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EVACUATION OF PEOPLE AND MUSEUM GOOD IN THE EVENT OF FIRE

Abstract: Implementing the evacuation and rescue measure of people, material and cultural property in the event of a fire from the premises where they are located and stored is one of the priorities of the entities for protection of cultural heritage. Therefore, if this measure is to be implemented in a timely and successful manner, it is necessary that all employees in the cultural institutions to be appropriately trained in this task. The purpose of the training is to provide skills and motivation for timely and quality performance of protection and rescue tasks.

Key words: evacuation, protection and rescue, natural disasters, cultural goods.

Pursuant to the Law on Protection and Rescue¹ and the Law on Occupational Safety and Health² it is of particular importance that the legal entities timely plan, organize and implement protection and rescue measures. The evacuation of museum cultural goods³ is one of the priority measures in case of natural and other disasters related to emergency and martial law. The evacuation is a planned, organized and controlled relocation of material goods

¹ Official Gazette of RM, No. 93/12.

² Official Gazette of RM, No. 92/07, 136/11, 23/13 and 25/13.

³ Law on cultural heritage protection, Official Gazette of RM, No. 20/04, 71/04, 115/07, 18/11, 148/11, 23/13, 137/13, 164/13, 38/14, 44/14, 199/14, 104/15, 154/15, 192/15.

from endangered areas to a safer place. The preparation of evacuation activities⁴ involves organizational and operational measures and procedures:

- manner of evacuation (collection points, routes of movement, number and type of means of transport, number and type of logistical support teams, material resources required, etc.);
- number and type of facilities provided for the accommodation of cultural goods;
- list of participants for realization of the evacuation (personnel preparing the evacuation of the exhibits and other items for relocation to the new location and personnel designated to receive them at the new location);
- timeframe for contracting;
- timeframe for completion of the protection and rescue forces involved in the evacuation of personnel and material resources;
- education, training and exercises with the personnel designated to perform the evacuation.

The accidents can occur at any time and with the potential for intense spread. The implementation of evacuation and fire rescue can be considered as one of the emergencies that may occur and therefore ***planned, organized and controlled*** abandonment and emptying of the premises (space) and relocation of employees and users of services and material goods (documents, money, equipment, technique, etc.) is performed.

Evacuation preparations⁵ involve undertaking timely measures and activities to protect and rescue employees, service users and material goods through:

- Professional services and trained professionals;
- Timely preparation of applicable plans for protection and rescue, including attachments (employee lists, more important phone numbers, projects, sketches, etc.);
- Provision of firefighting tools and equipment (fire extinguishers, fire hydrants, robust installations for fire detection, alarm and

⁴ Law on protection and rescue, Official Gazette of RM, No. 93/12; Decree for implementation of the protection and rescue against fires, explosions and dangerous substances, Official Gazette of RM, No. 100/10.

⁵ Decree on the implementation of the protection and rescue measure - evacuation of the population, Official Gazette of RM No. 101/10; Zoran Neskoski, Fire Protection in Urban Areas, Skopje, 2018; Mende Soluncevski, Metodija Dojcinovski, Mara Timovska, Resources and Measures for Protection and Rescue, Skopje, 2018.

- extinguishing, first aid boxes, procurement and installation of appropriate signs for warning of fire hazards;
- Arrangement of the building/s in accordance with the legislation - adequate building material, appropriate width of stairs and passages, auxiliary exits, panic lights, free passages and exits, adequate exit doors which should always open to the outside, i.e. to free and safe space, installation on warning and direction signs;
- Performing regular control and maintenance of infrastructure - installations in good working order (electrical, plumbing, heating, gas, lightning and other installations).⁶

The museums and other cultural institutions should have dedicated professional engaged for activities related to rescue and protection. It is also necessary to develop a timely assessment and plan for fire protection and rescue and an employee evacuation and rescue plan. All tools, equipment and installations intended for fire protection, alerting and extinguishing should be regularly controlled, serviced and maintained in good working order. Employees need to be trained in protection and rescue and are obligated by law to participate in fire protection and rescue trainings and simulations, as well as in other hazards. This obligation applies to all employees in museums and other institutions related to the protection of cultural heritage. Employees need to be coordinated by trained personnel designated in accordance with the protection and rescue plan.

In the event of a fire in the facility, the employee who first observes the fire is obligated to immediately notify the other employees, supervisors, security, electrician and other professionals, and if necessary the professional services in the city (fire brigade, Ministry of Interior, ambulance, etc.). The notification is made orally, by activating the manual fire alarm system or otherwise, unless the fire alarm system itself is activated. Each employee, immediately after the alert, is obligated to arrange his / her workplace (switch off the electrical appliances - computers, printers, lights, etc.), arrange the most important and necessary documentation and other things that he / she carries with him / her if possible and not dangerous for his life. The easily flammable materials (paper, books, etc.) should be removed and the workplace should be abandoned in a calm but effective manner, by approaching the exit following a proper exit schedule.

Employees who are trained in fire extinguishing should act only in cases of small, initial fires. They need to self-assess their capabilities for safe and timely handling with S-6, S-9, S-12, CO2-5 types of fire extinguishers, which are under

⁶ Law on occupational safety and health, Official Gazette No. 30/2016.

constant pressure or for handling with hydrants. The fire extinguishing action is managed by only one trained person, and the other employees listen to his orders and commands and assist in extinguishing the fire – they pass things over, bring other extinguishers from the immediate area, dislocate items, notify other employees, etc. In case the staff find that they themselves cannot extinguish the fire and it could be a threat to their lives, they immediately notify the fire brigade (Phone No. 193) and other services, as they prepare for evacuation.

When there is a fire, smoke, gases, partial demolition of parts of the building, glass breaks, power outages, and other events can always be expected. The appearance of smoke and the feeling of suffocation in many cases affect and create panic and fear in people. People's panic and fear are especially dangerous, as they can lead to other side effects in the short term. Therefore, it is necessary for the most prudent to prevent this occurrence, so that evacuation and rescue can be successfully carried out. When leaving the facility, people should use the shortest and safest way to the exit. The passages should be illuminated, so people can reach a free and safe space as soon as possible.

In the event of a fire and the need to leave and empty the facility, it is necessary to use the standard exit ladders located in the center of the building. In addition to these exits, passages through basement rooms and garage may be used so that pressure to the other exits is diminished. When employees and users of services / visitors go outside, they should immediately be directed away from the endangered object to safe spaces in a distance at least two or more times the height of the object. Evacuation routes are particularly important in multi-storey buildings and they must be cleaned regularly, vacant, illuminated and marked, and not filled with a variety of objects, packages and other material, so to enable rapid and successful abandonment of the facility. Evacuation of the object is done in a controlled manner, walking down the stairs along the walls with strong support pillars, slightly accelerated and bent, using protective masks etc. If employees do not have protective masks at hand, they should protect their respiratory organs by placing wet wipes or other clean parts of clothing on their mouth and nose. When the facility is emptied and all employees and visitors are in a safe and secure place, a thorough check is performed to make sure that everyone known to be in the facility at the time of crisis is at the safe spot. The injured are given first aid.

In public buildings such as museums, cinemas, theaters, banks, hospitals etc., which have daily turnover of many employees and visitors, the exit doors must not be locked or darkened, all emergency exits must be marked, tagged and projected in a way that they are always easily found and opened. Emergency access to exits must always be free and doors should preferably be double-glazed and must open in the direction towards the safe area. The width of stairs, free

passages and doors is always calculated according to the needs of the institution, the purpose of the facility, the number of staff and visitors, etc. When large-scale evacuation of multi-storey buildings cannot be carried out through existing exits, appropriate equipment and tools such as fire extinguishers, hydraulic platforms - baskets, hangers, rails, canvas etc. are used. People who are more easily or severely injured can also be rescued by using various types of ladders, reels, ropes, stretchers...

The success of a protection and rescue action in the event of fire or other hazards will largely depend on the training of each employee in the area of self-protection, organization and timely reporting to the relevant professional services. The complete event, the course of the evacuation, the consequences and the possible damages shall be reported to the general manager of the institution or to any other responsible person. They should contact with the competent services and authorities in a timely manner and, where necessary, seek assistance and follow their instructions and orders until the danger has ended. Upon termination of the emergency, an assessment is performed and a written report is prepared and forwarded to the competent authorities. The timely preventive and operational measures for protection of people and cultural property in cultural institutions, in particular the evacuation activities, as a very important segment in a comprehensive protection system, would reduce the risk and consequences of natural and other disasters, which pose a major threat to both people and cultural heritage.

Bibliography:

1. Нешкоски, Зоран, *Заштита од пожари во урбани средини*, Скопје, 2018;
2. Менде Солунчевски, Методија Дојчиновски, Мара Тимовска, *Ресурси и мерки за заштита и спасување*, Скопје, 2018.

Regulation:

1. Law on protection and rescue, Official Gazette of RM No. 93/12;
2. Law on occupational safety and health, Official Gazette of RM No. 92/07, 136/11, 23/13, 6p.25/13, 30/2016;
3. Law on cultural heritage protection, Official Gazette of RM No. 20/04, 71/04, 115/07, 18/11, 148/11, 23/13, 137/13, 164/13, 38/14, 44/14, 199/14, 104/15, 154/15, 192/15;
4. Law on fire-protection, Official Gazette of RM No. 168/17;

5. Decree on implementation of protection and rescue against fires, explosions and dangerous substances, Official Gazette of RM No. 100/10;
6. Decree on the implementation of the protection and rescue measure - evacuation of the population, Official Gazette of RM No. 101/10.