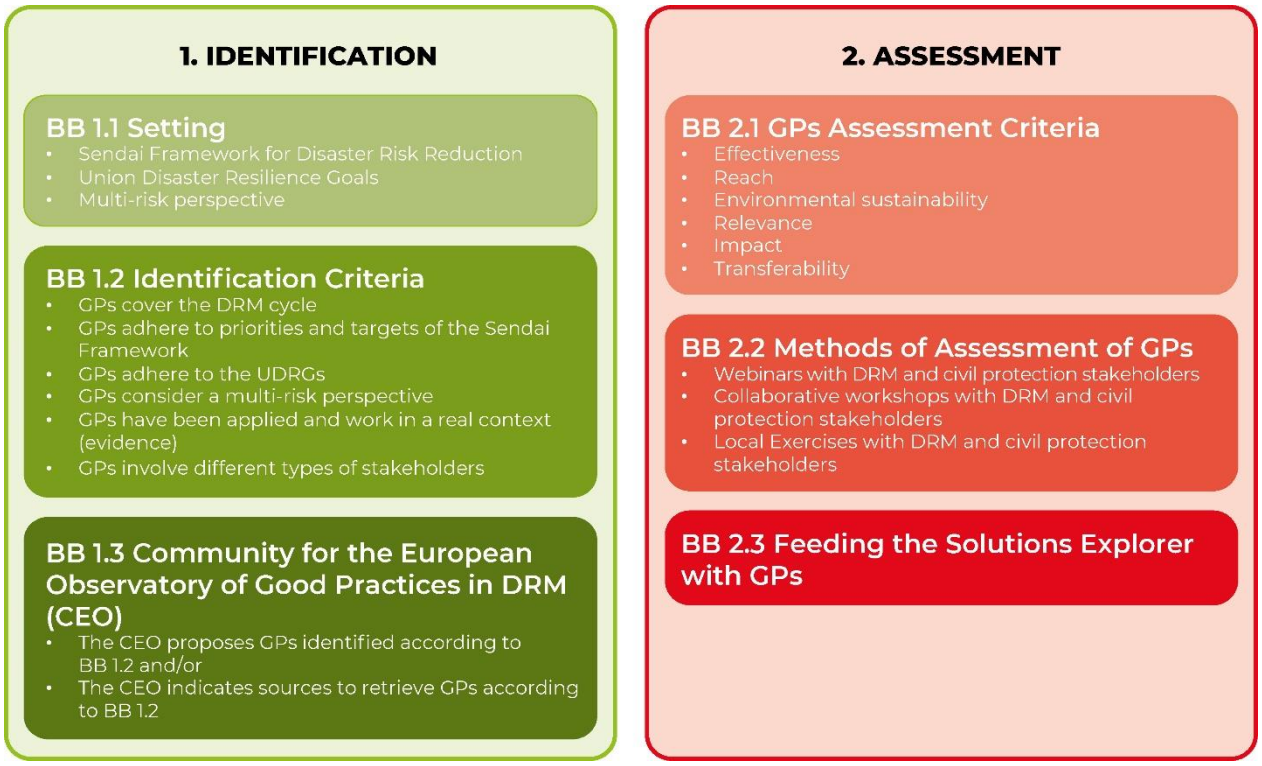

Figure 2: Illustration of the ROADMAP2 Framework and related Building Blocks

4. DOCUMENTATION OF GOOD PRACTICES

The work done within the ROADMAP2 Framework needs to be documented, especially in view of uploading the Good Practices in the Solutions Explorer. The literature offers several ways to document Good Practices (see Serrat, 2008; WHO, 2008; FAO, 2013; Alwazae et al., 2015; WHO, 2017; FFU-FUB, 2021). The previous ROADMAP project, as well, worked with a template to collect Good Practices. Building on the literature and on the previous work, this is the proposed template, which mirrors the Building Blocks described above.

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Template Phase 1 Identification

GP source	*Provide link or reference and find a short name to identify the GP*
Short description	*Provide information about the GP: geographical scale, temporal scale governance level, which results/outcomes it achieves, institutional and financial support, beneficiaries, type - e.g., ITC tool, legislation -, time frame of the GP etc.*
DRM cycle	*Indicate which phase(s) of the DRM cycle the GP meets*
Compliance with Sendai priority/target	*Indicate which priorities and targets the GP meets*
Compliance with EU legal framework and UDRGs	*Indicate references to documents of the EU legal framework and/or which UDRGs goal and area(s) of relevance the GP addresses*
Multi-risk	*Indicate which risk(s) the GP addresses*
Stakeholders	*Describe which types of stakeholders are involved in the GP*
Evidence	*Provide information about research and/or practice in which the GP is applied and works in a real context in achieving outcomes and results*
Extra notes	*Describe possible critical aspects and/or challenges of the GP*

Template Phase 2 Assessment - Assessment criteria from Building Block 2.1

GP source	*Report as above*		
Short description	*Report as above*		
Assessment criteria	**Question**	**Answer**	**Self-Assessment**
Effectiveness	To what extent does the GP achieve the desired result/outcome?		Low Medium High
Reach	To what extent does the GP affect the intended and critical target population?		Low Medium High
Environmental sustainability	To what extent does the GP address environmental issues and climate change challenges?		Low Medium High
Relevance	To what extent does the GP respond to a persistent/dramatically felt problem and to population's needs and priorities? Is the GP doing the right thing?		Low Medium High
Impact	To what extent has the GP broader or longer-term positive effects of social, environmental, and economic character? What difference does the GP make?		Low Medium High
Transferability	To what extent can the GP be adapted and transferred to other socio-economic contexts?		Low Medium High

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As the template shows, the assessment criteria are addressed using overall questions, which mirror their definition, to be answered by the stakeholders. These questions are deliberately broad to be applicable to a wide variety of stakeholders and practices. They allow emphasising criteria that are particularly relevant in the assessment of a specific GP. As mentioned in the introduction, a Good Practice does not need to meet all six assessment criteria to be considered workable and good. By encouraging descriptive answers to these broad questions, the template allows emphasising which criteria are particularly relevant in the assessment of the GP. The last column of the template proposes three assessment options (low, medium, high), which encourage stakeholders to formulate a critical judgement on the GPs.

Ideally, the assessment phase can end with this template. The ROADMAP2 project proposes its own methods of assessment to deepen the reflection on GPs, as the following template shows.

Template Phase 2 Assessment - Methods of assessment of GPs in DRM from Building Block 2.2

GP Source	*Report as above*	
Short description	*Report as above*	
ROADMAP2 methods	**Topic**	**Main results**
Webinar 1	Presentation of the Framework. Focus area of GPs TBD	
Webinar 2	Presentation of the Framework. Focus area of GPs TBD	
Webinar 3	Presentation of the Framework. Focus area of GPs TBD	
Collaborative workshop 1	TBD	
Collaborative workshop 2	TBD	
Local Exercise Estonia	TBD	
Local Exercise Italy	TBD	
Local Exercise Norway	TBD	
Local Exercise Portugal	TBD	

5. CONCLUSION

This document introduces a Framework for identifying and assessing Good Practices in Disaster Risk Management. The Framework consists of two phases - the identification and the assessment, which contain so-called Building Blocks. Both the Sendai Framework and the UDRGs were used to identify relevant DRM Good Practices considering a multi risk approach, while evaluation criteria from the literature were adapted to fit the context of the ROADMAP2 project. The result is an agile and user-friendly tool which builds on the latest European Civil Protection developments and will hopefully help civil protection and DRM stakeholders in harvesting Good Practices and assessing them. At the core of the ROADMAP2 Framework, the engagement

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of the CEO and the stakeholders remains essential to guarantee flexibility in the use of the Framework and to foster a tailor-made approach to different socio-economic contexts.

There are some challenges to acknowledge. Some concern the implementation and usage of the ROADMAP2 Framework, some others refer to the Good Practices.

The first challenge concerns the *ROADMAP2 project period*. The implementation of the Framework by engaging the CEO and the stakeholders in activities to identify and assess Good Practices lasts about one year. This is a quite short time, and it could happen that few Good Practices are uploaded to the Solutions Explorer. The maintenance of the CEO and the stakeholders' engagement throughout the project period is therefore essential. A mitigation measure for the CEO is to inform the members of the CEO quite in advance about the meetings and their content and to involve them also individually, by email, according to clear tasks. In addition, the CEO will be more and more integrated in the Union Civil Protection Knowledge Network[13], with the goal to establish a more permanent community of experts. As for the stakeholders, a stakeholders' engagement strategy is due in December 2023, and this will help to target experts to be involved in the project.

In addition, the length of the ROADMAP2 project does not allow monitoring the Good Practices contained in the Solutions Explorer. A mitigation measure is to present the ROADMAP2 Framework and the Solutions Explorer to the wider audience of the Knowledge Network and make both available, through the supervision of DG ECHO. In this way, two goals can be achieved. On the one side, the Knowledge Network members can provide new Good Practices which can feed the Solutions Explorer according to the Framework; on the other side, DG ECHO can take the lead to follow the lifecycle of a Good Practice and make it more impactful by integrating it into European guidelines, procedures, and standards. Periodical calls with specific invitations for sharing Good Practices to feed the Solution Explorer can be issued by CI3R (the developer of the Solutions Explorer).

The second challenge concerns the *time frame to which a Good Practice is referred.* It is likely that Good Practices dealing with reconstruction will be identified and assessed. While the mandate of the civil protection ends with the recovery phase, the Sendai Framework has one priority concerning Building Back Better. As such, the time frame time frame to which a Good Practice is referred needs to be considered in the template by mentioning this in the short description and in the DRM cycle.

The third challenge deals with the possible *limitation of a GP*. Due to the time frame of the project, monitoring Good Practices to find out their workability in the medium and long term is not foreseen. There is, indeed, always the possibility that a Good Practice does not work properly or becomes outdated as a consequence, for instance, of a change in the socio-economic context. In this sense, the assessment criterion *impact* could be use as monitor criteria as well, by periodically involving the users of the Good Practice in expressing their views.

Against this backdrop, the ROADMAP2 consortium calls for an integration of the ROADMAP2 Framework into the Knowledge Network and for its active and constant implementation to feed the Solutions Explorer.

[13] For information about the Knowledge Network see https://civil-protection-knowledge-network.europa.eu/.

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APPENDIX 1

Union Disaster Resilience Goals' description as for Appendix in the EC Recommendation C(2023)400 (European Commission, 2023a: 1-9).

1. **Anticipate**: improve risk assessment, anticipation, and planning.

A good understanding of existing and emerging risks is a pre-condition to prevent or mitigate the adverse consequences of disasters. Member States and the Commission should therefore continue to improve their capability to identify and assess disaster risks, particularly those with potential transboundary and cross-sectoral impacts. Europe-wide disaster scenarios should improve the Union's capacity to anticipate future crises and risks to life and health. Member States and the Commission should also build on sector-specific and multi-sector risk assessments. Member States and the Commission should take anticipatory action by enacting concrete preventative and preparedness measures and risk management planning, at the Union and national and appropriate subnational levels. Member States should seize the support available under the Union Civil Protection Mechanism (the 'Union Mechanism') and other Union funds to promote smart investments in disaster prevention to protect citizens from disasters, adapt to climate change and advance the green transition.

2. **Prepare**: increase risk awareness and preparedness of the population.

A risk-aware and prepared population is a crucial component of disaster resilience because individuals and communities are often the first affected and the first to respond to disasters. Public awareness of risks and sufficient knowledge of how to prevent, prepare for and respond to disasters greatly reduce the negative consequences of disasters. It should increase public knowledge of disaster risks and prevention measures; improve individuals' and communities' self-protection, behaviour and preparedness to respond to disasters and foster a culture of risk prevention and trust in civil protection authorities. With the support of the Commission, Member States should step up public communication efforts to bring disaster prevention and preparedness to the everyday life of citizens and promote civic engagement and volunteer-based initiatives for disaster prevention and preparedness. Member States should cooperate, as appropriate, with local and regional authorities, partners, including the private sector and civil society organisations, also in a cross-border context.

3. **Alert**: enhance early warning.

Effective early warning and monitoring systems are critical to anticipate and prepare for disasters. They help public authorities and people threatened by disasters to act in good time to minimise injury, loss of life and damage to property, the environment and cultural heritage. Early warning systems should be regularly assessed and improved at Union level and in Member States. Key functions of early warning systems, such as forecasting, detection, monitoring of hazards and their impact, and the timely and easily understandable warning of the population including of vulnerable groups, should be strengthened. The Emergency Response Coordination Centre (ERCC) should proactively support Member States and assist the civil protection authorities with on-demand and rapid impact assessments for detected or forecast events.

4. **Respond**: enhance the capacity of the civil protection at national and at EU level.

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Requests for assistance are becoming more frequent and response needs are becoming more diverse. The Union Mechanism should be prepared to respond to emerging risks and a likely increase in multi-country transboundary disasters. The Union Mechanism should therefore be strengthened with the appropriate type and number of resources to continue to effectively support Member States to respond to disasters that overwhelm their national capacities. The Union Mechanism's response capacity needs should be regularly reviewed. The Commission together with Member States should continue to develop relevant response capacities in the European Civil Protection Pool and rescEU as needed.

5. **Secure**: ensure a robust civil protection system.

The Emergency Response Coordination Centre (ERCC) and civil protection authorities in the Member States should continue to reinforce their business continuity. Alongside, they should adapt their business continuity planning to cross-sectoral transboundary disasters. To this end, the ERCC and civil protection authorities in the Member States should ensure cross-sectoral and cross-border cooperation and foster partnerships with partners such as the private sector, civil society and volunteer organisations. The Union Mechanism should support the conduct of stress tests to test business continuity of emergency operations centres and work with Member States on the follow-up of lessons learnt and recommendations.

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