Civil Protection in Europe: Towards a Unified Command System? *Update on knowledge-sharing work and future actions*

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ABSTRACT

In the context of climate change, increasing disaster severity and extension, the paper suggests to DGECHO, agency managing the European civil protection mechanism, an improvement for joint operations command-and-control practices. It constitutes an update of Monet et al. (2020) paper, enhancing the work progresses in terms of analysis, applicability, monitoring and training.

In this perspective, the work of the authors is completely dedicated to the improvement of interoperability when different (national) civil protection forces work together, to respond to emergencies or disasters. Building on

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theoretical comparative studies, this opinion paper now relies on an interoperability monitoring tool and consolidates the ways on defining the future for an "European Command System", proposing innovative operational practices by associating knowledge exchange and operational training.

Actually, the presentation will depict how to organize a training strategy at European level, alternating international and regional courses, to pave the way for future harmonization.

Keywords

Crisis Management; Civil Protection; Incident; Command and Control System; Interoperability; European Union

INTRODUCTION

The aim of this paper is to propose elements of a "new governance in operations" for European civil protection. To avoid any misunderstanding on the term governance, the authors specify that the present work does not tackle the whole domain of civil protection policies. This presentation is focused on a small part of these public policies, dealing with disaster response management and associated training.

All the years, from 2016 onwards, gave many occasions to activate at large scale the EU Civil Protection Mechanism (EUCPM): floods, hurricane, earthquakes, and wildfires. Climate change and the increasing occurrence of natural risks reveal a need and the opportunity to develop a European command and control framework (Maestracci, 2013). For more than 15 years, authors, who are in a predominant majority responders, have been working in this field of international mutual aid for civil protection. This paper's purpose is to provide inputs for the further empowerment of the EUCPM.

The area of large incidents and disaster management is frequently evoked by academics (Topper and Lagadec, 2013; Dufès and Ratinaud, 2014, Wybo and Latiers, 2003), but slightly targeting incident management practices. Many collaborative EU funded projects (FP7, H2020, and Horizon Europe) related to disaster research topics are contributory too, but totally focused on innovation, mainly technique one. Even if some research exists, "real" field incident management topic remains in Europe a kind of grey zone.

Today more than ever, in a changing risk landscape, and after many destabilizing incidents (terrorism in France and Belgium; wildfires in Portugal, Spain, France, Sweden, and Greece; flood and storms), empowerment of the European civil protection mechanism is essential. And clearly under the leadership of the Directorate-General for European Civil Protection and Humanitarian Aid of the European Commission (DGECHO).

Under pressure of climate change and wildfires geographical area extension, civil protection forces and fire departments have, right away, to respond to the risk of hyper violent fire behavior (e.g. extreme wildfires events: Tedim, Xanthopoulos et al., 2018), and natural disasters due to extreme meteorological conditions. While incident management is sometimes a sovereignty issue, or perceived as it, authors suggestion is conceived as an intermediary stage towards harmonization. Hence, in this transitional period, effort is dedicated to the crucial interoperability increase. For this purpose, national systems are preserved, and suggested to be customized in a kind of "international hybridization", to be better compliant when the European civil protection mechanism is activated.

The following paper presents ongoing works, written by knowledgeable practitioners of civil protection, aiming to provide insights and opinions, to support dealing with current global trends and the reality of "terrain response". As very challenging events (Maureen Essen et al. 2022), wildfires, due to their extension and intensity, could play in this evolution, the peculiar role they already performed in some fire-prone countries (USA, Australia, Portugal, France…) in fostering command and control enhancements, further extended to all hazard management, as Rowley and others authors explain for American incident command system (ICS).

The document is organized in five parts: built on lessons learnt study and real EUCPM activations, it presents an interoperability monitoring tool supporting the evaluation of the cooperation. After a quick presentation of existing systems, the work identifies by comparison the possible contributions that each could make to new European operating modes. And eventually provides some pathways to share the knowledge and organizing training and exercising in the EU.

Finally, in a nutshell, this transitional proposal, expecting a leveraging effect, opens the way for the EU towards establishing a sui generis harmonized operational command and control system (ECS), which would be interoperable with the other major pre-existing global ones, without being enslaved to them.

TERMINOLOGY

Definitions

To clarify the paper vocabulary, we must first reach an agreement on some basic terminology, which unfortunately is not yet harmonized across the world. After discussing terminology, we will present our ideas on proceedings.

We could start with the terms "crisis" and "crisis management" themselves: these words, initially meaning situations in which decision bodies lose control and their ability to act, have over time been stripped of their original meanings and now are more generally used to mean big incidents and incident management. Big incidents are not necessarily crises in the original sense, and a misbalance between available and needed means is not enough to create an actual crisis. However, random or quick evolution, lack of decisions, emergence of power struggles, and other signals of weakness need to be tackled in order to avoid crisis occurrence. In order to characterize these issues, and because no classification system exists in Europe, the US classification of incidents (see below Table 1.) could be used or slightly adapted to provide harmonization at an international level.

Table 1 : US Incident classification

	"Definition"	**Example**
Type I	Huge incident	i.e. large on shore pollution lasting weeks P>500
Type II	Big incident	i.e. Bushfire lasting 3 days P<500
Type III	Important incident	i.e. Railway crash lasting one day with multiple assets
Type IV	First level of incident implying transfer of command	i.e. structure fire
Type V	Small usual mission dealt by one or two assets.	i.e. Emergency Medical Service mission with one ambulance

What shall we call LEMA? LEMA is the European acronym for Local Emergency Management Authority. Nowadays it is frequently used in a broad sense, meaning all local incident managing activities. In our proposal, we use the term LEMA in its original sense, to refer to an elected (or non-elected) single person authority, who is a policy maker in charge of the strategy above the Incident Commander. To draw comparisons, UK uses "Competent Authority" and US ICS "Authority Having Jurisdiction".

What is an ICP? Incident Command Post (ICP) or Field Command Post (FCP), interchangeably, is remarkably close to US terminology. This term is our favourite to describe "site headquarters' ' preferred to **OSOCC which** was initially set by UNOCHA, in UNDAC/INSARAG guidelines. Meaning On-Site Operations Coordination Centre (UNOCHA Field Handbook, 2018), this wording has been surprisingly corrupted by the term "virtual OSOCC" (1998), which describes a shared assessment IT tool. Introducing *de facto c*onfusion which might be a permanent source of misunderstanding, we suggest not using this term, and favour ICP instead.

What about the so-called Standard Operating Procedures (SOPs)? While this acronym is trendy in Europe, with different understandings, (in total absence of an harmonization framework) we propose to clarify it by introducing a distinction. We suggest using STPs for *Standard Technical Procedures* and SCCPs for *Standard Command and Control Procedures*; both constituting SOPs (cf. Figure 7.)

STPs: as all EUCPM participant states have a great reservoir of skills relating to civil protection techniques, there is an opportunity to share and exchange. Currently technical practices are not regulated by any EU or other standard, so it's now impossible to have standardized training on these practices.

SCCPs: As it has been said, there is a real need to empower EUCPM through a "European Command System" (ECS), giving harmonized command and control methods at the international level in the EU. All these practices are gathered under SCCPs acronym.

Eventually, this paper has included a Glossary for all abbreviation used, in the last part of the paper

CONTEXT, LESSONS LEARNT AND PROBLEMATIC

Large and violent wildfires in Greece (2007, 2018, 2021, 2023), Portugal (2016, 2017), Spain (2012, 2015, 2019) France (2003, 2016, 2019, 2022), Sweden (2018), Australia (2019), South Africa, Canada (2023) and California (2018), gave in the last decade several opportunities to witness climate change consequences. These events also demonstrated a real need for a larger commitment of EU practitioners, to increase the quality of European civil protection mutual support. And the recent cases of EUCP mechanism activation (2018, 2021, 2022, 2023) including floods in Belgium and Germany (2021), and France (end of 2023 to 2024) demonstrated the increasing need for field experts and very experienced responders.

The Swedish 2018 fires gave another perspective on emergency management in a "non-fire prone country", using NATO guidance to deal with the unusual situation. Actually, the Kårböle-Ljusdal fire Incident command post followed the NATO standard organization (cf. below: "NATO framework"), with a large Incident Management Team, driven by an Incident Commander, responsible for decisions, ground tactics and management. The latter was permanently reporting to the local policy maker (Province Governor), in charge of strategy, and in contact with national authorities. In this case, despite the larger EUCPM activation of its history (20 years), and the involvement of eight countries in response to support Sweden, DG ECHO constituted only a very agile structure of coordination in the host country at national HQ. And that was valuable, a kind of "proof of concept", which allowed all kinds of wildfires modules sent, to be adequately involved in the fight, and additionally, the Swedish C2S demonstrated its adaptability in efficiently integrating the foreigner experts.

Greek fires in 2021 and 2023, demonstrated a real integration of European forces by pre-positioning of some other European resources and the repartition of large and diverse involvement of EU wildfires modules and assets.

Facing all these cases, we must admit that there is a great reservoir of data in the study of these cases. Some lessons learnt and seasonal reports have been written, notably by European Commission bodies (San-Miguel-Ayanz et al., 2023), but rarely dealing with command-and-control issues.

Regardless of the cases, the **same problematic arose**: if at ground level all foreigner strike teams and platoons are integrated with relevancy by "missional assignments" in the fight to the disaster, it remains the question about the interoperability for the officers and experts, that can neither understand clearly the host nation command and control practices, nor been properly integrated in the incident management team, to provide a support at the level of their expertise.

INTEROPERABILITY MONITORING TOOL

Principle

Authors propose and use a matrixial interoperability evaluation tool which offers a simple and user-friendly framework for evaluating and enhancing teamwork to prepare for and respond to joint civil protection operations.

The tool can be used to document in a structured manner the lessons learned in the aftermath of disaster response. Alternatively, it can be used at any time to monitor existing cooperative activities (e.g., cross-border operations) to check and identify areas for improvement, building a kind of "pathway toward interoperability".

Inspired by an US[1] radio communication monitoring tool (SAFECOM program), this interoperability evaluation tool (Monet, Mannaioni et al., 2018) was initially developed, by adding others criteria, at national level to meets satisfying two aims:

- Address all aspects of national interagency civil protection operations: policy and guidance, training and communication, and command and control practices.
- Assess and score each criterium and create a combined score using weights reflecting the decided relative importance of each.

The structure of this tool was slightly modified to reflect international operations and used to assess interoperability in a 2018 European Civil Protection Mechanism (EUCPM) wildfire operation in Sweden involving both Swedish and French responders.

This work has been finalized under the auspices of a EU funded project (Monet et al. 2023)

[1] Department of Homeland Security, 2004

Depiction

The structure of the matrixial interoperability evaluation tool, dedicated for assessing a joint operation which relies on the use of the table above to assign an Evaluation Level of 1 – 5 for each interoperability component, defining 5 as the best ranking.

- Governance
- Standardized Operational Procedures (SOPs)
- Data Technologies
- Voice Technologies
- Training and Exercises
- Language
- Operations

A Component Score is calculated for each component by multiplying its Evaluation Level by a Component Weight. An Overall Score is then calculated by adding up the seven interoperability components.

It was judged that the first four components, Governance, SOPs, Data and Voice Technologies, are considered of equal importance. Training and Exercises as well as Language skills are viewed deemed as being twice as important as the first four components. Finally, the Operations component was judged to be four times as important as the first four components.

All these Component weights ensure a maximum overall Score of 100. The Overall Score is supposed to rank the performance of the cooperation of civil protection forces at incident management level.

To give a score on the efficiency of interoperability, policy makers or responders can use this innovative and simple tool themselves to improve their joint operation, identifying the way(s) of improvement. The Table 2 below presents the tool.

Table 2. Evaluation components and levels

Interoperability component	Evaluation level				
	1	**2**	**3**	**4**	**5**
Governance	National agencies working separately	No formal joint work between national agencies	Occasional bilateral or multilateral formal group for join work and missions	Multilateral agreement (s) for join work and missions	Specific bilateral agreement (s) for join work and missions
SOPs	Harmonized national SOPs	National SOPs to receive international aid	Regional SOPs	Multilateral SOPs	Specific bilateral SOPs
Data Technologies	Manual files swap	Bilateral files exchange via commercial software	Sharing by a dedicated ad hoc interface App	One-way sharing with standards-based software	Two-way sharing
Voice Technologies	Swap radio	Gateway	Shared channels	Proprietary channels system	Bi or multilateral standards-based sharing systems
Training	National unified training doctrine	National full-scale exercises	Cross bordered training and exercise	Regional training and exercising	Multilateral training and exercising
Language Skills	Use of interpreters and/or immediate translation tools (e.g., I.A., smartphones)	Basic use of third language (A)	Independent use of third language (B)	Proficient use of third language (C)	Use of host country language
Operations	Teams working separately with limited communication	Teams working together with formalized (briefing, radio) communications	Teams achieved being integrated in the local command system	International teams taking roles in local ICS	Same incident command system

Summary

These last four years, the tool was applied by authors to some real cases of EUCPM activation, and after Modex (Modular exercises, EUCPM field trainings). Even if it highlighted several criteria's room for improvement, one of them, significantly always appearing with a low score, was C2S practices.

STATE OF THE ART IN COMMAND-AND-CONTROL PRACTICES

US ICS system

In the 1970's, the Incident Command System (**ICS)** was developed by the US Forest Service to manage forest fires and other natural hazards, and it was quickly recognized as an efficient inter-agency control system. After the terrorist attacks of 11 September, following an *ad hoc* decision of the federal government, the concept rapidly and widely spread throughout the United States. Now largely used there in its "All Hazards Management" version, ICS today involves thousands of civil servants, foresters, police officers, fire fighters and elected officials who constitute more than 15 regional teams. At the highest level, responding to the largest incidents known as Type I, these "Incident Management Teams" (see IMT, Figure 1.), are constituted with 50 specialists on 24/7 duty.

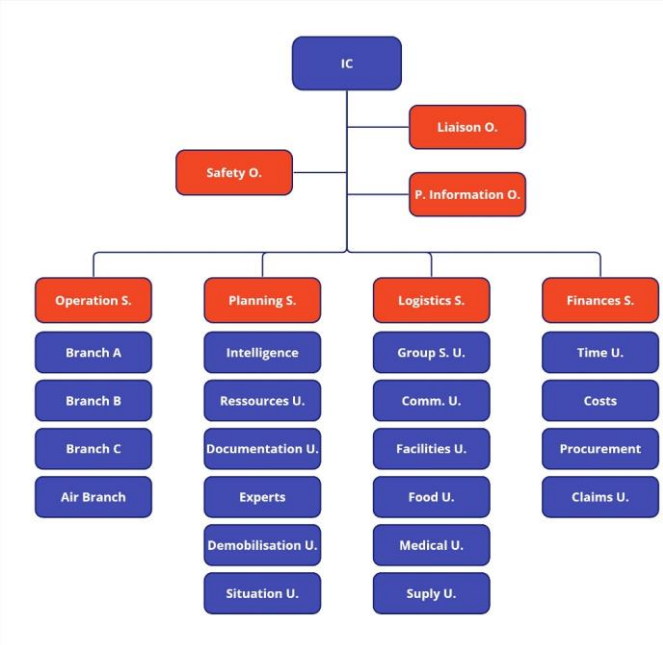

Figure 1. IMT

Today ICS is disseminated all over the world, with some adaptations. However, in France less than 20 fire officers are acquainted with this system. After being trained through the IS-420 Incident Management Team course (an intermediary rank in the ICS training program which starts from IS-100 to IS-800), a few of them participated in exercises in California and Australia. Some Spanish provincial foresters and Norwegian fire fighters are now implementing the US ICS directly. The fire service of Catalonia (GRAF, Grup d'Actuacions Forestal) is also influenced by ICS, especially in the practice of use of fire, which has been incorporated with a deep and extensive expertise in fires behavior.

One of the most interesting adaptations is the Australian system, AIIMS (for Australasian Inter-Service Incident Management System), more used as Command Control and Coordination system (C3S), in powerful headquarters, as example in New South Wales state.

In the U.S. the FEMA (Federal Emergency Management Agency, www.fema.gov) is responsible, through its National Incident Management System, for organizing, teaching and training of this doctrine. In general, the position of this agency towards teaching and giving public information can be an inspiration at the European level.

The World Health Organization (WHO) has also set up an ICS-related system, WHE, (WHO Health Emergencies, 2016). WHE is a very close system, not allowing for much sectoral adaptation (quite copy and paste). Some industrial companies, especially in oil and gas, have also directly adapted ICS for their crisis management, for example Total Offshore and LyondellBasell (U.S. National Incident Management System presentation, 2017).

Commented [LMzK1]: Closed?

UN Organization

The United Nations Office for the Coordination of Humanitarian Affairs (UNOCHA) framework United (Field Handbook, 2018) has, from its creation, been inspired as well by ICS. Although its field command post is called "On-Site Operational Control Centre" (OSOCC), it is not a real command and control system, but instead highly inspired by humanitarian activities. The main theme in UN field organizations is coordination (Figure 2.). So UNOCHA, is now in charge of managing a large certification system (International Search and Rescue Advisory Groups - INSARAG), and responsible for international aid, that is more focused on search and rescue and humanitarian aid.

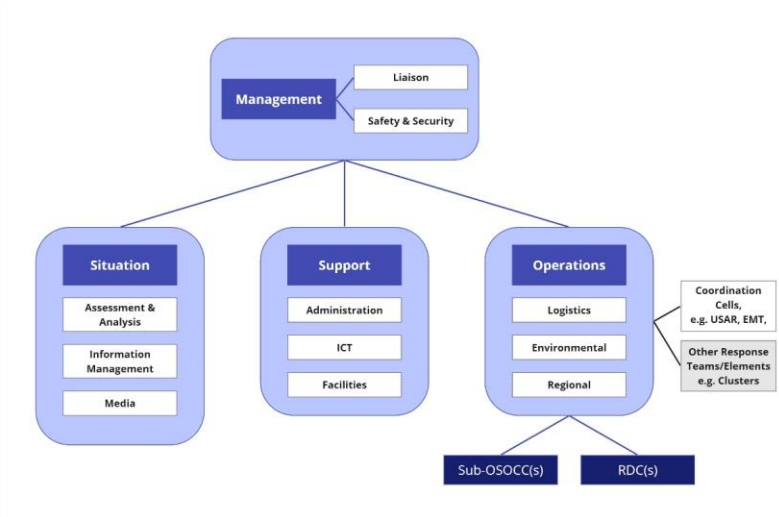

Figure 2. UN coordination

The OSOCC is a rapid response tool that provides a platform for the coordination of international response activities in the immediate aftermath of a sudden-onset emergency or a rapid change in a complex emergency. It is at the same time both a methodology and a physical location for on-site emergency response coordination. The OSOCC is designed to work in support of the Government of the affected country and is a tool promoted and supported by the UNOCHA to carry out its mandate of coordination and information management in emergency response, particularly at the field level.

Through its guidelines, the OSOCC enables the concept to be utilized by other organizations, agencies and teams, when responding to emergencies, including Governments, international and regional response organizations. It is a concept that can be internalized entirely by national emergency management structures who are in the lead of coordinating the assistance to populations affected by emergencies in their countries.

The OSOCC Guidelines are designed to provide direction on establishing, managing, working within and interacting with an OSOCC. The Guidelines are composed of three parts. Part I provides the foundation on which the OSOCC concept is built and the humanitarian context in which it operates. Part II presents guidance on how to implement the OSOCC system components, i.e., the Virtual OSOCC (VOSOCC), the Reception Departure Centre (RDC), the OSOCC facility, sub-OSOCCs and other coordination cells, and provides links to other more detailed guidance notes and resources. Part III is an annex of tools for practical use during OSOCC operations

The OSOCC is generally structured into four functions, each of which may be composed of multiple cells. The basic OSOCC structure is illustrated below; however, not all functions or cells may be needed in every situation.

French System, GOC.

In France, the GOC (standing for Gestion Opérationelle et Commandement) system has provided a unique and harmonized command system since the 1990's.
It manages four levels of command based upon progressive field transfers of command. Training program comprises five levels: level 1 is taught to all firefighters, it's not a commanding level. Level 2 (truck leader) is the first level of incident command used to deal with the majority (more than 50 %) of French fire service missions, tackled with a single resource. Levels 3 to 5 employ several ranks of officers, from team (group) leader to senior incident commander. Deployment of an Incident Command Post (ICP) starts at Level 4. Built as a decision tool for the incident commander, the ICP is staffed (one staff chief, four sections: operations, planning, resources & logistics, intelligence) with up to 12 persons; 20 in an interagency context. In this type of incident management team, the Incident Commander has a direct command on Sector Chiefs, whose number is usually between two and four (see Figure 3).

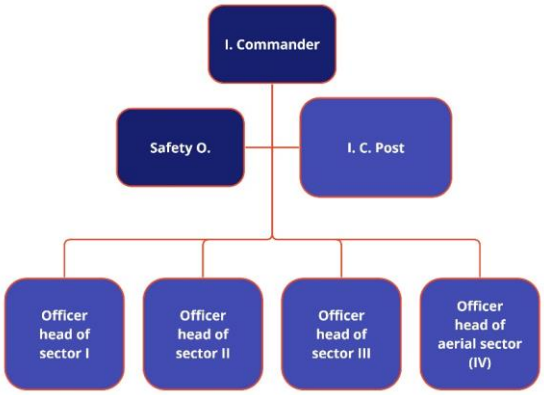

Figure 3. French GOC chart

This system has also been integrated by several countries of Africa, and Portugal and Spain (some provinces)

German System, DV 100.

Rather similar is the German system described in the set of regulations "Dienstvorschrift (DV) 100 - Führung und Leitung im Einsatz" (Service Regulation 100 - Command and Control in Operations) developed in the late 1970's after a major wildland fire and modified in the late 1990's. It combines the principle of sectorization with an incident command organized into functional sections. In most German states, an administrative crisis committee meets in parallel to the operational incident command in the event of major emergencies, both under the auspices of a political decision maker.

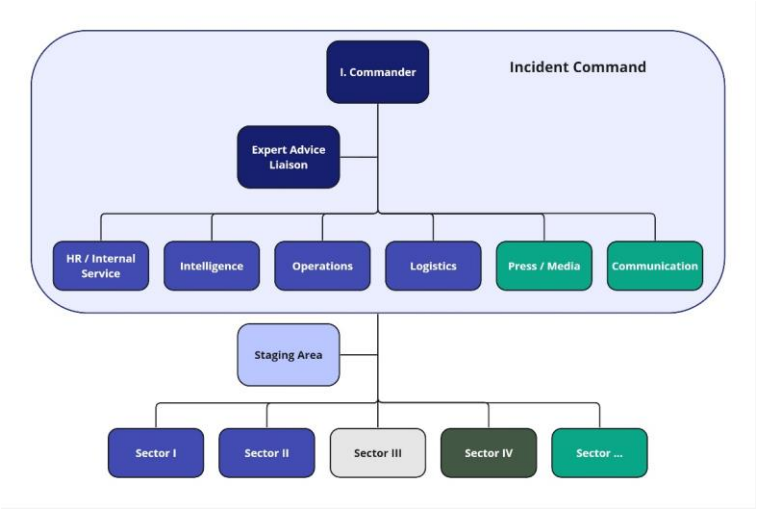

Figure 4. German GOC chart

NATO Framework.

Due to *"centric operations, demanding closer cooperation among more dispersed forces, the importance of interoperable C2 grows exponentially. Forces that expect to operate together must at least be able to communicate with each other via both voice and data formats, even though they are not yet equipped*." (Barry, 2003). Indeed, for years, command and control has been considered by NATO strategists as the "*most crucial medium for interoperability".* Eventually, NATO shifted in 2017 toward a new command and control structure, but it's interesting to note that this structure is based on a constellation of separate international headquarters split in the different member states.

Figure 5. NATO basic chart

In the field, NATO is working with a very classical organization, close to a generic ICS. The four main functions (Figure 4.) are represented here in the scheme above: operations, planning, intelligence, and logistics. In many NATO operations, planning is done far from the field of operations, in a distant and secure headquarters.

The cited case in Sweden (Figure 5. below, 2018) provided a very interesting implementation of this framework, managed by a large incident management team (90 – 100 officers).

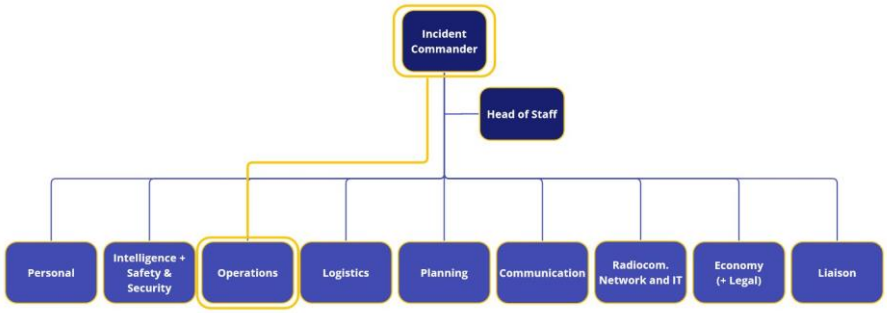

Figure 6. NATO / Swedish chart

After this quick overview of the existing landscape, two main concerns obviously appear: which relevant elements from these systems can be transferred to EUCPM with added value? And how to harmonize?

COMPARISON AND FINDINGS

To answer to the problematic mentioned at the end of the third chapter, we identified three critical issues:

- To manage very mature but not harmonized national civil protection systems, in all participant states;
- To be interoperable in and through the member states, some of them very small, respecting existing systems and implying a transition in the format of incident management when international aid is asked;
- Being compatible with UNOCHA teams and INSARAG standards, and others systems ICS, NATO, WHO and ISO 22320 compliant. But, fully independent from other international C2 systems, which can be sometimes considered as using “hegemonic practices”.

The idea developed here is not to copy and paste any system, but to develop, organize, implement and teach at EU level an ad hoc command system, ECS, tailor made for EU nations and disasters. It was foreseen since our 2018 works, but now somehow consolidated by our experimental training and new studies.

Comparison on the General Organization of the Command Framework

In all observed systems, the position of IC (incident commander) and its hierarchic relationship to LEMA plays a pivotal role. However, in some countries (Croatia for example), there is no clear differentiation between these two positions.

The connection with sectors or branches (generally 3) is sometimes done in a variable manner, but the recognition of a sectorization of the incident field is permanent and mandatory. Even if very dependent on national aerial laws and standards, the aerial sector appears to be fundamental for safety issues, in case of EUCPM activation. This sector is not developed in all countries' systems (only in GOC and ICS).

The existence of an Incident Command Post (or Field Command Post) is consolidated. Its internal organization is variable, but the common sections of quite all systems are:

- Operation
- Planning
- Resources

Alternatively, we find in the ICPs optional ones:

- Communication
- Intelligence
- Security
- Safety
- Coordination/liaison
- Finance-administration.

Safety and communication, frequently managed by single person positions besides the IC are also very dependent on command-and-control national culture. If these two functions seem to be a point of convergence, regardless of the nation, they are probably on the verge of turning into a function rather than a single officer duty. Other observed single positions (not ICP section) are: security (police), IT and radiocommunication, liaison officers.

Findings and Proposal

For large incidents, and activation of international European aid, the added value of this EU system could be in providing and establishing an interoperable framework of art of command, adaptable at state and at European level, considering national command systems and history.

This is the reason why we consider as "strongly suggested" the sections: **operations, logistics and planning**.

The single positions of **safety officer and communication** are at least recommended.

The **sectorization**, either geographical or missional, and aerial sector if the operation encompasses aircrafts, is also our recommendation.

Eventually, we identified a common "backbone" of command-and-control functions (Figure 6.)

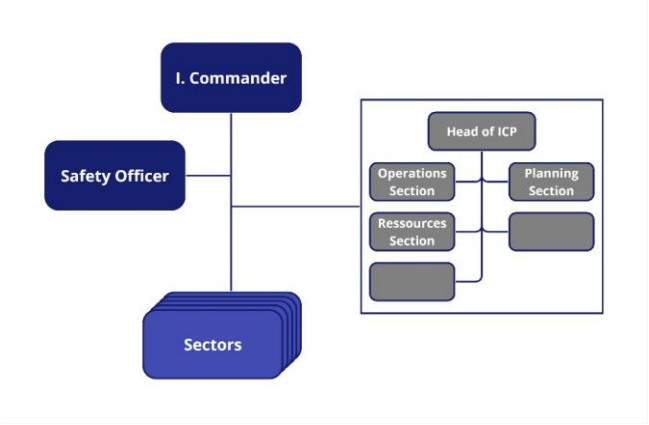

Figure 7. Commonalities

The proposed European Command System is, in evidence, a long-term solution. It must be expanded upon from this skeleton onwards. Rather than standardization, DG ECHO might establish guidance and recommendation to be acknowledged by practitioners.

Additionally, it is highlighted that in this way of construction the proposal is ISO 22-320 compatible, fulfilling the requirements listed at the beginning of the section.

What is nowadays lacking is a reliable inventory of all European participant states' command and control systems. That could support the authors to validate their study.

SHARING KNOWLEDGE

Since 2001 DG ECHO has organized EUCPM training for Member States. Renewed at the end of 2023, and reinforced by "knowledge network" website, this framework is now enriched by many courses. It also distinguishes clearly between the courses for responders and those dedicated to civil servants or staff persons.

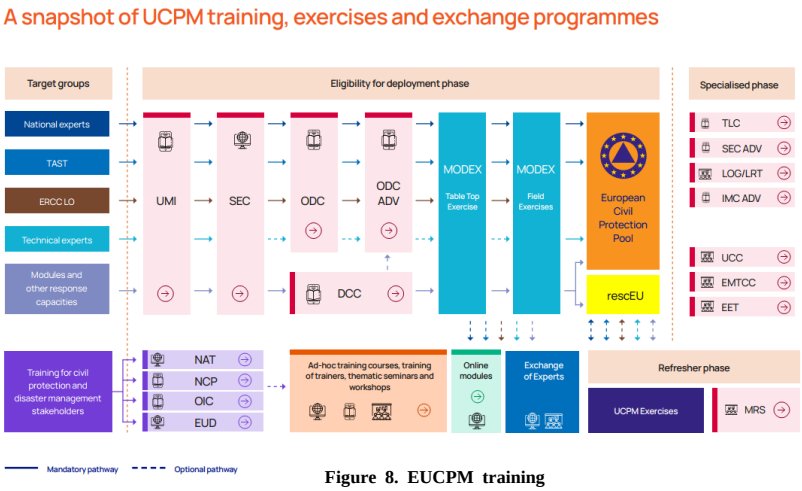

Figure 8. EUCPM training

The authors' suggestion is that DG ECHO would need to set, manage, and teach a "new command and control framework", or at least share the knowledge of the international C2 systems used within Europe, to increase our civil protection interoperability.

Finally, the authors propose to simply use the already existing training program (EU Brochure, 2023 & fig.7), and link these proposed trainings (see below) with On site Deployment Courses (ODC in the scheme).

Experimental Trainings

Several experimental European courses were organized in Aix-en-Provence, at national wildfire school (ECASC) France, in the context of European project called *"Network of European hubs for civil protection and crisis management"* (Ecorys, 2020), and in the Green deal project FIRE-RES (April 2024).
Gathering 40 trainees from 20 different countries, these trainings were organized at the French fire service facility's virtual reality simulator, involving a complete incident management team (15 to 20 players). This serious game provided a unique opportunity to organize some trials and experiments, as described below.

Methodology:

During experimental courses we highlighted that at least in Europe, command and control systems are comparable and some common points may be underlined.

The aim of this experimental training was to establish and drive an incident management team on a big incident and to deal with the arrival of – at least – two EU modules.

Exercise Incident Command and Control: The management of the training proposed a fixed command framework (IC + 3-4 sectors + ICP, cf. Figure 6.). But otherwise, the organization and staffing of the Incident Command Post was fully adaptable to each Incident Commander (i.e. to each nation receiving UCPM aid).

We only had a small "sample" of countries to lead this Incident Command System simulation: Italy, France, Sweden, Croatia, Portugal and Greece. However, all attendees were involved in ICP functions or single officer positions (safety, public info. officer, liaison officer …), giving a unique opportunity to test full international (Austria, Belgium, Poland, Croatia, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Israel, Italy, Netherlands, Norway, Portugal, Slovakia, Spain, Sweden) interoperability. This experiment demonstrated that EU participant states are able to cooperate efficiently in a command-and-control system. It also

confirmed the incident management commonalities existing between all participant states. This common framework could obviously constitute the backbone of a future European command and control system.

Modules and Experts Involvement:

This structured, common command and control system is actually very helpful to optimize involvement of EU modules. To manage module national specificities and logistics, a very obvious methodology (more than 9 times tested in the experimental courses) emerged at the end of these trainings: the Chief of Module needs to be directly involved within a sector, while a Liaison Officer needs to stay assigned to the ICP, in order to be the permanent representative of the module (logistics, capabilities, safety, etc …). This best practice is now beginning to be shared at EU level, even if it is not a mandatory procedure. Additionally, testing international cooperation within a unique incident management team in real/simulated conditions proved its feasibility and constitutes a very promising input for the future embedding of EU experts into the host nation incident management team.

This small-scale experience, more empirical than scientific, constitutes a demonstration of our theory on this parcel of interoperability and gives arguments and a possible form for future EU trainings.

CONCLUSION

We have imagined a doctrinal framework, totally dedicated to civil protection, based on guidelines developed in this paper. Effective, interoperable, respectful of sovereignties, this system could match with the needs and wishes of the EU for its citizens, and promote solidarity between the EU and non-European regions.

Of course, this proposal is anchored in experience rather than on scientific research. Further studies could be performed to confirm and consolidate this proposal. What is nowadays lacking is a reliable inventory of all European participant states' command and control systems. That could help to validate our assumption on the “common backbone”, and to clearly differentiate civil protection operations from humanitarian ones.

This work faces a paradoxical time context: after being hampered by Covid, its immediacy has been triggered by the climate change effect since 2021. Regarding usual experience with instructing, training and exercising efforts, it could take years to begin to fully use the new approach in operational situations. The first evaluation feedback is foreseen to be available after five years.

The European Commission has to determine how to organize the development of an improved EUCPM. How to concern and involve national civil protection, fire and EM services structures? What will be the role of national Fire and civil protection academies? How to let this European Command System knowledge percolate towards national levels? All these key points need to be solved if we really want to improve the interoperability of the participant states and the efficiency of EUCPM, to give European citizens the safety they deserve.

GLOSSARY

C2 Command and control

C2S Command and control system

ECASC ECole d'Application de la Sécurité Civile (Valabre national wilfire academy, France)

ECS European Command System

ERCC Emergency Response and coordination Center

EUCPM European Union Civil Protection Mechanism

ENSOSP Ecole Nationale des officiers de sapeurs-pompiers (French national officers' Fire academy)

EWE Extreme Wildfires Events

FCP Field Command post

GOC Gestion opérationnelle et commandement (Command and Operational management)

ICP Incident Command Post

ICS Incident command system, generic term which is quite a trademark US system

INSARAG International Search And Rescue Advisory Group

LEMA: Local Emergency Management Authority, Decisional policy authority in incident management

NGO, NGOs non-governmental organization(s)

OSOCC: On Site Operations Coordination Centre

STPs Standard Technical Procedures

SCCPs Standard Command and Control Procedures

SOPs Standard Operating Procedures

UNOCHA United Nations Office for the Coordination of Humanitarian Affairs

UNDAC United Nation Disaster Assessment and Coordination

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