RECIPE

REINFORCING CIVIL PROTECTION CAPABILITIES INTO MULTI-HAZARD RISK ASSESSMENT UNDER CLIMATE CHANGE

Guidelines for a participatory crisis management plan to manage wind throw along roads

ENGLISH SUMMARY

July 30th, 2021

Funded by
European Union
Humanitarian Aid
and Civil Protection

Project name: Reinforcing civil protection capabilities into multi-hazard risk assessment under climate change (RECIPE)

Financed by: DG ECHO 2019 Call for projects on prevention and preparedness in civil protection and marine pollution

Website: http://recipe.ctfc.cat/ **Twitter**: @NAThaz_recipe

Partnership: Forest Science and Technology Centre of Catalonia - CTFC (Coord.), Pau Costa Foundation - PCF, Civil Protection General Directorate of Catalonia - DGPC-CAT, Forest Research Institute Baden-Württemberg - FVA, CIMA Research Foundation - CIMA, Austrian Research Centre for Forest Natural Hazards and Landscape - BFW, Institute of Cartography and Geology of Catalonia - ICGC, Higher Institute of Agronomy- ISA

Duration: 2020-2021

Contact: recipe@ctfc.cat

Document reference suggested: Maier, Carolin 2021 Guidelines for a participatory crisis management plan to manage wind throw along roads. Deliverable 4.4. Reinforcing civil protection capabilities into multi-hazard risk assessment under climate change. 874402 - RECIPE. 8 pp

CONTENTS

1. Introduction

This report is part of the deliverables of the RECIPE Project (Reinforcing Civil Protection capabilities into multi-hazard risk assessment under climate change) and corresponds to the Deliverable 4.4 of Task 4.3.

RECIPE is a two-year Prevention Project (January 2020 – November 2021) founded by the Civil Protection Mechanism of the European Commission (call identifier UCPM-2019-PP-AG), with the participation of 8 institutions from 5 EU countries:

- Forest Science and Technology Centre of Catalonia (CTFC), Spain (Project coordinator).
- Pau Costa Foundation (PCF), Spain.
- Civil Protection General Directorate of Catalonia (DGPC CAT), Spain.
- Forest Research Institute Baden-Württemberg (FVA), Germany.
- CIMA Research Foundation (CIMA), Italy.
- Austrian Research Centre for Forest Natural Hazards and Landscape (BFW), Austria.
- Institute of Cartography and Geology of Catalonia (ICGC), Spain.
- Higher Institute of Agronomy (ISA), Portugal.

The RECIPE Project seeks to develop operational recommendations and tools to reinforce Civil Protection capabilities into emergency management and risk planning of different natural hazards across Europe to address climate change impacts, by using an integrated risk management approach and the exchange of lessons learned and best practices.

By means of putting together multi-hazards' expertise from science and practice on wildfires, floods, storms, avalanches, rockfalls and landslides, main impacts of climate change in risk management will be identified. The potential scenarios of unprecedented multi-risk events will be considered. The interactions between prevention-preparedness-response-recovery actions in projected climate change scenarios will be analysed with an active participation of practitioners and other users. Accordingly, Civil Protection requirements to face new risk management challenges about climate change impacts will be identified.

Based on the above, transferable guidelines will be edited to incorporate the projected multi-risk impacts of climate change into operational decision support systems (DSS) that are used for risk management. Complementary, specific operational tools will be developed at pilot site level for each natural hazard to reinforce Civil Protection capabilities. Participation of public agencies will be promoted from the beginning to achieve an end-user oriented focus. Results will be actively disseminated into Civil Protection systems.

Furthermore, the project's workshops will promote the knowledge exchange in the existing networks to reinforce European landscapes' resilience to natural hazards.

The project is divided in 5 work packages (WP) as follows:

- WP1 Management and coordination of the action.
- WP2 Framing Civil Protection requirements for integrated multi-hazard risk management.
- WP3 Impacts of climate change projections on multi-hazard risk management.
- WP4 Guidelines and decision support tools to integrate climate scenarios into risk assessment and planning.
- WP5 Publicity and project outcomes transference.

Task 4.3 is part of the work package 4. This WP is composed by three tasks. On the one hand, in task 4.1 an analysis of existing decision support systems and the operability to include projected climate change impacts identified in previous WP3, is developed. In the second task (4.2), a description of the risk attributes and data requirements to be included into the DSS to address climate change impacts on multi-hazards risk management is done. Finally, the taks 4.3 includes a set of support tools for civil protection which will serve to address a specific need, taking into account all the work done in the previous WP.

As expected, each support tool will be edited in the local language of the territory of applicability (Italian, Catalan, German and Portuguese), and will be also a summary in english available, which is this document.

2. Guidelines for a participatory crisis management plan to manage wind throw along roads

2.1 Objectives and scope

The following guidelines outline a way for individuals and organizations working in civil protection or the forest sector to develop a crisis management plan in a participatory manner. Its implementation is illustrated using the example of a participatory process that took place in the spring of 2021 in the forest district Oberkirch in Baden-Württemberg, in southwest Germany. The forest district is located at the edge of the Black Forest, crisscrossed by a number of high-traffic roads. With climate change, the region is expected to experience higher intensity winter storm, hence the need to prepare for such events.

The process outlined below helps structure collaboration through a participatory development of communication pathways and information exchange at the local level, addressing all phases of the crisis management cycle - prevention, preparation, intervention, recovery. The process of collaborating to develop a crisis management plan, as well as the plan itself can be the starting point for strengthening or building new networks across organizations. Ultimately, implementing the plan and maintaining these networks is up to local practitioners. These guidelines can also be adapted to prepare for other scenarios involving actors from multiple organizations or sectors, e.g. wildfire or heavy rainfall events.

2.2 Description of the tool

Developing a crisis management plan involves several steps: 1) determining the plans' objective and scope, 2) contacting relevant actors, 3) interviewing relevant actors individually, 4) hold a workshop to develop process map further and discuss means of cross-organizational collaboration, 5) draft crisis management plan, 6) obtain feedback on the draft, and 7) finalize crisis management plan and distribute. It is recommended to have one person moderate the entire process.

1) Determining the plans' objective and scope

The very first step is defining the crisis management plan's objective and scope. Outlining clearly the scenario to plan for, its geographical scope, as well as its focus on those processes that involve multiple organizations is key. It brings focus to all subsequent steps and helps keep participants' expectations toward the crisis management plan realistic.

In our case study in Oberkirch, the declared aim was to develop a crisis management plan for a winter storm event with wind throw along roads for a specific forest district; the objective was to structure communication and collaboration among actors from different organizations in all phases of the crisis management cycle (prevention, preparation, intervention, recovery). Hence, it did not aim to display all processes going on in each organization related to a winter storm event, nor did it aim to address managing wind throw damage in the forest away from the road.

2) Contacting relevant actors

First, actors relevant to the envisioned scenario have to be identified and contacted. Starting out with the most obvious candidates, each contacted person is asked who else/which other organizations should be included. The exact position an interviewee has in his/her respective organization is not of fundamental importance as long as he/she can speak to the organization's internal processes and resources. The individuals participating in the crisis management development process may later serve a point of contact for inquiries by other participants from other organizations.

In our case study, we started out by contacting the forest management, as well as road management agencies responsible for the Oberkirch forest district. We also contacted the fire department, the county's integrated emergency services control center, private forest owner associations, forestry businesses, as well as local units of the federal agency for technical relief and armed forces reserve. Some organizations were represented by more than employees to represented different perspectives within their organization. The example, both a district supervisor and a forest ranger participated in the process.

3) Individual interviews

Individual interviews with all relevant actors – the future workshop participants - serve to gain an understanding of the different perceptions regarding the challenges associated with winter storm events, as well as the resources and capabilities various actors and organizations can contribute to managing winter storm events.

The interviews also serve as preparation for the subsequent workshop; it is an opportunity to familiarize interviewees with the concept of dividing crisis management into four phases and distinguish processes that take place in the forest, in the respective organization(s), and in relation to the environment (e.g. media, the general public). The input received through individual interviews serves to build a first draft version of a process map, which will be central to guide workshop discussions.

In our case study, the moderator interviewed 11 individuals - due to COVID-19 related travel restrictions - by phone. Each interview lasted between 30 and 45 minutes and covered the following topics: prior experience with winter storm events and wind throw on roads, and associated collaboration with other organizations, challenges associated with such events, resources to contribute to the prevention, preparation, intervention and recovery phases in the context of winter storms, and suggestions for future improvements. Based on the interviews, the moderator drafted a first process map (see Figure 1, Figure 3).

4) Workshop

The workshop serves two main purposes: it is an opportunity for participants from different organizations to meet (ideally in person). To facilitate network building, it is recommended to plan sufficient amounts of time for each participant to introduce him or herself, as well as for informal exchanges, e.g. during coffee breaks. In addition, the workshop serves to discuss the first process map draft which illustrates points of interactions among different organizations. A such, the process map allows participants to form a common understanding of all phases of the crisis management cycle and facilitates a discussion on how to organize the inter-organizational exchange. The suggestions are collected and documented by the moderator and later included in the first crisis management plan draft.

Due to COVID-19, the workshop for the forest district Oberkirch had to be held online. At the core of the workshop was the process map draft which reflected the insights gained from the interviews. Participants had the chance to voice additions and corrections, before discussing suggestions for future improvements. Most of the suggestions made revolve around improved facilitation of information exchange in the

prevention and preparation phases. For example, participants agreed on the benefit of establishing a system of exchanging contact information as well as maps that indicate responsibilities by forest rangers, road management agency, as well as fire departments.

5) Drafting the crisis management plan

Based on the input provided in the workshop, the moderator drafts the first version of the crisis management plan. It consists of the process map and a text document containing 'process briefs' (Figure 2); these outline the individual processes in more detail, including a process description, who is in charge and who participates in the respective process. The brief also lists 'to dos' if a process requires any initial action or new routines to be implemented. This is the case particularly with new processes or altered process elements, e.g. the implementation of a regular exchange of contact information among different organizations.

6) Obtaining feedback on the draft

Workshop participants are given the opportunity to read and comment on the draft plan. Their feedback is integrated into the final version of the crisis management plan and ensures it addresses local level needs and concerns.

7) Final crisis management plan

After incorporating participant's feedback, the crisis management plant can be finalized and distributed to all participants and interested third parties. A less tangible, though just as important output are the networks built across organizations.

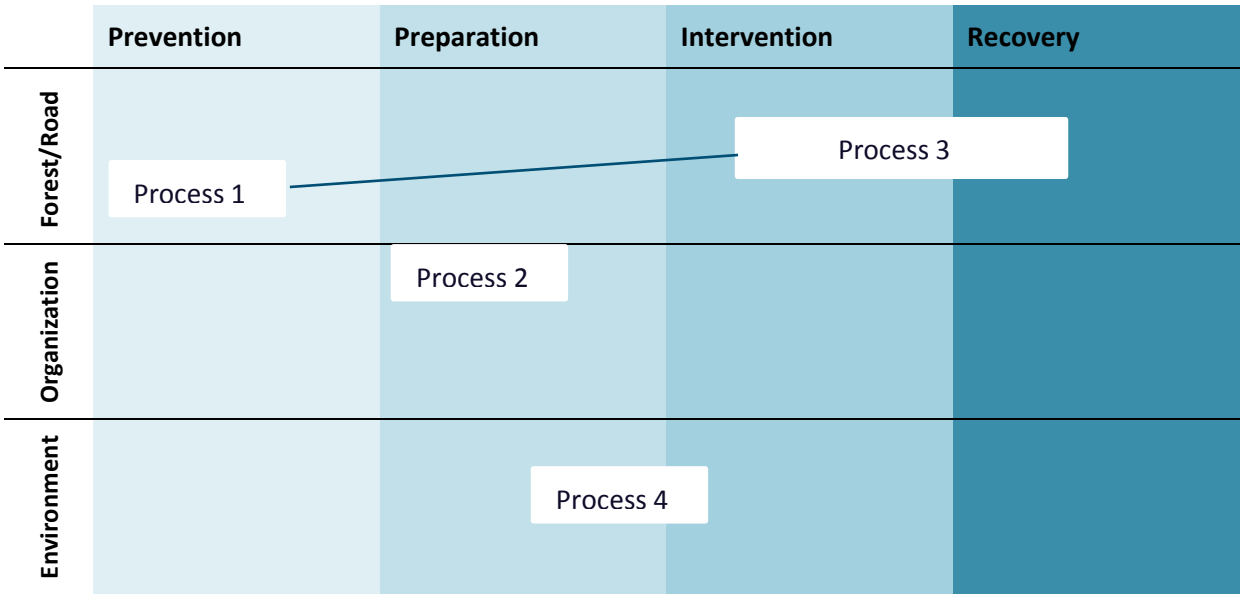

Figure 1 Template for a process map; the columns indicate the phases of the crisis management cycle, the lines represent the different levels.

Color code – indicates the organizations involved in this processes

Process Title

Short description of the process	
Who's in charge	Who/which organization is in charge of implementing this process?
Who's participating/informed?	Which organizations are participating in the implementation or are informed about it?
To do	What has to happen in order for the process to be realized?

Figure 2 Template for a process ‚brief'. For each process displayed in the process map, the crisis management plan includes a 'brief'.

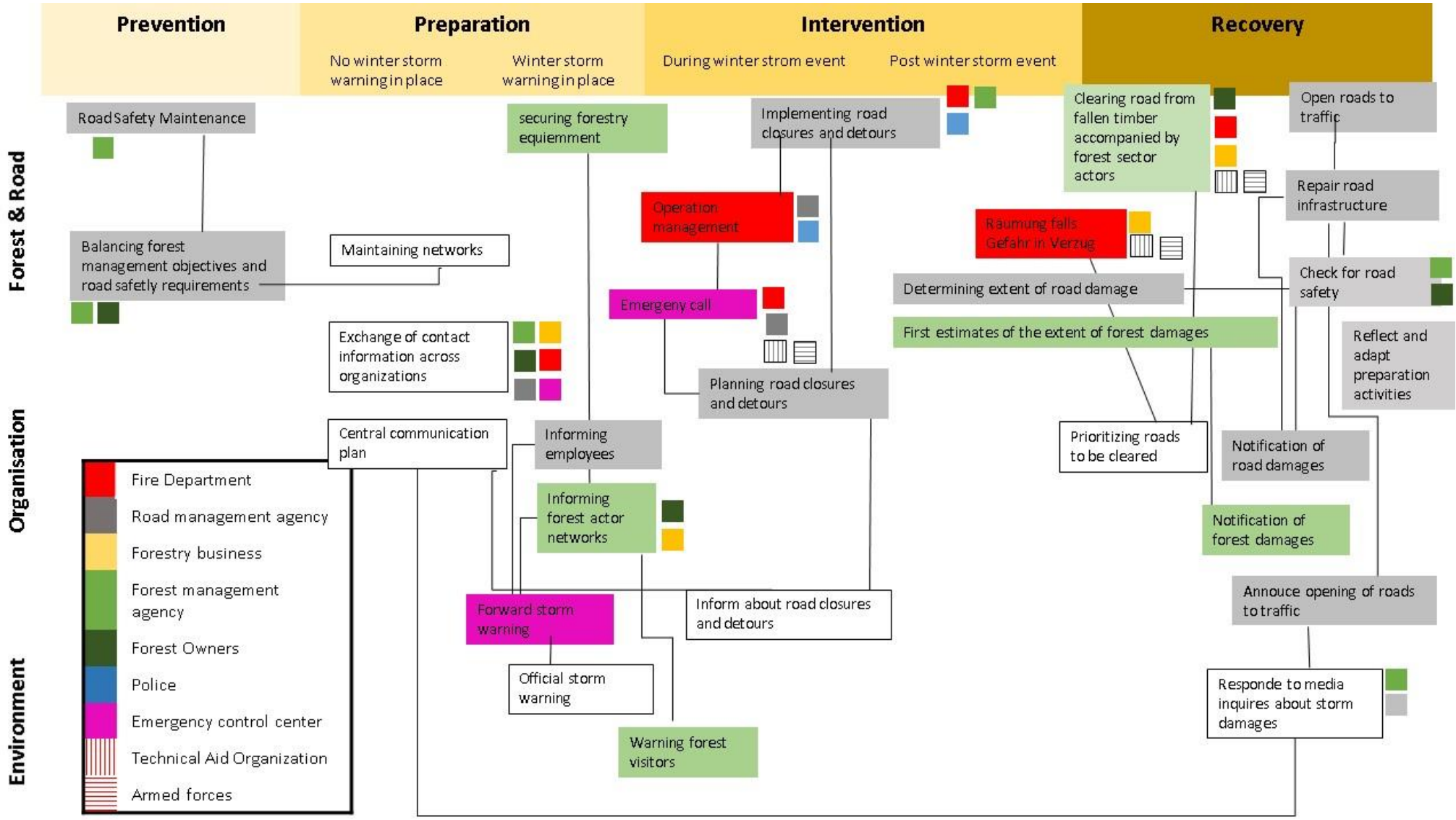

Figure 3 Example Process map for the forest district Oberkirch

3. Recommendations for the EU scalability of the support tool

The above described guidelines can be adapted to prepare for other scenarios involving actors from multiple organizations or sectors, e.g. wildfire or heavy rainfall events, and regional contexts. The process described is most suitable to be implemented at a local or regional level.