

UDC 355.4



S. Trutniev



V. Rudynskyi



I. Tylichko

PLANNING AS THE FOUNDATION OF RECONNAISSANCE OPERATIONS IN URBAN ENVIRONMENTS

Based on the analysis of combat experience, tasks and goals of planning and organizing reconnaissance in populated areas, the author highlights the problematic issues that arise in the course of planning, training and organizing reconnaissance activities in urbanized areas and ways to solve them. The author also considers the ways to improve the quality of task performance and develop a unified approach to the use of reconnaissance units in urban areas.

Keywords: *planning and organization of reconnaissance of a settlement, tactical reconnaissance in urbanized areas, intelligence support of forces (troops) in urbanized areas, reconnaissance in urban areas.*

Statement of the problem. The organization of reconnaissance in urban areas is influenced by the specifics of combat operations in the city. It is always necessary to take into account factors that have a significant impact on the methods and actions of reconnaissance units. First, the distance to the enemy may be less than a dozen meters. This means that the only obstacle for the enemy is the wall of a house or a narrow street. In addition, combat operations usually take place along the street, which increases the independence and autonomy of the units. In this case, each unit is fighting in an isolated area, so it has its own intelligence and must work closely with other units in a single intelligence system and information space [1].

Due to the significance of offensive combat in urban areas and the constant and close contact with the enemy, combat operations can last day and night. Therefore, reconnaissance units must solve the same information problems as mobile infantry, tank, and artillery units. Limited directions, a large number of enemy anti-tank weapons, the presence of barriers and obstacles make it difficult to maintain tank and mechanized units in full combat readiness, complicate the planning and organization of reconnaissance, and make it difficult to use reconnaissance assets of combat vehicles and units conducting reconnaissance on foot. The dispersion of the advancing units is exacerbated by the fact that

one street turns into several smaller streets, which are further separated during the battle. This situation further complicates the organization and conduct of reconnaissance and makes it difficult to obtain information. The need to conduct reconnaissance in front of advancing troops means that there is always a risk of a sudden enemy counterattack from the flanks or rear. In addition, the maze of existing buildings, streets, and alleys makes it difficult to disclose information about the enemy in a timely manner.

It is also worth paying attention to the strength of firepower on the front line and the enemy's defense capabilities. This is because the enemy can use any building, barricade, or alleyway as a civilian structure and attack the enemy behind it, which is very difficult even with large-caliber artillery systems. The widespread use of civilian structures and barricades by the enemy, as well as the use of all stone houses, ruins, buildings and clusters of buildings as shelters, fortifications and enemy positions, often makes it impossible to attack a wide area at high speed, forcing reconnaissance units to conduct reconnaissance on foot.

Reconnaissance problems are partly related to the deep hierarchy of the enemy's battle order, which also limits the ability to maneuver. The large number of enemy elements with different orientations makes it difficult to conduct reconnaissance even if the enemy's defense depth is

small. This necessitates the development of tasks for timely determination of the enemy's composition, status, grouping and plan of action [2].

Analysis of recent studies and publications.

According to Western experts, almost 15 % of the territory of Central European countries is currently inhabited (urban population) and up to 40 % is "built-up", but by the middle of the twenty-first century these proportions will increase to 30 % and 75 %, respectively. American expert John Spencer identifies 8 rules of engagement in urbanized areas, both in total war, when all norms of humanitarian law are ignored and total destruction of the population and urban development is carried out, and in individual military operations [3].

In general, the armed forces of the world's leading countries are designed to conduct maneuver warfare, while an attack on a city is a classic positional war. The current military and political leadership of the Russian Federation does not sufficiently understand an attack on a city as a positional war on the ground, and therefore it applies the principles, tools and methods of maneuver warfare against the enemy, which relies on maneuver and firepower. Ultimately, this fundamental misunderstanding leads to the destruction of entire cities, building by building. For example, during the Russian-Ukrainian war, parts of urban areas where the Armed Forces of Ukraine were defending themselves were destroyed by units of Putin's occupation forces (in particular, in March 2022 in the city of Mariupol, Donetsk region of Ukraine). Artillery, missile, and air strikes destroyed (damaged) about 90 percent of the high-rise and 60 percent of the private housing stock, with estimated civilian losses of about 20,000 dead and another 100,000 missing, and about 200,000 people internally displaced to the territory controlled by Ukraine (at the time of the invasion, the population of Mariupol was about 540,000) [4].

In the current context, the use of weapons of mass destruction is deemed unacceptable for achieving military success. This is because the political cost of the inevitable mass deaths of civilians would be offset by military success. There is also a real threat of chemical and bacteriological contamination of the environment as a result of the destruction of chemical industry enterprises and the emergence of epidemiological hazards due to the lack of clean water and the high concentration of decay products (half-life) of living organisms (bodies of dead people, animals, and birds). On the other hand, defense forces can suffer from their own ammunition [5]. For these reasons, urban assault

forces must rely on specialized skills, high-tech equipment, and advanced military technology to conduct combat operations in urban environments.

Modern views on urban warfare are reflected in key US military documents, such as a series of field manuals [Field Manual FM 3-90-1 Offense and Defense Volume 1 Change 2 April 2015 Kindle Edition]. For example, the term MOUT (Military Operation in Urbanized Terrain) means "a combat operation of combined arms units planned and conducted in complex terrain where the presence of artificial structures is an acceptable decision for the commander under the circumstances" [6].

Military experts cite a number of characteristics that distinguish urban combat from combat in other environments. Primarily, they note that destroyed urban structures and preserved buildings create favorable conditions for defensive operations, sheltering personnel, weapons and military equipment in terms of engineering (bases, defense lines, resistance positions). At the same time, urbanization restricts the mobility of troops, impedes the movement of heavy equipment, hinders the concentration of efforts in threatened areas, limits reconnaissance capabilities, reduces the effectiveness of air strikes, complicates the management of troops in combat, reduces the effectiveness of radio and guidance equipment, and impairs visibility and firepower. The firing is occasionally carried out from a distance of more than 500 meters. According to NATO experts, such conditions negate the technical advantage of an enemy attack and put the defending forces at a disadvantage. In view of the above, the question arises as to the need for careful planning of the operation and training of reconnaissance personnel to perform their tasks in urbanized areas.

The purpose of the article is to identify ways to improve the quality of the tasks and develop a unified approach to planning for the use of reconnaissance units in urban areas based on the analysis of the experience of planning and conducting combat operations, tasks and goals of reconnaissance in populated areas.

Summary of the main material. The multi-vector nature of enemy defense allows enemy units to regroup near the military conflict zone between units, which can be done using convenient access roads, parks and boulevards, as well as large underground structures in cities. Reconnaissance in underground structures is an important task for forward units. When it comes to reconnaissance tasks in urban environments, it should be noted that the capabilities of large reconnaissance units are

limited [7]. This means that the capabilities of tactical reconnaissance, especially military reconnaissance, are clearly limited and the depth of penetration is insignificant. In such circumstances, the key role in the successful completion of the task will be given to the planning, preparation and organization of reconnaissance for the entire period of the task. Let us consider these issues through the prism of Admiral William Harry McRaven's "Theory of Special Operations", which includes the following stages and principles [8]:

Stage 1 – Planning (the main principle is simplicity);

Stage 2 – Preparation (principles are security and training);

Stage 3 – Implementation (principles are surprise, speed and purpose).

1. Planning. According to Admiral William Harry MacRaven, simplicity is the key to planning. There are three elements of simplicity critical to success: limiting the number of objectives, good reconnaissance, and innovation.

From the very beginning of planning, you need to recognize and assess the situation according to the following criteria: METT-TC (M – mission, E – enemy, T – troops, T – terrain, T – time, C – civilian).

When determining the task facing the unit, the commander must answer 5 questions (Who? What? Where? When? Why?).

The enemy. In the course of assessing the enemy, designated headquarters units must collect information about the opposing enemy and conduct a thorough analysis of the information received regarding the likely nature of the enemy's actions. During the information gathering, all available forces and means of reconnaissance units should be used and requests should be made to the senior commander to provide the necessary reconnaissance information or to organize reconnaissance with his available forces and means.

Reconnaissance should be conducted mainly in small groups. When our troops attack large settlements or cities, tactical reconnaissance groups collect information using operational, special, and tactical reconnaissance, as well as their components and available forces and means.

After information on the composition, position, size, morale, and training of the enemy has been collected, it is necessary to analyze its governing documents and determine how it can organize its defense in the locality in accordance with their requirements. Having the necessary information about the enemy and its governing documents, the

relevant persons analyze the possibility of the enemy's compliance with the requirements of its statutes and instructions, taking into account its available forces and means.

Terrain. When assessing the terrain, it is also necessary to adhere to the relevant criteria, which will reduce the time for collecting and processing information and make this information more understandable for other units.

The reconnaissance of densely populated areas, especially cities, and their assessment begin after all command and control and headquarters units receive combat missions, that is, when the area of operations (direction) is known, and in offensive operations, when the depth of the combat mission is known.

Sources of information about cities include topographic maps, city plans, aerial photographs, and information obtained by all types of reconnaissance. At the same time, the assessment of the impact of cities on the enemy's territory on combat operations is carried out using maps at a scale of 1:50,000 or, at most, 1:100,000. This is because such maps show all available urban and rural settlements with their size (number of inhabitants) and administrative significance [9]. When surveying cities using large-scale topographic maps, the following should be noted:

1) Maps at a scale of 1:100,000 show an increase in building density by 30–90 % and a slight decrease in the density of settlements in densely populated areas;

2) On maps with a scale of 1:50,000, the building density is somewhat exaggerated.

Detailed studies of large cities and their individual districts are based on large maps, drawings, aerial photographs, and reconnaissance data at a scale of 1:25,000. The drawings show in detail the location and outline of the most important objects in and around the city, showing their position and structure in detail, but one should note that many military objects might not be marked on the drawings. Such objects can only be identified from aerial photographs or other information. The analysis should include additional information about the economic, political, administrative, and cultural significance of the city, its environment, topographic features, road network, and other elements. The data may also contain information on the quality of buildings, underground structures, the depth of groundwater and soil quality.

In order to organize and conduct reconnaissance, it is necessary to know the nature of the road layout,

which can complicate combat operations or, conversely, facilitate them.

When assessing the quality of buildings, the first thing to consider is the material of construction (wood, clay, brick, reinforced concrete, or stone masonry), height (number of floors), and layout. The material of the building determines its fire resistance and resistance to various types of weapons. It is necessary to remember that unpainted wooden buildings catch fire easily during shelling or air strikes, even with conventional ammunition, and burn down in an average of 40–60 minutes. Plastered wooden houses burn for 1.5–2.0 hours, and wooden buildings inside brick, stone, or concrete buildings burn for 2 to 3 hours. The density of urban development has a significant impact on reconnaissance. Urban settlements may have no gaps between the facades of individual buildings (solid buildings), have small gaps between buildings (dense buildings), or be located at a considerable distance from each other. Since it is not always possible to tactically assess building density during planning, units and subunits should use up-to-date information from higher headquarters, mainly aerial photographs and aerial reconnaissance data from unmanned aerial vehicles. Densely built-up neighborhoods are much more difficult to navigate and reconnoiter. In addition, the uniformity of buildings inherent in solid construction makes it difficult to detect the enemy firepower, locate it, and determine angles and linear distances. When assessing the structure of a city center, it should be borne in mind that business districts (centers), industrial buildings, train stations, and warehouses can be prepared for defense by the enemy in advance. This requires additional training for the personnel of the unit (group) responsible for reconnaissance in such areas of the city center. Buildings are usually already prepared for defense during combat operations in urban areas. Direct-fire artillery is placed behind corner buildings or stone shelters, while small-caliber artillery is placed on the second or third floor and can fire from windows or doors. For direct-fire artillery, the enemy can also build special loopholes in walls and fences and fire from the sides. Streets and squares are covered with rubble and mines are laid. Enemy uses underground structures (subways, large sewer and water pipes, tunnels) to equip underground shelters and conduct cover operations against troops. A preliminary study of the nature of cities, buildings, squares, parks, and underground structures allows one to draw conclusions about the likelihood of the enemy defenses and the location of

enemy bases, artillery, and suppression points. However, no description, map, or drawing of a city can provide a commander with all the information needed to perform a combat mission. Such information can only be obtained through reconnaissance.

In the course of assessing the terrain, they also take into account weather conditions, time of year and time of day.

After assessing the enemy and the terrain, reconnaissance officers can predict the likely nature of the actions, which, in turn, will affect the ways and means of performing tasks by our units.

Our units are assessed by the same criteria as the enemy. The assessment is conducted in parallel with the enemy's assessment.

The available time is assessed from the moment of receiving the task to the time of readiness to perform it, and the following requirements must be met at all times 1/3 of the time should be spent on planning, 2/3 of the available time should be spent on preparing and practicing the task execution plan.

One of the main components in planning and organizing reconnaissance in urbanized areas is the civilian factor that can affect the execution of the task. In the process of assessing the civilian component, certain criteria are also used to allow for a more thorough assessment and to reduce risks during planning and during the execution of the task.

Once the necessary information is gathered and thoroughly evaluated, designated individuals conduct the overall planning for the mission, and set goals for each unit that will lead to overall success in the mission. According to Admiral McRaven, the number of objectives should be limited.

When planning the reconnaissance of a settlement, it is necessary to draw up a plan for the execution of the task by the intelligence agencies as simple as possible, while organizing multifactorial collection of information through innovation, its thorough processing and forming a conclusion on the assessment of the situation, which will influence the planning and organization of the task. During execution planning, each unit should be assigned a limited number of objectives that must be achieved for overall success.

2. Preparation. At this stage, the principles of security and training are envisaged.

Security. The difficulty of conducting combat operations in urbanized areas is that the enemy can prepare for defense in advance if there is time, and if there is not enough time, he needs to quickly organize defense, that is, the enemy will be ready

for our actions. In this case, in order to achieve security, it is necessary to reduce the number of people who are familiar with the plan of the task, planning and conducting measures to mislead the enemy by commanders of all levels. Thus, measures aimed at ensuring security will not allow the enemy to know the time and method of attack.

Training. Training is a key component in preparing for the assigned tasks. During the training, you can test the plan that is so "well mapped out". Conducting reconnaissance in urbanized areas is a set of measures and actions to be carried out by different units according to a single plan, place, task and time under the general supervision of a designated official.

After the tasks are set, the personnel must organize interaction in certain ways, which results in a clear understanding by commanders of all levels of their unit's tasks and the order of execution.

Training increases the level of training of personnel and improves their interaction with each other.

The result of this training is confident and sustainable management and leadership of the task. In addition, the training makes it possible to identify some obstacles and planning shortcomings that need to be eliminated in the course of training.

Intelligence personnel must be properly trained to conduct close combat and overcome various engineering fortifications, obstacles, and barriers.

Thus, at the stage of preparing for a mission, commanders of all levels must take measures to prevent leakage of information about upcoming actions and to take measures to mislead the enemy. It is also imperative to organize interaction and training of all personnel involved in the task.

3. Implementation. At this stage, the following principles are provided.

Surprise. In the course of organizing reconnaissance in urbanized areas, it is necessary to achieve surprise for the enemy, which means to carry out planned actions at a time, place or in a way that the enemy is not ready for. Therefore, it is necessary to use forms and methods that the enemy does not expect, without violating the requirements of international laws of warfare. Any prepared defense has its weaknesses, so reconnaissance has the task of predicting and identifying them in order to suddenly take advantage of them and achieve a relative advantage in a certain place at a certain time.

Speed. This is another criterion that must be achieved by reconnaissance specialists. For scouts, speed is inversely related to the result of the task. If

a reconnaissance unit does not quickly reach its intended target, it should not stay near the enemy for a long time, because this will give the enemy the opportunity to hit it. In this case, in order to reduce the vulnerability of the intelligence agency, it is necessary to increase maneuverability, which may negatively affect the management of personnel during the execution of the task.

Purpose. The objectives of the task must be communicated in a timely manner and be properly understood by all personnel of the intelligence agency. The enemy also does not stand still; he also conducts constant reconnaissance and plans his actions in the face of different types of our actions, so he plans countermeasures for each action of our troops. Regardless of the changing situation, each reconnaissance man must know the purpose and intent of the task and make every effort to achieve them, because the overall result of the task will depend on the achievement of one specific goal, which, in turn, can cause heavy losses among the personnel.

The importance and value of scouts lie in their unwavering commitment to their work, in the correct understanding of the goals and procedure for performing a task, in the speed of decision-making, and in the suddenness and unconventional nature of their actions.

Conclusions

Thus, the success or failure of reconnaissance in urban environments depends primarily on careful planning of reconnaissance, knowledge of street combat tactics and specific information about the enemy's use of technical means of warfare. A number of conclusions can be drawn about the organization and activities of reconnaissance units in modern conditions. First of all, it is necessary to change the organizational and staffing structure of reconnaissance units. A separate unit should be set up to collect information about the enemy, thoroughly assess it and determine the likely nature of its actions at the planning stage, as well as to collect information during the execution of the task by the intelligence agency and to monitor its actions at all stages of preparation and execution of the task. This unit should be equipped with special equipment and software that will allow it to organize surveillance and be able to use stationary video equipment available in cities close to the combat zone.

In addition, it is necessary to introduce into the staff structure a unit that will conduct general

planning of the use of intelligence agencies based on the conclusions of the situation assessment. The planning process is very flexible and always requires adjustments.

As the experience of ongoing combat operations worldwide shows, reconnaissance personnel must be highly qualified, motivated, and well-prepared to perform their assigned tasks. Additionally, reconnaissance activities should be integrated into all stages of combat training to enhance operational effectiveness. Therefore, the main vector of further scientific research will be aimed at the peculiarities of planning reconnaissance operations in urbanized areas and the peculiarities of preparation (training) of intelligence agencies to perform the task.

References

1. Telelym V. M. (ed.). (2015). *Osnovy stratehii natsionalnoi bezpeky ta oborony derzhavy* [Fundamentals of the national security and defense strategy of the state]. Kyiv : NUOU Ivana Cherniakhovskoho [in Ukrainian].
2. Global Conflict Trends. Retrieved from: <https://surl.li/hkgdkz> (accessed 28 September 2024) [in English].

3. Modern War Institute at West Point (2021). The eight rules of urban warfare and why we must work to change them. Retrieved from: <https://surl.li/zjhfpw> (accessed 28 September 2024) [in English].

4. Radio Svoboda (2023). *Mer Mariupolia nazvay dani pro zahyblykh u misti* [Mariupol Mayor calls for tribute for victims in city]. Retrieved from: <https://surl.li/bkpwbe> (accessed 28 September 2024) [in Ukrainian].

5. Trends in Armed Conflict, 1946–2014. Retrieved from: <https://surl.li/hkwsem> (accessed 28 September 2024) [in English].

6. US Army – Field Manual FM 90 10 1 - Guide To Combat In Built Up Areas. Retrieved from: <https://surl.li/nmuyzq> (accessed 28 September 2024) [in English].

7. FM 3-06 Urban Operations. Headquarters. Department of the Army. Washington, DC, 26 October 2006 [in English].

8. William Harry McRaven (2022). Theory of special operations. Washington [in English].

9. Graham S. The Urban "Battlespace". DOI:<https://journals.sagepub.com/doi/10.1177/0263276409349280> [in English].

The article was submitted to the editorial office on 28 December 2024

УДК 355.4

С. Г. Трутнев, В. В. Рудинський, І. В. Тилічко

ПЛАНУВАННЯ – ОСНОВА ОРГАНІЗАЦІЇ ТА ВЕДЕННЯ РОЗВІДКИ В УМОВАХ УРБАНІЗОВАНОЇ МІСЦЕВОСТІ

На основі аналізу досвіду ведення бойових дій висвітлено завдання розвідки в урбанізованих місцевостях, а також проблемні питання та шляхи їх вирішення.

Автори також розглянули шляхи підвищення якості виконання завдань і вироблення єдиного підходу до цілеспрямованого застосування розвідувальних підрозділів у міській місцевості.

Проаналізовано основні завдання розвідки у період підготовки наступу у міських умовах, завдання розвідки у разі розвитку бою вглибині лінії оборони противника, активізації розвідувальних дій після закінчення оточення та в розгром оточеного ворога.

Зазначено, що інформація у ході бою має бути зрозумілою атакуючим частинам і підрозділам, щоб забезпечити оточення й обхід окремих частин і підрозділів противника.

Особливу увагу приділено організації діяльності підрозділів розвідки в сучасних умовах. Це відповідність організаційно-штатній структурі підрозділів розвідки; необхідність виділення окремого блоку відеоспостереження, оснащеного спеціальним обладнанням, зокрема для виявлення підземних тунелів; формування розвідувальних підрозділів, які можуть використовувати дахи багатопверхових будинків для проникнення в тил ворога.

Визначено, що підготовка розвідувальних підрозділів до ведення бойових дій у міських умовах потребує створення спеціальних центрів площею не менше чверті великого міста, з повною міською інфраструктурою. Такі центри дають змогу проводити підготовку розвідувальних підрозділів різного рівня на найвищому науково-методичному рівні.

У статті проаналізовано умови і чинники успішності розвідки у міських умовах: ретельне планування, розуміння тактики вуличного бою, наявність конкретної інформації про застосування противником технічних засобів ведення війни.

Ключові слова: *планування й організація розвідки населеного пункту, тактична розвідка в урбанізованій місцевості, розвідувальне забезпечення сил (військ) в урбанізованій місцевості, розвідка в умовах міської забудови.*

Trutniev Serhii – Senior Lecturer at the Department of Management of Military Intelligence and Special Operations Forces, Military Academy (Odesa)
<https://orcid.org/0000-0002-6107-7920>

Rudynskyi Vitalii – Deputy Head of the Department of Management of Military Intelligence Units and Special Operations Forces, Military Academy (Odesa)
<https://orcid.org/0000-0003-2066-865X>

Tylichko Ihor – Lecturer at the Department of State Security, National Academy of the National Guard of Ukraine
<https://orcid.org/0009-0005-5989-1340>