

FEATURES OF CIVIL DEFENSE OF THE POPULATION IN FRONTLINE CITIES

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Abstract. The article analyzes the challenges for the civilian population in frontline cities, where hostilities lead to daily destruction and casualties among the civilian population. The main attention was focused on assessing the efficiency of notification, the effectiveness of shelters and the coordination of rescue services management. The proposed recommendations are aimed at increasing the resilience of urban life support systems in conditions of constant fire threats.

Keywords: war, civil defense, threats, frontline cities.

Анотація. В статті аналізуються виклики для цивільного населення в умовах прифронтових міст, де бойові дії призводять до щоденних руйнувань та жертв серед цивільного населення. Основну увагу було зосереджено на оцінці оперативності оповіщення, ефективності укриттів та координації управління рятувальними службами. Запропоновані рекомендації спрямовані на підвищення стійкості міських систем життєзабезпечення в умовах постійних вогневих загроз.

Ключові слова: війна, цивільний захист, загрози, прифронтові міста.

Introduction. In the current conditions of military aggression against Ukraine, the issue of ensuring the safety of the civilian population is of particular importance. Frontline cities located near the combat zone are facing unprecedented challenges associated with systematic shelling, destruction of infrastructure, disruptions in the work of public utilities, threats to people's lives and health. These factors necessitate the creation of effective civil defense mechanisms adapted to the conditions of constant danger [1].

Unlike relatively safe territories, frontline communities require quick decisions, autonomous response systems and high coordination between state bodies, military administrations, rescue services and the population. Civil defense in these conditions is becoming not only a response tool, but also a strategic element of the survival of communities.

Analysis of the state of the issue. Ukraine's frontline cities are constantly suffering from shelling by the Russian Federation army. In the last four months alone, settlements in the Donetsk, Zaporizhzhia, Luhansk, Odesa, Sumy, Kharkiv, Kherson, and Chernihiv regions have been shelled 8,399 times. Of these, 401 attacks occurred in regional capitals.

The purpose of the study is to identify the specific features of the functioning of the civil defense system in frontline cities of Ukraine, analyze its problems and needs, and substantiate the directions for increasing the effectiveness of protective measures in martial law.

Methods, materials, and research results. The civil defense system of Ukraine is based on the provisions of Code of Civil Protection (2012) and subordinate regulations that regulate the actions of government bodies, enterprises and citizens in case of emergency situations [2]. However, in frontline cities, these norms are often implemented in specific conditions, when state institutions operate in a zone of increased danger, and the resources of the protection system are limited.

One of the main features is the increased intensity of threats. Frontline settlements are regularly subjected to artillery, rocket and air attacks, which leads to large-scale destruction of critical infrastructure, energy, transport, water and heating systems. As a result, local authorities are forced to ensure not only emergency response, but also the constant restoration of vital systems.

An important aspect is the organization of a shelter system. Many frontline cities have a limited number of protective structures that do not meet modern security requirements. In these conditions, communities are forced to use basements, metro stations, parking lots and specially equipped storage facilities. At the same time, it is necessary to ensure their proper infrastructure – ventilation, sanitary conditions, communications and medical support.

Another specific feature is the integration of civil defense with military structures. In the frontline regions, military administrations operate, which combine the tasks of defense, evacuation, humanitarian support and rescue operations. This management format ensures faster decision-making and coordination between all security actors. At the same time, this creates a need to develop special protocols for interaction between military and civilian structures, in particular in the field of evacuation, demining, and liquidation of the consequences of shelling.

Volunteer organizations and local initiatives play a special role in ensuring life. In many frontline communities, they are the first to respond to the destruction of residential buildings, deliver humanitarian aid, and evacuate vulnerable groups, including the elderly, people with disabilities, and children. Such community activity complements official civil defense structures, increasing the resilience of urban communities.

One of the key functions of civil defense is to promptly inform the population. Warning systems are often damaged in wartime, so local authorities are implementing alternative communication channels: mobile applications, social networks, instant messengers, SMS messages, loudspeakers and mobile warning systems. The number of lives saved depends on the timeliness of the signals.

An equally important component is the organization of the evacuation of the population. In frontline cities, this process is complicated by the lack of transport, road hazards, and the absence of guaranteed humanitarian corridors. Effective evacuation requires prior planning, the creation of collection points, the identification of temporary accommodation sites, and logistical routes to safe regions.

The psychological aspect is also crucial. Prolonged exposure to shelling leads to constant stress, burnout, and psycho-emotional exhaustion of the population. Therefore, the civil defense system must include elements of psychological support:

the creation of crisis centers, hotlines, mobile aid teams, educational programs on self-regulation and stress management.

In order to increase the effectiveness of civil defense, it is necessary to implement a resilient community's model, which involves decentralization of decisions, local reserves of material resources, education of the population and support for horizontal interaction between communities. It is the ability of a community to independently respond to threats that determines its viability in crisis conditions.

The main areas of improvement of the civil defense system in frontline cities include [3]:

- updating the regulatory framework taking into account military realities;
- creating effective warning and communication systems;
- developing a network of shelters and invincibility points;
- improving the level of training of management, rescue services and the population;
- integrating civil defense with the territorial defense system;
- establishing partnerships with international humanitarian organizations;
- developing psychological and social support for victims.

Conclusions. Civil defense in frontline cities of Ukraine is a complex multi-level system that unites state, municipal, military and public structures. Its feature is the need to function in conditions of constant danger, resource shortage and high psychological stress on the population.

The effectiveness of civil defense is determined by the degree of adaptation of authorities to crisis conditions, the willingness of the population to act independently, the availability of evacuation plans, information means and inter-institutional coordination. In the future, the development of the civil defense system of frontline communities should be based on the principles of sustainability, efficiency, decentralized management and social cohesion.

Civil defense in frontline regions is not only a technical or administrative response system, but also an important component of national security, which determines the state's ability to save the lives of citizens, ensure the functioning of society and strengthen trust in the authorities even in the most difficult conditions of wartime.

References

1. Іванов, І., & Симоненко, А. (2022). Захист цивільного населення в умовах війни. *Діяльність державних органів в умовах воєнного стану: зб. матеріалів Міжнар. наук.-практ. онлайн-семінару*, м. Кривий Ріг, 29, 56-58.
2. Бабенко, Д. М. (2024). Аналіз наукових досліджень щодо організації заходів цивільного захисту в умовах воєнного стану. *Інвестиції: практика та досвід*. 3, 176–181.
3. Веселов, М. & Забеділіна, А. (2023). Цивільний захист населення в умовах воєнного стану. *Зовнішня торгівля: економіка, фінанси, право*. 129 (4), 98–114. [https://doi.org/10.31617/3.2023\(129\)09](https://doi.org/10.31617/3.2023(129)09).