



**The 10<sup>th</sup> International Scientific Conference**  
**“DEFENSE RESOURCES MANAGEMENT**  
**IN THE 21<sup>st</sup> CENTURY”**  
**Braşov, November 13<sup>th</sup> 2015**



## **THREATS AND OPPORTUNITIES IN ACTUAL DEFENCE MANAGEMENT**

**Oriana Negulescu, PhD**

Department of Economics, Spiru Haret University, Brasov, Romania

**Abstract:**

The actual international context is characterized by several important threats, like terrorism, local wars, huge immigration, and the lack of raw materials resources, new markets and others. Nevertheless these threats are causing more challenges for the defense management. This paper is aiming to discuss some of the opportunities that the defense management might take into account, having in view the most important international threats. The activity planning, costs, resources allocation, risks and other management tasks are to be considered in order to strengthen the defense capability.

*Key words: security environment, security threats, opportunities, strategic actions, defense management strategy*

### **1. Introduction**

The world security environment is characterized ‘as extremely fluid and unpredictable’ (Adrian, 2012). The national conflicts between different ethnical groups in countries and over their borders located in Asia and Africa have enhanced the danger of the third world war’s beginning.

Since Russia has extended its territories in Crimean Peninsula and its conflicting influence in Ukraine and other former Soviet Union countries, the UE territory is also in danger.

But, the main focus for a new world war is located in the Asian countries.

The actual conflicting threat and allied interests are summarized by Cordesman (2015) offering a general picture of the main players and world defense environment (table 1).

<b>Player</b>	<b>The main actions</b>
Iran	Expanding regional influence, role in Syria and Iraq, Challenge to U.S.
Russia	Ukraine, basing, regional influence, support of Assad, U.S. is destabilizing region, Putin’s desire to reassert Russia.
Lebanon	Hezbollah, Shi’ite Alignments, ties to Iran, refugees.
Iraq	Shite-dominated government with deep sectarian and ethnic tensions, distrust of reliance on U.S.
Kurds	Wide mix of factions and interests in Syria, Iraq, Turkey, refugees
Turkey	Erdogan’s ambitions, Kurdish issue (s), focus on Assad, higher

## ***THREATS AND OPPORTUNITIES IN ACTUAL DEFENCE MANAGEMENT***

	tolerance of Islamist movements, own security, refugees.
Israel	Focus on Palestinians, Iran and nuclear, own security.
Saudi Arabia, UAE, Qatar, Kuwait	Focus on Assad in Syria matches focus on ISIS, support Sunni Arabs in Iraq, Iran in Gulf a primary threat, uncertain trust in U.S.
Bahrain	Focus on tensions with own Shi'ites (Base 5th fleet in the Gulf)
Egypt	Internal struggles, uncertain trust in U.S., Sinai unrest.
Jordan	Major internal security concerns, border threats, uncertain trust in U.S., Palestinian issue, refugees.
Europe	helping Ukraine and refugees, with no common interest in region and focus on domestic needs and limit defense spending and military efforts.
US strategy	support moderate forces and Kurdish and Arab Sunni forces by expediting light weapons and providing air support and advises, but with little progress.

**Table 1 The main players in the Middle East conflicts**  
(Source: Cordesman, 2015, p.29)

Having in view the above presented general picture of the world security environment and some of the opinions stressed by reputed authors, this paper is aimed to analyse the main international security threats and to find out the strategic actions that the defence management might apply, according to the international opportunities.

### **2. International security threats**

Stephen M. Walt describes threat as a composite of different variables: capabilities, intentions, geography, domestic political institutions, and external support (cited in Lanoszka, 2015). But, the security threat may be defined as being the danger of the nations' losing the peace, safety and freedom. The term includes the social, economical, political, democratical, informational and borders threats.

Considering the international security, the main identified eight threats are the followings (fig.1): corruption; terrorism; chemical and biological weapons; nuclear and radiological weapons; infectious diseases; smuggling, counterfeiter and piracy; territorial expansion strategy, and the last, but not the least, the cyber weapons.

#### **Corruption**

The corruption may be considered as being the source of all security vulnerabilities. The "corruption is a feature of all conflicts, playing a key role in the power-struggle between competing groups for resources and power. This places mission leaders in a challenging situation because it means engagement with corrupt entities is frequently inevitable" (Williams, 2014). The author is underlining ten main corruption pathways: criminal patronage networks, factionalism, elections, organized crime, narcotics, exploitation of natural assets, land title and expropriation, borders, foreign aid and military, police and militias explaining how they are sources for corruption.

Military and aid spending have often been driving factors in increase in corruption and distorting economy to dependence on outside spending (Cordesman, 2015). The author underlines that the poor governance and the low income per capita distribution, in the condition of population increase (6.5 times in 2015 comparing with 1950 in Libya, Syria and Iraq) are sources of corruption, as well. The lowest rate of the government

## ***THREATS AND OPPORTUNITIES IN ACTUAL DEFENCE MANAGEMENT***

effectiveness is in the Middle East countries, as Libya, Yemen, Syria and Iraq and the highest rate of corruption may be found in the same countries, followed by Lebanon, Egypt, Algeria and others.

The author is also arguing that the economic factors that divided and sometimes shattered a nation are largely ignored and the government is focused on getting money and spending, not auditing the use of the money and measuring its effectiveness.

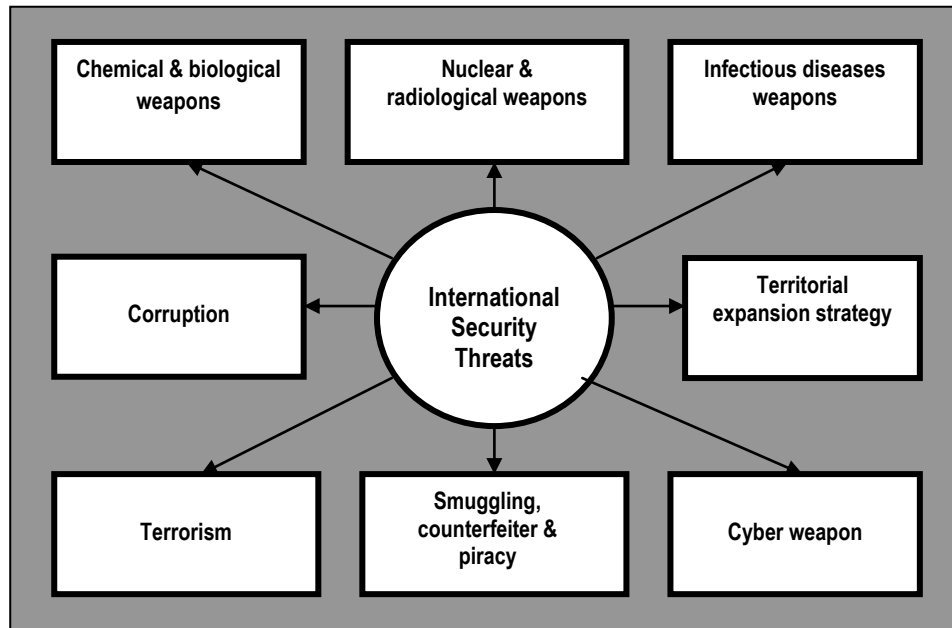


Fig. 1 The international security threats

### **Terrorism**

ISIS and Al Qaida acting on a large global area and Hezbollah acting regionally are the main terrorist groups that are causing international disorders (including jihadist bombings and kidnapping threat).

ISIS or Islamic State of Iraq and Syria, is “the Only One Threat, and Key ISIS Countries Face Many Equal or Great Challenges” (Cordesman, 2015). The author is emphasizing a big picture of what are the terrorism sources and how it is developing:

- ISIS ‘Caliphate’ is the product of two sets of civil wars, growing out of Sunni and Al Qaida hostility to U.S. invasion of Iraq; it assumes ‘provinces’ in several Islamic states like Syria, Iraq, Saudi Arabia, Yemen, Egypt, Libya, Algeria, Nigeria, Afghanistan and Pakistan. It is also absorbing terrorist groups of Philippines and Malaysia and others are affiliating to ISIS, as Jordan, Lebanon, Saudi Arabia, Palestinian, Chechnya and Dagestan and Maldives. ISIS groups are the most violent Islamist extremists.

- Al Qaida, with its core in Afghanistan is dominant Sunni Islamist extremist faction in Arabian Peninsula, acting in Syria, Yemen, and Algeria and is supporting Al-Shabab in Somalia;

- Hezbollah has the Iran’s support and interests of the Shiites against Sunni monarchy and people, acting in Lebanon, Syria, Iraq, Bahrain and Yemen (Houthi movement);

- The main causes of the terrorism jeopardizing and ISIS free space of acting are: the ‘authoritarianism, failure to cope with internal divisions, poor governance and

## ***THREATS AND OPPORTUNITIES IN ACTUAL DEFENCE MANAGEMENT***

corruption, failed economy development and equity, population pressure and youth bulge, repression and violence by internal security forces, traditional and corrupt military’;

- Security remains a key problem that often is not taken into account in economic and human development estimates: rising sectarian, ethnic, tribal, regional and other internal divisions often are ignored and nevertheless the progress in life expectancy, education, medical services, job creation, electric power, agriculture, and roads raise major questions about quality of data;

- Foreign volunteers joining ISIS groups estimated by USA on September 2015 at a nominal of 30,000.

However, the ISIS groups are and remain in the next years the most dangerous threat for all countries’ defense and intelligence management.

### **Chemical & biological weapons**

The conventional weapons are more and more replaced by chemical and biological weapons that hardly may be controlled. The biotechnology revolution is mostly based on chemical compounds (Kelle et al., 2012). The authors’ book “responds to a growing concern that changes in the life sciences and the nature of warfare could lead to a resurgent interest in chemical and biological weapons (CBW) capabilities”.

The increasingly blurred lines between biology and chemistry are especially apparent in new processes for drug discovery using combinatorial chemistry and high throughput screening to generate significant numbers of new chemical compounds, some of which may be highly toxic (Heyman et al. 2009).

Apart of the anthrax, one of the most dangerous biological weapons is the ricin powder. “The primary concern regarding ricin as a biological threat agent is the ease with which it can be manufactured. The process requires no advanced laboratory skills or equipment. As a result, it is possible for individuals with relatively little experience with biological agents to successfully produce ricin” (Temoshchuk, 2013).

The Centers for Disease Control and Prevention categorizes pathogens by their perceived threat based on criteria such as lethality, ease of production and distribution, and availability of treatment or vaccine. Well-known biological threat agents such as anthrax and smallpox fall under Category A due to their lethality, public health impact, and ability to instill panic in a population. On the other hand, ricin falls under Category B, qualifying it as only a moderate threat (Temoshchuk, 2013).

### **Nuclear and radiological weapons**

The nuclear weapons have changed the world security dynamics with increasing risks. The states possessing the nuclear weapons, such as USA, Russia, China and other countries, have to avoid any confrontation.

„As the security dynamics in Asia change, it is increasingly important for China and the United States to remain engaged with each other on nuclear weapons issues with a view toward strengthening communication, regional peace, and strategic stability”(Ahn, 2015).

Bilateral agreements as between the nuclear forces in the world like USA and China, USA and Russia might discourage the other states ambitions to develop new weapons, such as Iran, North Correa, India and Republic of South Africa, maybe Japan, which “has sufficient nuclear material and technological capabilities to produce nuclear weapons and their associated delivery vehicles” (Lin, 2015) and is not to be neglected the ISIS and “al Qaeda interest in nuclear weapons and radiological material” (Squassoni & Armitage, 2015).

## ***THREATS AND OPPORTUNITIES IN ACTUAL DEFENCE MANAGEMENT***

Nevertheless, the USA decision to place ballistic missile defense (BMD) in Europe have made Russia to make strong opposition, “arguing that it will cause a breakdown in strategic stability and threaten space security. (...) However, following the announcement and formalization of plans to place ground-based the BMD stations in Poland and Romania, Russian opposition has further increased” (Davydov, 2015).

Even the radiological materials, like cesium, are very dangerous to the people’s health, small quantities of them are sold on the black market by smuggling to be used in hand-made weapons, usually be terrorists. „There are some indications that material that entered the black market then may still be for sale today. In addition to Moldova, most states in the Black Sea region have had similar cases - including Georgia, Ukraine, Kazakhstan, and Tajikistan. (...) Cesium - a highly radioactive material cannot be used in a nuclear weapon but could be paired with ordinary explosives to create a radioactive mess. This kind of “dirty bomb” is considered to be within most terrorist groups’ wherewithal, as opposed to the more technically demanding challenge of acquiring/manufacturing a nuclear weapon. A dirty bomb would disperse radioactivity, potentially contaminating a wide area and causing panic” (Squassoni & Armitage, 2015).

The radiological the risk is coming from the lack of information about how much materials are still on the black market, the authors are underlining.

### **Smuggling, counterfeiter and piracy**

As a transnational organized crime the smuggling has different subjects (weapons, drugs, inventions, others and people) and it is developing al over the word. The “human smuggling, one very important aspect of irregular migration, is widely described as a threat to the security of a receiving country” (Nadig, 2002). The author is arguing that “that the increase in human smuggling and the development of restrictive access policies to EU states are interlinked and reinforce each other”. Nevertheless, the huge migration to UE in the last 2 years from Syria and other Asia’s countries is a real proof of it.

The counterfeiters are dangerous for the economies and people health.

The piracy, specifically to South Asia and Pacific areas is also dangerous for the maritime security. “The menace of counterfeiting, piracy and smuggling has assumed enormous proportions across the world, and is not only hurting industry and governments in terms of economic loss, but these are also a major source of funding for terrorist outfits and organized crime” (Ernst & Young, 2013).

These forms of the organized crime are representing important threats to the national and international security, mostly because they are financing the terrorism.

### **Infectious diseases**

Another form of threats is the infectious diseases spreading. “Traditional diseases have greater impact in crowded societies that increase the opportunities for diseases to develop and spread. New diseases continually emerge as microorganisms evolve in ways that evade or overcome the human immune system and as humans spread into new environments and become exposed to formerly unfamiliar pathogens. (...) Trade and travel disruptions that result from ad hoc or coordinated attempts to control a disease’s spread can have severe economic impacts. (...) Far less familiar to governments and policymakers is the threat that disease will be used deliberately as a weapon. In fact, few security threats facing society manifest as great a discrepancy between the potential for large-scale harm and the paucity of historical use as biological weapons and bioterrorism” (Heyman et al., 2009).

# ***THREATS AND OPPORTUNITIES IN ACTUAL DEFENCE MANAGEMENT***

## **Territorial expansion strategy**

In the name of the ethnic liberation from oppression and protection of minority rights, similar to the USA intervention in Kosovo, Russia tends to increase its influence by using the forces towards new territories annexation. “Despite Russia’s annexation of the Crimean Peninsula, however, events have not derailed wider strategic initiatives favored by the United States that necessitate some level of Russian support or that require acquiescence to continue. In cases such as the Iranian nuclear negotiations, the removal of Syrian chemical weapons, and the continued monitoring of existing arms control treaties with the United States, Russian interests have not been affected by events in Ukraine, and therefore no substantive change in policy would improve Russia’s position. Despite analysis to the contrary, Russia has no incentive to scuttle these negotiations, as this would needlessly antagonize the other members of the process and would see Russia gain little in return” (Fargo, 2015).

## **Cyber weapons**

The cyber weapons derives from the information technologies and it is used by intelligence and military organizations as Internet viruses to destroy the servers with huge data basis or other techniques to use the data in the criminal ways. The “cyber weapons are cyber means of warfare that are by design, use, or intended use, capable of causing either injury to, or death of, persons. The ‘Methods’ of cyber warfare are the cyber tactics, techniques and procedures, by which hostilities are conducted” (Paganini, 2015).

“These military and intelligence organizations are preparing the cyber battlefield with things called ‘logic bombs’ and ‘trapdoors’, placing virtual explosives in other countries in peacetime” (Clarke & Knake, 2012).

The bigger threat in our days and in the future is a cyber war. “Another serious issue to address is the attribution of responsibility for the cyber war acts; in the majority of cases it is quite impossible to discover the origin of the attack and to identify the attacker. (···)A cyber attack is cyber operation, whether offensive or defensive, that is reasonably expected to cause injury or death to persons or damage or destruction to objects” (Paganini, 2015).

All these threats, presented briefly above, have determined a huge global population displacement. Nearly 60 million people are displaced around the world because of conflict and persecution, the largest number ever recorded by the United Nations. Over 14 million of those fled in 2014 (Pecanha & Wallace, 2015). By August 2015, the number of refugees in Syria alone had risen to around 4 million. In total, around 12 million out of a population of 18 million (Taylor, 2015) has displaced from their countries of origin.

## **3. Opportunities for the defense management**

Considering the vulnerabilities that are deriving from the eight threats identified bellow, the defence management may consider the existing main opportunities that could be found in the international environment: international organizations strategies (as the United Nations and the United Nations Children's Fund), the diplomacy, the NATO alliance, the bilateral defence agreements, the use of worldwide experts for protection and peace instruments and the communities support.

All these opportunities could be retrived in the strategic actions, in order to strengthen the defense capability. The most important strategic actions that the defense and intelligence might approach are presented in the figure 2.

## ***THREATS AND OPPORTUNITIES IN ACTUAL DEFENCE MANAGEMENT***

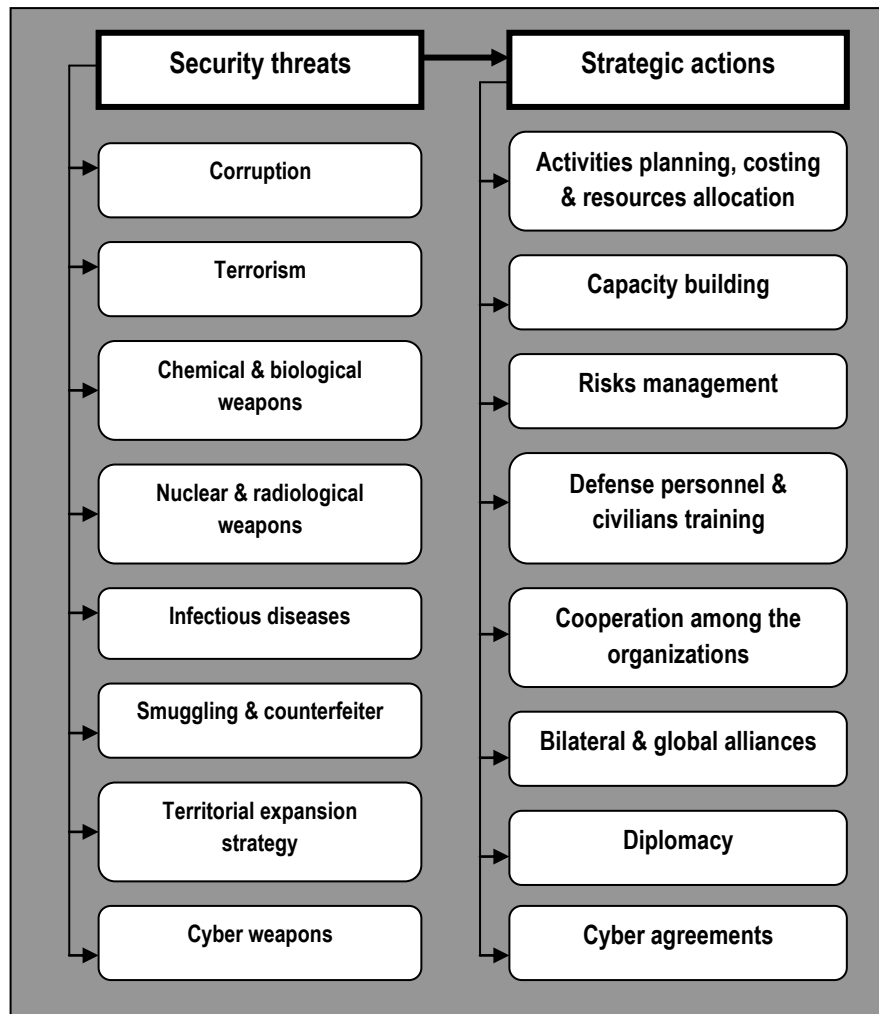


Fig. 2 Strategic actions for the international security

### **Activities planning & costing, including resource allocation**

The defense and intelligence activities plans, including the resource allocation, have to be evaluated in terms of effectiveness.

Moreover, the military budgets have to be increased in order to extend the expenses for the new weapons aroused protection because they are in progress of development (such as the cyber weapons).

In the same time, all countries need to fight against the corruption in any form.

### **Capacity building**

The defense capacity (equipment and trained defense personnel), has to be extended in order to avoid the threats coming from the terrorism, smuggling, chemical, biological, nuclear, radiological and infectious diseases weapons. “It is essential that all involved participants are equipped with the requisite training and skill sets to effectively implement anti-counterfeiting, piracy and anti-smuggling initiatives to detect and prevent financing of terrorism” (Ernst & Young, 2013).

In the same time, the defense capacity and the anti nuclear missiles need to be developed to counter some countries and terrorist groups’ tendency for seizure new territories.

### **Risks management**

The risk management needs to become the main attribute for all organizations involved in the security, stability and peace assurance. The three lines of the Defense

# ***THREATS AND OPPORTUNITIES IN ACTUAL DEFENCE MANAGEMENT***

model, considered by the Institute of Internal Auditors to be in the management attention for an effective risk management, are: the operational management (including overseeing risks and provide independent assurance), risk management and compliance functions and the internal audit (IIA, 2013).

## **Defense personnel and civilians training**

Defense personnel training and joint practical exercises of the defense teams have to be developed in all countries. A well trained army may act efficiently against terrorism (ISIS groups especially).

Moreover, the civilians of all countries need to get public education, advises from experts and to be well informed about the security threats and their own actions for protection.

## **Cooperation among the organizations**

The cooperation among the organizations worldwide, mostly in the research area, may lead to a better protection against the nuclear weapons, terrorism, smuggling, and chemical, biological, nuclear, radiological and infectious diseases weapons.

Moreover, the humanitarian actions have to be extended and the way of delivering to be improved, in order to provide water, education, medical assistance and children protection to decrease the sufferings impact on the population living in the countries of conflicts or displaced in other countries.

## **Bilateral & global alliances**

Prevention from nuclear and biological weapons, including the letters scanning, is the most important way. “These weapons have the potential to impair citizens and resources in different ways, requiring a distinct response capability for a host of potential events” (Nelson & Wise, 2012).

“The current stated goal of the U.S. government is the achievement of a nuclear weapons-free world, and consequently we must be prepared for that possibility. However, vital capabilities will begin to be at risk even before Global Zero is reached” (Moore, 2015)

## **Diplomacy**

The diplomacy remains the main instrument in the security development for the direct bilateral communication, negotiations and agreements.

## **Cyber agreements**

The harder task for the defense management is to avoid the cyber attacks. The moral rules and the acceptance of the international agreements may protect the civil people, but the criminal organizations’ hackers have no morals. The proper strategy may be the international teams of the information technology’s experts forming to find out the better ways of cyber protection.

## **4. Conclusion**

The international security environment is today as a Vulcan that is going to erupt. The EU, USA and the other countries are worried facing new threats coming from the Middle East. The worries are increasing considering the threats coming from the territorial expansion tendency and the terrorism actions.

The terrorism and the other unconventional weapons, like: chemical, biological, nuclear, radiological and infectious diseases weapons, smuggling, counterfeiters and piracy and the cyber weapons are jeopardizing the threats against the countries security and world peace.

In this context, the defense management worldwide has to consider the international existing opportunities and to develop some strategic actions to protect their countries and citizens: activities planning & costing, including resource allocation; capacity building,



## ***THREATS AND OPPORTUNITIES IN ACTUAL DEFENCE MANAGEMENT***

risks management; defense personnel and civil people training; cooperation among the organizations; bilateral & global alliances; diplomacy and cyber agreements.

The proposed approaches regarding the international security threats identified and the strategic actions necessary in relation with the existing opportunities to be considered by the defense management in order to avoid and defense the threats may be useful instruments in the military strategy building.

New developments might improve the present analyze.

### **References:**

- [1] Adrian, F. (2012) National and international security objectives: some correlations, *Journal of Defense Resources Management*, Vol.3, Iss.1 (4), 2012, p. 113-116.
- [2] Ahn, S.J. (2015) U.S.-China Nuclear Dynamics in the Context of a New Model of Major Power Relations, in Sarah Minot (editor), *Nuclear Scholars Initiative*, Center for strategic & international studies, August 2015, p.2.  
[http://csis.org/files/publication/150724\\_Minot\\_NuclearScholars2014\\_Web.pdf](http://csis.org/files/publication/150724_Minot_NuclearScholars2014_Web.pdf).
- [3] Clarke, R.A. & Knake, R.K. (2012) *Cyber War. The Next Threat to National Security and What to Do About It*, Ecco, USA, p.XI, <http://www.amazon.com/Cyber-War-Threat-National-Security/dp/0061962244>.
- [4] Cordesman, A. H. (2015) *ISIS and "Failed State Wars"*, Center for strategic & international studies, Oct. 9, 2015, <http://csis.org/publication/isis-and-failed-state-wars>.
- [5] Davydov, J.S. (2015) Expanding the Scope: Setting the Stage for Future U.S.-Russian Arms Control Negotiations in Sarah Minot (editor), *Nuclear Scholars Initiative*, Center for strategic & international studies, August 2015, p.25.  
[http://csis.org/files/publication/150724\\_Minot\\_NuclearScholars2014\\_Web.pdf](http://csis.org/files/publication/150724_Minot_NuclearScholars2014_Web.pdf).
- [6] Ernst & Young (2013) *Counterfeiting, piracy and smuggling: Growing threat to national security*, EY, FICCI, Ernst & Young LLP, Published in India. [www.ficci-cascade.com](http://www.ficci-cascade.com), p.29; 31.
- [7] Fargo, M. (2015) The Prospects for U.S.-Russian Collaboration after Ukraine, in Sarah Minot (editor), *Nuclear Scholars Initiative*, Center for strategic & international studies, August 2015, p.33.
- [8] Heyman, D., Epstein, G.L. & Moodie, M. (2009) *The Global Forum on Biorisks Toward Effective Management and Governance of Biological Risks. A Report of the CSIS Homeland Security Program*, Center for strategic & international studies, December 2009, [http://csis.org/files/publication/100113\\_Heyman\\_GlobalForumBiorisks\\_Web.pdf](http://csis.org/files/publication/100113_Heyman_GlobalForumBiorisks_Web.pdf), p. 2-4.
- [9] IIA (2013) *Position Paper: The three lines of defense in effective risk management and control*, The Institute of Internal Auditors- Global, Florida, USA, January 2013, p. 3; 7, <https://na.theiia.org/standards-guidance/>.
- [10] Kelle, A., Nixdorff, K. & Dando, M. (2012) *Preventing a Biochemical Arms Race*, Stanford University Press, book's description, <http://www.sup.org/books/title/?id=18656>.
- [11] Lanoszka, A. (2015) Don't Make Me a Target: Alliance Management, Threat, and Forward Deployments, in Sarah Minot (editor), *Nuclear Scholars Initiative*, Center for strategic & international studies, August 2015, p.84.  
[http://csis.org/files/publication/150724\\_Minot\\_NuclearScholars2014\\_Web.pdf](http://csis.org/files/publication/150724_Minot_NuclearScholars2014_Web.pdf).
- [12] Lin, B. (2015) Chinese Views of Japanese Nuclear Capabilities and Ambitions, in Sarah Minot (editor), *Nuclear Scholars Initiative*, Center for strategic & international studies, August 2015, p.96.  
[http://csis.org/files/publication/150724\\_Minot\\_NuclearScholars2014\\_Web.pdf](http://csis.org/files/publication/150724_Minot_NuclearScholars2014_Web.pdf).

## **THREATS AND OPPORTUNITIES IN ACTUAL DEFENCE MANAGEMENT**

- [13] Modified from Adam Taylor, 17 ways the unprecedented migrant crisis is reshaping our world,” Washington Post, June 20,2015,  
<http://www.washingtonpost.com/blogs/worldviews/wp/2015/06/20/17-ways-the-unprecedented-migrant-crisis-is-reshaping-our-world/>
- [14] Moore, J. (2015) Maintaining the Nuclear Security Complex for Non-Stockpile Research and Development as the United States Pursues Global Zero, in Sarah Minot (editor), *Nuclear Scholars Initiative*, Center for strategic & international studies, August 2015, p.115.  
[http://csis.org/files/publication/150724\\_Minot\\_NuclearScholars2014\\_Web.pdf](http://csis.org/files/publication/150724_Minot_NuclearScholars2014_Web.pdf).
- [15] Nadig, A. (2002) *Human Smuggling, National Security, and Refugee Protection*, *Journal of Refugee Studies* (2002), no.15 (1), Oxford University Press, p. 1-25.
- [16] Nelson, R. & Rob Wise, R. (2012) *Building an Integrated Enterprise: Increasing the Efficiency and Effectiveness of CBRNE Detection – threats and Response*, Center for strategic & international studies, December 2012, <http://csis.org/publication/building-integrated-enterprise-increasing-efficiency-and-effectiveness-cbrne-detection-a>, p. 2.
- [17] Paganini, P. (2013) *Cyber warfare or information warfare is still a gray area of the military doctrine, it is necessary to define the “model of conflict” and rules for the actors*, Security affairs, December 6, 2013, <http://securityaffairs.co/wordpress/20204/intelligence/cyber-warfare-model-of-conflict.html>.
- [18] Pecanha, S. and Wallace, T. (2015) “*Around the Globe, a Desperate Flight From Turmoil*,” New York Times, June 20, 2015,  
[http://www.nytimes.com/interactive/2015/06/21/world/map-flow-desperate-migration-refugee-crisis.html?\\_r=0](http://www.nytimes.com/interactive/2015/06/21/world/map-flow-desperate-migration-refugee-crisis.html?_r=0)
- [19] Squassoni, S. & Armitage, A. (2015) *Nuclear Smuggling: From Moldova to ISIS?*, Center for strategic & international studies, OCT 9, 2015,  
<http://csis.org/publication/nuclear-smuggling-moldova-isis>.
- [20] Singh, A. D. (2013) in Ernst & Young (2013) *Counterfeiting, piracy and smuggling: Growing threat to national security*, EY, FICCI, Ernst & Young LLP, Published in India. [www.ficci-cascade.com](http://www.ficci-cascade.com), p.1.
- [21] Temoshchuk, A. (2013) *Ricin: Characterization of a Biological Threat*, CSIS Center for Strategic and International Studies, Washington.  
[http://csis.org/files/publication/150724\\_Minot\\_NuclearScholars2014\\_Web.pdf](http://csis.org/files/publication/150724_Minot_NuclearScholars2014_Web.pdf).
- [22] Williams, B. (2014) Corruption threats & international missions, in *Transparency international UK*, Defence and security programme [online], the CBW Proliferation Problem, Bradford Science and Technology Reports Number 7, University of Bradford, 2007, p. 7; 17-19.  
<http://www.ti-defence.org/publications/dsp-pubs/307-corruption-threats-and-international-missions.html>.
- [23] Zarante, J.C. (2013) Can we Adapt to the Changing Nature of Power in the 21st Century?, in *Global Forecast 2014*, Report, U.S. Security Policy at a Crossroads, Nov. 1, 2013 [online] <http://csis.org/program/counterterrorism-and-international> D.C., May 8, 2013, <http://csis.org/publication/ricin-characterization-biological-threat>.