

OBVEŠČEVALNO VREDNOTENJE GEOGRAFSKEGA PROSTORA V PROCESIH NASPROTOVANJA TERORIZMU

INTELLIGENCE ASSESSMENT OF GEOGRAPHICAL AREA IN FIGHT AGAINST TERRORISM

Professional article

Povzetek Republika Slovenija uveljavlja svoje politične interese in mednarodno sprejete obveznosti tudi zunaj geografskega območja držav članic Nata in EU. Odločanje o izvajanju nalog na mednarodnih operacijah in misijah na območjih zunaj nacionalnega ozemlja, še posebej zunaj Evrope, zahteva temeljite geoprostorske analize. V procesih odločanja o uporabi vojaških sil so geoprostorske analize temelj drugim informacijam in obveščevalnim ocenam interesnega območja. Z razvojem komunikacij in velikega števila javno dostopnih podatkov se postavlja zahteva za vzpostavitev učinkovitega geoinformacijskega sistema, ki bo zagotavljal podporo pri odločanju o uporabi sil ob upoštevanju varnostnih tveganj, ki izhajajo iz geografskega prostora. Obveščevalno vrednotenje geografskega prostora obsega učinke in vplive v njem. Njegovi rezultati so v sodobnem času pomemben, celo ključen element delovanja SV in njenih pripadnikov v boju proti terorističnim in drugim asimetričnim grožnjam. Slovenska vojska skupaj z drugimi strokovnimi organi geoprostorske podpore na MO in v zavezništvu vzpostavlja učinkovito in odzivno obveščevalno vrednotenje geografskega prostora, ki je namenjeno kot pomoč odločevalcem in pripadnikom SV v mednarodnih operacijah in na misijah.

Ključne besede *Geoprostorska obveščevalna dejavnost, vrednotenje geografskega prostora, javni viri, Slovenska vojska.*

Abstract The Republic of Slovenia exercises its political interests and international obligations also outside the geographical areas of NATO and EU countries. Every decision to conduct tasks in international operations and missions outside national territory, especially outside Europe, requires detailed geospatial analyses. During any decision-making processes regarding the use of military forces, geospatial analyses provide the basis for all other information and an intelligence evaluation of the Area of Interest. With the development of communication technologies and the existence of a large number of publicly available data, an effective geo-information system must be established, which will provide support in decision-making processes regarding

the use of military forces and at the same time take into account security risks linked to the geographical area. An intelligence evaluation of a geographical area covers the effects and impacts in the geographical area. Its products are important in the contemporary world, and they are often a key element of the functioning of its members and the Slovenian Armed Forces (SAF) in the fight against terrorism and other asymmetric threats. The SAF, together with other responsibilities for geospatial support within the MoD and the alliance, provide an efficient and responsive intelligence evaluation of the geographical area, thereby helping decision-makers and members of the SAF in international operations and missions.

Key words *Geospatial intelligence, evaluation of geographical area, public sources, Slovenian Armed Forces.*

Introduction The Republic of Slovenia also implements its political and economic interests outside the geographical area of the Alliance, relying strongly on geospatial information in defining national defence as well as international operations and missions.

The Slovenian Armed Forces (SAF) have been given a new role and new tasks within the national defense system since Slovenia entered NATO (North Atlantic Treaty Organization) and the European Union (EU). Rather than being confined to defending national territory, the SAF is evolving into a more post-modern type of military formation, responsible not only for national defense, but also involved in international operations and missions. National territory is a “point of departure” for all operations in the interests of the Alliance and the international community. Becoming a professional army, the SAF has moved from being a “standby at home” to a “real time” armed force, with the alliance constantly availing itself of its capacities in international operations and missions.

The SAF now forms part of the NATO armed forces and together they face various challenges and demands in international operations and missions, which are basically expeditionary operations given their complexity, with peace support operations prevailing. These operations are mainly unpredictable and comprehensive. Armed forces must carry out numerous tasks, ranging from humanitarian and military and police tasks to intense armed combat. This requires a high level of independence, self-sufficiency, endurance and flexibility in the face of the security challenges of the particular area of activity. The geographical area greatly affects the security situation and the quality of life.

Most modern crisis-hit areas have a specific ethnic and religious background (Zupančič, 2006:168). Since the end of the Cold War, conflicts tend to have national rather than international dimensions.

Ethnic conflicts are under the jurisdiction of the nation-state, only to gain international importance when the fundamental rights of an ethnic group (minority) have been

violated. Resulting armed conflicts of various degrees, mostly in the form of complex and intense social conflicts, often occur in the attempt of a group to defend or expand its territory, or to acquire the wealth and status of a people within a defined territory.

NATO and EU military operations outside the geographical area of their Member States (so-called Out-of-Area Operations) require sufficient intelligence support in all operational phases, including the decision-making process to deploy forces (Grizold, 2005:55). During this stage, military intelligence must provide data to support the decision to start an operation, as well as to facilitate tasks such as planning, training, equipment and the preparation of task forces. No doubt the most important task of military intelligence is to provide intelligence support during the implementation phase, when the SAF units face military and security threats, difficult climate, living and sanitary conditions in a foreign social environment (Rode, 2007:7).

The level of classic military threats to the SAF abroad depends on the type of international operation or mission it is involved in. Military threats in combat operations, such as peace enforcement operations, are significantly higher than in peace keeping operations, where terrorist attacks, mostly aimed at civilians, pose the biggest threat.

Classical military threats are now giving way to modern threats to security. The latter mostly take the form of international terrorism, illegal migration, organized crime, drug and human trade, extremism, various ethnic movements, religious fundamentalism, environmental issues, unsupervised biological, chemical and nuclear proliferation, and Internet abuse.

Geospatial intelligence activities to evaluate a geographical area are crucial in all efforts to overcome these modern security threats.

1 GEOSPATIAL INTELLIGENCE

As early as 1928, Viktor Cousin (Bratun, 1999:20) said: “Give me a map of any country, tell me about its geographical position, its climate, waters, winds and physical geographical features, add data on its natural resources, vegetation, geology and such, and I will tell you about its population and the role of this country in human history.”

Intelligence activities¹ provide intelligence data to all levels of command of the SAF as well as the Alliance.

¹ *Intelligence disciplines (ID):*

a) *Reconnaissance & Surveillance*

b) *Open Source Intelligence / OSINT*

c) *Human Intelligence / HUMINT*

d) *Signals Intelligence / SIGINT*

e) *Imagery Intelligence / IMINT*

f) *Technical Intelligence / TECHINT*

g) *Measurement and Signatures Intelligence / MASINT (Canadian Joint Intelligence doctrine - B-GJ-005-200/FP-000/, 2003: 31–33)*

Public intelligence sources are favored when price-to-value is considered, because 80 percent of all intelligence data are available with merely 5 percent investment dedicated to public intelligence sources. Public sources represent 90 percent of all geospatial data acquired by geospatial intelligence from publicly available geospatial reference data sources and other non-confidential information, the public distribution and availability of which may be subject to owner's restrictions or made freely available on the Internet (Grozde, 2008:3).

Geospatial intelligence is one of the functional intelligence disciplines (ID)², which includes the use and analysis of images and geospatial data to describe, evaluate and display in visual form various physical characteristics and georeferential activities in a particular geographical area.

Through the use of geo-information systems, geospatial intelligence uses publicly available sources as the basis for geospatial analyses of territories where the SAF operates within the framework of international operations and missions.

Geospatial intelligence evaluation³ focuses on the impacts and influences of general, physical and social geographical factors⁴ on the military, business and other activities of all parties within the particular geographical area.

The results of geospatial analysis depend on the quality of data and methodology chosen in its preparation. A good methodological approach cannot, however, guarantee a quality analysis, unless it is based on data of sufficient quality:

**poor quality data + good information processing = poor answers
= poor decision-making**

2 EVALUATION OF GEOGRAPHICAL AREA

Crisis hit areas where the SAF operates alongside allied forces are areas affected by fast physiognomic, structural and functional changes, usually aggravating the general situation in the area. They have mostly faced the destruction of their infrastructure (human settlements, traffic routes, energy facilities etc.), chaotic legal

² *Intelligence functional disciplines include the following intelligence activities: biographic intelligence, economic intelligence, political intelligence, targeting intelligence, scientific and technical intelligence, technical intelligence, logistics intelligence, infrastructure intelligence, geospatial intelligence, engineering intelligence, sociological intelligence, health intelligence, security intelligence (Canadian Joint Intelligence doctrine - B-GJ-005-200/FP-000/, 2003: 33–34).*

³ *Intelligence in the SAF and the Alliance (NATO and the EU) evaluates geographical areas, so the same evaluation algorithm is applicable in the military evaluation of a geographical area as in any other, but with intelligence aspects complementing it.*

⁴ *Problematic political geography defines the immediate conflict area (combat zone), the mobilization zone (area with political, cultural and economic ties to the combat zone) and the damage zone (Zupančič, 2006:166).*

circumstances, anarchy within their public institutions or the absence of such institutions, the prevalence of black market and other illegal economic activities, a lack of investments, capital and economic flights, a low level of personal and collective security, the strong presence of various forms of repression by various paramilitary groups, a sudden spike in mortality and drop in birth rates, mass migrations, the presence of refugees, the absence or weak functioning of the education, health and social security systems (Zupančič, 2006:163).

Geospatial information provides a corner stone to any military operation along with other information about the crisis-hit area in question. When combined with intelligence information and information on internal forces, weather, logistics, these data allow the commander a more comprehensive insight into the area, thereby enabling him to plan and command operations more efficiently and define enemy targets more precisely. Geographical information systems (GIS)⁵ and other intelligence disciplines combined allow armed forces to take control of the territory.

2.1 Evaluation of a geographical area within the alliance

Geospatial evaluation within NATO is based on standardized geospatial information and data and the controlled application of these data in the planning processes as well as during the implementation of operations and other tasks by the alliance.

Alliance members have the right to control the creation, reproduction and use of geospatial information about their territory and territorial waters and may restrict the distribution and further use thereof, if such restrictions do not interfere with planning and NATO policy tasks performed by its Member States.

Each NATO Member State has the right to capture data and survey non-member states' territories and provide relevant data to Member States responsible for updating and producing these data in the area of interest.

NATO command may demand geospatial support upon consultation with Member States with specific interest to provide such support or with the country whose sovereign rights are being prejudiced.

The exchange of geospatial information (GI) among states for the needs of NATO is subject to no restrictions and is carried out on the basis of bilateral agreements (applicable for geospatial information of NATO and of non-member states). The exchange of digital geospatial data is carried out through the NATO network in accordance with the highest security standards in data transmission processes.

Geospatial evaluation is organized within the framework of intelligence and security bodies J/G/S-2 in all NATO command forces.

⁵ *GIS is an organized collection of personnel, geographical data, computer hardware, and software designed to efficiently capture, store, update, manipulate, analyze, distribute, and display all forms of geographically referenced information (ESRI, 1994).*

The regional command of any individual operation is responsible for geospatial support to forces within its command.

Users must justify their request for any geospatial information, pursuant to the “need to know” principle. Free access is only allowed for basic topographic maps, minefield maps and traffic communication maps, and these maps are available to all NATO/EU countries as well as non-NATO allies. A record of all issued data is kept regardless of the level of confidentiality or the beneficiary.

The evaluation of a geographical area in the EU is carried out by the EU Satellite Centre⁶, an agency of the Council of the European Union, established to support the Common Foreign and Defence Policy of the European Union by providing analysis of satellite imagery and collateral data. It collects data via commercial satellites, processes them and then sends them to the Council of the European Union. Member States can get access to data analyses upon request. The Satellite Centre prepares intelligence information that individual Member States mostly cannot at the national level.

2.2 Evaluation of a geographical area within SAF

The SAF is provided geoinformational support by two bodies within the Ministry of Defence of the Republic of Slovenia. The Civil Defence Agency (Department of Spatial Planning and Cartography) is responsible for the development of a cartographic system for defense and protection, prepares expert groundwork for the standardization and preparation of cartographic materials, it controls aerial photography and is the custodial of bilateral agreements on geosupport⁷. The Information Technology and Communications Agency (Department of Data Administration and GIS) plans, develops, implements and updates applications and administrates geographical data bases, and designs and manages the spatial data model and any related data bases.

A process is underway within the SAF to promote the use of weapons and support systems on the basis of geospatial (GIS) data bases. The SAF uses GIS in performing command and control tasks and intelligence support tasks⁸, in operation planning (planning of aviation operations, planning of radio frequencies, preparation of tactical image, analysis of the effects of weapons of mass destruction etc.), in operation support tasks, in warfare simulations etc.

⁶ Upon successful conclusion of operation Desert Storm, Ministers of the WEU met in Luxembourg in May 1991 and decided to establish the Torrejon Satellite Centre. In July 2001, the Satellite Centre and the Institute of Security Studies were formally included within the framework of the European Union. The bodies were formally established by the European Council Joint Actions). The Republic of Slovenia is a member of SATCEN.

⁷ The Republic of Slovenia has concluded bilateral agreements with Austria, Germany, Italy, the United Kingdom, Hungary, the Czech Republic and the USA. Preparatory works are currently underway for the conclusion of bilateral agreements with France and Croatia.

⁸ In the KFOR operation, the SAF are currently introducing the SITAWARE/tactical GIS system – simple user interfaces for all combat levels, part of the PINK systems (Command and Control). Characteristic: a common battlefield image – within PINK systems, based on GIS data.

3 EVALUATION OF A GEOGRAPHICAL AREA IN COMBATING TERRORISM

A suitable model of intelligence activity for military geospatial intelligence is provided by Richelson (Grozde, 2006:43), dividing it into three categories:

- documentary intelligence, carried out during peacetime to acquire information about potential crisis areas. It includes short-term (usually for one year) or long-term evaluations and projections of political, geographical, demographical and security risks. The results of such analyses are generally publicly available and published in printed form or on the Internet. An example of a yearly study would be the Political and Economical Risk Map 2009 (AON Corporation, ZDA), whereas one long-term security study is published under the title *Global trends 2025: Transformed World* (National Intelligence Center, USA, NOV 2008); *The DCDC Global Strategic Trends Programme 2007-2036* (The Development, Concepts and Doctrine Center, GB, JAN 2007), *Future Security Environment 2025 (FSE)* (Supreme Allied Commander Transformation, NATO, MAR2008- ppt);
- situation intelligence is carried out during a time of crisis, in the planning and implementation of crisis management operations, in warfare and when natural disasters occur. In an intelligence evaluation of a geographical area, a modified algorithm may be used, as Bratun did (1997:44)⁹ to define the processing structure of a particular area in command decision-making. This algorithm includes the general overview, importance and delimitation of the entire area in question along with its physical and social geographical characteristics. It enables one to assess military capacities, response to natural disasters and other forms of crisis response. Each algorithm is developed for a single crisis-hit area, and it entails the strategic, operational and tactical levels. An expert methodological approach and appropriate technological applications allow us, for example, to enter the locations and forms of terrorist attacks against ISAF, the relevant frequencies and times of these attacks and weather information. Based on this data, an algorithm can then be developed for the evaluation of the Afghan area to allow the preparation of a precise situation map of terrorist attacks against ISAF troops, thereby increasing the predictability of potential terrorist attacks in the future (*National Counter Terrorism Center, Worldwide Incidents Tracking System* -<http://wits.nctc.gov/>, 2009);
- warfare or implementing geospatial intelligence provides intelligence support to forces in a limited geographical area, with military intelligence authorities conducting the intelligence preparation of the battlefield / area of interest. The process of intelligence preparation of the battlefield entails four steps, i.e. defining the battlefield, describing the battlefield's effects, evaluating the threat and determining the courses of action.

⁹ *Algorithm of military evaluation of geographical area by Bratun (similar to Collinson's model and geographical approach to analysis of crisis-hit areas):*

1. gathering and concentration line or area; 2. tactical operation objective and military geographical facilities; 3. boundaries of the operation area; 4. higher category area; 5. geological features; 6. surface and passability; 7. hydrographic features; 8. weather conditions; 9. pedological characteristics; 10. vegetation; 11. population and human settlement; 12. communications; 13. social and economic characteristics and capacities of the area; 14. administrative, public infrastructure and regional organisation; 15. potential courses or areas.

4 USE OF SOURCES IN INTELLIGENCE EVALUATION OF A GEOGRAPHICAL AREA

Analysis of a geographical area is conducted in three stages:

Stage 1: data collection, analysis of geographical information and data, the assessment, storing and maintenance of assessed data on land in digital or analogue form. Public sources play a crucial role during this stage as they provide the basis for any reasonable and comprehensive initial analysis of the geographical area in question.

Stage 2: the selection and combination of assessed geospatial data and impacts of specific geographical factors (weather and/or local particularities) on the operation of units. Firstly, geographical data and information about areas outside Europe are normally found on the Internet or in printed publications. It is important to search for primary sources, because secondary sources (containing processed data) may lead to incorrect decisions and major risks.

Stage 3: the preparation of a final geographical area analysis to support the decision-making processes, communication, weapons and other military systems by complementing the decision-making and implementation activities.

5 THE IMPORTANCE OF GEOD IN COMBATING TERRORISM

It is sometimes difficult and, indeed, nearly impossible to separate terrorist threats from military threats against SAF troops. In the area of interest, units usually face threats posed by irregular armed groups, be it terrorist, guerrilla or rebel militant groups. This dilemma was present in Afghanistan and Iraq, and its resolution mostly depends on the political assessment of the nature of activities as either guerrilla, rebel or terrorist. This, however, poses a difficult question about the concrete relationship between the fight for freedom and terrorism. This article will not deal with this philosophical issue; what is relevant here is how the Republic of Slovenia perceives each individual threat against its troops - are they dealing with terrorist or military threats? Perhaps the dividing line between the two could be the wearing of a uniform: if those threatening the military troop do so in a uniform and wear distinctive military insignia, they can be considered as military threats; otherwise, we are likely dealing with terrorists. Terrorism is a multi-faceted phenomenon, and it is important to explore its underlying causes and background in order to identify a threat in a timely fashion and do what is necessary to prevent it. Only by understanding this problem can combating terrorism be effective and successful.

In light of the events of the past decade, terrorism has become an everyday topic. It has become a major issue in the media, on political agendas at the national and international levels, and scientific discussions on modern threats to security. Individuals as well as states and their institutions perceive terrorism as an extreme form of threat to security, menacing the very existence and balanced development of society and individuals (Prezelj, 2000:15–22).

The 9/11 attacks have shed new light on the phenomenon, and efforts are mainly aimed at the preventive identification of potential terrorists and the elimination of damage caused by terrorist attacks. Meanwhile, the international community often fails to address the causes of terrorism, such as religious grievances, fundamentalism, and a clash of civilizations, territorial demands, poverty, oil, weapons, conflicts, injustice, and dissonant political interests (Henigman, 2008).

“Modern terrorism” has taken its most extreme form. Separatist, nationalist, militant religious groups and factions, and anti-Western organizations, merciless extremists who do not hesitate to kill anyone, be it politicians, businessmen, athletes, journalists, workers, bystanders, women and children and other vulnerable groups, have adopted an unprecedented approach. While troops on international operations and missions may be considered legitimate targets of terrorist activities, terrorist attacks aimed at them usually do not upset the local population enough; that is precisely why terrorists are more likely to target the groups mentioned above.

Conclusion The SAF has come from being a mass home defense army to a small professional military force, able not only to defend Slovenian territory, but also to work alongside others in most international operations and missions in crisis-hit areas outside the geographical area of NATO states. In the planning and preparation of activities under the framework of international operations and missions, the SAF relies on publicly available sources of geospatial data and information, on data provided by Slovenian and foreign scientific, research and educational institutions, as well as those provided by partners and NATO, the EU and the UN.

Working hand in hand with expert bodies within the Ministry of Defence of the Republic of Slovenia, the SAF are actively involved in the establishment of an efficient and responsive system of geoinformational support to command and control activities at all command levels.

Such a system is crucial if the overwhelming quantities of public data are to be efficiently controlled and used. Data collection, processing and assessment inevitably entails the elimination of out-of-date, useless and unreliable geospatial data and information, thereby guaranteeing user-friendly, real-time and efficient geo-support to all command levels, which is essential in the effort to identify security threats in any particular geographical area.

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