ANALYSING ORGANISATIONAL, LEGAL, AND POLITICAL FRAMEWORK CONDITIONS TO SUPPORT THE IMPLEMENTATION OF NEW CRISIS MANAGEMENT SOLUTIONS

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Abstract

New solutions, technical and non-technical, provide strong opportunities to improve crisis management, while successful operationalisation of new solutions essentially depends on framework conditions such as organisational, legal, and political aspects in the respective area. Within the FP7-project DRIVER, these framework conditions are addressed in a dedicated part. Next to the objective of receiving most realistic scenarios for the testing of new Crisis Management solutions, the analysis of framework conditions aims at developing evidence-based recommendations for different types of stakeholders. Intensive surveys of the European Member States, selected third countries, the United Nations and the European Union have been completed. In a next step, more pertinent organisational, legal, and political framework conditions regarding the applicability of DRIVER solutions will be focused.

Keywords: Crisis management; innovation; operationalisation; resilience; policy; legislation; organisation.

1 INTRODUCTION

Natural and man-made hazards, their variances and broad range of possible impacts on society, critical infrastructures, environment or economy, perpetually induce new challenges for crisis management. These challenges must be met by constant improvements and adaptations of the crisis management process, to ideally be able to cope with complex disasters in the best possible way at any time. New technical and non-technical solutions play a crucial role in this regard, providing strong opportunities for improving crisis management capabilities and thus societal resilience.

Whether new solutions are implemented in crisis management, if they actually strengthen resilience, as opposed to rather triggering negative secondary impacts or providing no real added-value, strongly depends on conditions such as relevant organisational, legal, and political framework conditions.

1.1 The EU-FP7 project DRIVER

The EU-FP7 project DRIVER (*"**Driv**ing Innovation in Crisis Management for **E**uropean **R**esilience",* running May 2014 – October 2018, with a budget of approx. € 45 million)

implements the Aftermath Crisis Management System-of-Systems Demonstration Programme funded under the 7th Framework Programme by the European Commission.

DRIVER aims at three main dimensions:

- The development of a pan-European test-bed, an assembly of virtually connected, distributed operational or training facilities dedicated to experimentation plus test-bed tools (modelling and simulation, data recording, data analysis), methods (experiment design, campaign planning, analysis, evaluation), people, and ideas enabling the testing and iterative refinement of new crisis management solutions.
- The development of a DRIVER Portfolio of Emerging Solutions that improves Crisis Management at Member State and EU level (solutions for civil resilience, for professional response, and methods or infrastructure for individual and organisational learning)
- The development of a more shared understanding of crisis management across Europe including all stakeholders in crisis management who are concerned by societal and technological innovation in crisis management.[1]

The DRIVER consortium consists of 36 organisations from 13 EU Member States and two associated countries. The project is coordinated by European IT services leader Atos with technical and scientific support from the Swedish Defence Research Agency (FOI) and the Fraunhofer Institute for Technological Trend Analysis (INT).

1.2 Part of DRIVER: Analysing organisational, legal, and political framework conditions

DRIVER follows an approach of campaigns of experiments, providing an iterative way towards operationalisation of innovative solutions in crisis management. For these experiments, an analysis of organisational, legal, and political framework conditions supports the development of different scenarios. Next to the objective of receiving most realistic scenarios, the analysis of framework conditions aims at developing respective evidence-based recommendations for different types of stakeholders based on the results of the experimental campaigns.

In accordance with the overall DRIVER concept, instead of focusing on specific conclusions only relevant for specific solutions, findings especially target methodological approaches for future actions to foster innovation processes.

2 METHODOLOGY

As a first step, a “high-level” analysis has been conducted, providing general overviews on crisis management organisational, legal, and political framework conditions in the EU Member States, selected third countries, and on EU- and UN-level. All studies followed the same template, ensuring comparability of the gathered information. An additional survey examined the evolution of civil-military coordination in crisis management.

The work has mainly been done by desk top research, based on publicly available information. In addition, information gaps have been filled by conducting interviews with relevant stakeholders [1, 2].

Following the DRIVER working definition of a crisis as “a major disaster (natural or man-made) that requires coordination between or assistance from other countries, i.e.

[1] See project website: http://driver-project.eu/

that exceeds the crisis management capacity of one nation or affects more than one country," excluding e.g. a "financial crisis" or war-like crises, bi- and multilateral cooperative linkages between nations have been focussed.

As the experiments in DRIVER are getting more and more complex, so does the need for more detailed information on framework conditions. Thus, in a second step, more pertinent framework topics will be identified, in collaboration with the project partners working on the experiments and their design. A respective feedback loop has already started. The confirmation of framework topics will be followed by a selection of countries to be analysed, and the actual analysis of the topics in these countries (plus EU- and UN-level).

In addition, assessments of DRIVER experiments are expected to reveal additional requirements of organisational, legal, and political framework conditions, which will, together with the analysis described above, feed into evidence-based recommendations with regard to the implementation of DRIVER solutions under different conditions.

Adaptations to enhance the compatibility of solutions with framework conditions can be made from different angles. Respectively, recommendations will be developed for different target groups – incident commanders, decision makers, policy makers, and legislators.

3 RESULTS

The "high-level" studies, conducted for EU Member States, selected third countries, and on EU- and UN-level, cover topics on *Organisation* (e.g. chains of command, cross-border operational cooperation), *Procedures* (e.g. Standing Operating Procedures, national crisis management plans), and *Capabilities* (e.g. human/ materiel resources). They further cover *Policy* (e.g. risk assessments, analytical support and R&D, financing, policy review cycle, approaches to resilience, information sharing and data protection) and *Legislation* (e.g. general crisis/ emergency/ disaster law, emergency rule, specific regional and local legal arrangements, regulations on the involvement of volunteers, international engagements of first responders). They also provide data on CM organisations' *procurement processes* to support the exploitation of DRIVER emerging solutions and the DRIVER test-bed. Besides general information, also first specific information needs for DRIVER solutions have been considered in the analysis [1, 2].

As already stated, innovation processes in Crisis Management, i.e. a successful operationalisation of new Crisis Management solutions, strongly depend on the ability to be integrated in the respective framework conditions.

Those conditions can considerably differ between different nations, as shown in some examples below.

3.1 Policy and Strategy focus

Comprehensive crisis management includes measures for prevention and risk reduction, preparedness and protection of critical assets, maintaining capabilities and readiness to react to emerging crises quickly and manage their consequences, as well as measures to enhance resilience.

The surveyed countries recognise the need to comprehensively address crisis management requirements. For example, the aspiring EU member Albania recently introduced a comprehensive approach towards disaster risk reduction and management, including prevention, preparedness, response and recovery [3].

Some of the surveyed countries clearly emphasise the importance of one or another phase of crisis management. Countries like Albania, Belgium and Croatia emphasise response tasks and capabilities [3, 4, 5]. The strategy focus in Finland, on the other hand, is on preparedness and prevention rather than on response and recovery as a result of its low risk profile in terms of natural and man-made-disasters [6]. The policy of Austria puts a premium on preparedness issues like education and training of key response personnel, the promotion of new response technologies like decision support systems, simulation tools and also on an improved organizational framework for cooperation and coordination in the response phase [7].

While in some countries the concept of resilience is virtually unknown (and the term does not even translate easily in the respective language, e.g. Albania, Bulgaria), other countries strongly emphasise the importance of increased resilience of communities and societies. Such examples are provided by the Czech Republic, the United Kingdom, and other among the surveyed countries [3, 8, 9, 10].

3.2 Centralised vs distributed crisis management

Practically all European countries implement distributed systems for crisis management. In practice, however, there are significant differences in views – and respective policies and budget allocation – on the role of the state versus the role of the local preparedness and response. Bulgaria, for example, still heavily relies on the centralised development of capabilities and financing from the state budget. The crisis management approach of Denmark, taken as an example to the contrary, assumes the local level to be better placed to tackle local crisis situations, than the national level, and relies heavily on the contribution of private organisations, volunteers and NGOs in Danish crisis management [8, 11].

3.3 Volunteer involvement

The involvement of volunteers in crisis management strongly differs in various EU Member States, which has already been shown in previous studies [12, 13]: In general, volunteering is strongly influenced by the history, politics and culture of a community and a country. There are countries with longstanding traditions and well developed voluntary sectors (e.g. Ireland, the Netherlands, UK) as well as countries with less developed voluntary sectors (e.g. Bulgaria, Greece, Romania). Also, volunteering has different weights on the political agenda (e.g. high in Austria, Germany; rather low in Bulgaria, Czech Republic), which lead to differences also in the level of volunteering. Moreover the general treatment, organisation and support of affiliated volunteers and voluntary agencies differ from country to country.

The studies at hand e.g. confirm (referring to [14]) that the “German civil security system officially and strongly relies on non-profit relief organisations and their volunteer staff. […] While most management tasks and everyday emergency services are carried out by professional staff, volunteers remain essential for more exceptional crisis management situations.” [14, 15]. Also the country study Austria confirms that "One characteristic of the Austrian Crisis and Disaster Management is the strong involvement of voluntary organizations which enable an easy access to a huge amount of human resources. Due to the fact, that there is no single organisation in Austria, which will be mainly responsible for the response to disasters, related duties will be organized by voluntary organisations” [7]. In contrast, in Bulgaria “the legal provisions for the use of volunteers and volunteer formations are fairly recent. In the short period of about three years in which they are in force, 162 formations were created, and FSCP (Fire Safety and Civil Protection) provides public access to the respective registry” [8].

3.4 Post-disaster assessment and Lessons Learned systems

First evaluations of the country surveys let assume that nearly every organization involved in Crisis Management reports and analyses the measures that have been taken during a disaster as well as during exercises and trainings, in many cases including international/ cross border experiences. Nevertheless, only few additional centralized (national) or inter-organisational Lessons Learned systems including central data bases of respective information and/or a central organization exist like in Ireland [16] or Finland, where investigation reports of all major accidents, regardless their nature, are prepared and include recommendations for improving systems, policies and processes [17, 6]. A major problem of these review processes is in many cases the lack of implementation of its findings. As a result, findings of review processes could often rather be seen as lessons identified than lessons learned, which hampers the innovation process.

4 OUTLOOK: WORK IN PROGRESS

The next (update) phase will focus on pertinent issues regarding the applicability of DRIVER solutions. In a two-way process, information with the teams designing, conducting, and analysing the results of DRIVER experiments will be exchanged. This exchange is planned to be organised along questions, such as:

1. How each proposed and demonstrated solution adds value to the European capacity to manage crises? Potential contributions may range from filling in an identified capability gap, to a more robust crisis management (i.e. increases of effectiveness), to increasing the efficiency of preparedness and response.
2. To what extent the solution could be adapted to framework conditions (i.e. legislation, procedures, organization, existing capabilities, and policy), that differ from the ones in which the experiment took place?
3. What are requirements in the framework conditions (which might differ among countries) that are necessary in order to implement the solution?
4. What additional contextual information is needed to better tailor the solution and design future experiments?

The expectation is that such rigorous and structured exchange, complemented by additional surveys and analysis, will provide a sound foundation for evidence-based recommendations to policy-makers and legislators, as well as to incident commanders, and other decision makers at the operational and tactical levels of crisis management.

From current status, three groups of recommendations are anticipated, addressing respectively the capacity for professional response; strengthening the involvement of societal actors and resilience, and enhancing the capacity to innovate and adapt crisis management policies to evolving risks and societal expectations, with each group covering four thematic issues.

4.1 Professional response

The professional response to crisis management will benefit significantly by enhanced situational awareness, efficient coordination, command and control, streamlined information management, and enhanced logistics.

In terms of awareness, DRIVER solutions will facilitate situational assessment and sense-making, with focus on damage and needs assessment, prediction of crisis evolution and raising alerts, and continuous risk mapping. Further, situation assessment will be complemented by information from airborne sensors, with the requisite mission planning for remotely piloted aerial systems (RPAS) and modelling and optimization in traffic management.

Recommendations on Coordination, Command and Control will focus on multinational/ cross-border, multiagency and, in particular, civil-military coordination. The supporting analysis, including analysis of results of experimentation, will cover the issues of resource allocation and tasking, information exchange and interoperability.

The focus in the examination of information management is on reporting lines for and exchange of operational situational information, elaboration of a common operational picture (COP), interoperability, crowd sourcing and sending information to the public.

In terms of logistics, the main interest is on modelling logistics processes in crisis management, optimization of transportation means, and cooperation with civil society logistics' stakeholders.

4.2 Resilience

Society can turn into an effective actor in crisis management and disaster response through advanced volunteer management, enhanced societal and community resilience, effective crisis communication, and timely and professional psycho-social support.

Recommendations in regard to volunteer management will focus on volunteer registration databases, ad hoc management of spontaneous volunteers in the field, and crowd tasking.

Societal and community resilience will be addressed by measuring community resilience and raising awareness on local levels, assessment of the resilience of local government and definition of respective action plans, organisation and mobilization of individuals and communities.

The analysis of crisis communication will focus on crisis resilience communication, measuring the impact of messages to the public and the elaboration of key messages to the public.

The focus in providing psycho-social support will be on training, in particular basic training for psychosocial first aid.

4.3 Innovation capacity

The capacity to innovate and adapt to changing circumstances is contingent on the rigour and professionalism of education and training, the capacity to identify and incorporate good practice, and the agility of crisis management organisations.

Recommendations related to education will focus on continuous learning, multinational and multiagency education, as well as the shared understanding of required crisis management competences.

Advances in training will emphasise multi-national and multi-agency training, serious gaming, and training of volunteers, as well as context and dilemma training and the development of educational packages for trainers.

The identification of good practice requires rigorous evaluation and drawing lessons from field experience, exercises, experiments, and demonstrations. Focus is on a lessons learned framework for cooperation, coordination and collaboration across borders, sectors and organisations.

The EU-wide capacity for innovation depends on organizational agility and adaptiveness that include, *inter alia*, continuous mapping of requirements to available capabilities and maintaining a European crisis management architecture.

5 CONCLUSION

Successful innovation processes in Crisis Management depend on various factors. One of the major issues in the implementation of new Crisis Management solutions, besides being thoroughly tested and societal as well as ethical acceptable, is their compatibility to existing framework conditions such as relevant organisational, legal, and political circumstances.

The FP7-project DRIVER faces these challenges to foster innovation in European Crisis Management by building a sustainable pan-european test-bed, and elaborating a Portfolio of emerging solutions.

To facilitate the later implementation of these emerging solutions, the existing Crisis Management organisational, procedural, legal, and political framework conditions are analysed respectively. An intensive survey of the European Member States, selected third countries, the UN and the EU as well as a study on the evolution of civil-military coordination in crisis management have already been completed. First examples of policy and strategy focus, centralised vs distributed crisis management, volunteer management, and post-disaster assessment have demonstrated differences between countries with respect to framework conditions, which have strong influence on a successful implementation of crisis management solutions.

As the experiments in DRIVER are getting more and more complex, so does the need for more detailed information on framework conditions. The results of these more realistic experiments will feed into the formulation of evidence-based recommendations for different target groups – incident commanders, decision makers, policy makers, and legislators. While not expecting to derive only clear and exclusive recommendations for action, pros and cons/ risks and opportunities for different alternatives of action will be elaborated and linked to different local backgrounds/ framework conditions, considering that enhanced adaption to framework conditions can be supported from both sides – from the solution as well as from the framework itself.

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