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EQUIPMENT ACCORDING TO THE CULTURAL INSTITUTIONS' PLANS FOR ACTION IN EMERGENCIES

Abstract: This paper attempts to present, highlight and update numerous issues and problems related to the system for protection and rescue of the cultural institutions' employees, material and cultural goods, emphasizing the condition of the equipment for protection and rescue. In this sense the paper gives an overview of the basic issues related to the dangers that threaten humanity through analysis of the necessary equipment according to the plans for protection and rescue and pointing out the shortcomings in the system. Recommendations for improvement and promotion of the prevention of disasters are presented.

Key words: cultural institutions, emergencies, equipment, prevention, education, protection.

We live in dynamics times, characterized with rapid technological development and application of important scientific achievements in number of areas that positively affect the quality and standard of life. However, the contemporary living and working conditions, as well as the climate change cause everyday threats from natural disasters and other accidents. In the same time, contemporary civilization faces various types and forms of major challenges, terrorism, military conflicts, use of weapons of mass destruction, epidemics, environmental degradation, crashes, etc.

Natural disasters and other accidents are an integral part of life. History abounds with accidents and disasters, which unfortunately have caused unpredictable consequences and great suffering to human civilization. However,

mankind is now confronted with number of dangers that disturb the balance in nature, endangering the life and health of people, the environment, the material and cultural heritage. Worldwide statistics show that the number of mass casualties today is much greater than in the past, and the population and the material goods are endangered more in peacetime than during wars. Regardless of the type of threat and its effects, disasters have one basic feature - they do not know boundaries and have global impact.

Different forms of hazards that threaten human civilization attract attention and cause high degree of uncertainty and concern for many people, institutions and other social structures. Accordingly, the world mobilizes, or invests resources and undertakes common measures to reduce the consequences of such phenomena, which become more frequent and more aggressive and result with major human casualties and material losses on all continents. This implies that every state should have an effective system of protection and rescue of citizens and material goods in the country. In the Republic of Macedonia, the protection and rescue of people, material goods and cultural heritage from natural disasters and other accidents in peace, crisis, emergency and in state of war are regulated with the following laws: Law on defense, Law on protection and rescue, Law on fire-fighting, Law on protection of cultural heritage, as well as other bylaws and strategical documents in the area of protection and crisis management: National strategy on protection and rescue, Methodology for the content and manner of hazard assessment and planning of protection and rescue and Assessment of the threat of the Republic of Macedonia from natural and other disasters. According to these national regulatory and strategic documents, more entities have the obligation to plan and prepare activities for implementation of protection and rescue, the state administration bodies, municipal bodies, public enterprises, institutions and services, trade companies and every citizen of the state.

Having in mind the importance of the cultural heritage for the identity, history and culture of a nation, the employees in the cultural institutions within their business process are obliged to organize the protection and rescue of the employees, the material and cultural goods, by undertaking measures and activities for preventing and mitigation of the consequences of natural disasters, military actions and other accidents.

As a prerequisite for preventing the occurrence or mitigation of the consequences of natural disasters and other accidents, depending on the number of employees, type of activity, location and other conditions, the cultural institutions have legal obligation to adopt and develop assessment of endangerment and plan for protection and rescue from natural disasters and other accidents. The plan for protection and rescue, in accordance with the Law on protection and rescue is prepared on the basis of an assessment of the vulnerability of the facility and its entities from natural disasters and other

accidents, also assessment of the actual needs and capacities for implementing effective protection by utilizing the available potential and resources, as well as through cooperation with other subjects of the protection and rescue system.

The plan for protection and rescue should encompass:

- ▶ Activities and measures for protection and rescue:
 - preventive activities and measures
 - operative activities and measures
- ▶ Phases for protection and rescue:
 - Prevention
 - Preparedness
 - Realization

Each cultural institution, in accordance with its scope of activity and its needs, develops the following measures for protection and rescue:

- urban-technical measures: sheltering; protection and rescue from floods; protection and rescue from fires, explosions and dangerous substances; protection and rescue from wreckage;
- humanitarian measures: evacuation; chemical, biological and radiological protection; first (medical) aid.

In order to implement measures for protection and rescue according to the plans, the institutions within their institutional mechanisms, establish universal protection and rescue unit that is equipped and trained to provide: first medical aid, extinguishing minor and initial fires, rescue of trapped people in shallow ruins, protection against floods, participation in sheltering and evacuation of employees, visitors and cultural goods. In order to implement the measures for protection and rescue, in accordance with the Plan for protection and rescue, each entity should be obliged to provide adequate equipment for personal and collective protection and material and technical means.

Equipment according to the Plan for sheltering the population, material and cultural goods

This plan covers all available capacities of the facilities for basic sheltering, the manner of their use, but also adaptation and maintenance of other auxiliary facilities suitable for sheltering employees, visitors, material and cultural goods. Each construction unit should have a shelter according to the spatial-urban plans, however in case of lack of shelters in the older buildings, according to the plans it is necessary to adapt the basement and other premises, adaptation of natural objects or construction of trench protective structures for temporary sheltering and provision of basic protection. Regarding the capacity and the protective characteristics, the shelters can be equipped with air purification or filtering installations. The larger shelters could have preferably

installed equipment for water supply, sewage and electricity, which corresponds to the standards regarding the capacity of the shelter.

According to the plans, depending on the type of material and cultural goods that are protected, and which are of importance for the Republic of Macedonia, appropriate material and technical resources are needed to implement the sheltering.

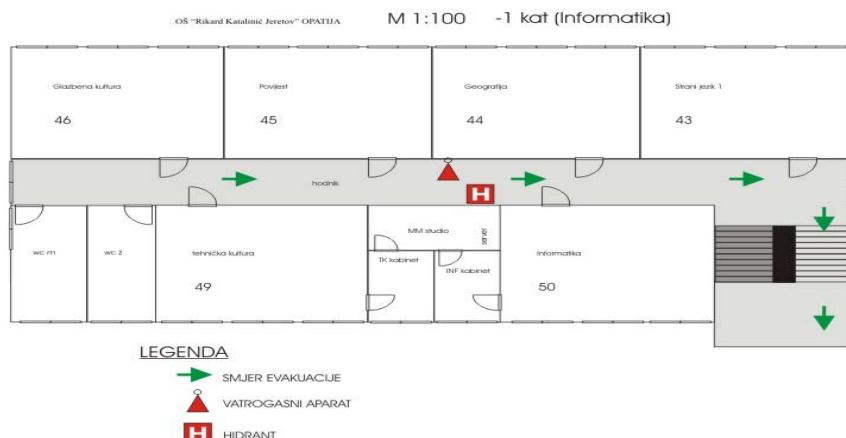
Equipment according to the Plan for evacuation

Evacuation involves organized, controlled and temporary relocation of employees, visitors and cultural goods from the potentially endangered or already endangered area to a safe area under the Plan for protection and rescue. The evacuation is carried out in cases where it is not possible to prevent the risks and dangers or consequences of natural disasters and other accidents by other measures. Depending on the time and manner of implementation, the evacuation can be organized as: timely - before the peril took place, and additional - during or after the peril; and depending on the scope, the evacuation can be complete or partial.

According to this plan, it is necessary to define the routes of evacuation, to mark them appropriately and visibly on the floors, to place the flashing signs on the walls to the exit and to ensure that the passages should always be free. Furthermore, it is necessary to locate the reception point, the previously designated evacuation facilities, the material and technical equipment for the transport of cultural heritage (boxes, metal boxes, etc.) and motor vehicles which will be used for evacuation, depending on the number of endangered persons and the volume of the material and cultural goods that are being evacuated.



Signs for evacuation



Plan for evacuation

Equipment according to the Plan for chemical, biological and radiological protection

Chemical, biological and radiological (CBR) protection is organized in order to prevent, reduce or eliminate the catastrophic consequences in the case of chemical, biological and radiological contamination of humans and the environment. The radioactive action causes combined injuries and harm to people - initial shock, heat and radioactive effect of the gamma rays and neutrons, and additional radioactive effect of rains, usage of contaminated food products and subsequent damage to the digestive and respiratory system. Various chemical compounds and biological agents - infectious agents and their toxic products - toxins, have negative effect on human health.

Therefore, to implement the measure for personal and collective chemical biological and radiological protection according to the plan, it is necessary to provide means for measuring contamination (radiological and chemical detectors, chargers and readers of dosimeters), equipment and means for decontamination (personal decontamination devices, device for group decontamination, soaps, detergents, etc. for the protection of employees, visitors, material and cultural goods.) are necessary. Further, the following means are also needed for CBR protection: protective mask, protective gown, rubber aprons, rubber boots, etc. In shortage of specialized items, one can use items that are at hand: various gowns, coats, hats, leather and rubber boots, leather bracelets, etc.



Part of the equipment for CBR protection

Equipment according to the Plan for protection and rescue from wreckage

It is necessary that this plan covers the preventive activities in the procedure of adopting spatial and urban plans, construction-technical and other measures that would reduce the harmful impact of natural and other disasters: earthquakes, strong winds, slopes, landslides, aerial and artillery blows and the like.

Modern wars, natural disasters and other accidents result in large number of destroyed buildings, injured and killed people and animals and great material damage.

Given that natural hazards such as earthquakes could not be prevented or accurately predicted, it is necessary to take preventive measures for protection and rescue. Readiness is required before, during, and after the earthquake. The most important and necessary precautionary measure for protection and rescue before the earthquake is to educate the employees about the manner, procedures, adherence and full respect of the regulations for behavior in the event of an earthquake. According to the plan for protection and rescue from wreckage, the cultural institutions need to have adequate equipment and material and technical means for clearing and salvaging the trapped people and cultural goods under shallow ruins. For identification of survivors under the ruins, a detector is required to search for signs of life, auxiliary equipment and tools for clearing, extraction of the buried under the ruins and equipment for protection from additional landings. To implement these measures and activities, the following items are needed: protective helmets, various lamps, chainsaws, motor drills, hammers, diggers, spades, lorries in various sizes, waders for transporting wounded, semi-open and open skates for downloading the injured and cultural goods, liaison / communication equipment, etc.



Part of the equipment for protection from wreckage

Equipment according to the Plan for protection and rescue from floods

This plan covers measures for protection and rescue of people and cultural goods threatened by floods caused by high water levels of rivers or lakes, demolition of dams, landslides, snow melting, crashes due to strong, torrential or long rains, frozen watercourses etc.

The history witnesses massive losses in people, material and cultural goods due to floods on every continent and in every country. Floods as natural phenomenon could not be prevented, but appropriate precautionary measures before occurrence of the flood and operational measures and activities that are

undertaken immediately before and during the danger, can reduce the harmful influence of the water. Various defense mechanisms as obstacles, embankments, dams, reservoirs, etc. are undertaken as preventive measures. In case of a smaller flood, the first step is to evacuate the people from the flooded to a safe location, while the material and cultural goods are dislocated from the ground floor and the basement to the upper floors, according to their perceived priority. The most common materials for floods protection today are protective barriers of wood, planks, sand, stone, etc. The necessary equipment for cleaning the flooded objects includes: blades, plates, hoes, axes, saws, rescue belts, pumps and hoses for pumping water etc. For the implementation of these activities, personal protective equipment is also needed: protective suits and raincoats, protective boots, etc.



Part of the equipment for protection from floods

Equipment according to the Plan for protection and rescue from fires

The plan for protection and rescue from fires implies undertaking preventive measures for identification of risk factors for fire outbreak and their

removal, preparation and implementation of measures for extinguishing initial fires and remediation of the consequences. According to the regulations, the newly built facilities should fulfill the requirements for protection from fire and explosions. In the old buildings, built according to the old regulation, there is no fire protection, but it can be implemented if the building is reconstructed or re-used. The people's ignorance, negligence and carelessness are the most important factors for outbreak of fires, therefore it is necessary to regularly inform the employees about the risks of fire and its consequences. Fires may occur due to defective electrical appliances, installations, improper use and maintenance of electrical devices, improper storage of materials; chemical reactions, natural phenomena - solar heat, atmospheric electrical discharge, etc. The type and quantity of fire extinguishers and other equipment should correspond to the degree of fire hazard, calculated according to the fire load on the facilities specified in the Assessment of the threat of natural hazards and other accidents and the Plan for protection and rescue. The institutions are obliged to provide appropriate systems, devices and installations for automatic and manual detection and alerting of fire, devices and installations for detection, fire extinguishers, underground and wall hydrant networks and other fire-fighting equipment. The following items for protection and rescue are needed: eco blanket for extinguishing people, fire-fighting brooms, stretching ladder, motor saws for wood, mats, etc. Despite the standard equipment and items for fire-fighting, the institutions need to provide: stationary or mobile safety staircase, system of panic lights, system for protection from atmospheric discharges-lightning installation; approach and admission routes for ventilation of the premises and accessibility and auxiliary exits and routes for evacuation, etc.





Part of the equipment for protection of fires

Equipment according to the Plan for first aid

First aid refers to medical attention that is usually administered immediately after the injury occurs and at the location where it occurred. It is performed with standard and manual means, it involves medical triage of the injured and their prompt and safe transportation to the nearest health facility. The obligation for giving first aid assistance is regulated by a number of laws.

The first aid is an additional measure in the system for protection and rescue in all other types of accidents, since injured persons might be present during evacuation, sheltering, rescue from wreckage, floods, fires, CBR protection, etc. The following items are necessary: sterile gauze, wadding, bandages in different sizes, triangular scarves, patches, needles, scissors, first aid stretchers for transportation of the injured to the medical triage points, etc. In the absence of standard means for first aid, one can use materials and objects that are at hand in the immediate vicinity: clothes, blankets, handkerchiefs, towels, branches, slats, etc. The employees should be trained in first aid.



Part of the equipment for first aid

Having in mind the above, one can see what equipment, material and technical means for protection and rescue are needed by the cultural institutions according to the plans for protection and rescue in case of natural disasters and military conflicts.

However, the equipment at the disposal of the institutions is not in line with the one provided in the plans, on the contrary, it does not satisfy the basic minimal level of protection and rescue. No interest for investing in this area can be noted so far. The conditions of the existing equipment in the cultural institutions is also worrying - inadequate fire-fighting equipment, insufficient number of fire extinguishers, their uncontrolled quality and regular servicing, non-existent, destroyed and non-functional hydrants, damaged and unusable equipment. Many of the necessary items according to the plans for protection are not available at all.



Damaged and unusable hydrant

The institutions which have high visitors' frequency and which host many people are without specific plans, equipment and education or training for rescuing the endangered, for use and handling of existing equipment for protection and rescue in the event of earthquake, flood, fire or other type of danger. Therefore, the protection and rescue system in these institutions is unable to respond to the basic needs and follow further development and modernization of the equipment for protection and rescue of employees, material and cultural goods. Despite the regulatory provisions for obligatory assessments and plans, as well as for the necessary preparatory measures for protection and rescue in the event of natural disasters and armed conflict, the institutions practically have no capacity to respond to the challenges, which shows that the regulations are not respected. With regards to the legislation and its implementation, Jovan Ristov of the National Conservation Center says: "We have

too many regulations, and a little legal awareness and legal culture to apply it. First of all I refer to ourselves, the public institutions in which the wealth has been deposited. "

The discrepancy between the legal obligations and their application in the implementation of preventive measures and activities will have negative effects in dealing with natural disasters and other accidents and their consequences. In the previous years, we witnessed several natural disasters and other accidents that caused enormous material damage, and unfortunately human casualties. These disasters showed that the existing system for protection and rescue has institutional and organizational, material and technical, expert and educational deficiencies in the preventive plans and measures, and hence the measures for protection and rescue were inadequately and insufficiently implemented.

Conclusion

The frequency of natural and other disasters in the world requires serious approach in the implementation of preventive measures according appropriate plans for protection and rescue. In order to enhance the emergency preparedness, it is necessary that the preliminary assessment align the legal regulations with the human, material, technical and financial capacities for application of the emergency intervention measures. Failure to implement the legal obligations, and accept the responsibilities in the event of disaster, is unacceptable. Therefore, there is a need to revise the legislation, to bring a single strategy of preparatory and operational plan, mandatory equipment and material-technical means, training exercises for the protection and rescue forces and continuous practical verification of the competence of the staff for preventive and operational action in case of natural disasters and other accidents. For an effective protection and rescue system, including appropriate equipment according to the protection and rescue plans, a stable funding system is necessary, that will enable implementation of the legal provisions, realization of the plans, provision of appropriate equipment and material and technical means in the interest of raising the quality and enabling organized approach for protection and rescue from natural disasters and other accidents.

Bibliography

1. Ристов, Ј., Инструменти за заштита на културното наследство, Прин Поинт, Скопје, 2008.
2. Ресурси и мерки за заштита и спасување : (практични примери, разработка и постапки) / Менде Солунчевски, Методија Дојчиновски, Маја Тимовска. - Скопје : Ка ел ес принт, 2018.
3. Штит (Shield), 95, Ministry of defense, Skopje, 2017.

Legislation

1. Law on protection and rescue (Official gazette of RM No. 93/2012).
2. Law on fire-fighting (Official gazette of RM No. 67/2004).
3. Law on defense (Official gazette of RM No. 185/2011).
4. Law on cultural heritage protection (Official gazette of RM No. 20/04).
5. Regulation on special measures for cultural heritage protection in the event of military and other emergencies (Official gazette of RM No. 56/08).

