

PROTECTION OF VITAL HYDROTECHNICAL FACILITIES FROM TERRORIST ATTACKS BY ENGAGING COUNTERDIVERSION DIVERS

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Abstract: *International rivers such as the Danube, Tisa and Sava rivers, which mostly flow through the territory of the Republic of Serbia, as well as the Danube-Tisa-Danube canal itself are crucial when it comes to development of agriculture, economy, tourism, river transport, energy, water supply and other activities important to the prosperity of each state. Numerous hydro-technical facilities built on and along the banks of these rivers, such as bridges, locks, hydroelectric power plants, marinas, ports and other buildings, aim to ensure the most efficient use of their hydro-navigation potential. And that is exactly why hydrotechnical facilities are very sensitive, attractive and interesting security facility whose protection from possible terrorist attacks requires the application of special measures, but also the use of specially trained and equipped units. One of such forces at the disposal of our state are the diving units of the River Flotilla, which have counterdiversion (anti-sabotage) divers in their formation, one of the purposes of which may be the protection of vital hydrotechnical facilities in the internal waters of the Republic of Serbia.*

Key words: *terrorism, counterdiversion divers*

1. INTRODUCTION

Responding to terrorist acts requires a wide range of activities, ie the use of all available resources of a society that can be engaged at a given moment within a unique, fast and efficient counter-terrorist response. The objects of a terrorist attack can be numerous and diverse, from airports, schools, stadiums, theaters, hospitals to various economic and industrial centers. However, hydrotechnical structures on rivers, lakes and canals are particularly sensitive to terrorist attacks, and their successful protection can only be carried out by specially trained and equipped anti-terrorist units. Counterdiversion divers from the River Flotilla of the Serbian

Army, due to their specificity, whose business processes are primarily realized on and in the capture of inland waters, represent one of the most respectable forces in the fight against terrorist and other destructive actions.

2. COUNTERDIVERSION DIVERS

According to the purpose, we can distinguish the following types of combat divers in the formation of diving units: anti-mine divers, counterdiversion (anti-sabotage) divers, divers for underwater actions and divers for search and rescue (Bajrami, 2022).

Counterdiversion divers (Figure 1) are a specialty within the military diving service whose main purpose is to protect important personalities, key warships (command ships) and hydrotechnical facilities on inland waters from various sabotage, terrorist and other destructive activities of the enemy. Counterdiversion divers are organized in teams (strength of 8 to 10 people) within the diving units of the River Flotilla of the Serbian Army and their training and equipment requires a special approach to planning, organizing and implementation. They perform tasks within the diving pair using different types of diving apparatus, underwater weapons, fast transport boats and technical means for observation and supervision. They are engaged independently or in cooperation with other forces of the River Flotilla.

The main characteristic of counterdiversion divers is reflected in the realization of underwater activities on inland waters whose width, depth, speed of movement of water mass, visibility, coast and coastline, require the engagement of specially trained personnel, various vessels and technical means available to diving units. Also, their specificity in relation to other forces of the defense system is reflected in the fact that their direct connection with the underwater environment provides a successful response to all challenges, risks and threats, as well as the ability to adapt to sudden and dynamic changes all forms of terrorist attack on wars and other vital hydrotechnical facilities on the internal waters of our country.



Figure 1. Counter-diversion divers

Source: (www.objektiv.rs/vest/803673/ruski-komandosi-ratuju-pod-vodom-njihovo-oruzje-ispaljuje-specijalne-metke-i-granate-video/)

3. MEANS AND EQUIPMENT OF COUNTERDIVERSION DIVERS

During the realization of tasks, equipment and means integrated into a unique system for support of diving activities are used. There are three types of equipment: heavy diving equipment (HDE), light diving equipment (LDE) and deep diving equipment (DDE) (Pravilo Ronjenja-1989). Diving equipment should also provide full autonomy, safety and security during diving, but also the successful implementation of anti-sabotage activities such as underwater guards, patrolling boats in the entire security area, closing access roads using technical means (underwater sensors and cameras, binoculars, sonar, thermal imaging cameras

etc). However, the most important equipment and means used during the implementation of anti-sabotage and anti-terrorist tasks are primarily:

- closed-circuit diving apparatus;
- underwater weapons;
- sonar for searching the waters and
- diving boats for transporting divers and patrolling.

A closed-circuit diving apparatus (Figure 2a) is a means of providing a medium for divers to breathe underwater, and whose operating principle (closed-circuit breathing apparatus), unlike other types of diving apparatus, has no unmasking moment when used.

Underwater weapons (Figure 2b) are a specific type of weapon that effectively neutralizes enemy manpower under water. By applying special constructive solutions, the problem of ballistic flight of ammunition through the water environment has been overcome and thus conditions have been created for a successful anti-sabotage fight not only on land but also under water surfaces.



Figure 2. a) Drager diving apparatus b) Underwater weapons
Source: a) <https://www.nordic-market.de> b) <https://orzjeonline.com>

Sonar (Figure 3a) is a modern means of searching the water area, whose possibilities are significantly greater compared to standard search techniques with the help of divers. It is used to detect river saboteurs whose location is unknown, and the search conditions are unfavorable (large area, poor visibility, strong river currents, low water temperature, etc.).



Figure 3. a) Sonar b) diving boat type Zodiac
Source: a) https://commons.wikimedia.org/wiki/File:2015-06-12_SSS-100K_or_600K_Side_Scan_Sonar.jpg and b) <https://m.facebook.com/Zodiac-Black-Boats->

Diving speedboats (Figure 3b) due to their excellent maneuverability, small dimensions, easy handling and easy transport to the area of operation, are used to transport people and material resources, support diving activities, reconnaissance, patrol and search in inland waters.

4. ENGAGE OF COUNTERDIVERSION DIVERS DURING PROTECTION OF VITAL HYDROTECHNICAL FACILITIES FROM TERRORIST ATTACKS

The need to organize comprehensive, flexible and effective protection of possible objects of action is conditioned by the fact that threat bearers are increasingly being trained for special actions using various techniques and tactics.

The method of organization of protection of hydrotechnical facilities from terrorist activities will depend on a number of circumstances, and in all situations the geographical characteristics of the area and coordinated activity of river forces, military police forces and other units will be used to close waterways, subterfuge and evacuation of terrorist groups and successfully secure potentially endangered facilities (Pravilo recni odred, 2020).

After receiving information about a possible attack, the following measures and activities of anti-sabotage and anti-terrorist protection are generally taken:

- establishment of observers for visual control of the surface and below the water surface,
- periodic control of underwater parts of the endangered object,
- closure of sensitive approaches and passages from the water using technical means,
- searching the water and the coast for the timely detection and destruction of terrorist groups,
- patrolling by diving boats around the endangered object and
- defining and coordinating procedures and ways of counteracting the detection of the presence of sabotage or terrorist groups.

The method of protection of facilities located on the water and along the coastal belt will differ from the estimated threat in terms of the forces and means used, but the principles of organization will remain largely the same. The organization of anti-sabotage or anti-terrorist protection of important facilities on the water is realized in principle in three zones of defense in which efforts are made to prevent diversion.

In the first zone, anti-sabotage divers have the task to discover the means of transportation (boat, kayak, vehicle, aircraft, etc.) with their equipment, in the initial phase of the attack, and act on them. The specificity of this phase of defense (first belt) is that timely detection and action on means of transportation will enable the destruction of the entire group of saboteurs or terrorists, which is not possible in the later phases of diversion. In addition, by detecting means of transportation without the presence of the enemy in them, they will indicate the probable directions of passing to the defended object and enable timely and adequate concentration of forces in the second and third zones. The goal of introducing the first belt is to force saboteurs to leave the means of transport much earlier than planned, ie at greater distances from the object of action, which increases their psychophysical stress, time spent in the second zone, reduces their efficiency in finding and leading to object of action thus minimizing the probability of successful action. The first belt is provided by applying various technical means (sonar, drones, sensors, thermal cameras, etc.) but also by reconnaissance and patrolling diving boats with clearly assigned tasks and delimited responsibilities.

The second belt of defense, unlike the first, where the main goal is to detect and destroy means of transportation, is intended to detect and act directly on saboteurs or terrorists during the

phase of their submission to the goal. The forces and resources of the second belt are deployed at shorter distances from the defended facility than is the case with the third zone and depends primarily on the hydro-geographical characteristics of the defended area. The main characteristic of this belt is the presence of strong forces that are ready to react quickly due to the close proximity of the defended object. The second belt is also provided by applying various technical means for timely detection and locating of the enemy, but also by carrying out proactive actions such as dropping submarine bombs on the access routes.

The third belt represents the immediate protection of the defended object, with the task of destroying terrorists in the final phase of the attack or preventing their penetration to the object. The characteristic of this belt is that it is established in the immediate vicinity of the defended facility and that within it there is a large concentration of forces ready for immediate engagement. The protection of the facility in this zone is realized primarily through the direct engagement of anti-sabotage divers whose diving activities below or around the facility represent the last line of defense. In addition to underwater patrols, additional diving forces are organized in rubber boats as well as armed guards who are on land near the defended facility.

5. CONCLUSION

The realization of the protection of vital hydro-technical facilities on inland waters from possible terrorist attacks is a complex and demanding process that requires active and coordinated engagement of specially trained and equipped forces. Timely, safe and efficient response to dangers is achieved primarily through the application of appropriate measures and activities in the organization and implementation of anti-sabotage and anti-terrorist actions. For something like that, one of the basic forces of the defense system is the counterdiversion divers of the River Flotilla. Diving units, by engaging manpower, weapons, special equipment and resources, provide a universal and flexible approach to addressing unpredictable, dynamic and complex challenges and threats characteristic of a deviant social phenomenon such as terrorism.

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