ROADMAP2

The Solutions Explorer developed by ROADMAP and ROADMAP2 projects

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The Solutions Explorer is an open-source web platform developed by the ROADMAP project (n. 101017776 - UCPM-2020-KN-AG, **https://roadmap.ci3r.it/**) and further improved by the ROADMAP2 project (n. 101101690 - UCPM-2022-KN; **https://roadmap.ci3r.it/**). It is aimed at searching, collecting, uploading, sharing and consulting existing Good Practices in Disaster Risk Management in the field of Civil Protection. This text is organised in two main sections:

- the rationale behind the Solutions Explorer, which provides an account of the process to build the web platform in terms of developing a workable definition of Good Practices, and a framework for their identification and assessment (Section 1);
- the Solutions Explorer structure, which includes a step-by-step explanation on how it works and can be used (Section 2).

1. Rationale

1.1 Background information on the Solutions Explorer

The projects ROADMAP and ROADMAP2, founded by DG-ECHO, focused on the collection and analysis of existing Good Practices (GPs) in the fields of Disaster Risk Management (DRM) and Civil Protection. These GPs have fed an open-source web platform, the **Solutions Explorer (SE)**, developed by the two projects during their implementation. The SE aims at supporting the Knowledge Network community of DG-ECHO in the search, systematisation, and consultation of these practices.

As a dynamic web platform, the SE provides examples on a wide range of GPs related to the entire risk management cycle (forecasting and anticipation, prevention and preparedness, emergency, recovery), which are relevant at different levels of governance (local, regional, national and international). This allows the sharing of information on successful experiences on how to address criticalities and needs, as well as to overcome obstacles and increase the understanding of DRM solutions.

The aim of this paper is to describe the SE, provide information on how to navigate through the GPs already available in the web platform and upload new ones, provided they are compatible with the defined **identification and assessment rules** and criteria adopted when building the SE.

The goal is to make available a tool that can be used freely and regularly by the Knowledge Network community to share and retrieve solutions that have been already applied to address needs and solve problems in DRM.

1.2 ROADMAP2 working definition of Good Practices

As GPs were the main subject of ROADMAP and ROADMAP2 activities, it was crucial to have a common working definition. At the beginning, the ROADMAP2 adopted, as working definition of GPs, the one provided

by the previous ROADMAP project, as described in more detail in **deliverable 3.1** of ROADMAP2 project (ROADMAP2, 2023).

During the implementation of ROADMAP2, this working definition was further discussed to include two important features:

- specific criteria should be met for any approach, guideline, tool, or activity to be identified as a GP;
- the identification of GPs relies on the quality of evidence and the soundness of assessment methodologies (see, for instance, Simmons et al., 2017; Orru et al., 2023).

These aspects are, indeed, common to many definitions of GPs. 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).

During the development of the ROADMAP2 new working definition, the consortium particularly built on the following official documents and scientific publications, including the European Commission's definition above:

1) European Commission (2021b). Commission staff working document. Better regulation guidelines. This document did not deal directly with GPs as such, but included the following general assessment criteria applicable also to GPs:

- *effectiveness;*
- *efficiency;*
- *relevance;*
- *coherence;*
- *EU added value.*

2) OECD (2021). Applying evaluation criteria thoughtfully. This document, as well, did not spell out what a GP is but contained criteria that overlap with those from the European Commission (2021b), in addition to other criteria, such as impact and sustainability, which are all useful to assess a GP:

- *relevance;*
- *coherence;*
- *effectiveness;*
- *efficiency;*
- *impact;*
- *sustainability.*

According to OECD, a practice is relevant if it responds to 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. The Authors 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 (2021b) 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 (2008). <u>Identifying and Sharing Good Practices</u>. The Author defines a GP 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 GPs:

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

Incorporating the above aspects and considerations, the new workable ROADMAP2 definition of GPs, including six assessment criteria, was established as 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 <u>effective</u>, <u>reachable</u>, <u>environmentally sustainable</u>, <u>relevant</u>, <u>impactful</u>, and <u>potentially transferable</u> to other contexts**".

This definition:

- uses the term actions as including activities, measures, procedures, methods, and tools;
- does not imply that a GP must meet all six assessment criteria but, by including several criteria, a holistic assessment of what constitutes a GP is allowed;
- emphasises the importance of evidence, whether through research or practice. This evidence-based approach is crucial for ensuring that GPs 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 ROADMAP2 in the context of civil protection and DRM.

1.3 The ROADMAP2 Framework for Good Practices

In ROADMAP2, a framework was developed to identify and assess GPs in DRM, which includes the criteria described before. It is structured in two distinct phases: "Identification" and "Assessment". Each phase is further divided into a few "building blocks" that guide the process (Figure 1; ROADMAP2, 2023).

The first phase, "Identification", focuses on defining the context and criteria for identifying potential GPs.

It starts with the Building Block 1.1 "Setting", for which GPs in DRM must comply with the Sendai Framework for Disaster Risk Reduction 2015-2030 (SFDRR, 2015), adopt a multi-risk perspective and contribute to the achievement of the Union Disaster Resilience Goals (UDRGs; European Commission, 2023a and b).

The Building Block 1.2 "Identification Criteria" goes into detail and assesses different aspects of potential GPs. It analyses the extent to which they cover the full DRM cycle, their compliance with the objectives of the SFDRR and UDRGs, the adoption of a multi-risk perspective, their application in real-life contexts and the involvement of different types of stakeholders.

Finally, the Building Block 1.3 "Community for the European Observatory of GPs in DRM" highlights the key role of experts in the process of identifying GPs.

The second phase, "Assessment", deals with the review of the potential GPs identified in the previous phase.

The Building Block 2.1 "GPs Assessment criteria" presents the key assessment criteria: effectiveness, reach, environmental sustainability, relevance, impact and transferability.

The building block 2.2 "Methods of assessment of GPs" proposes three main methods: webinars, collaborative workshops with DRM stakeholders, and local exercises. It is worthwhile noticing that the framework is not tied to these specific methods and also supports the use of other ones.

Lastly, the Building Block 2.3 "Feeding the Solutions Explorer with GPs" represents the final phase, where GPs that are uploaded to the SE web platform.

Further information can be found in the "**Framework for identifying and assessing GPs in DRM**" (ROADMAP2, 2023).

2. The Solutions Explorer structure

2.1 GPs organization in the SE

As anticipated in the previous Section, the SE hosts GPs in DRM, selected by experts at different levels of governance (local, regional, national and international), which can be already searched and consulted. Moreover, following the framework criteria, new GPs can also be uploaded, thus contributing to increase the knowledge sharing on the management of the civil protection disaster risk cycle, since the SE is an open-source platform.
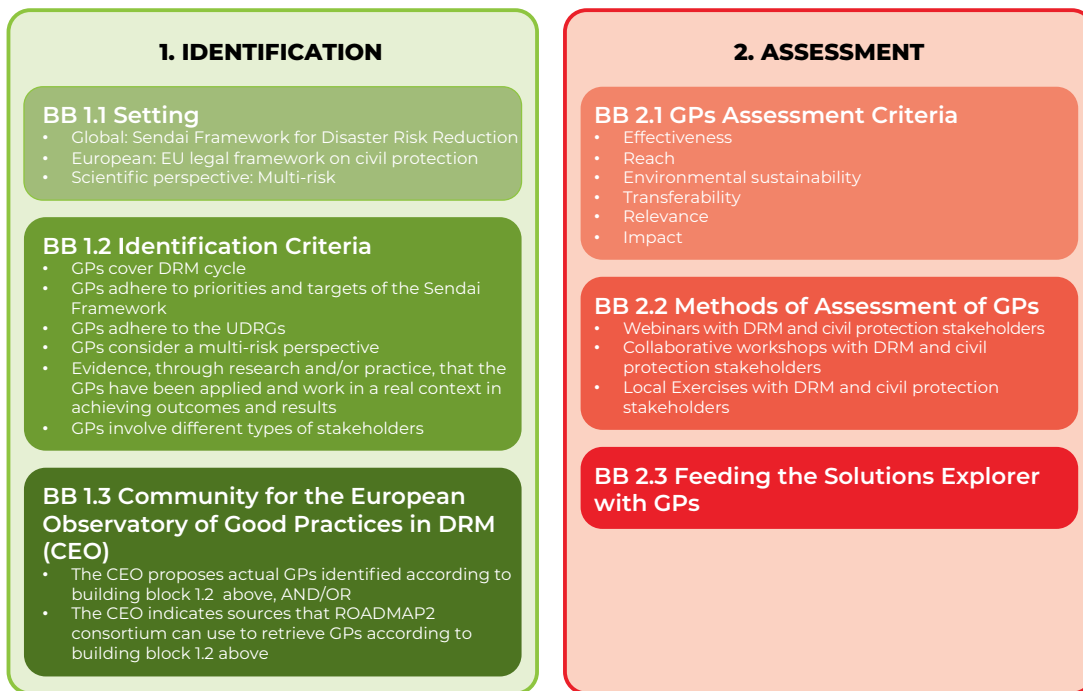
Figure 1: Illustration of the Framework, and related Phases and Building Blocks (ROADMAP2, 2023).

The main structure of the SE, which is structured as a form to fill out step by step, mirrors the framework (ROADMAP2, 2023) to some extent and refers to four main areas:

1. "Solutions to…"
2. "Characterized by…"
3. "Solutions features…"
4. "Assessment criteria…"

The first area ("Solutions to…"; Figure 2) aims to define the characteristics of the GPs available in terms of the scope and objectives of the GP required. In particular, 1. "Solutions to…" are thought to be useful to enhance the DRM cycle, target the Sendai Framework or support the EU legal framework. Therefore, the search for a solution in this area starts with general criteria, linked to the phases of the DRM cycle, and then progresses to more

Figure 2: First area - Solutions to.

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specific criteria linked to both the Sendai Framework and relevant EU legislation on DRM (e.g., compliance with the UDRGs, for instance).

The second area ("Characterised by…"; Figure 3) aims to define the characteristics of the GPs. Within this section, the required scales (spatial and temporal) and risk elements (types and assets) can be selected.

The third area ("Solution features…"; Figure 4) allows the definition of specific attributes of the solution (i.e., of the GP) in terms of beneficiaries, actors, challenges and type of solution.

Finally, the fourth area ("Assessment criteria…"; Figure 5) allows for selecting GPs according to a specific level of:

1. Effectiveness
2. Reach
3. Environmental sustainability
4. Relevance
5. Impact
6. Transferability

The end-user will recognise that this list corresponds to the key assessment criteria described in Section 1. For each criterion of this area, the end-user can select a value between "Low", "Medium" and "High". Each specific indicator is explained in an "info" pop-up label, available for each criterion.

Figure 3: Second area - Characterized by.

Figure 4: Third area - Solution features.

Figure 5: Fourth area - Assessment criteria.

The single GPform hosting the GP in the SE has been improved to be compliant with the defined criteria. When a GP is selected following the workflow shown in Figure 6, the associated form will display all the criteria associated with the selected GP, and for each evaluation criterion it will report both the value ('Low", "Medium" or "High") and a specific field with the evidence for that specific indicator.

2.2 How to upload GPs in the SE

This part illustrates how to upload of a GP in the SE, step by step.
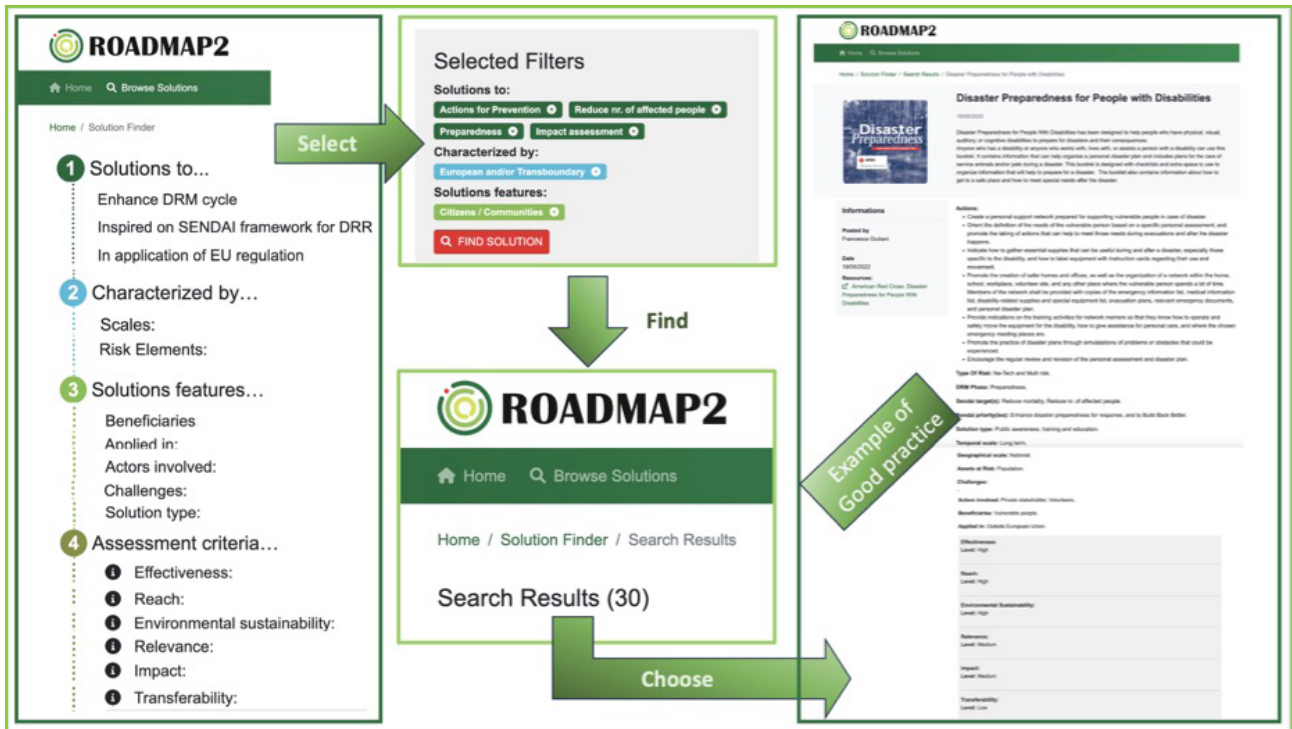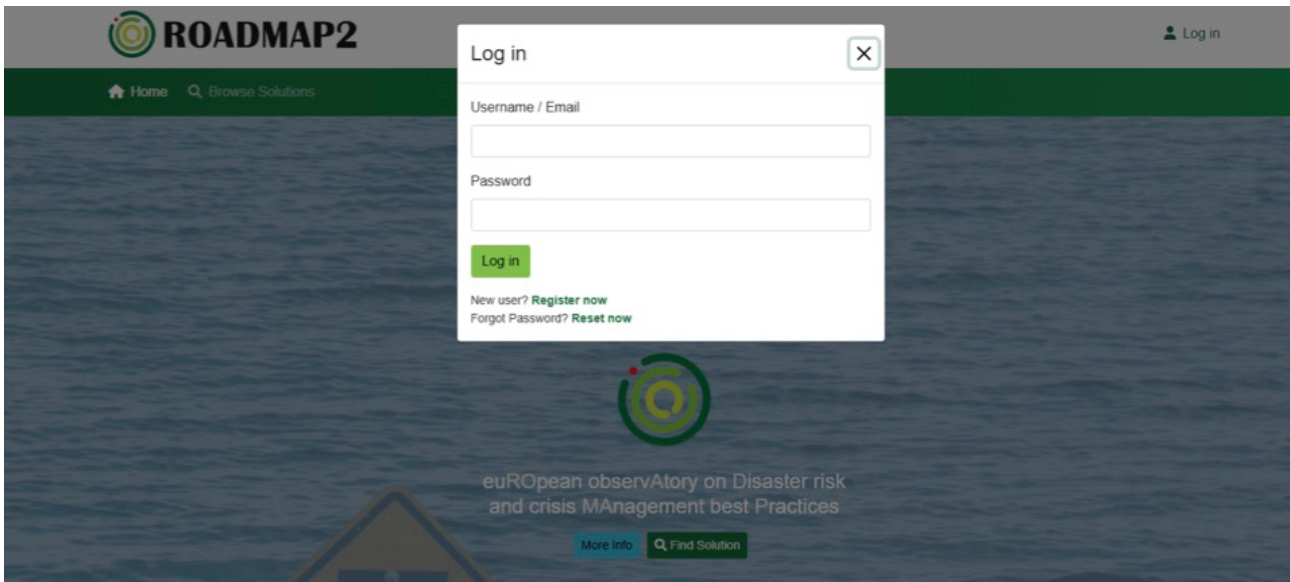If you want to add GPs to the SE, you need to register first (Figure 7).

Figure 6: The structure and the functional flow of the Solutions Explorer.

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Figure 7: Login main page.

Once you have registered, you will be able to see from your profile both the opportunity to submit new GPs and the status of those previously submitted, which may have been accepted, or may be in review status, rejected or in need of additional integration (Figure 8). In your dashboard, by clicking on the "New Good Practice" button, you will be guided to enter the data related to the GP. The data entry path involves entering the main information first, followed by the four areas described before and a final section where resources and documents can be enclosed.

What follows is this process explained step-by-step. In the "Main Information" section (Figure 9), the end-user will have to enter the title of the GP, a brief description, the actions taken into account by the practice and an optional representative picture.

In the "Solutions to" section (Figure 10), the scope and objectives of GPs are defined. The following entries can be found in this section:

- "Enhance DRM Cycle", where the end-user can enter the DRM phase the GP belongs to;
- "Inspired on SENDAI Framework for DRR 2015 2030", where the end-user can enter the goals that the GP wants to achieve in terms of, for example, reducing loss of life, damage to facilities or the environment;
- "In application of EU regulation", where the end-user can choose the actions in which your GP can be placed, actions defined and subdivided according first to UCPM and then to UDRG.
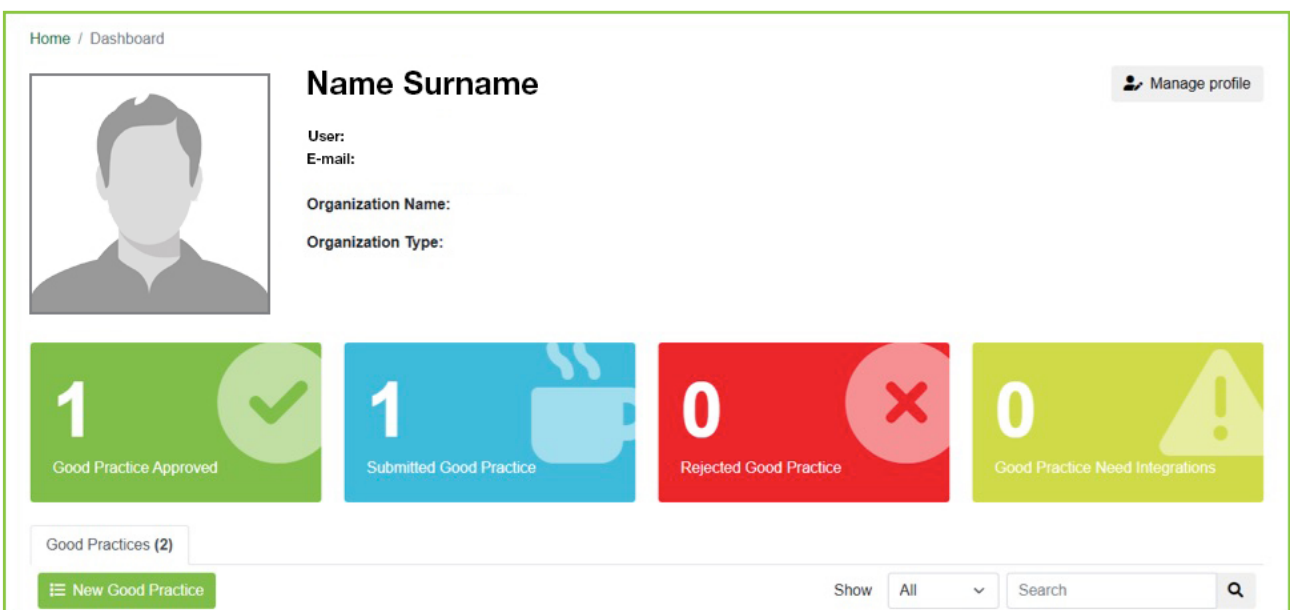
Figure 8: Personal dashboard.

Figure 9: Main Information.

Note that not all fields are mandatory.
In the "Characterized by" section (Figure 11), the end-user can first enter the geographical scale that characterises the extent to which the GP can be used

Figure 10: Solution to.

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Figure 11: Characterized by.

(European, national, metropolitan, etc.), then the time scale for which the practice can be considered, i.e., short term (<1 week), medium term (>1 week and < 1 year), long term (> 1 year), and finally the type of risk (geological, hydrological, meteo-climatological, biological, anthropic, cascading, multi risk, na-tech) and the assets involved (people, infrastructure, environment, etc.).

Figure 12: Solution features.

In the "Solutions features" section (Figure 12), the end-user can indicate who benefits from the practice (citizens, environment, vulnerable people, etc.), in which countries it is applicable, who are the actors involved in the application of the GP (civil protection, scientists, volunteers, etc.), the challenge faced by adopting the GP (unexpected event, fast evolving crisis, long-term impact of a decision, etc.), and the type of solution found (public awareness, policy recommendation, technical regulation, etc.).

Finally, in the "Assessment criteria" section (Figure 13), the end-user can enter parameters for which you can then choose between three qualitative levels, i.e., high, medium or low. The section fields are:
- Effectiveness: extent to which the practice achieves the desired outcome;

- Reach: extent to which the practice affects the intended and critical target population;
- Environmental Sustainability: maintenance of the GP with available resources, adapting to social, economic and environmental requirements of the context in which the GP is applied;
- Transferability: extent to which the practice can be applied to or adapted for various contexts;
- Relevance: the extent to which the GP responds to particular needs;
- Impact: an evaluation of the broader or longer-term social, environmental and economic effects of the GP.

The data entry ends with the opportunity to add resources and documents related to the GP (Figure 14).

Figure 13: Assessment criteria.

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Figure 14: Resources.

Once all the required fields have been filled in, the GP can be uploaded. It is worthwhile noticing that the SE is based on a self-assessment conducted by the analyser/end-user of the practice regarding its compliance with the chosen criteria. This means that GPs in the SE are considered as such by the end-users, according to their experience and expertise.

3. Conclusion

The construction of the Solutions Explorer has been a long journey, started with the ROADMAP project in 2021 and continued with the ROADMAP2 project during its implementation period 2023 – 2024. It required several rounds of discussions and reflections within the project consortium and between the consortium and the "**Community for the European Observatory (CEO) of Good Practices**", which has provided valuable input to improve the functionalities of the platform. The aim of this Community has been to support the Science Pillar of the Knowledge Network and contribute through seminars/ workshops/test exercises to capacity development and sharing of knowledge and expertise in civil protection and disaster management. In particular, in the ROADMAP2 project the role of the **CEO** was:

- To advise the Project Consortium in its activities of Good Practice collection and systematization, providing expert opinions and hints on relevant Good Practices, solutions or background available information.
- To give support for the critical review of the Good Practices and solutions already existing in the EU countries.
- To give support for the selection of topics and preparation of webinars and workshop.
- To facilitate networking activities with the broader community of experts and practitioners for DRM.

To conclude, the SE reflects activities and inputs developed and provided during ROADMAP and ROADMAP2 projects on GPs in DRM. It is expected to become a useful and used tool for sharing information on how to overcome obstacles and increase understanding of DRM solutions within the Knowledge Network community of the Union Civil Protection Mechanism.

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