

The Whole Community Approach to Emergency Management

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Abstract

The technological progress of the 20th and 21st centuries has increased the risk of manufactured disasters. In contrast, the current political landscape has led to a surge of threats related to terrorism. Nevertheless, one aspect of emergency management has remained relevant throughout the centuries. Since the dawn of life, humanity has been subject to dangerous natural phenomena. Natural disaster remains widely used across settings and differentiates between human-conditioned and less controllable events caused by environmental processes. Volcanic eruptions, earthquakes, hurricanes, and floods have become the reason for millions of deaths across history. Despite considerable progress, natural disasters remain an essential risk factor on the scale of the whole planet. Therefore, the oldest element of emergency management has always been one of its crucial aspects. It explores the relevant risks while introducing a framework to mitigate the consequences of the impact of nature's forces. Additionally, the proposed approach to the study of the mechanisms for optimizing the functioning of social organizations, whose tasks are aimed at ensuring the safety of people in conditions of constant natural and manufactured risk, will contribute to the further theoretical and empirical study of similar problems in other areas of national security.

Keywords

Whole Community Approach, Emergency Management, Disasters

1. Statement of Problem

Today, the tendency of changes in natural and climatic conditions and the intensification of seismic and heliophysics processes is observed, which is also expressed in an increase in the frequency and scale of disasters, the development of natural disasters into manufactured and *vice versa*—the danger of the transbound-

dary transfer of pollutants and hazardous substances in various media increases. In addition, the number of sources and reserves of natural drinking water is decreasing. From these trends, the practicality of the systematic development of the system for monitoring and forecasting emergencies follows, which implies, in particular, the following (Boin et al., 2016; Jerolleman & Kiefer, 2016):

1) Microseismic zoning and earthquake-resistant construction in hazardous areas should be carried out at an accelerated pace. The health care system and bioengineering science will increase readiness to combat the foci of exotic infections and improve technologies for manufacturing and testing vaccines and antidotes. Water sources' environmental protection zones will be formed on the territories and built water reservoirs.

2) Creating a geographically distributed system for alerting the population about natural disasters should be completed, comprehensive monitoring systems for entities within communities should be created, and their instrumental and analytical base should be significantly strengthened, contributing to a full-fledged territorial forecast.

3) The development of the system of teaching the population to act in case of disasters characteristic of the regions will continue. Through organized forms, a more significant amount of knowledge and practical skills in the field and population protection will be received by heads of municipal authorities.

In this regard, there is an increasing need to revise the existing priorities in the activities of state organizations included in the system for the prevention and elimination of natural and artificial emergencies, from the managerial attitude toward the elimination of consequences to the attitude towards prevention of their occurrence. In turn, this step is only possible by realizing that the protection of the population is, first of all, scientifically grounded management of social processes based on the principles of concreteness and information sufficiency. Therefore, the development of management technologies aimed at socially solving the problems of protecting the population and territories from emergencies requires at least the entire complex of knowledge about the laws of social development, phenomena, methodology for collecting and analyzing sociological information, as well as developing and implementing specific procedures for organization of civil protection process management.

To increase the safety culture of the population, as an element of national culture, the potential for moral and psychological impact on society will be systematically increased through traditions, works of literature and cinema, the media, club, and computer means of communication. Furthermore, the volunteer fire and rescue units being created will also be used as centers to promote a safe lifestyle, which should be considered, especially concerning computer network information expansion. Nevertheless, the severe threat of widespread dissemination of unreliable, socially dangerous, and provocative information remains constant. Moreover, it is necessary to constantly analyze the trends and dynamics of the development of the socio-economic situation around the object of artificial danger and in the territory near its location. Therefore, first of all, it is needed to

monitor those phenomena and processes that are associated with the stability and safety of the object and are a kind of social background that determines the socio-psychological state of personnel, the material and spiritual foundations of their behavior, and life in general, to exclude the negative influence of human factor in disasters.

It is necessary to form a policy in information culture consistently. The state regulatory bodies on emergencies must develop and implement preventive and operational technologies to support measures to prevent and eliminate troubles. At the same time, one should consider the national and religious characteristics of the population, strengthening public confidence. Moreover, the expert system for social monitoring of the civil protection system involves the creation of organizational conditions for continuous monitoring, regular analysis, and assessment of information about the state and changes in the social, socio-technical, moral-psychological, financial-economic, political, informational, and another environment not only inside, but also around the security facilities (Pine, 2017). All these activities should be carried out at the Whole Community Approach level to ensure the best interaction of all elements within communities as systems.

The Whole Community Approach represents a mutually beneficial strategic mid to long-term collaboration based on the public-private and municipal-private partnerships paradigm. It is carried out between the state, characterized by community formation and non-state actors, sharing risks and benefits and implementing socially beneficial tasks and functions (Canton, 2019). As a result, new qualities will gradually become inherent in advancing monitoring, forecasting, management, training, scientific and practical, and fire and rescue services into everyday life, which the regulatory bodies on emergencies can provide. Furthermore, this will give an opportunity of existing in the market for rescue services and organizations specially created for a range of needs, dealing with the issues of overcoming environmental disasters, optimal socio-economic planning, humanitarian interaction with international organizations, and expert support. In this regard, in addition to optimizing financial and economic policies of the government and tightening budget discipline, it is advisable to search for additional resources in the field of protecting the population and territories from disasters in the Whole Community Approach, public-private partnerships, development of a risk assessment and management system, and training anti-crisis managers.

1.1. Statement of Purpose

Being a large public organization, the de facto state can only sometimes react effectively or instantly change emergency management's planned course of action. In this case, it becomes necessary to form new social institutions that can become factors of an accelerated and system-wide adjustment of plans and measures. At the same time, per the tasks set and the specific order of their achieve-

ment for each participant, the benefits from participation in implementing projects in the Whole Community Approach frames must be disclosed and justified. The main so-called “benefits” include financial, budgetary, socio-economic, environmental, political, and technological (see **Appendix A**). Thus, as a result of participation in projects, each participant “wins”; however, research on this issue is scattered and devoted mainly to separate areas of emergency management, characterized by a lack of consistency. Accordingly, building a systemic interaction model between subjects and stakeholders seems appropriate within the Whole Community Approach in emergency management (see **Appendix B**).

1.2. Hypothesis

The hypothesis can be formulated as follows: a systemic model of interaction of subjects and stakeholders within the Whole Community Approach in emergency management will enable emergency management in communities to contribute to the prevention and better elimination of emergencies caused by natural disasters and anthropogenic factors.

1.3. Research Question

As noted above, to effectively implement emergency management in communities, building a system model of interaction between actors and stakeholders within the framework of the Whole Community Approach in emergency management is necessary. This core objective implies the following tasks:

To define the role and place of civil protection in the ecological and social security system, where the civil protection system is an integral component of the social institution of national security. The primary function of this institution is to protect the country’s population and its environment from the destructive impact of negative phenomena of natural and manufactured origin on different levels of interaction of the individual with other elements of the ecosystem.

- Conduct a comparative analysis of response systems in the field of prevention and elimination of the consequences of natural and artificial emergencies in the USA and Western Europe
- Substantiate an axiological-synergetic approach to the study and solution of problems of social regulation of the processes of ensuring effective emergency management and civil protection, considering the processes of self-organization of social systems in indissoluble unity with the goals and objectives of their organizational activities.
- Reveal the essence of the Whole Community Approach to show the subject and method of regulation, to define the principles of legal relations.
- Research and systematize best practices in the field of the Whole Community Approach in emergency management on a national and international scale.
- Develop a conceptual model of the mechanism of socio-technological regulation of the population’s civil protection process.
- Devise a systemic model of subjects’ and stakeholders’ relations and interac-

tions in Whole Community Approach application frames in emergency management.

2. Literature Review Funnel

2.1. Whole Community Approach Overall Advantages

Delmon (2017). *Public-private partnership projects in infrastructure: An essential guide for policymakers*. Cambridge University Press.

The article provides a broad vision of the Whole Community Approach, which will be the basis of further research.

U.S. Department of Health and Human Services (2016). *Building public-private partnerships to enhance disaster resilience: A listening session*. Division for At-Risk Individuals, Behavioral Health, and Community Resilience.

Further, the paper will demonstrate the importance and practicality of public-private partnerships in effective emergency management, with a further transition to the paradigm of the Whole Community Approach.

2.2. Best Practices of Whole Community Approach in Emergency Management

European Centre for Disease Prevention and Control (2017). *A literature review on community and institutional emergency preparedness synergies*. ECDC.

This literature review represents a valuable set of best practices of the European systemic approach to emergency management. It will be used as an evidence-based approach in the planned research to show the effectiveness of the systemic approach in this field and borrow some practices for future model application recommendations.

Rubin (2019). *Emergency management: The American experience*. Routledge.

The book describes the American emergency management system's successes, failures, advantages, and drawbacks. It is a valuable source for substantiating the need for change regarding the increased risk of natural and artificial disasters during the last decades.

2.3. Risk Sharing and Benefits of the Model Elements

Snair, Reed Snair, & Herrmann (2016). *Exploring disaster risk reduction through community-level approaches to promote healthy outcomes: proceedings of a workshop -in brief*. National Academies Press.

The paper provides community-based risk reduction strategies in frames of disaster consequences elimination. Although it covers a relatively narrow area, which includes healthy outcomes, it would help better comprehend the practical nature of the Whole Community Approach in emergencies.

Serino & Grimes (2016). What the "Whole Community" means to the whole community? *DomPrep Journal*, 12(1), 11-13.

Based on the principle of "one community, one goal," the authors briefly describe benefits for the whole community and individual elements of interaction,

defining the core function of leadership as bringing people together. This article has significant value for the planned research as a conceptual base for defining and measuring benefits and synergy effects in frames of the systemic model, which is expected to be built.

2.4. Systemic Approach in Emergency Management

Warnick & Molino (2020). *Emergency incident management systems: Fundamentals and applications*. Wiley.

The book suggests a description and analysis of convincing evidence showing successes and failures in emergency management in frames of appropriate systems in the USA and worldwide (see **Appendix C**). Due to the practical approach applied by the authors and much valuable evidence, the book can be used in planned research to substantiate the necessity of the systemic model of the Whole Community Approach elements of links and interactions.

Grobe (2017). Applying systems thinking to emergency response planning using soft systems methodology to structure a national act in Sweden. Proceedings of the 6th International Conference on Operations Research and Enterprise Systems (ICORES 2017), pp. 288-297.

The article uses the electrical power shortage case example to describe a soft systems method for modeling a national preparedness planning procedure. With the help of the model, the author provides a new perspective for understanding and enhancing the collaborative joint decision-making environment for the actors engaged in planning. In addition, the case-study approach used in the article represents valuable sources for the planned research regarding outlining and building the systemic model mentioned above.

3. Methodology

A survey was chosen as a research method, including standardized and open-ended questions. The primary purpose of the survey is to identify existing problems in the area of emergency management in communities, availability or lack of the Whole Community Approach, existing practices, cases, as well as potential locations and opportunities for improvement of emergency management based on implementation or enhancement of the Whole Community Approach grounded on the systemic paradigm of risks sharing, benefits, responsibilities, and interactions (see **Appendix C**).

3.1. Sample

The selection of respondents at all stages of the study will be carried out according to a quota, stratified, random sample, representative of the region of residence, social status, demographic characteristics, and various kinds of emergency involvement. The survey will cover nine communities in three states in the Center, North, and South of the United States. The following categories will act as experts: representatives of local authorities, non-governmental organizations,

chiefs and deputy chiefs of staffs of civil defense and emergencies and their structural divisions; members of emergency committees of various territorial and administrative units; senior officers of civil defense units, the Ministry of Defense; rescuers with experience in the prevention and elimination of emergencies; scientific workers of the corresponding direction. It is assumed that such a sample will provide the complete picture of the current situation and prospects in the Whole Community Approach in emergency management in different communities, excluding regionally specific influence factors in the final model. In addition, it is expected to obtain information about the social determinants of the socio-technical stability of the emergency management system. In particular, the following data will be accepted:

- the state of balance (imbalance) of social and technical subsystems,
- factors of personal and professional risk, social fatigue,
- the state of labor and life motivation of workers, stress expectations,
- the effectiveness of measures taken, correction of imbalances, development vectors, and existing management mechanisms in extreme situations.

In all cases, research will include a questionnaire survey of experts, a mass population survey, an analysis of statistical data, and a legal framework. In addition, as a methodological base, an analysis of the main directions of scientific knowledge in the field of safety of complex dynamic systems of a social nature will be carried out: the theory of complex dynamic systems, general control theory, cyclic theory, social management theory, social technology theory, risk management theory, social action theory, sociology of organizations.

3.2. Projected Findings

After their respective processing, the projected results of the survey will clearly show sound drawbacks in the national emergency management system, which will be supported by appropriate data on the soundest disaster cases that took place from 2010 to 2019. Based on particular best practices in individual American communities and Europe, the urgent expediency to develop, introduce, and promote the systemic model of actors' interaction, responsibilities, and risk-sharing based on the Whole Community Approach in emergency management will be shown. The findings are expected to support the hypothesis presented above, stating that a systemic model of interaction of subjects and stakeholders within the Whole Community Approach in emergency management will enable the improvement of emergency management in frames of communities, contribute to the prevention and better elimination of emergencies caused both by natural disasters, and anthropogenic factors.

The model will imply two main elements in the mechanism of social management of civil protection. These are two main components: the first is a complex of means and methods of controlling influence on social processes taking place in the social system and its subsystems to achieve their state of optimal protection, and the second is the socio-axiological response of the contingent of

the civil protection system to controlling influence, that is, value orientations, interests, motives, incentives.

4. Conclusion

The expected theoretical and empirical results will allow the development of specific practical recommendations for government bodies collaborating with communities to form a mechanism for regulating social processes. Those system functions will optimize activities to prevent and eliminate the consequences of natural and artificial emergencies.

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Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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Appendix A: The Whole Community Approach Benefits



Whole Community Approach Benefits

- Shared understanding of community risks, needs and capabilities
- More efficient use of existing resources
- Stronger social infrastructure
- Establishment of relationships that facilitate more effective prevention, protection, mitigation, response, and recovery activities
- Increased individual and collective preparedness

Greater Resiliency!

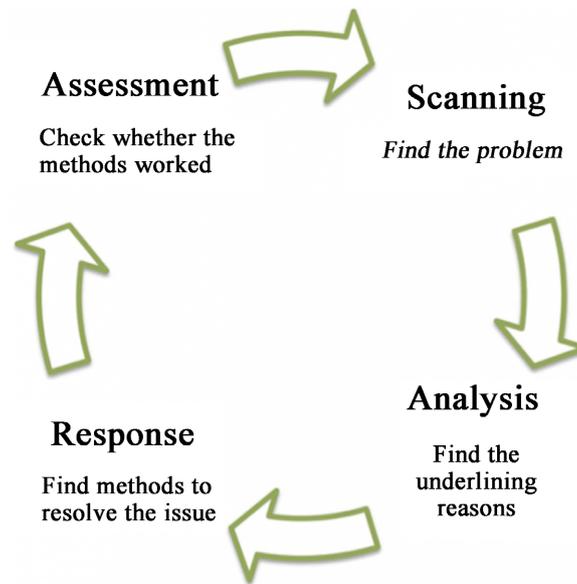
Note. Adapted from Williams (no date) *Engaging the whole community—ppt download, SlidePlayer*. Available at: <https://slideplayer.com/slide/12087810/> (Accessed: April 25, 2023).

Appendix B: The Whole Community Approach Stakeholders



Note. Adapted from *Continuum of community (stakeholder) engagement in research. A general...* (no date). Available at: https://www.researchgate.net/figure/Continuum-of-Community-Stakeholder-Engagement-in-Research-A-general-model-by-which-to_fig1_326796254 (Accessed: April 26, 2023). *Whole Community Approach to Emergency Management | City of Amarillo, TX*. (n.d.). <https://www.amarillo.gov>. Retrieved January 22, 2023, from <https://www.amarillo.gov/departments/public-safety-and-organizational-services/office-of-emergency-management/disaster-preparedness/11-27-18-whole-community-approach-to-emergency-management>.

Appendix C: Community Policing Assessment



Note. Adapted from James (2020) *A look inside strategies contributing towards Community Policing: Sara Model, Movement Forward*. Available at: <https://movementforward.org/a-look-inside-strategies-contributing-towards-community-policing-sara-model/> (Accessed: April 25, 2023).