

Ministry of Education and Science of Ukraine
Lesya Ukrainka East European National University

**INTERNATIONAL AND NATIONAL SECURITY:
POLITICS, INFORMATION, ECOLOGY, ECONOMY**

Collective monograph

Lutsk
MPBP “Hordon”
2018

УДК 327(100)-049.5:351.746.1

I-73

*Recommended for the publication by the Academic Council
of Lesya Ukrainka Eastern European National University
(Protocol No. 14 as of November 29, 2018)*

Sydooruk T. – Doctor of Political Sciences, Professor,
Head of the International Relations Department
of National University of Ostroh Academy;
Rewievers: **Nikolaienko N.** – Doctor of Political Sciences,
Professor, Head of the Political Studies Department,
V. O. Sukhomlynskyi Mykolaiv National University.

International and National Security: Politics, Information, Ecology,
Economy: collective monograph/ed. by A. Mytko. Lutsk: MPBP “Hordon”,
I-73 2018. 320 p.

ISBN 978-966-8398-55-1

The collective monograph is aimed at defining a coherent understanding of the current state of international information, environmental and economic security.

It is intended for a wide range of specialists in international information, professionals working in structural subdivisions of state authorities, in information and analytical departments of local authorities and administration, in Public Relations departments of state and private structures, and others.

УДК 327(100)-049.5:351.746.1

© Boiar A., Czop A., Fedoniuk S., Fesyk O.,
Karpchuk N., Kaźmierczak D., Khomiuk N.,
Kolomechiuk V., Kopachinska G., Kytsyuk I.,
Mykhaliuk N., Mytko A., Patlashynska I.,
Pavlikha N., Pikulyk O., Romaniuk N.,
Shuliak N., Skorokhod I., Syshchuk A.,
Tykhomyrova Y., Voichuk M., Vozniuk E.,
Wasiuta A., Wasiuta O., Wasiuta S., 2018

ISBN 978-966-8398-55-1

© Lesia Ukrainka EENU, 2018

CONTENT

Introduction	5
--------------------	---

Chapter 1. INTERNATIONAL SECURITY

1.1. European Security Policy: Theoretical and Practical Aspects (<i>Pikulyk Oksana</i>)	7
1.2. European Union Common Security and Defense Policy: Threats and Challenges of its Functioning (<i>Kopachinska Galina</i>)	22
1.3. The Tasks of Self-governments in the Mission of Providing Security to Local Communities (<i>Czop Andrzej</i>).....	36
1.4. Separatism as a Threat to European Security (<i>Romaniuk Natalia</i>)	52
1.5. Peacekeeping as a Guarantee of International Stability (<i>Patlashynska Iryna</i>)	62
1.6. Synergy of “Soft” and “Hard” Power: Global Dimension (<i>Fesyk Olesya</i>).....	74

Chapter 2. INFORMATION SECURITY

2.1. Human Security – the Main Concern of the 21 st Century (<i>Kaźmierczak Danuta</i>).....	89
2.2. European Union Information Security Practice (<i>Karpchuk Nataliia</i>)	99
2.3. Mass Collaboration as a Factor of Information Security of Society and States (<i>Fedoniuk Sergii</i>)	120
2.4. Problems of Information Space Protection and National Information Security (<i>Mytko Antonina, Shuliak Nazarii</i>)	133
2.5. Modern Hybrid Threats (<i>Wasiuta Olga, Wasiuta Sergiusz</i>)... ..	145
2.6. Information Terrorism as a Modern Dynamic Part of International Terrorism (<i>Vozniuk Eugenia</i>)	165
2.7. Role of Cybersecurity as a New Element of National Informational Security (<i>Mykhaliuk Nazar</i>)	174

2.8. Information and Communication Factor of Climate Diplomacy as a Component of International Security Programs (<i>Tykhomyrova Yevheniia</i>).....	181
--	-----

Chapter 3. ECOLOGICAL SECURITY

3.1. Ecological Security of Smart Cities Development: Reality and Expectations (<i>Pavlikha Nataliia, Vladyslav Kolomechiuk</i>).....	206
3.2. Ecologically Secure City Development: Experience, Modernity and Future (<i>Voichuk Maksym</i>).....	215
3.3. European Union Ecological Security Ensuring (<i>Skorokhod Iryna</i>).....	226

Chapter 4. ECONOMIC SECURITY

4.1. Economic Instruments for Environmental Security and Sustainable Development (<i>Aleksander Wasiuta</i>).....	241
4.2. Budgetary Security of the European Union: the Structure of Expenditures (<i>Boiar Andrii</i>).....	260
4.3. National Enterprises Economic Security in the New Global Competitive Environment (<i>Kytsyuk Iryna</i>).....	280
4.4. Economic Security of the State and its Priorities in the Foreign Economic Policy of Ukraine (<i>Syshchuk Artem</i>).....	294
4.5. Development of Rural Territories in the System of Ukraine's Economic Security (<i>Pavlikha Nataliia, Khomiuk Nataliia</i>).....	305

INTRODUCTION

For the latest decades the idea of sharing information in the process of social and political development as an integral part of the political process has become more topical. All civilizations needed communication, its slightest changes led to the destruction of some political systems and the establishment of new ones. Information has become the fundamental basis of democracy as informing the majority laid the ground for the mechanism of minority's public control over the state. By means of information constant feed-back was carried out between the authority and the society. At the same time information may threaten national interests of a state; we can observe it recently when Ukraine has been at hybrid (military and information) war. So, Ukraine should pay big attention to balanced solution of issues of national information space protection. The study of information security issues, in our opinion, will not be holistic if it does not stand out in conjunction with other areas of society's life (economy, politics, ecology, etc.).

The collective monograph "International and National Security: Politics, Information, Ecology, Economy" aims to define a coherent understanding of the current state of international information, environmental and economic security. It is the result of work on the relevant topic of the Ukrainian-Polish project "Information Warfare as a New Dimension of Geopolitical Rivalization" conducted by the Ministries of Education and Science of Ukraine and the Republic of Poland in 2018–2019.

The Project leaders are Antonina Mytko, the Head of International Communications and Political Analysis Department, International Relations Faculty, Associate Professor, Doctor of Political Sciences, Lesya Ukrainka Eastern European National University; and Olga Wasiuta, the Head of National Security Chair, Institute of Security Education and Civic Education, Faculty of Pedagogy, Professor, Doctor of Political Sciences, Krakow, Poland.

This collective monograph is the result of the scientific activity of the staff of the International Relations Faculty, Lesya Ukrainka Eastern European National University and Pedagogical University im. National

Education Commission in Cracow, Poland. Individual materials of the topic have been tested in scientific publications on international relations, international economy, political science, at national and international scientific and scientific and practical conferences, in teaching the subjects for the specialty “International relations, public communications and regional studies”. The work is a comprehensive study of the problem of national and international security. It is intended for a wide range of specialists in international relations, public communications, professionals working in structural subdivisions of state authorities, in information and analytical departments of local authorities and administration, in public relations departments of state and private structures, etc.

Chapter 1

INTERNATIONAL SECURITY

1.1. European Security Policy: Theoretical and Practical Aspects

Pikulyk Oksana

The dynamics of international processes indicate that the importance of regional security systems in ensuring global stability will continue to grow. The interdependence of regional and global organizations of collective security and defence is intensifying. The European Union is moving today through deepening integration in all spheres, including the area of security.

Europe faces new threats such as the threat of terrorism, the proliferation of weapons of mass destruction, regional conflicts and illegal migration, organized crime.

Challenges faced by Europe and the world in the early twenty-first century are global. Their solution is possible by developing a common strategy and implementing effective security policies, since none of the states can protect themselves without interacting with other countries. Therefore, the implementation of an effective common security policy is an important priority for European countries.

Following the unsuccessful attempt in 1954 to establish the *European Defence Community*, a new impetus for the development of the European integration process in the field of security and defence was provided by further agreements and treaties signed by the European countries. During the existence of the bipolar system of international relations the issues of security and political cooperation among the countries of Western Europe were resolved and implemented within the framework of the foreign policy of national states, some of which

© *Pikulyk Oksana* – PhD in Economics, Senior Lecturer of the Department of International Relations and Regional Studies, Lesya Ukrainka Eastern European National University.

were coordinated through the participation of countries in the North Atlantic Treaty Organization and the Western European Union.

A new stage of European integration began in the second half of the 1980s and was carried out in favorable foreign policy conditions of the end of the cold war, dynamic development and steady growth rates of the EU economy. The *Single European Act* of 1986 finally formed the basis for intergovernmental cooperation in the field of foreign policy. In the *Maastricht Treaty* (1992), for the first time, the Union's responsibility in the field of security policy and the possibility of pursuing a common security policy were identified. The Treaty formalized the creation of the European Union based on three "pillars": 1) European Communities; 2) a common foreign and security policy (CFSP); 3) cooperation in the field of internal affairs and justice. The cooperation of Member States of the EU in the field of common foreign and security policy was based on intergovernmental cooperation. The objectives of the EU policy in this area were: protection of common values, basic interests, independence and integrity of the Union; strengthening the security of the European Union; preservation of peace and international security; promotion of international cooperation; development and consolidation of democracy and the rule of law and respect for human rights. The main role in decision-making in the field of CFSP was assigned to the EU Council. The permanent political and military bodies were established in 2001 to implement the common foreign and security policy (Political and Security Committee, the Military Staff of the European Union, the Military Committee of the European Union).

The *Political and Security Committee* is a Committee of the Council of the European Union dealing with the common foreign and security policy. The Committee provides strategic guidance and political control over crisis management operations, monitors the development of international events in the field of CFSP, helps to determine the direction of this policy and oversees its implementation¹.

¹ CSDP structure, instruments, and agencies. URL: https://eeas.europa.eu/topics/crisis-response/5392/csdp-structure-instruments-and-agencies_en (access.: 12.06.2018).

The *EU Military Committee*, which is the highest military body of the European Union, fulfills its functions under the overall guidance of the Secretary General of the Council of the EU – the EU High Representative for Foreign and Security Policy. The main tasks of the Military Committee are: assessment of the military-political situation in various regions of the world; participation in the development of directions for the military construction of the EU and approaches to crisis management; preparation of proposals to the highest political bodies of the European Union on the practical application of its military potential.

The *European Union Military Staff* serves the purposes of the Common Security and Defence Policy of the European Union and is a separate department within the European External Action Service. The European Union Military Staff submits to the EU Military Committee and ensures its work, in particular, in matters of strategic planning and early warning of possible threats.

One of the milestones in the development of European security was adoption of *the European Security Strategy* in 2003. For the first time Europe has analysed the European Union's security environment and identified key security challenges and subsequent political implications for the European Union. European Security Strategy provided the conceptual framework for the Common Foreign and Security Policy that later became the Common Security and Defence Policy¹.

The document, based on an assessment of the state and trends of the military-political situation in the world, specifies threats and risks to the security of the European Union, clarifies the goals and objectives of the organization, and identifies the priorities and principles of the EU's activities in this area. The document identifies the main threats to European security, namely, international terrorism, the proliferation of weapons of mass destruction, regional conflicts, the crisis of the system of public administration in countries with undeveloped democracy, organized crime. Counteraction to these threats must be

¹ Keinis V. The Theoretical and Practical Challenges of European Security Community in the Context of Globalisation. *European Integration Studies*. 2017. No. 11. P. 65–74.

carried out both on the territory of the European Union and outside the geographical boundaries of the organization. Such activities should include a set of political, economic and military measures.

With the entry into force on December 1, 2009 the *Treaty of Lisbon*, a new stage in the development of the *Common Security and Defence Policy* of the EU began. This document reveals the content and direction of the security and defence policy of the participating countries, the tasks of the governing bodies of the European Union responsible for the functioning of crisis management structures, the principles of joint activities of European states in this area, as well as common approaches to the formation and application of the EU's military potential.

The Lisbon Treaty re-formulated the EU's objectives on the international arena, specifically, protection of values, basic interests, security, independence, human rights and freedoms; consolidation and support of democracy, the rule of law and the principles of international law; preservation of peace, prevention of conflicts and the strengthening of international security; promotion of integration of all countries into the world economy. The Lisbon Treaty specifies the tasks to be performed by the EU Response Force in the course of peacekeeping operations, for the first time the provision is made about the possibility of using military contingents of these forces in the interests of countering terrorist danger, illegal migration and organized crime, and for eliminating the consequences of emergency situations. The powers of the EU High Representative for Foreign Affairs and Security Policy have been expanded, and the legal basis for the functioning of the European Defence Agency (EDA) has been formalized.

An important aspect of the Lisbon Treaty is a provision on mutual assistance. This provision requires joint EU coordinated action by Member States to provide the necessary assistance in the event of a Member State experiencing armed aggression on its territory. In accordance with the Lisbon Treaty, the security policy of the Member States was transformed into "community" affair. In general, the Lisbon Treaty created the prerequisites for more coherence in the CFSP, which significantly strengthened the position of the European Union in the world.

The *European Defence Agency* has been presenting a *Capability Development Plan* since 2008 for the solution of security and defence issues in the short- and longer-term. It develops future security scenarios and makes recommendations about the capabilities European militaries will need to react to a variety of potential threats¹. Capability Development Plan provides a view of future capability needs, taking into account the impact of future security challenges, technological development and other trends. It assists the Member States in their national defence planning and programmes. The CDP is an important element in a comprehensive capability development process, and it provides the basis of the Agency's capability-driven approach².

On June 28, 2016, the EU High Representative for Foreign Affairs and Security Policy Federica Mogherini presented the *European Union's Global Strategy for Foreign and Security Policy*. The European Union's security and defence policy includes: gradual synchronization and mutual adaptation of national defence planning cycles (this planning should be in full compliance with NATO defence planning); use of EU funds to support technology, multinational cooperation and defence research; development of defence industry in the EU countries; involvement of the full potential of the European Defence Agency³.

According to the *Foreign Affairs Council Conclusions in November 2016*, the main priorities of the EU policy in the sphere of security and defence are the following: responding to external conflicts and crises, building capacities of partner countries, and protecting the EU and its citizens. The main tools to achieve these goals involve launching a coordinated annual review on defence (CARD) to enhance defence cooperation between member states; setting up a military planning and conduct capability (MPCC) to improve crisis management structures;

¹ European Defence Agency. Capability Development Plan. URL: <https://www.eda.europa.eu/european-defence-energy-network/our-current-priorities/capability-development-plan> (access.: 12.06.2018).

² Capability Development Plan. URL: <https://www.eda.europa.eu/what-we-do/our-current-priorities/strategies/Capabilities> (access.: 12.06.2018).

³ Poshedin O. I. Nove zhyttia spilnoi polityky bezpeky ta oborony Yevropeiskoho Soiuzu: oriientyry dlia Ukrainy. Visnyk NADU pry Prezydentovi Ukrainy. Seriiia "Derzhavne upravlinnia". 2017. № 2. S. 48–54.

strengthening the EU's rapid response toolbox, including the EU battlegroups and civilian capabilities; and establishing a permanent structured cooperation (PESCO) to strengthen defence cooperation among member states¹.

On November 30, 2016, the European Commission approved a *European Defense Action Plan* whose mission is to increase the cost-effectiveness of defense spending; strengthening of defense cooperation; building a stronger industry. European Defence Action Plan aimed at encouraging defence and security cooperation between Member States through the establishment of a capability window, and the implementation of the Warsaw Joint Declaration of the EU and NATO leaders.

On March 6, 2017, the European Council adopted the conclusions, which include the main achievements in the implementation of the EU strategy in the area of security and defence. The document defines what has been done to achieve the objectives of security policy in various areas. The Council also endorsed the concept of operational planning and implementation of missions and operations, which would allow the EU to respond much faster and more efficiently to threats².

Practical aspects of European security and foreign policy include 16 *Common Security and Defence Policy Missions and Operations*. Nearly 2000 civilians and 3300 military staff are deployed in Europe, in the Middle East, and in African continent. In particular, ten civilian Missions (in Kosovo, Ukraine, Georgia, Niger, Mali, the Occupied Palestinian Territories, Iraq, Libya, and Somalia) and six military Missions and Operations (in Bosnia and Herzegovina, the Central Mediterranean, Somalia (on land and off the coast), Mali, and the Central African Republic).

The activities of the *EU Police Mission in Bosnia and Herzegovina* are the first EU operation within the framework of the European

¹ Council of the European Union. EU cooperation on security and defence. URL: <http://www.consilium.europa.eu/en/policies/defence-security> (access.: 12.06.2018).

² Council of the European Union. Security and defence: Council reviews progress and agrees to improve support for military missions. URL: <http://www.consilium.europa.eu/en/press/press-releases/2017/03/06/defence-security> (access.: 12.06.2018).

Security and Defence Policy. On January 1, 2003, the EU Police Mission in Bosnia and Herzegovina continued to fulfil its tasks previously assigned to the UN International Police Task Force. Mission objectives include monitoring, training, inspection and technical support for Bosnia and Herzegovina Police.

Since June 15, 2007 in order to assist the government of the Islamic Republic of Afghanistan (IRA) in the formation of the system of law enforcement agencies of the country, the *EU Police Mission in Afghanistan* (EUPOL AFGHANISTAN) has been deployed. Its tasks include: teaching and training of personnel for the Ministry of Internal Affairs (Afghan National Police) and the power structures of the IRA; assistance to its government in reforming and improving the law-enforcement system of the state; organization of interaction between international structures and law enforcement agencies of the country on combating organized crime and illiciting drug trafficking; assistance to local authorities and security agencies in ensuring internal security in the republic.

Since February 16, 2008, the *EU's Rule of Law Mission* (EULEX KOSOVO) has been operating in Kosovo. Its purpose is to assist the authorities of the region in observing the rule of law and establishing law and order on its territory. The mandate was valid up to June 14, 2014. The main objectives of the mission were: to assist the Kosovo authorities in the formation of government bodies and law enforcement structures, as well as to ensure stability and security in the territory of the self-proclaimed state¹.

Since 2014, an EU Consultative Mission for Civil Security Sector Reform (CMEU) has been operating in Ukraine. However, it only provides assistance to non-military state authorities of Ukraine, i. e. the Police, the Border Guard Service, the National Guard, the Security Service, the General Prosecutor's office, the courts and anti-corruption bodies.

In 2001 in order to effectively counter terrorist threats the European Union adopted a plan to combat terrorism. Further development of

¹ Ivanov V. Voennyye i grazhdanskyye operatsii i missii Evrosoyuzya v sfere krizisnogo uregulirovaniya. Zarubezhnoe voennoe obozrenie. 2014. № 6. С. 3–9.

cooperation between the EU Member States in this field continued in 2004. The *Declaration on Combating International Terrorism* was adopted and a special program was approved, according to which the post of the European Union Coordinator for Combating Terrorist Threats was approved. The situation centre of the European Union (opened in January 2005), reinforced by special services of Great Britain, Spain, Italy, France and Germany, was transferred to its subordination. The main task of the center is to organize the exchange of information between the national antiterrorist agencies of the EU countries.

On December 2005, the European Union adopted a new strategy to combat terrorism, which reflects the changing approaches of the leadership of the organization to meet the challenges of countering such threats. To combat terrorism and radicalism, the EU offers neighbouring countries to intensify their cooperation in countering the financing of terrorism, the involvement of young people in terrorist and radical movements, illegal migration and arms trafficking. The active involvement of civil society organizations and the use of the existing Radicalisation Awareness Network, Europol, Eurojust, and financial intelligence units are expected.

Concerning the sphere of counter terrorism the EU Member States have strengthened cooperation with the main partners in the Middle East, the North Africa and Western Balkans. The EU is supporting efforts to overcome gaps in legislative frameworks and capabilities through upgraded and targeted counter terrorism Political Dialogues and the development of counter terrorism partnerships¹.

The greatest fears in the European Union are the threat of the proliferation of weapons of mass destruction (WMD). In order to develop common approaches in this area, the European Council adopted the *Declaration on Non-Proliferation of Weapons of Mass Destruction and the EU Strategy Against Proliferation of Weapons of Mass Destruction*, which defined the main objectives of the EU in the sphere of non-proliferation of weapons of mass destruction within the framework of the common security and defence policy and cooperation

¹ From Shared Vision to Common Action: Implementing the EU Global Strategy Year. URL: https://europa.eu/globalstrategy/sites/globalstrategy/files/full_brochure_year_1.pdf (access.: 12.06.2018).

with third countries in this field. The EU's goal is to prevent, deter, halt and, where possible, eliminate the problems associated with the proliferation of weapons of mass destruction in Europe and throughout the world.

As stated in the Strategy, proliferation is driven by a small number of countries and non-state actors, but presents a real threat through the spread of technologies and information and because the proliferating countries may help one another. These developments take place outside the current control regime. Therefore the EU is committed to the multilateral treaty system, which provides the legal and normative basis for all non-proliferation efforts. The EU policy is aimed at the implementation and universalisation of the existing disarmament and non-proliferation norms. The EU policy is to pursue an international agreement on the prohibition of the production of fissile material for nuclear weapons or other nuclear explosive devices. In November 2003 the Council of the European Union adopted the *Fight against the Proliferation of Weapons of Mass Destruction: Mainstreaming Non-Proliferation Policies into the EU's Wider Relations with Third Countries*, which detailed a new EU policy on non-proliferation under the EU Common Foreign and Security Policy¹.

The EU assists third countries in the fulfilment of their obligations under multilateral conventions and regimes and work towards improving the existing export control mechanisms. It advocates adherence to effective export control criteria by countries outside the existing regimes and arrangements². In December 2009, the European Council adopted a statement on closer international security cooperation and called for a negotiated solution to the Iranian nuclear issue. The statement on tighter international security further asked for "resolute operational cooperation to obstruct illicit transfers, control exports even more effectively, counter illegal networks, take punitive action against proliferation financing and reduce the risk of a link-up between terrorism

¹ Lina Grip. The European Union's Weapons of Mass Destruction Non-Proliferation Clause: a 10-Year Assessment. EU Non-Proliferation Consortium. 2014. No. 40. April. P. 1–16.

² EU Strategy Against Proliferation of Weapons of Mass Destruction. URL: http://trade.ec.europa.eu/doclib/docs/2004/august/tradoc_118532.en03.pdf (access.: 12.06.2018).

and weapons of mass destruction”¹. In July 2010, the European Council also endorsed the establishment of a European network of independent non-proliferation think tanks.

The EU financially supports various WMD agencies and regimes and helps them strengthen their capabilities to monitor and verify suspected WMD activities. It contributes to the International Atomic Energy Agency (IAEA) Nuclear Security Fund. It has established CBRN (Chemical, Biological, Radiological and Nuclear) Centres of Excellence in various regions: in the Middle East, Africa, Central Asia, South Asia, the Caucasus, Ukraine and Moldova in order to counter the CBRN threat².

The European security policy is also being implemented through the deepening of the EU and NATO partnership in the field of security and defence. Both organisations consult and work together to prevent and resolve crises and armed conflicts in different regions of the world. On December 16, 2002, *Declaration on European Security and Defence Policy* was signed between NATO and the EU. The declaration sets out the political principles for cooperation and states that the EU will have access to planning mechanisms, NATO forces and capabilities to complement a range of existing EU instruments for crisis management and conflict prevention, including military operations the NATO is not involved.

On March 17, 2003, the EU and NATO signed a package of *Berlin Plus agreements*, which provided basis for the NATO-EU cooperation in crisis management by allowing the EU access to NATO’s collective assets and capabilities for the EU-led operations³. Berlin Plus Agreement provides: further adaptation of NATO’s defence planning system to better integrate resource availability for the EU-led operations; an agreement between the NATO and the EU

¹ Council of the European Union. Statement on Tigher International Security. Document 16751/08 (3 December 2008). URL: <http://register.consilium.europa.eu/pdf/en/08/st16/st16751.en08.pdf> (access.: 12.06.2018).

² Dr. Münevver CEBECI. The European Union and Weapons of Mass Destruction Terrorism. Defence Against Terrorism Review DATR. Vol. 5. No. 1. P. 53–74. 2013.

³ The NATO-EU strategic partnership. URL: <https://www.nato.int/docu/comm/2004/06-istanbul/press-kit/006.pdf> (access.: 12.06.2018).

on the exchange of classified information; the NATO-EU consultations in the context of the EU crisis management operations that use the NATO assets and capabilities; procedures of the monitoring, return and recall of the NATO resources and assets. On March 31, 2003 Operation Concordia began under the auspices of the EU. The EU has guaranteed access to the NATO's rapid response mechanisms. The operation was completed in December 2003 and was the first implementation of the Berlin Plus agreement.

NATO and the EU took part in establishing stability and bringing peace to Afghanistan. The *NATO-led International Security Assistance Force* helps create a stable and secure environment in which the Afghan government as well as other international actors can build democratic institutions, extend the rule of law and reconstruct the country. NATO welcomed the EU's launch of an *ESDP (European Security and Defence Policy) Rule of Law mission* (EUPOL) in June 2007. The European Union has also initiated a programme for justice reform and is helping to fund civilian projects in NATO- run Provincial Reconstruction Teams (PRTs) that are led by an EU Member Country¹. Since September 2008, NATO and the EU have jointly pursued anti-piracy operations. NATO and EU ships, as well as UN peacekeepers, are constantly patrolling the coast of Somalia.

On July 8, 2016 NATO and the European Union signed a declaration of cooperation in which they pledged to confront together the "hybrid threats" from east and south. The document was signed by Secretary General of NATO Jens Stoltenberg and the EU representatives Donald Tusk, the President of European Council, and Jean-Claude Juncker, the President of European Commission. They plan to exchange information, to coordinate actions in the field of cybersecurity and operations in the Mediterranean Sea in the fight against illegal immigration. In addition, NATO and the EU have committed themselves to supporting the military industry and joint training. The EU-NATO Joint Declaration, signed in June 2016, identified the directions for this cooperation, which were detailed in the package of the EU proposals in December 2016.

¹ NATO's relations with the European Union. URL: https://www.nato.int/summit2009/topics_en/21-nato-eu_strategic_partnership.html (access.: 12.06.2018).

On June 7, 2017, the European Commission decided to establish a *European Defence Fund* to increase the efficiency of the EU Member States' expenditure on common security and defence. The Fund will coordinate, complement and expand national investment in defence research, procurement of equipment and technology in the field of defence.

The European Parliament and the EU Council have completed talks on the *European Defence Industrial Development Program (EDIDP)* proposed by the European Commission. EDIDP is a key element of the European Defence Fund, launched in June 2017. The purpose of this project is to encourage cooperation in developing the technologies and equipment needed to meet common defence and security challenges. The EU, in the framework of the EDIDP program, co-finances projects (500 million euros planned in 2019 and 2020), which are implemented by at least three enterprises in at least three Member States¹.

In light of a changing security environment, the *EU Global Strategy for Foreign and Security Policy (EUGS)* started a process of closer cooperation in security and defence. Member States agreed to step up the European Union's work in this area and acknowledged that enhanced coordination, increased investment in defence and cooperation in developing defence capabilities are key requirements to achieve it. *PESCO (Permanent Structured Cooperation)* is a Treaty-based framework and process to deepen security and defence cooperation amongst EU Member States. The PESCO participating Member States are Austria, Belgium, Bulgaria, the Czech Republic, Croatia, Cyprus, Estonia, Finland, France, Germany, Greece, Hungary, Italy, Ireland, Latvia, Lithuania, Luxembourg, the Netherlands, Poland, Portugal, Romania, Slovenia, Slovakia, Spain and Sweden. The aim is to jointly develop defence capabilities and make them available for the EU military operations².

¹ YeS zatverdyyv pershyi fond oboronnoho rozvytku i vydilyv 500 mln yevro. URL: <https://www.eurointegration.com.ua/news/2018/05/24/7082133> (access.: 12.06.2018).

² Permanent Structured Cooperation on security and defence (PESCO). URL: https://eeas.europa.eu/headquarters/headquarters-homepage/34226/permanent-structured-cooperation-pesco-factsheet_en (access.: 12.06.2018).

Permanent Structured Cooperation envisages the possibility of the EU member states working more closely together to solve security problems in the region and in the world. This permanent cooperation will allow Member States to develop jointly defence capabilities to prevent threats, invest in shared projects, and enhance the operational readiness and contribution of their armed forces into a common European security architecture.

PESCO is set up to strengthen the security and defence system of the EU member states. It provides for the possibility of uniting small groups of the EU Member States to initiate projects that are generally designed to serve the objectives of the EU security and defence. PESCO has developed 17 military training and combat capabilities development projects, crisis response, maritime security, and cyber-threat response (Table 1).

Table 1

Projects developed under PESCO¹

No	Project	Project members
1	2	3
1	European Medical Command	Germany, the Czech Republic, Spain, France, Italy, the Netherlands, Romania, Slovakia, Sweden
2	European Secure Software defined Radio (ESSOR)	France, Belgium, Germany, Italy, the Netherlands, Poland, Portugal, Finland
3	Network of logistic Hubs in Europe and support to Operations	Germany, Belgium, Bulgaria, Greece, Spain, France, Croatia, Italy, Cyprus, Hungary, the Netherlands, Slovenia, Slovakia
4	Military Mobility	The Netherlands, Belgium, Bulgaria, the Czech Republic, Germany, Estonia, Greece, Spain, France, Croatia, Italy, Cyprus, Latvia, Lithuania, Luxembourg, Hungary, Austria, Poland, Portugal, Romania, Slovenia, Slovakia, Finland, Sweden

¹ COUNCIL DECISION establishing the list of projects to be developed under PESCO. URL: <http://data.consilium.europa.eu/doc/document/ST-6393-2018-INIT/en/pdfn> (access: 12.06.2018).

End of table 1

1	2	3
5	European Union Training Mission Competence Centre (EU TMCC)	Germany, Belgium, the Czech Republic, Ireland, Spain, France, Italy, Cyprus, Luxembourg, the Netherlands, Austria, Romania, Sweden
6	European Training Certification Centre for European Armies	Italy, Greece
7	Energy Operational Function (EOF)	France, Belgium, Spain, Italy
8	Deployable Military Disaster Relief Capability Package	Italy, Greece, Spain, Croatia, Austria
9	Maritime (semi-) Autonomous Systems for Mine Countermeasures (MAS MCM)	Belgium, Greece, Latvia, the Netherlands, Portugal, Romania
10	Harbour & Maritime Surveillance and Protection (HARMSPRO)	Italy, Greece, Spain, Portugal
11	Upgrade of Maritime Surveillance	Greece, Bulgaria, Ireland, Spain, Croatia, Italy, Cyprus
12	Cyber Threats and Incident Response Information Sharing Platform	Greece, Spain, Italy, Cyprus, Hungary, Austria, Portugal
13	Cyber Rapid Response Teams and Mutual Assistance in Cyber Security	Lithuania, Spain, France, Croatia, the Netherlands, Romania, Finland
14	Strategic Command and Control (C2) System for CSDP Missions and Operations	Spain, Germany, Italy, Portugal
15	Armoured Infantry Fighting Vehicle / Amphibious Assault Vehicle / Light Armoured Vehicle	Italy, Greece, Slovakia
16	Indirect Fire Support (EuroArtillery)	Slovakia, Italy
17	EUFOR Crisis Response Operation Core (EUFOR CROC)	Germany, Spain, France, Italy, Cyprus

A promising area of European cooperation in the field of security is to increase the efficiency of the EU defence and military financing system. EU ministers of defence, meeting informally in Sofia on 4–5 May 2018, reviewed advances in the framework of Permanent Structured Cooperation (PESCO) in the field of defence and discussed new projects to build further on the rapid progress made over the last two years. Following the budget proposal on 2 May, 2018 which envisages a 22-fold increase in EU defence spending for 2021–2027, the EU High Representative F. Mogherini also announced her intention to present a detailed proposal by mid-June on the new European Peace Facility, an additional instrument to finance the EU's work on defence and military operations¹. By May/June 2018 the Council should adopt the common set of governance rules for the projects, as well as a recommendation to sequence the fulfilment of the more binding commitments and to specify more precise objectives.

Cooperation between the EU Member States in the field of security continues to evolve. Its proof is the implementation by the European Union of the main provisions of the Global Strategy on Foreign and Security Policy. Nowadays we can speak about new achievements of the EU countries in the field of security cooperation, specifically the Permanent Structured Cooperation, the establishment of European Defence Fund and Coordinated Annual Review on Defence. The main activities of the EU in the field of security policy include as well the policy of cooperation and association (mainly in relation to neighbouring states); cooperation for development, strategic partnership with the largest countries; transatlantic relations; European Security Strategy; the settlement of international conflicts; activity in international organizations. The European security policy provides the Union with the possibility of expanding its civilian and military capabilities in the areas of crisis management and conflict prevention at the international level, thereby contributing to the preservation of peace and international security.

¹ European Defence: 17 cooperation projects underway; more to follow later in 2018. European Union External Service URL: https://eeas.europa.eu/headquarters/headquarters-homepage/44123/european-defence-17-cooperation-projects-underway-more-follow-later-2018_lv (access: 12.06.2018)

1.2. European Union Common Security and Defense Policy: Threats and Challenges of its Functioning

Kopachinska Galina

In today's globalized world one of the most necessary goals (except development and prosperity) is to defend interests and protect actors of the system of foreign relations from threats and challenges. This situation happens with members of the EU as well. Currently European regional environment becomes more and more unpredictable, creating instability and ambiguity, especially after BREXIT. There are various challenges which create an arc of instability for the EU which will surely have implications for the Union and the wider world as well.

In order to protect the EU Member States and predict possible instable situations within them the *Common Security and Defense Policy*, formerly known as the European Security and Defense Policy was initiated. Hence studying threats and challenges of the European Union Common Security and Defense Policy is a necessary and actual task which implementation will help understand their preconditions, main features and ways to solve.

The *Common Security and Defense Policy (CSDP)*, formerly known as the European Security and Defense Policy (ESDP), is a major element of the *Common Foreign and Security Policy (CFSP)* of the European Union (EU) and is the domain of the EU policy covering defense and military aspects, as well as civilian crisis management. The ESDP was the successor of the European Security and Defense Identity under NATO, but differs as it falls under the jurisdiction of the European Union itself, including countries with no ties to NATO².

Formally, the Common Security and Defense Policy is the domain of the European Council, which is an EU institution, where

© *Kopachinska Galina* – PhD of Geographical Sciences, Senior Lecturer of International Relations and Regional Studies Department, Lesya Ukrainka Eastern European National University.

² Kyalagin V. M. *Sovremenaja mezdynarodnaj ab ezopasnostj*. Moskva, Rossija: KNORUS, 2012.

the heads of Member States meet. A very important role in this institution is played by the High Representative of the Union for Foreign Affairs and Security Policy, currently Federica Mogherini, who prepares and examines decisions to be made before they are brought to the Council.

European security policy has followed by several different paths during the 1990s, developing simultaneously within the Western European Union, NATO and the European Union itself. The history of its formations influenced greatly main challenges and threats which happened to it.

First efforts to form European security and defense policy were made in early 1947, when *Treaty of Dunkirk* between UK and France was signed. In 1948 this agreement was transferred into the military *Article 4 of the Treaty of Brussels* which included the BeNeLux countries. In 1948 *Western Union Defense Organization* was set up in order to implement all the tasks of this Treaty. In 1949 the United States and Canada joined the alliance and its mutual defense agreements through the North Atlantic Treaty with its Article 5, which specified that military response was not absolutely necessary. In 1950 the European Defense Community was proposed but its ratification was failed in the French parliament. In 1954 it resulted in the establishment of the political *Western European Union* (WEU) out of the earlier established Western Union Defense Organization. The WEU itself had no standing army but depended on cooperation between its members. That is why in 1992, with the possible destabilization of Eastern Europe the EU adopted the *Petersberg tasks*, which included humanitarian and rescue tasks; peacekeeping tasks; tasks for combat forces in crisis management, peacemaking¹.

In 1996 it was agreed that the WEU would oversee the creation of a *European Security and Defense Identity (ESDI)* within NATO structures. The ESDI was to create a European “pillar” within NATO, partly to allow European countries to act militarily where NATO did

¹ Common Security and Defense Policy [Online]. URL: [http://www.europarl.europa.eu/RegData/etudes/fiches_techniques/2013/060102/04A_FT\(2013\)060102_EN.pdf](http://www.europarl.europa.eu/RegData/etudes/fiches_techniques/2013/060102/04A_FT(2013)060102_EN.pdf) (access.: June 1, 2018).

not want to participate, and partly to alleviate the United States' financial burden of maintaining military bases in Europe, which it had done since the Cold War, so that allowed European countries to use NATO assets.

In 1999, in order to act autonomously the European Council decided to incorporate the role of the WEU within the EU, eventually shutting it down. This year Javier Solana was appointed as the High Representative for CFSP in order to make it function¹.

Main objectives of the CFSP were decided to be the following:

- to safeguard the common values, fundamental interests, independence and integrity of the Union in conformity with the principles of the United Nations Charter;
- to strengthen the security of the Union in all ways; to preserve peace and strengthen international security, in accordance with the principles of the United Nations Charter, as well as the principles of the Helsinki Final Act and the objectives of the Paris Charter, including those on external borders;
- to promote international co-operation;
- to develop and consolidate democracy and the rule of law, and respect for human rights and fundamental freedoms.

The European Council was decided to become the institution which main task was to define and implement the principles and general guidelines for the CFSP as well as common strategies, which had to be called “joint actions” or “common positions”. In general, *Joint actions* address specific situations where operation action by the EU is considered necessary and lay down the objectives, scope and means to be made available to the EU. *Common positions*, on the contrary, define the approach that the EU takes on a certain matter of geographical or thematic nature, and define in the abstract the general guidelines to which the national policies of Member States must conform.

¹ Michael E. Smith Europe's Common Security and Defence Policy: Capacity-Building, Experiential Learning, and Institutional Change [Online]. URL: <https://www.cambridge.org/core/books/europes-common-security-and-defence-policy/BE414345DA4007E499DF855843D7CE43> (access.: June 2, 2018).

For sufficient functioning of the CFSP a number of bodies were organized. Within the Council, there is the Foreign Affairs Council configuration, essentially a meeting of foreign ministers; the Political and Security Committee, which monitors the international situation in the areas covered by the CFSP and contributes by delivering opinions to the Council of Ministers, it also monitors the implementation of agreed policies.

The *European Defense Agency* encourages increase in defense capabilities, military research and the establishment of a European internal market for military technology. The *European Union Institute for Security Studies* is the European Union's analytical institution, which mission is to find a common security culture for the EU, to develop and project the CFSP, and to enrich Europe's strategic debate. The *European Union Satellite Centre* is providing analysis of satellite imagery and collateral data¹.

In 1999 member states of EU signed the *Helsinki Headline Goal*, which included the creation of a catalogue of forces (the "Helsinki Force Catalogue") to be able to carry out the so-called "Petersberg Tasks". As the objectives outlined in the Helsinki Headline Goal were not achievable quickly, in May 2004, the EU defense ministers approved *Headline Goal 2010*, extending the timelines for the EU's projects².

In 2002 *Joint EU-NATO Declaration* was signed, as independent European security pillar could result in a declining importance of NATO as a transatlantic forum. This partnership included such founding principles as:

- effective mutual consultation and cooperation;
- equality and due regard for the decision-making autonomy;
- interests of both the EU and NATO;
- coherent and mutually reinforcing development of the military capability requirements common to the two organizations.

¹ Common Security and Defense Policy [Online]. URL: <http://politics.oxfordre.com/view/10.1093/acrefore/9780190228637.001.0001/acrefore-9780190228637-e-156> (access.: June 1, 2018).

² Carter A., Piny W., Steinbrunner J. A new concept of cooperative security. Washington, the USA: The Brooking Institution, 2015.

The partnership was reflected in the *Berlin Plus Agreement* agreed in March 2003, which allowed the EU to use NATO structures, mechanisms and assets to carry out military operations if NATO declined to act. The main idea of this agreement was that EU could only act if NATO first decided not to. Furthermore, an agreement on information sharing between the EU and NATO also has been signed¹.

In 2003 the *European Defense Initiative* was formed. It is sometimes referred to as the *Initiative of the Four*. It was a proposal for enhanced European Union defense cooperation presented by France, Germany, Belgium and Luxembourg in Brussels. It was based on the reinforced cooperation principle and aimed for better reactivity under the European Security and Defense Policy².

The year of 2003 is specific for CSDP because of adoption of *European Security Strategy*. The European Security Strategy was drawn up in 2003 under the authority of the EU's High Representative for the CFSP, Javier Solana, and adopted by the Brussels European Council of 12 and 13 December 2003. The European Security Strategy is the document in which the European Union clarifies its security strategy which is aimed at achieving a secure Europe in a better world, identifying the threats facing the Union, defining its strategic objectives and setting out the political implications for Europe. It highlighted main directions of the EU security such as energy security, migration, climate change, terrorism and hybrid warfare, economic and financial crime, terrorism and trafficking, demographic change and others³.

In 2008 this document was followed by the *Report of the Implementation of the European Security Strategy: Providing Security in a Changing World*.

On 28 June 2016 the *Global Strategy for the European Union's Foreign and Security Policy* was presented to the European Council. The strategy identified five priorities for the EU foreign policy:

¹ Common Security and Defense Policy. URL: [http://www.europarl.europa.eu/RegData/etudes/fiches_techniques/2013/060102/04A_FT\(2013\)060102_EN.pdf](http://www.europarl.europa.eu/RegData/etudes/fiches_techniques/2013/060102/04A_FT(2013)060102_EN.pdf) (access.: June 1, 2018).

² Ibid.

³ Edkins. *Global Politics: A New Introduction*. London, Great Britain: Routledge, 2017.

- the security of the Union;
- state and societal resilience to the East and South of the EU;
- the development of an integrated approach to conflicts;
- cooperative regional orders;
- global governance for the 21st century.

Cooperation between EU and NATO became a very essential priority as well, since 22 out of current 28 EU Member States are also NATO Allies. On 8 July 2016, the President of the European Council and the President of the European Commission together with the Secretary General of NATO signed a *Joint Declaration in Warsaw* with a view to giving a new impetus and new substance to the NATO-EU strategic partnership. Information sharing, coordinated planning, concrete cooperation in the areas of hybrid threats, operational cooperation, cyber security, capacity building, defense capabilities, industry and research, trainings were decided as main priorities of this strategic partnership. This has led to a significant intensification of cooperation in all relevant areas¹.

On 14 November, 2016 in order to provide implementation of the main priorities of Global Strategy, the Council was presented with an *Implementation Plan on Security and Defense*. It set out 13 proposals which encompassed a coordinated annual review of defense spending, a better EU rapid response, the use of EU Battlegroups, and a new single Permanent Structured Cooperation (PESCO).

PESCO became an instrument to enable willing Member States to pursue greater cooperation in defense and security. Out of the 28 EU Member States, 25 have joined PESCO and thereby agreed to more binding commitments in the area of defense. Furthermore, participating member states developed projects working together in groups to enhance military training and exercises, strengthen jointly their capabilities on land, air and sea as well as in the ever more important cyber space².

¹ Common Security and Defence Policy. URL: <https://www.dfa.ie/our-role-policies/international-priorities/peace-and-security/common-security-and-defence-policy> (access.: June 1, 2018).

² Ullman. *Redefining Security*. London, Great Britain: Routledge, 2017.

In 2017, the EU moved fast on the implementation of the *Global Strategy*, in the area of security and defense. New tools and instruments were developed, such as the *Coordinated Annual Review on Defense*, through which member states had to share their defense spending plans to better identify shortfalls, be more coherent and benefit from retrenchment. Another big achievement for the EU security implementation was the creation of a *European Defense Fund*, which had to finance joint research and development. The *Centre of Excellence for Countering Hybrid Threats or the EU Security and Defense College* became very important for the EU concrete measures to step up resilience as it launched a cyber platform to boost cyber security capabilities across Europe.

For sufficient implementation of all security tasks the military force of the European Union was also formed during these years. It comprised the various cooperative structures that have been established between the armed forces of the Member States, both intergovernmentally and within the institutional framework of the Union; in general, it formed the Common Security and Defense Policy branch of the Common Foreign and Security Policy.

Nowadays, the military of the European Union includes such organizations as European Union, European Defense Agency, EU Institute for Security Studies, EU Military Staff, EU Military Committee, EU 18 Battlegroups, Finabel, Eurocorps, European Gendarmerie Force, European Air Group, European Air Transport Command, European Maritime Force, Organization for Joint Armament Cooperation, German/Dutch Corps, Combined Joint Expeditionary Force, and Multinational Corps Northeast. Moreover on 20 February, 2009 in order to make a first step towards a true European military force the European Parliament voted in favor of the creation of *Synchronized Armed Forces Europe (SAFE)*, which had to have its own training standards and operational doctrine.

On the current stage, the functioning of the EU military is provided by 546 ships, 2,448 aircraft & 7,490 battle tanks, which are operated by 1,825,000 active personnel. Budget for expenditures comprises 226,73 billion \$, that is 1,42 % of EU GDP¹.

¹ All Statistics on the European Union. URL: <https://www.statista.com/topics/921/european-union> (access.: May 29, 2018).

In general the policy area of defense is principally the domain of nation states. The intergovernmental North Atlantic Treaty Organization remains the main military alliance in Europe. The development of the CSDP with regard to the existing role of NATO is a contentious issue. Article 42 of the Treaty on European Union provides for substantial military integration within the institutional framework of the union. Complete integration is an option that requires unanimity in the European Council of heads of state or government. For now it remains politically gridlocked considering the critical stance of the United Kingdom in particular. Article 42 does also provide for a permanent structured cooperation between the armed forces of a subset of Member States¹.

The result of military functioning and cooperation between the EU and NATO was the first deployment of European troops in March 2003 in the Republic of Macedonia. *EUFOR Concordia* used NATO assets, was considered a success and was replaced by a smaller police mission, EUPOL Proxima, later the same year. In general, from 2002 until now, the European Union has undertaken more than 30 overseas operations, using civilian and military instruments in several countries in three continents (Europe, Africa and Asia), as part of its Common Security and Defense Policy. 15 of these operations are currently ongoing, and 15 are completed².

With the participation of the EU completed operations in Europe include: Police Mission in Bosnia and Herzegovina (1 January 2003 – 30 June 2012); Military Operation in the former Yugoslav Republic of Macedonia (31 March 2003 – 15 December 2003); Police Mission in the former Yugoslav Republic of Macedonia (15 December 2003 – 14 December 2005); Rule of Law Mission in Georgia (16 July 2004 – 14 July 2005); Police Advisory Team in the former Yugoslav Republic of Macedonia (15 December 2005 – 14 June 2006).

¹ Shurin S. Faktor vneshnej sredy v sovremennoj global'noj sisteme mezhdunarodnykh otnoshenij. URL: <http://www.intertrends.ru/nineth/022.htm> (access.: June 1, 2018).

² The EU strengthens cooperation on security and defence. URL: https://eeas.europa.eu/headquarters/headquarters-homepage/35285/eu-strengthens-cooperation-security-and-defence_en (access.: June 2, 2018).

Completed operations in Africa are the following: operation in Central African Republic (2015–2016); Military Operation in the Democratic Republic of Congo (12 June 2003 – 1 September 2003); Police Mission in Kinshasa, Democratic Republic of the Congo (12 April 2005 – 30 June 2007); Support to African Union Mission in Sudan (18 July 2005 – 31 December 2007); Military Operation in the Democratic Republic of Congo (12 June 2006 – 30 November 2006); Military Bridging Operation in Chad and the Central African Republic (17 March 2008 – 15 March 2009); Mission in Support of Security Sector Reform in Guinea-Bissau (12 February 2008 – 30 September 2010); Aviation Security Mission in South Sudan (February 2013 – January 2014); Military Operation in Libya (April 2011).

Completed operations in Asia include Monitoring Mission in Aceh, Indonesia (15 September 2005 – 15 December 2006); Integrated Rule of Law Mission for Iraq (1 July 2005 – 31 December 2013).

Ongoing operations in Europe are as follows: Border Assistance Mission to Moldova and Ukraine (1 December 2005 – Present); Rule of Law Mission in Kosovo (9 December 2008 – Present); Monitoring Mission in Georgia (1 October 2008 – Present).

Ongoing operations in Africa include Security Sector Reform Mission in the Democratic Republic of the Congo (8 June 2005 – Present); Congo Police Mission (1 July 2007 – Present); Naval Force Somalia in international waters (5 November 2008 – Present); Training Mission Somalia (May 2010 – Present); Regional Maritime Capacity Building for the Horn of Africa and the Western Indian Ocean (16 July 2012 – Present); Capacity Building in Niger (July 2012 – Present); Mali Training Mission (18 February 2013 – Present); Military Operation in Libya (22 May 2013 – Present).

Ongoing operations in Asia involve: Border Assistance Mission for the Rafah Crossing Point (25 November 2005 – Present); Coordinating Office for Palestinian Police Support (1 January 2006 – Present); Police Mission to Afghanistan (15 June 2007 – Present)¹.

Analyzing threats and challenges which endanger the EU security the following should be mentioned. The big territorial resource of the

¹ Common security and defence policy. URL: http://europedia.moussis.eu/books/Book_2/3/8/2/3/index.tkl (access.: June 1, 2018).

EU, which comprises 28 countries, such as: Austria, Belgium, Bulgaria, Hungary, Germany, Greece, Denmark, the United Kingdom, Ireland, Spain, Italy, Cyprus, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Finland, France, the Czech Republic, Sweden, Estonia, Croatia. Some of the Member States of the EU have conflicts inside the country (like the problem of Bask people in Spain or Ulster in North Ireland), also there are conflicts outside the EU territory, influence of which is rather negative, like question of Transnistria or a present conflict in Ukraine.

Another big threat to the EU stability is Brexit. On 23 June 2016 citizens of the United Kingdom voted in favour of leaving the European Union. On 29 March 2017 the state formally notified the European Council of its intention to leave the EU by triggering Article 50 of the Lisbon Treaty. For the time being, the United Kingdom remains a full member of the EU and rights and obligations continue to fully apply in and to the UK.

Brexit will have a big influence on the following development of the EU as according to the statistics total EU spending in the UK is 7,458 billion €, total EU spending as % of the UK's gross national income (GNI) is 0,30 %. Total UK contribution to the EU budget counts 18,209 billion €, the UK's Contribution to the EU budget as % of its GNI is 0,72 %. The money paid into the EU budget by the UK helps fund programmes and projects in all EU countries – like building roads, subsidising researchers and protecting the environment, hence Brexit will negatively result to the EU development in the whole¹.

The economic potential of the EU can also form some threats to its security. Regardless, that the EU is 20% larger total world exporter, it has a small trade surplus, it is not in such dependence on inflows of foreign capital, and is a net exporter of capital. Just a few its Member States form its main economic potential and implement the most to its budget. They are France (7th place by nominal GDP in 2017 according to the IMF statistics), Italy (9th), Germany (4th) and Great Britain (5th).

¹ Eurostat EU. URL: <http://ec.europa.eu/eurostat/web/main/home> (access: June 2, 2018).

Other members occupy lower position in the rank of GDP and take more from the EU budget than investigate in it¹.

A big challenge for the EU stability is provoked by the problem of Eurozone. Just 19 of the 28 EU current members participate in this monetary union. Countries of the European Union that do not use euro are the following: Bulgaria, the United Kingdom, Hungary, Denmark, Poland, Romania, Croatia, the Czech Republic and Sweden. They (except Denmark and the United Kingdom) are obliged to join once they meet the criteria to do so. Andorra, Monaco, San Marino, and Vatican City have formal agreements with the EU to use the euro as their official currency and issue their own coins. Kosovo and Montenegro have adopted the euro unilaterally, but these countries do not officially form part of the eurozone and do not have representation in the European Central Bank or in the Eurogroup.

In order to prevent illegal migration, flows of goods and services (one more threat to the EU stability of the Schengen Area), sufficient border control began to function. Since 1985, it has gradually grown and encompasses today almost 26 European states that have officially abolished passport and all other types of border control at their mutual borders. 22 of the 28 current EU Member States participate in the Schengen Area. Out of the 6 EU members that are not part of the Schengen Area, four – Bulgaria, Croatia, Cyprus, and Romania – are legally obliged to join the area, while the other two – the Republic of Ireland and the United Kingdom – maintain opt-outs. The four European Free Trade Association Member States, Iceland, Liechtenstein, Norway, and Switzerland, are not members of the EU, but have signed agreements in association with the Schengen Agreement. Three European microstates – Monaco, San Marino, and the Vatican City – can be considered de facto participants².

Another big threat to the EU security and stability is its demographic potential. As a result of the enlargement of the EU, population

¹ All Statistics on the European Union. URL: <https://www.statista.com/topics/921/european-union> (access.: May 29, 2018).

² Common Security and Defense Policy. URL: <http://politics.oxfordre.com/view/10.1093/acrefore/9780190228637.001.0001/acrefore-9780190228637-e-156> (access.: June 1, 2018).

increased to 450 million people. The number of the EU population increases due to new members, what partly contributes to solving the acute demographic problems in Europe. Stable fertility decline is characteristic for European countries, which increases the vulnerability of the continent on the following aspects:

- budgetary problems (aging of population increases social payments from the budget, and reduces the competitiveness of the country in geopolitics);
- dependence on immigration;
- loss of competitiveness (as a result of long-term decline in fertility workforce becomes rare, its price increases);
- reducing of the capacity for cultural expansion (due to population decline, culture loses its ability to spread)¹.

Functioning of the EU military sphere is a real great challenge to the Union, as it is difficult for the European Union to compete with the USA. Europe is on the verge of “real disarmament process” because the total cost of European countries accounted for only 20 % of US spending. The United States give NATO 30% more funds than European countries. But the total military spending of the EU, which is 175 billion \$, is higher than military spending of Japan or China. In terms of the size of the armed forces, the EU is ahead of the USA (1,8 million people in the EU against 1,5 million in the USA). It is also expected that after ten years, the EU will be able to expand operations abroad up to 200 thousands soldiers; it is four times more than its current capacity².

The status of a nuclear power country of its neighbors such as Russia Federation and the USA poses one more challenge to the EU security. Nevertheless France and Great Britain have the same status as well; the problem of confrontation and prediction of possible conflicts is also a threat to the EU stability. Moreover when EU is

¹ Zakonnirnosti funkcionyvanja globalnoji ekonomiku. URL: <http://www.helpiks.org/4-19769.html> (access.: May 29, 2018).

² Common Security and Defense Policy. URL: [http://www.europarl.europa.eu/RegData/etudes/fiches_techniques/2013/060102/04A_FT\(2013\)060102_EN.pdf](http://www.europarl.europa.eu/RegData/etudes/fiches_techniques/2013/060102/04A_FT(2013)060102_EN.pdf) (access.: June 1, 2018).

dependent on energy resources and has no deposits which could provide its independence.

The EU strives to full political union of democracies with strong institutions, but was unable to acquire it till now, and it forms another challenge to its stability. In this case a big threat to the EU functioning was the question of the EU Constitution, which is not adopted till now because of the negative referendum on ratification in France (May 2005) and the Netherlands (June 2005)¹.

The Lisbon Treaty was the alternative of the European Constitution. The official signing of the Lisbon Treaty was made on 13 December 2007, after which the document was subject to ratification by the national parliaments of 27 Member States of the EU. On 13 November, 2009 agreement was approved by all 27 EU countries. The agreement entered into force on 1 December 2009. This document stipulates the provisions of the EU functioning and includes articles about foreign relations and security, High Representative, mutual solidarity and defense prospects².

In order to prevent destabilization of today's world which may influence vulnerability of the EU security, it participates in the protection of human rights. In those countries where violence targets people the EU uses military and economic interventions, among which involve non-EU European states, countries of sub-Saharan Africa, Asia and the Americas.

The EU also fights against terrorism which is the great threat to Europe and the whole world as well. Under the EU provisions the groups or the entities that are controlled directly or indirectly by persons who commit or attempt to commit terrorist acts, participating in these groups, or facilitating the execution of terrorist plans are considered to be terrorist organizations. According to the EU definition terrorism is an intentional act which, given their nature or context as

¹ Tichonravov J. V. Chrestomatija ot geopolitiki k chronopolitiki Geopolitiziskije faktor. URL: http://vasilievaa.narod.ru/gu/stat_rab/book/Geopolitika/Hrestomatia3.aspx.htm (access.: June 1, 2018).

² Common Security and Defense Policy. URL: [http://www.europarl.europa.eu/RegData/etudes/fiches_techniques/2013/060102/04A_FT\(2013\)060102_EN.pdf](http://www.europarl.europa.eu/RegData/etudes/fiches_techniques/2013/060102/04A_FT(2013)060102_EN.pdf) (access.: June 1, 2018).

defined crimes under domestic law, may seriously harm a state or an international organization when committed for the purpose of:

- seriously intimidating a population;
- unduly compelling a government or international organization to perform or abstain from performing any act seriously destabilizing or destroying the fundamental political, constitutional, economic or social constructs.

In order to conduct its foreign policy and use all the tools of defense in a proper way the EU is represented in different organizations and has various rights in them. In the UN the EU has gained influence in areas such as aid due to its large contributions in that field. In the G7 (previous G8), the EU has the rights of membership besides that of chairing/hosting summit meetings. Moreover the EU is represented at the G7 by the presidents of the Commission and the Council. In the World Trade Organization, where all 28 member states are represented, the EU as a body is represented by the Trade Commissioner.

The influence of the EU is also felt due to the enlargement. The potential benefits of becoming a member of the EU act as an incentive for both political and economic reform in states wishing to fulfil the EU's accession criteria, and are considered a major factor contributing to the reform and stabilization of former Communist countries in Eastern Europe. This influence on the internal affairs of other countries is generally referred to as “soft power”, as opposed to military “hard power”. An example of the support the EU offers to the reform processes of its neighbors is the *EU Border Assistance Mission to Moldova and Ukraine*, which assists the governments of Moldova and Ukraine in approximating their border and customs procedures to the EU standards.

The *European Community Humanitarian Aid Office*, provides humanitarian aid from the EU to developing countries. The EU is the largest aid donor in the world.

Hence, specificity of the EU security implementation does not involve just prediction and struggle against current challenges and threats inside the EU territory but realization of help to other states outside it.

Common security and defense of the EU policy implemented by the EU members is an instrument of preventing threats and challenges, resolving them. A long historical period has passed until the EU Common Security and Defense Policy was formed. Key elements of its implementation are defined in the EU Security Strategy and main objectives of its functioning are described in the Lisbon treaty. The main threats and challenges to nowadays' EU are growing influence of NATO in the region, Brexit, demographical problems, mass migration and territorial conflicts inside and outside the EU, different economic development of the EU members, dependence upon energetic resources, sufficient functioning of euro and Schengen zones, development of military strength of the EU and its Member States, sufficient participation in vulnerable situations and conflict zones all over the world, fight with terrorism and autocratic regions all over the world, spread of democratic values, etc.

The study of possible ways to reduce these challenges and threats and to stop their spread is considered to be prospects of further scientific research, which is a topical and necessary task on the current stage.

1.3. The Tasks of Self-governments in the Mission of Providing Security to Local Communities

Czop Andrzej

The process of creating a civic society is inextricably linked to the decentralization of power and the transfer of part of the competences, hence also the responsibility, to local governments. A very important competence obtained by the self-government authorities is

© *Czop Andrzej* – Instytut Bezpieczeństwa i Edukacji Obywatelskiej Uniwersytetu Pedagogicznego im. Komisji Edukacji Narodowej w Krakowie.

to ensure public safety. In Poland, this took place in a situation where system changes, of an economic and political nature, that began in the early 1990s caused not only acceleration of economic and civilization processes that ensured dynamic progress and development in various areas of life, but also rapid increase in crime and accompanying social pathologies. It was at that time, that previously unknown new types of crimes appeared, including organized and international crime. Simultaneously, the control of the state over citizens' activity was weakened; also, the first private fortunes were created, giving birth to the emergence of domestic capital. An international transfer of financial assets progressed and the borders have become more open, including the criminal world. The society started, mainly due to media's free transmission, to feel an increased risk of crime, which was recognized by a society, as a serious obstacle to achieving a satisfactory standard of life. The state was no longer able to provide broadly understood security – this in turn triggered a lasting change – which is the de-monopolization of security¹.

Paradoxically, the next determinant of the threat was Poland's entry into the anti-terrorist coalition and the participation of the Polish Armed Forces in both stabilization missions and military operations abroad. This move created a real threat for our country – the threat of extremists. State authorities faced a real problem at that time to effectively resist these new challenges, which resulted in an increased dynamics of the security threat. In this new situation, the state quickly realized that the existing, centralized security management is ineffective, because it does not provide a proper response to the threat determinants unknown in Poland before. Thus, sharing the responsibility of the public safety with other than governmental entities was a result of, on the one hand, processes of democratization of the state, and on the other, the inability to self-combat the existing threats. In this way, a gradual de-monopolization of security took place. According to the *Dictionary of the Polish language PWN*, the word “monopoly” is defined as “someone's exclusive right to something”².

¹ Por. A. Czop. *Udział firm ochrony osób i mienia w zapewnianiu bezpieczeństwa publicznego w Polsce*. Katowice, 2014. S. 9.

² URL: <https://sjp.pwn.pl/szukaj/monopol.html> (data pobrania: 2018-06-28).

In this context de-monopolization means “the decommissioning of the existing monopoly, in a specific field. For many years, the area that was completely monopolized by the state was security. It is widely recognized as one of the basic human needs, whose satisfaction enables him to use other values, giving the opportunity to survive and develop”.

In this publication, the author formulated a research problem in a question: “Do the self-governments play an important role in ensuring public safety in Poland?”

To find the answer to this question, he also identified detailed problems:

- 1) Is the public safety system homogeneous?
- 2) What tasks are carried out by self-governments in the area of ensuring public safety?
- 3) What is the role of municipal/city guards?

Public security system

Jan Widacki and Paweł Sarnecki assume that the term “public security” includes the notions of “internal security of the state” and “national security” and means, namely, correct, not threatened operation of public structures, in which citizens operate, or which act for citizens, as well as enforce civic duties towards country. Therefore, all members of the society are interested in the efficient and safe operation of these structures, because they ensure the fulfillment of their basic needs¹. The issue of public safety was also addressed by the Supreme Court², which, by a verdict issued on 22 December 1993, described it as: “the whole order and social appliances, protecting citizens from phenomena dangerous to life, health or threatening with serious losses in the national economy”³.

¹ Widacki J., Sarnecki P. Ustrój i organizacja Policji w Polsce oraz jej zadania w ochronie bezpieczeństwa i porządku. Warszawa; Kraków, 1997. S. 7–15.

² Art. 175, 183. Konstytucji Rzeczypospolitej Polskiej z dnia 2 kwietnia 1997 r.

³ Wyrok Sądu Najwyższego z 22 grudnia 1993 r. I KZP 30/93. OSNKW. 1994. Nr. 1–2. Poz. 6.

Taking into account the above-mentioned definitions¹, it can be assumed that the de-mopolization of security means *permission given by the state and the creation of appropriate conditions to ensure security by other than state owned entities. This is the state's sharing of competences, tasks and responsibilities in providing security, with entities that the legislator provided for this purpose with certain powers and tools, allowing them to conduct effective actions.* A system to ensure public safety is provided by an organized set of subsystems cooperating with each other and forming a coherent whole, aimed at achieving a common goal that is obtaining and maintaining a desired conditions in the state, understood as a lack of danger in the life of society and its individual members enabling them to constantly and sustainably develop. These subsystems function on the basis of the competences assigned to them, carrying various tasks aimed at effectively counteracting all determinants of threats and preventing acts harmful to the welfare of the state, its public order, life, health and property of its citizens.

Leszek Korzeniowski defines the basic attributes characterizing such a defined security system, being a certain type of social system, by the following elements²:

– a common goal and a sense of connection between the structure as a whole and its individual elements;

¹ Zob.: Maslow A. *Motywacja i osobowość*. Warszawa, 2009. S. 53; Kawka W. *Policja w ujęciu historycznym i współczesnym*. Wilno, 1939. S. 46, 67–68; Ura E. *Prawne zagadnienia bezpieczeństwa państwa*. Krajowa Agencja Wydawnicza. Rzeszów, 1988; Zaborowski J. *Administracyjno-prawne ujęcie pojęć bezpieczeństwo publiczne i porządek publiczny*. Zeszyty Naukowe ASW. Nr 41. Warszawa, 1985. S. 85; Litwin J. *Prawo administracyjne*. Cz. 4. Warszawa, 1953; Pieprzny S. *Administracja bezpieczeństwa i porządku publicznego*. Rzeszów, 2008. S. 13–14; Pływaczewski E. *Przestępstwo czynnej napaści na funkcjonariusza publicznego*. Toruń, 1985. S. 16; Bolesta S. *Pojęcie porządku publicznego w prawie administracyjnym*. Studia Prawnicze. Nr 1. 1983. S. 243; Pieprzny S. *Administracja bezpieczeństwa...* Op. cit. S. 14; Ochendowski E. *Podmioty administracji publicznej i prawne formy ich działania*. Toruń, 2005. S. 21.

² Por. L. Korzeniowski. *Podstawy nauk o bezpieczeństwie*. Warszawa, 2012. S. 84.

- the limit defining the scope of individuality from the environment;
- organizational culture understood as values, norms and principles regulating the actions of individuals and parts in the processes, taking place in the system;
- the structure of the system, that is, the internal layout and relations between the links of the system;
- cooperation of the structure components aimed at achieving the goal;
- management, i. e., managing the activities of the cells constituting the structure.

All participants of this system, despite the fact that they act on the basis of various legal acts and have a different institutional subordination, function in the same public space, carrying out various tasks for public safety. The creation and functioning of the public security system is the responsibility of the state, for which, ensuring security is one of the basic and most important tasks¹.

The system of public safety understood in this way consists of following subsystems:

- Governmental;
- Self-governmental;
- Private.

Governmental subsystem²

It consists of state uniformed services, including: Police, Internal Security Agency, Intelligence Agency, Military Counterintelligence Agency, Military Intelligence Agency, Central Anticorruption Bureau, Border Guard, Government Protection Bureau, State Fire Department and Prison Service³. The *Internal Affairs section of the Act* includes

¹ Por. A. Czop. System bezpieczeństwa publicznego w Polsce [w:] Kultura Bezpieczeństwa. Nauka – Praktyka – Refleksje. Nr 12/red. W. Hrynicki, J. Piwowarski. Kraków, 2012. S. 74.

² Zob. System bezpieczeństwa publicznego Rzeczypospolitej Polskiej ze szczególnym uwzględnieniem prywatnego sektora ochrony. Kraków, 2016. S. 23–89.

³ Czop A., Soplityk R. Badanie struktury bezpieczeństwa publicznego w Polsce. Kraków, 2017. S. 6–7.

such tasks fulfilled by these formations as: protection of public safety and order, protection of the state border, crisis management, civil defense, fire protection, counteracting the effects of natural disasters, supervision of mountain and water rescue¹.

Private subsystem²

It is created by personal and property protection companies. A joint initiative undertaken by state authorities and the private security sector led to the adoption of the long-awaited *Act on the Protection of Persons and Property* by the Sejm on August 22, 1997³. Thus, the state administration, responsible for the state security system, recognized that its partner at the local level will be entrepreneurs running licensed economic activity that meets high, strictly defined requirements and employs employees with appropriate professional qualifications. The process of security commercialization has begun.

Self-governmental subsystem⁴ – municipal level

Its creation was the result of the already described de-monopolization of security. In order to implement this, it was necessary to introduce new legal regulations. An important legal act from this point of view was the *Act of 8 March 1990 on Local Self-Government*⁵, which in art. 7 considered that satisfying the collective needs of the community of residents belongs to the municipality's own tasks. It pointed out particularly important tasks: to keep public order and security of citizens as well as fire and flood protection, including equipment and maintenance of the municipal flood protection warehouse⁶.

¹ Ustawa z dnia 4 września 1997 r. o działach administracji rządowej. Dz.U. 1997. Nr 141. Poz. 943, z późn. zm.

² Zob. A. Czop. System bezpieczeństwa publicznego Rzeczypospolitej Polskiej ze szczególnym... Op. cit. S. 104–124.

³ Dz. U. 1997. Nr 114. Poz. 740.

⁴ Zob. A. Czop. System bezpieczeństwa publicznego Rzeczypospolitej Polskiej ze szczególnym... Op. cit. S. 90–103.

⁵ Dz. U. 1990 nr 16 poz. 95.

⁶ Por. A. Czop. System bezpieczeństwa publicznego... Op. cit. S. 79–80.

On December 22, 1999, pursuant to the *Resolution of the Krakow City Council No. XL / 299/99, the Security Improvement Program for the City of Krakow* was launched under the title “*Safe Krakow*”. The program was a response of the city authorities to an increase in crime and a low sense of security for the residents of Krakow. To improve the evaluated situation, with a help of many social environments, a comprehensive and coherent program of planning and coordination of various institutions in the area of safety and public order was created¹. The City Guard was the most important partner for the Police in the implementation of tasks related to improving the safety and public order in the city. Such solutions were also accepted in other municipalities, both those of the metropolitan agglomerations and in small towns, which inhabitants and representatives of local governments recognized that the Police alone would not provide them with needed security level.

The municipal council obtained the right to select permanent and ad hoc committees to carry out specific tasks with the possibility of determining the subject of their operation as well as their personal composition. In many communes, Committees for public order and safety started to function, often including participation of the councilors who were not their members. These committees are subject to the Commune Council, they submit their work plan and periodic reports of their activities².

In the scope of matters not regulated in separate acts or other generally applicable regulations, the Municipal Council has also obtained legislative powers. The power of issuing law regulations is applicable when it is necessary to protect the life or health of citizens and to ensure order, peace and security of the public³. Order regulations, as acts of local law, may include a fine, imposed in accordance with the procedure and rules specified in the law on misdemeanors.

¹ Miasto Kraków; Biuletyn Informacji Publicznej. URL: https://www.bip.krakow.pl/?sub_dok_id=700 (data odczytu: 20.07.2018).

² Art. 21. Ustawy z dnia 8 marca 1990 r. o samorządzie terytorialnym. Dz. U. 1990. Nr 16. Poz. 95.

³ Ibid., Art. 40 ust. 3.

Local self-governmental subsystem – poviats level

On June 5, 1998, the Sejm of the Republic of Poland adopted another law extending local government prerogatives to the poviats level. Thus, the poviats was entrusted with the execution of public tasks defined by statutes, also in the area of public order and security of citizens¹.

In this legal act, it was indicated that other acts specify cases in which the competent government administration authorities may impose the obligation to perform specific activities on the poviats, within the scope of tasks of the poviats, related to the elimination of direct threats to public safety and order or defense. In a situation when these activities are carried out as part of an organized action, the imposition of the indicated obligation may concern the performance of certain activities also outside the poviats's territory. The legislator anticipated that for the implementation of those tasks, the poviats should be reimbursed with the necessary expenses and expenditures². An important prerogative of the poviats's council is the adoption of a poviats crime prevention program and protection of citizens' security and public order. The Act introduced a previously unknown legal institution, called Poviats Unitary Administration, which included: poviats Starost's office, poviats labor office, which is an organizational unit of the poviats, along with other organizational units, which are an auxiliary apparatus for chiefs of poviats's services, inspections and guards (commands and inspectorates). Starosta, being the head of the poviats's office, became the superior of the district administration and heads of the district organizational units and the superior of the poviats services, inspections and guards³.

As in the case of the municipal, the poviats council has gained the right to appoint permanent or ad hoc committees for specific tasks, among which, as the practice indicates, the committees on order and security are of particular importance. They enable the Starost to carry

¹ Art. 4 ust. 1 pkt 15. Ustawy z dnia 5 czerwca 1998 r. o samorządzie powiatowym, Dz. U. 1998. Nr 91. Poz. 578.

² Ibid., Art. 7.

³ Ibid., Art. 35 ust. 2.

out tasks in the field of sovereignty over powiat services, inspections and guards as well as tasks defined in acts in the field of public order and security of citizens. The committees are responsible for:

- assessment of threats of public order and security for citizens in the powiat;
- providing opinions on the work of the Police and other powiat services, inspections and guards, as well as organizational units performing tasks in the area of public order and security for citizens of the powiat;
- preparing a draft of powiat crime prevention, public order and security program;
- providing opinions on draft programs for cooperation of the Police and other powiat services, inspections and guards as well as organizational units performing tasks in the area of public order and security for citizens in the powiat.

The Commission, which term is three years, consists of two representatives delegated by the powiat's (city) police. In case of the capital city of Warsaw they are delegated by the Warsaw Police Commander¹.

The chairman of the commission, in order to perform its tasks, may demand from the Police and other powiat's services, inspections and guards, as well as powiat's and municipal organizational units performing public order and security tasks, documents and information about their work, except personal files of employees and officers, operational-reconnaissance or investigative materials and files in individual administrative cases².

The Starost is obliged to create an operational plan to fight the flood, as well as to announce and cancel the flood alarm.

The statutory procedure for presenting the report by the powiat's chief of the police on the activities of the unit subordinate to him gives the powiat's council the opportunity to draw up a relevant resolution. It defines the directions of work on safety that are important for the local

¹ Czop A. *Udział firm ochrony osób i mienia...* Op. cit. S. 107.

² Art. 38b ust. 1. Ustawy z dnia 5 czerwca 1998 r. o samorządzie powiatowym. Dz. U. 1998. Nr 91. Poz. 578.

community. However, it cannot contain conclusions and indications regarding specific methods of police work. It is an important factor allowing the local authorities to determine the directions of Police activity in the area of ensuring public safety.

According to Art. 11, Item 1 of the Act, the Starost has the right to: require from the poviát's commander of the police - in an event of a real threat to security – to bring the situation to the initial state (provided for by legal framework) or action to prevent breaking the law.

In matters not regulated in separate acts or other generally applicable regulations, in particularly justified cases, the poviát's council may issue poviát's order regulations providing that:

- it is necessary to protect the life, health or property of citizens;
- it is needed to provide environmental protection;
- to ensure order, peace and public safety, if these causes occur

in the area of more than one municipality. These acts of local law may provide, in the event of violation, fines, administered in accordance with the procedure and under the rules set out in the law on offenses¹.

Self-governmental subsystem – voivodeship level

Along with *the Poviát Self-Government Act*, the Sejm of the Republic of Poland has passed *the Act on the Self-Government of the Voivodship*². It provides that on the basis of statutory authorizations and within its boundaries, the Voivodship Assembly sets the acts of local law applicable in the area of the voivodeship or its part.

The voivodship self-government performs voivodship tasks defined by acts, in particular in the field of public safety³. The voivodship assembly, like the municipal and poviát's legislative authorities, may appoint permanent and ad hoc committees to carry out specific tasks, which enable to take care of public order and safety matters⁴. According to Art. 15, Items 4 and 4a of the *Act on*

¹ Ibid., Art. 41 ust. 1 i 2.

² Ustawa z dnia 5 czerwca 1998 r. o samorządzie województwa. Dz. U. 1998. Nr 91. Poz. 576.

³ Ibid., Art. 14 ust. 1 pkt 14.

⁴ Ibid., Art. 28 ust. 1.

Government Administration in the Voivodship, the Voivode acts as a representative of the government and his plans are to be implemented in the voivodship. He is to ensure cooperation of all organizational units of government and self-government administration operating in the voivodship. He also manages their work in the area of:

- protecting life, health and property;
- caring for the natural environment;
- protecting and upholding the civil rights;
- securing the voivodship in the event of natural disaster and repairing its consequences according to the rules included in the Acts, is obliged to assess flood protection, creates an operational plan for fighting floods and also has the option of announcing and canceling flood alarms¹.

The Voivode plays a significant role in activities related to maintaining security and public order, directing all activities performed by state administration institutions in a given province. He has coordination and supervisory competences in this area.

The Voivode has additional competences in the event of a natural disaster. According to Art. 11 of the *Act on the State of Disaster*² the coordination of works remains in the hands of the Voivode in order to fight the natural disaster and to remove its effects on the territory of the voivodship. It is tantamount to taking over sovereignty over organs and organizational units of the government administration as well as the voivodship self-government, functioning in the province, as well as other tools entrusted in the possession of the Voivode (including units and subunits of the Armed Forces of the Republic of Poland³), intended to operate in the Province territory.

¹ Ibid. Art. 28 ust. 1.

² Ustawa z dnia 18 kwietnia 2002 r. o stanie klęski żywiołowej. Dz. U. Z. 2002. Nr 62. P. 558.

³ Siły Zbrojne Rzeczypospolitej Polskiej służą ochronie niepodległości państwa i niepodzielności jego terytorium. Zapewniają bezpieczeństwo i nienaruszalność jego granic. Jako podstawowy element systemu obronnego państwa uczestniczą w realizacji polityk: bezpieczeństwa i obronnej. URL: <http://www.mon.gov.pl/sily-zbrojne> (data dostępu 16 sierpień 2018 r.).

From the analysis of legal acts, the state has given the right to administer public order and safety also to self-government bodies, which does not mean that government authorities are deprived of competence in the implementation of these tasks. It still remains primarily in the hands of the services and formations belonging to the government administration, which perform basic tasks in this area. The activities of local government entities are only of a supplementary and auxiliary nature¹. This is due to the fact that territorial self-governments do not have such authoritative powers as governmental bodies and so they do not have adequate tools to effectively combat threats generated by the environment in which they operate. Hence, they focus their attention mainly on protective activities. The widest range of security tasks has been delegated to the municipal level, which implements these tasks mainly through the creation of Municipal / Municipal Guards². Initially, they were established and operated on the basis of *the Police Act*, currently these issues are regulated by *the Act of 29 August 1997 on Municipal Guards. U. of 1997 No. 123, item 779*³.

Municipal / City Guard – organization, tasks and power

At its current state, the Municipal Guard is a self-governmental, uniformed formation for the protection of public order, functioning in the commune and fulfilling a servant role towards the local community. The formation of this unit is optional⁴. The Commune Council may establish a municipal guard after having first consulted the territorially competent provincial commander of the Police (Capital Chief of the Police in case of Warsaw). Voivode is also being notified about this. In municipalities where the mayor (city president) is the

¹ Por. M. Karpiuk. Miejsce samorządu terytorialnego w przestrzeni bezpieczeństwa narodowego. AON. Warszawa, 2014.

² Por. A. Czop. System bezpieczeństwa publicznego... Op. cit. S. 81.

³ Por. S. Pieprzny. Administracja bezpieczeństwai porządku publicznego. Rzeszów, 2008. S. 136.

⁴ Por. J. Gierszewski. Bezpieczeństwo wewnętrznezarys systemu. Warszawa, 2013. S. 181.

executive body, this guard is called the “city guard”¹. Costs related to the operation of the guard are covered by the commune budget. According to the Act, a person can become a guardian if he/she:

- has Polish citizenship;
- is 21 years old;
- enjoys full public rights;
- has at least secondary education;
- enjoys an impeccable opinion;
- is physically and mentally fit;
- was not convicted by a final court judgment for commitment of a public prosecution crime or a deliberately committed crime or fiscal offense².

The guards and persons applying for admission as a guard are subject to obligatory medical and psychological tests. While performing their duties, they are required to wear uniforms, a service card, an identification mark and a commune emblem. When performing official duties, the guard uses the legal protection provided for public officials.

The guards are commanded by the chief, employed on the basis of a contract of employment by the commune head, mayor or president of the city, after consulting the territorially competent provincial (Capital) commander of the Police³. The supervisor of the chief is the commune head, mayor (city president), who supervises the ongoing substantive activity of the guard. The Voivode, acting through the provincial (Capital) Police commander, oversees the activities of the guards in the exercise of powers of quasi-police, the use of firearms, means of direct coercion and records, job positions and equipment, including direct coercion means, firearms, devices that automatically disclose and record traffic violations, technical measures to observe and record the image of events in public places, vehicles and results of activities.

¹ Art. 1 i 2 Ustawy z dnia 29 sierpnia 1997 r. o strażach gminnych. Dz. U. z 1997 r. Nr 123. Poz. 779 z późn. zm.

² Ibid., Art. 24.

³ Ibid., Art. 7.

For the efficient performance of the entrusted tasks, the municipal guard cooperates with the police¹. For this purpose, the commune head, mayor (city president) may enter into an appropriate agreement with the territorially competent police commander, defining the framework and principles of such co-operation². In particular, it may consist of constant, ongoing exchange of information on local threats in the area of personal and property security as well as public safety and order. It can determine the organization of a common communication system, which ensures constant communication between police and guards units³. The agreement can coordinate the dislocation of police forces and guards, taking into consideration the geography and dynamics of threats. It can also determine the conduct of joint activities undertaken to ensure safety and order in places of gatherings, artistic, entertainment and sports events, as well as in other public places. The agreement may provide a ground to organize joint training and exercises of police officers and municipal guards and facilitate the exchange of information in the field of observing and recording, by technical means, events taking place in a public space. The guards carry out tasks in the field of public order protection following the Acts and acts of local law after the successful completion of the basic training. They may, for the purpose of carrying out statutory tasks, process personal data, without the knowledge and consent of the data subject, if those have been obtained as a result of actions taken in proceedings for misdemeanors or from registers,

¹ Ibid., Art. 9 ust. 4.

² Porozumienie administracyjne stanowi czynność dwustronną lub wielostronną z zakresu prawa administracyjnego. Dokonywane jest przez podmioty wykonujące administrację publiczną, dążące do zgodnych oświadczeń woli. Najważniejszą cechą porozumienia jest to aby jedna ze stron była jednostka realizującą funkcję administracji publicznej. Istotą jest tutaj wspólne wykonanie zadań lub przekazanie zadań z jednego podmiotu na drugi. Zgodnie z ustawą o samorządzie gminnym z 8 marca 1990 r. zostały wprowadzone porozumienia jako forma współdziałania administracji publicznej, dodatkową regulacją jest również ustawa z 22 marca 1990 r. o terenowych organach administracji rządowej. URL: https://lexplay.pl/arttykul/prawo_administracyjne/porozumienie_administracyjne (data dostępu 18 sierpień 2018 r.).

³ Por. J. Gierszewski. Bezpieczeństwo wewnętrzne... Op. cit. S. 182.

records and collections to which, the guard, has access based on separate regulations¹.

The basic tasks of the guard include²:

- protection of peace and order in public places;
- vigilance over the order and control of traffic – within the scope specified in the traffic regulations;
- control of public transport – to the extent specified in art. 45 par. 1 of the Act of 16 December 2010 on public collective transport (Journal of Laws No. 5, Item 13);
- cooperation with relevant entities in the field of saving the life and health of citizens, assistance in removing technical failures and the consequences of natural disasters and other local threats;
- securing a crime scene, a disaster site or other similar incident, along with places which are at risk of such an event from an unauthorized access or destruction of traces and evidences until the appropriate services have arrived and determining, if possible, the witnesses of the event;
- protection of municipal facilities and public utility facilities;
- cooperation with organizers and other services in providing order and protection during public gatherings and events;
- bringing drunk people to the sobering-up center or their place of residence, if these persons give their reason to scandalize in a public place, are in circumstances that threaten their life or health or threaten the life and health of others;
- informing the local community about the state and types of threats, as well as initiating and participating in activities aimed at preventing crimes and misdemeanors as well as criminogenic phenomena and cooperating in this respect with state, self-government and social organizations³;

¹ Art. 10a Ustawy z dnia 29 sierpnia 1997 r. o strażach gminnych. Dz. U. z 1997 r. Nr 123. Poz. 779 z późn. zm.

² Por. T. Fijałkowski. Straż Gminna, miejska podstawy prawne działania, prawa, obowiązki. Warszawa, 2011.

³ Misiuk A. Administracja porządku i bezpieczeństwa publicznego. Zagadnienia prawno-ustrojowe. Wydawnictwo Akademickie i Profesjonalne. Warszawa, 2008. S. 208.

– escorting documents, valuable items or monetary values for the commune's needs¹.

Simultaneously, the municipal guards are, due to their powers, an important element in the public security system of the state². The presented solutions show that at the municipality level, the guard has a subsidiary role in relation to the Police, who is obliged by law to ensure order and security throughout the whole country³.

The data⁴ clearly show that municipal guards are very much involved in maintaining order and security in their areas. It is worth noticing that their actions allow the Police to deal with other issues of greater importance, such as the counteracting of more serious criminal activity. The conducted research indicates a constant tendency to route the guard on the systematic support of the Police in combating common crime, in counteracting hooliganism, disturbances of public order and social pathologies⁵. Many guards implement their own prevention programs in the area of counteracting of risky behavior and even as part of criminal prevention. Municipal and City guards have been successfully incorporated into the public security system.

Conclusions

In the course of the analysis of legal acts and literature on the subject, the author answered the detailed research problems formulated at the beginning of the publication. The collected material shows that the public security system in Poland is not homogeneous, but consists of three levels: governmental (so-called uniformed services), private-commercial (personal and property security companies) and self-governmental (Municipal/City Guards).

¹ Art. 11 ust. 1. Ustawy z dnia 29 sierpnia 1997 r. o strażach gminnych, Dz. U. z 1997 r. Nr 123. Poz. 779 z późn. zm.

² Pieprzny S. Ochrona bezpieczeństwa i porządku publicznego w prawie administracyjnym. Rzeszów, 2007. S. 151.

³ Zob. Lisiecki M., Kwiatkowska-Basałaj B. Pojęcie bezpieczeństwa oraz prognostyczny model jego zapewnienia/[w] red. P. Tyrała. Zarządzanie bezpieczeństwem. Kraków, 2000. S. 59.

⁴Zob. Raport Komendy Głównej Policji. Warszawa, 2017.

⁵ Zob. Rojtek R., Bezpieczeństwo publiczne w Polsce-wnioski z badań. Warszawa, 2010. S. 16.

The author showed that local self-governments carry out important tasks related to public safety, including matters of public order, security of citizens, fire and flood protection, including equipment and maintenance of the communal flood protection warehouse. Self-governments have obtained the right to issue order regulations when it is necessary to protect the life or health of citizens and to ensure order, peace and public safety. Commissions for order and safety, which function at the county (poviat) level, enable the Starost to carry out tasks in the field of sovereignty over poviat services, inspections and guards as well as tasks specified in statutes, in the area of public order and security of citizens. A special task of those commissions is to develop a project of a poviat crime prevention and public order and security program, which is a framework action program for services operating under the so-called complex administration.

The author considered municipal/city guards to be an important tool for ensuring order and security in the commune, which fulfill a complementary function in relation to the activities undertaken by the Police, taking over a large part of the preventive activities¹.

The research process finally allowed the author to give a positive answer to the main research problem and to say that currently local governments play an important role in ensuring public safety in Poland².

1.4. Separatism as a Threat to European Security

Romaniuk Natalia

At the beginning of the XXI century the activation of the globalization processes as well as transformation of political and economic

¹ Zob. Hołyst B. Kryminologia. Warszawa, 2007. S. 1472–1473.

² Pieprzny S. Ochrona bezpieczeństwa... Op. cit. S. 151.

© *Romaniuk Natalia* – PhD of Geographical Sciences, Associate Professor of International Relations and Regional Studies Department, Lesia Ukrainka Eastern European National University.

regimes in the world led to an intensification of separatist movements. Being a controversial socio-political phenomenon nowadays separatism represents one of the most complex and topical problems in the world community, therefore its study is worth considering as a threat to international security.

In the scientific literature there is no single approach to the interpretation of the “separatism” concept. It is determined both as a way of solving the problem and as a movement for territorial separation and as a policy and practice of the activities of social and political movements. Separatism (from the Latin “separatus” – a separate one) is usually the theory, policy and practice of separation, separation of a part of the state’s territory in order to create a new independent state or to obtain the status of a broad autonomy¹.

The researcher A. Baranov claims that separatism always arises on the basis of the deeply experienced and clearly perceived impairment of its position felt by the ethnic group, and therefore separatist sentiment is the result of a long process of self-awareness within the ethnic community. According to the author, separatism has been and remains a radical, egocentric way of solving problems that somehow arise in multinational societies in order to separate from a single system and the formation of their own statehood, which in turn leads to the loss of a part of the territory by the state and its receipt hostile neighbors².

The emergence of a separatist movement is possible in the presence of two conditions: the discrimination of the ethnic community by the state and the formation of an active political elite capable of leading this movement³. Moreover, the ethnic unit is deprived of political rights, unlike the dominant majority. Economic discrimina-

¹ Divak V. V. Separatyzm yak sotsialno-politychne yavyshche: sutnist i prychny vynyknennia. Derzhava i pravo: z. nauk. prats. 2008. Vyp. 39. S. 690–695.

² Baranov A. V. Separatizm v sovremennom mire: politiko-territorialnyy aspekt. Chelovek. Soobshchestvo. Upravlenie. 2005. № 3. S. 108–123.

³ Kliuchnyk R. Separatyzm yak svitova mehatendentsiia suchasnosti. Politychnyi menedzhment. 2011. № 6. S. 120–128.

tion leads to a situation of “internal colony”, when a certain part of the territory turns into a kind of economic donor¹.

According to the American researcher P. Spencer national identity is the main driving factor leading to the emergence of separatism². The ideology of separatism should be based on the historical experience of the independence of the nation, which took place in this region. If it is not, then you should look for resistance to the independence of identical territories or relatives of ethnic origin. Nationalists can come to an agreement with the central government, making the level of autonomy a bargaining object for their people or region³.

Separatists always consider self-determination as a rejection of the state as a politically integral territorial unit, a political and cultural division⁴. The motives of the separatists can be political, economic, ethnic, confessional, and territorial by their very nature in connection with which several types of separatism are distinguished. Ethnic separatism is the most widespread in the modern world, since almost every ethno-social community tries to use the right to self-determination and realize it until the creation of its own state⁵.

There are many reasons for the emergence of separatism. The most typical of these are ethnic, religious, linguistic, economic, political, etc. The main forms of the manifestation of separatism, depending on the goals set by the leaders of the separatist movements, are secession, andredentism, enolysis, and evolution (Fig. 1).

¹ Politolohichniy entsyklopedychnyi slovnyk. Kyiv: Heneza, 1997. 400 s.

² Molina F. The historical dynamics of ethnic conflicts: confrontational nationalisms, democracy and the Basques in contemporary Spain. ASEN/Blackwell Publishing Ltd, Nations and Nationalism. 2010. P. 240–260.

³ Tsebenko O. O. Ideolohichni zasady separatyizmu. Aktualni problemy mizhnarodnykh vidnosyn/Kyivskyi nats. un-t im. T. Shevchenka, In-t mizhnar. vidnosyn. Kyiv: In-t mizhnar. vidnosyn. 2011. Vyp. 99, ch. 2. S. 90–94.

⁴ Tishkov V. A. Moralnost separatyizma. Institut etnologii i antropologii. URL: http://www.valerytishkov.ru/cntnt/publikacii3/lekcii2/lekcii/n61_moralno.html (access.: 15.08.2018).

⁵ Divak V. V. Separatyizm yak sotsialno-politychne yavyshe: sutnist i prychny vynyknennia. Derzhava i pravo: zb. nauk. prats. 2008. Vyp. 39. S. 690–695.

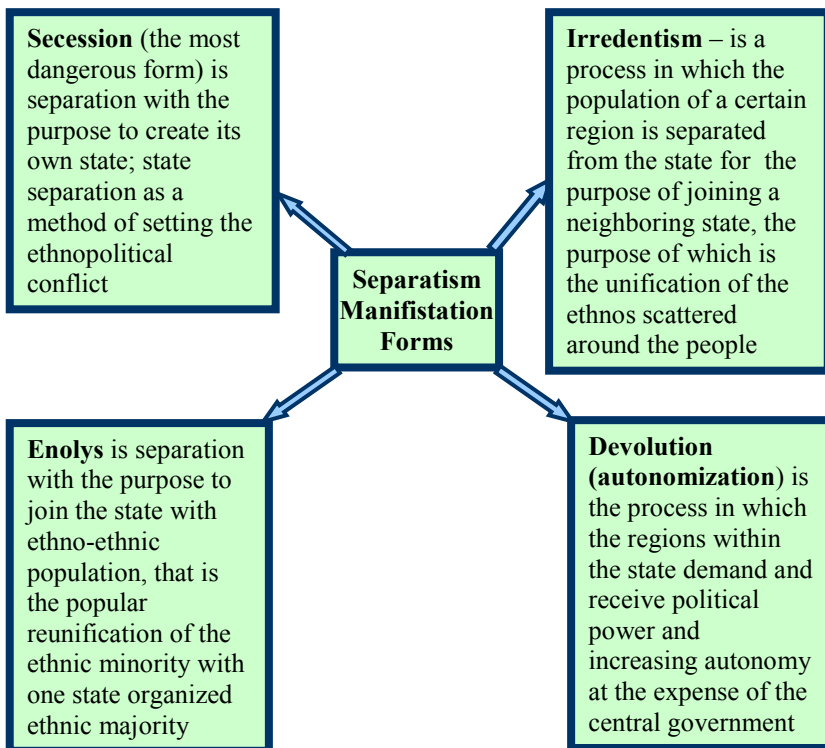


Fig. 1. *Forms of the separatism manifestation depending on the goals set by the leaders of separatist movements*

The most widespread ethnic separatism, which in essence is an ethno-territorial conflict, is based on the desire of the ethnic group to stand out from the general state, perceived by its representatives as the state formation of another ethnic group¹. The emergence in the position of one of the conflicting parties of the elements of separatism internationalizes the conflict and obeys the needs and norms of international law.

Ethnic separatism can be deployed in the following forms¹:

¹ Bolotnikova O. R. Etnoseparatizm i ego perspektivy. *Mirovaya ekonomika i mezhdunarodnyie otnosheniya*. 2011. № 5. S. 32–42.

¹ Basarab M. M. Etnichniy separatyzm: imanentna konfliktnist chy vidpovid na zahrozy tsinnosti. *Naukovi zapysky Instytutu politychnykh i etnonatsionalnykh doslidzhen im. I. F. Kurasa NAN Ukrainy*. 2011. Vyp. 4. S. 295–306.

1) open, where means and methods of separatist realization of their intentions include such public actions as statements, mass protests, open military confrontation;

2) hidden, where means and methods of separatist realization of their intentions are non-public acts such as underground and anonymous terrorist activities, the use of pressure on their opponents through third parties.

A characteristic feature of modern times is that ethnic conflicts are less often manifested as wars between states, more often they originate in the territory of one country. This is due to the fact that the sources of crises in some cases are instability, underdevelopment and poverty, which contribute to the rise of religious integrity (eg, Islamic fundamentalism) in the territory of a single state. The causes of conflict can be the fight against poverty, or, on the contrary, attempts to overcome it, which causes social change.

Non-state actors, extremist religious movements, criminal gangs and transnational terrorist groups, are increasingly appearing to be parties to the ethnopolitical separatist conflict. Ethnic clashes become dangerous because they are used by terrorists and armed illegal groups. Terrorists create their bases in uncontrolled territories of countries which authorities cannot manage them, for example, the organization of the ETA in Spain.

Today, the new grounds for artificially infiltrating separatist sentiment in certain regions of the world generate the expansion of communicative opportunities in the post-industrial world¹. One can come to the conclusion that in a society with a higher level of political culture and economic welfare, ethnic separatism has considerably less chance of developing in rapid and sharp manifestations.

External factors have a significant influence as well on the emergence of separatism, which can either accelerate or reduce the intensity of separatism. In the political sphere separatism can lead to negative consequences, for example, the weakening of state sovereignty, the destabilization of the situation in the country, etc.

¹ Basarab M. Hlobalizatsiini tendentsii: novi stymuly dlia separatyizmu. Naukovi zapysky Instytutu politychnykh i etnonatsionalnykh doslidzhen im. I. F. Kurasa NAN Ukrainy. Kyiv, 2011. Vyp. 5. S. 275–286.

V. Tishkov notes the morality of separatism. By the moral approach, often there is sympathy for those who want to separate and for this purpose a program of national self-determination is created with an argument in favor of the program of secession (branch to create its own state) and the desire to get rid of the humiliated status of a minority – a status that can be characterized as discrimination, over-exploitation, ethnocide, colonial oppression.

The desire to get rid of this status is also explained by the desire to preserve and develop the integrity and features of small cultures that are destroyed by a dominant culture. The key to achieving this goal is the exit from the existing system and the acquisition of its “own” state or the reunification of the territory with “historic homeland”¹.

Consideration of separatism in terms of the moral approach encounters a number of significant problems: firstly, secession is always a serious redistribution of resources and power, which can not but be accompanied by causing damage to a large number of people, and if the majority loses and the minority wins, so why should it be considered moral? Secondly, supporters of secession and internal separatists use as an argument the necessity to eliminate discrimination, when in fact the latter does not exist at all, or, on the contrary, permeates the entire society, and does not concern only certain groups that seek separatism.

An interesting point of view concerning the practical implementation of separatism was proposed by the ethnopolitical scientist T. Gurre, who, according to the demands of the ethnic region, developed the Theory of “three groups”: “Voice” (the requirements of cultural autonomy); “Loyalty” (refusal of conflict in exchange for attention and recognition); “Exit” (the requirements of self-determination, which may also be related to federalization). In his view, separatism is an inevitable feature of state development, and it does not always mean the achievement of secession. Almost all researchers denote the federalization of states (decentralization of governance) as

¹ Tishkov V. A. Moralnost separatizma. Institut etnologii i antropologii. URL: http://www.valerytishkov.ru/cntnt/publikacii3/lekcii2/lekcii/n61_moralno.html (access.: 15.08.2018).

a way of solving problems with the rights of a separate ethnic community and democratization¹.

According to point of view of some scholars, autonomization should not be considered as a form of separatism, since it does not violate the territorial integrity of the state. In Scotland, for example, the term “devolution” is used when it comes to increasing power in Edinburgh’s hands and the transition to the widest possible autonomy and possible independence.

The openness of territorial and communication frontiers leads to the transparency of state borders, bridges the gap between internal and external policies, which threatens ethnic identities. This causes defensive reflexes from many ethnic minorities who have a conscious collective desire to maintain their own separation. Such processes give rise to additional inter-ethnic conflict. Ethnic minorities objectively feel the need to protect their identity².

Separatism can have negative consequences for the country, specifically, it manifests itself in the general destabilization of the situation, the weakening of state sovereignty and the exit of certain territories from the control of the central government, the emergence of organizations and parties that appear under the slogans of separatism and have significant political influence; it undermines the authority of the central government among the country’s population, it provokes the emergence of refugee problems, which can have serious political and socio-economic implications.

Seraphism as a socio-political phenomenon also has positive functions that articulate the interests of the region population in the political, socio-economic, and cultural spheres. The extension of market relations, the expansion of free trade zones, on the one hand, lead to the rapprochement and deepening of the integration of the countries, and, on the other hand, encourage the isolationist and separatist forces that promote the revival of nationalism and the escalation of local conflicts.

¹ Tsebenko O. O. Ideolohichni zasady separatyizmu. Aktualni problemy mizhnarodnykh vidnosyn/Kyivskyi nats. un-t im. T. Shevchenka, In-t mizhnar. vidnosyn. Kyiv: In-t mizhnar. vidnosyn. 2011. Vyp. 99, ch. 2. S. 90–94.

² Ponomarova I., Murza K. Spetsyfika separatystskykh rukhiv u krainakh Yevropeiskoho Soiuzu. Politychnyi menedzhment. 2012. № 1–2. S. 235–243.

According to a Ukrainian researcher S. Blavatsky the objective reality of a globalized world order will require the redeployment of modern countries into new territorial entities: according to its forecasts, it is possible that by the middle of the XXI century. such states as Germany, Italy, the USA, Japan will no longer be integral political entities. Instead, on the economic and political scene there will be separate regions (Orange County in California, Osaka in Japan, the district of Lyon in France, Ruhr in Germany), the integrity of which will be based on economic ties and economic feasibility¹.

The reasons for the strengthening of nationalism at the present stage of world development prove that separatism is one of the consequences of an unresolved national issue in multiethnic countries. This situation is a reaction of small ethnic and linguistic communities to intensify the processes of Westernization of all forms of life in a globalized world. In this context, nationalism can be used as an ideological basis for the struggle of these communities for its own state, and therefore may have a perspective, especially in third world countries.

The European Union's highly integrated separatist movements in the EU countries (Spain, Belgium, Germany, Italy, France, Great Britain) can destabilize this international organization. Based on the identities and claims of certain ethnic, linguistic or religious groups, separatists today actively use communication technologies and transnational networks for organizing political actions both in the middle of the country and abroad (diaspora or sympathizers of these movements). For example, in Spain, the Basque terrorist group ETA (Euskadi Ta Askatasuna) repeatedly attacked the Spanish government, which did not support Catalan separatism.

The European economic crisis also contributes to the intensification of separatist movements. In the times of the economic downturn, richer regions do not want to assume an economic national burden. For example, Catalonia (Spain) and Flanders (Belgium) are rich regions of their countries. They pay significant taxes, which are redistributed by the governments of these countries, and receive much

¹ Basarab M. Hlobalizatsiini tendentsii: novi stymuly dlia separatyizmu. Naukovi zapysky Instytutu politychnykh i etnonatsionalnykh doslidzhen im. I. F. Kurasa NAN Ukrainy. Kyiv, 2011. Vyp. 5. S. 275–286.

less money back in the regions. Catalonia annually remains in the minus of such transfers in the amount of 16 billion euros¹. Experts believe that smaller and richer regions, such as Catalonia and Flanders, can have a cost-effective effect from self-staying in the EU. Strengthening the economic gap between the regions of European countries that seek to separate is an important feature of separatist movements in the twenty-first century.

Although the EU is not ready to take them immediately to the organization, stressing that they must go all the way to the EU membership. According to the European Commission, the new states will have to apply for membership for re-entry into the European Union in accordance with Articles 48 or 49 of the *Treaty on European Union*. Since joining the EU requires the consent of all its Member States, it is highly likely that their membership in the EU may be blocked by the mother-states. For example, Spain will not agree to the introduction of Catalonia to maintain its sovereignty and prevent disintegration of Europe. Therefore, the accession of separatist states could potentially create a political and economic crisis in the European Union.

Today in the EU countries, which are characterized by separatist movements, there is a situation where the separatists' actions are supported by populist parties which leads to a political crisis in the countries. For example, in Spain, the left-wing political party *Podemos* supports the right of Catalonia to self-determination. However, the main political parties in the country are afraid that if Catalan independence ever happens, the controversy about national borders, self-determination and the rights of national minorities, which once caused many European conflicts, will again be chasing this continent.

The migration crisis in Europe also intensifies the separatist movements in Europe. The rise of Muslim immigration is perceived as a threat to national identity, employment and security. Restrictions on such immigration have become a key political issue that contributes to the growth of the right political movements and the coming to power of populist parties that often support separatism.

¹ Yevropeiskyi "separatyzm bahatykh". URL: http://ipress.ua/ljlive/yevropeyskyy_separatyzm_bagatyh_12710.html (access.: 15.08.2018).

Each European country facing these problems is trying to solve them on the basis of its own political and socio-cultural traditions, according to the level of development of democracy, using such basic methods of neutralizing separatist manifestations as federalization, autonomy, regionalization. However, an analysis of the results of the use of these models by European countries suggests that none of them can finally solve these issues.

Separatism is a serious problem for the integrity and stability of not only individual European countries, but the entire European security system. The peculiarity of this process lies in the fact that the dynamics of European integration processes do not significantly affect the resolution of manifestations of separatism. Despite the existence of various ways and means to combat the manifestations of separatism in Europe, the truth remains that while separatists will be interested in any activity, no methods will be able to “neutralize” or suspend this process, which leads to the transformation of the European Union into “Europe of Regions”.

There are two scenarios for the development of events concerning separatist movements in Europe. The first scenario is seen like this: dissatisfaction and separatists protests will continue to gain momentum, separatists will seek more success in the elections, confrontation at the local and national levels, internal conflicts, the EU crisis, destabilization of the situation in the region. The second scenario is the peaceful pathway that can be achieved through agreements between the governments of the countries and representatives of the separatist movements by providing greater autonomy to certain regions, while preserving the territorial integrity of the states. No state will use force to preserve territorial integrity. According to this scenario, governments are realizing that such sentiment is a reaction to the challenges posed by globalization and multiculturalism.

A further perspective of world development is the simultaneous existence, unity and struggle of two contradictions – the growing interdependence of states in all spheres of social life and the strengthening of disintegration processes, nationalism, separatism, religious extremism as consequences of the self-identification of ethnic groups and nations.

Consequently, separatism is an objective socio-political phenomenon, which has both a negative and a positive impact on the development of society. On the one hand, separatism as secession leads to the disintegration of European states and violates the balance of geopolitical security in the region, and on the other hand, it is one of the means of realizing the economic, political, social, spiritual, linguistic interests of the ethnic group, which is fully justified in the case of political, economic and cultural discrimination of the latter. Separatism in Europe is not only a threat to the territorial integrity and national security of the states, but also a destabilizing factor in the region's development. Only joint actions by governments of the states and the whole EU will be able to prevent this threat or minimize its consequences.

1.5 Peacekeeping as a Guarantee of International Stability

Patlashynska Iryna

Fundamental and dynamic changes become the ample evidence of the modern world. At the turn of XX–XXI centuries the system of international relations has significantly changed; a new geopolitical situation has developed. The world bipolar system collapse meant the ideological, political and military confrontation end between the East and the West. Debates relative to the alternative ways developing societies like capitalist and socialist, have lost their global significance. Thus, prerequisites for building a more stable and crisis-resistant world order emerged under the influence of these significant changes, and the importance of integration associations has increased in respecting peace and security. At the global and regional levels peace and stability have become an indispensable condition for the equal coexis-

© *Patlashynska Iryna* – Ph. D. in Political Sciences, Senior Lecturer of International Communications and Political Analysis Department, Lesia Ukrainka Eastern European National University.

tence and harmonious development of all Member States of the world community.

However, traps for humankind and serious challenges to the world have appeared in the modern international sphere along with the positive dynamics, and global security as well as at the national level. Having overcome the direct threat of global war, the world community faced the danger of the emergence and intensification of unpredictable by results and difficult to control armed territorial, inter-ethnic and interfaith conflicts.

Despite the colossal efforts of the international community to maintain peace, the formation of a collective security system and the rapid evolution of strategic concepts and doctrines of peacekeeping operations, the modern world is further dipped into some instability, international conflicts, the number of which remains steadily high.

Information provided by the so-called “Conflict Barometer 2017” developed by the *Institute for the Study of International Conflicts (ISIC)* in Heidelberg (Germany), indicates that there are 20 wars in the world today, as well as conflicts with the highest escalation rates, in addition to 200 conflicts of lesser intensity. Wars and armed conflicts occur mainly in sub-Saharan Africa and the Middle East. The fighting in the east of Ukraine is recognized as the only war on the European continent. The *Barometer* has recorded 120 conflicts in Asia and Oceania that most often occur without the use of violence. As to the continent of both Americas, the only war was therein that is “war of drugs” between the government and the cartels of Mexico¹. However, these data should be observed in dynamics, as the *Barometer of Conflicts* for 2008 counted 345 disputes¹. Based on the above figures, we can safely say that reducing the number of conflicts by 40 % is the evidence of the effectiveness and efficiency of measures implemented to overcome crisis phenomena and prevent their escalation at the international level.

Speaking about international stability and security, it is impossible to ignore the main actor – the United Nations, which is endowed

¹ CREDO. URL: <http://credo.pro/2018/03/202064> (access.: 22.07.2018).

¹ URL: <https://www.dw.com> (access.: 22.07.2018).

with full legal personality on a set of measures to prevent and overcome conflicts in the world. It is the UN that is the legitimate peacemaker in the current system of international relations. It gives the unique opportunity to act appropriately on behalf of the world community to prevent and resolve ethno-political crises and conflicts. It has been already determined in the preamble of the *UN Charter* that the purpose of its activity is “to unite our forces for the maintenance of international peace and security”. After the Organization establishment, the concepts like “making peace”, “peacekeeping” or “peace enforcement” have not been clearly defined. The conceptual foundations of peacekeeping have been formed by means of the “efforts and mistakes” method. It should be noted that the *UN Charter* does not reflect the term “peacemaking”, but mechanisms for the implementation of peacekeeping operations have been established¹.

It is worth noting that “peacemaking activity”, under the influence of modern concepts, began to cover the entire spectrum of United Nations activities aimed at resolving situations that threaten international peace and security, including preventive diplomacy, peacekeeping, post-conflict peacebuilding, peace promotion, or peacemaking, as well as peace enforcement. Each of these categories denotes a set of measures of a specific nature (military/non-military, economic, political, diplomatic, etc.) assisting to resolve a conflict situation at different stages of its development. Actually, most of these activities were the result of the development of mechanisms for maintaining peace and security, as specified in the *UN Charter, in Chapters VI and VII*².

The *UN Charter* allocates the main responsibility on the UN Security Council for maintaining international peace and security. It gives broad powers to investigate disputes between parties to a conflict in order to determine whether they affect international peace and security; appeal to the parties to the dispute with a request to resolve the conflict through peace negotiations, impose economic, diplomatic and travel sanctions; and, with the others, to give the permission to use military forces.

¹ Charter of the United Nations/United Nations Department of Public Information. Kiev, 2008. P. 69.

² Ibid.

Since the founding of the UN, 71 peacekeeping operations have been conducted under the auspices of the Organization, and now, 16 missions are active. The geography of peacekeeping under the auspices of the UN mainly covers the African continent and the Middle East. However, the “blue helmets” remain in Kosovo, in Haiti and in the zone of the Kashmir conflict between India and Pakistan. In total, according to the UN, more than 95,000 military and police officers participate in these missions. They are mostly the representatives of South Asia¹.

Seventy-year history involves the first UN peacekeeping mission initiated in 1948 during the Arab-Israeli conflict and called the *United Nations Truce Supervision Organization* (UNTSO). The experience gained in the peacekeeping performance process makes possible to highlight the following UN mechanisms in peacekeeping: peacekeeping, peace enforcement operations and peace building operations.

Peacekeeping operations (PKO) ensure the ceasefire observance after the signing of an armistice agreement using methods for the peaceful settlement of disputes and are carried out in accordance with *Chapter VI of the UN Charter*. It is worth noting that this type of operation is divided into two subtypes, namely, peacekeeping operations that do not involve military forces (Articles 11, 24 and 29 of the UN Charter) and peacekeeping operations using military force (Articles 39 and 42 of the UN Charter). The principle of the non-use of forces and the use of weapons in self-defense were the main PKO features.

Under the conditions of a real threat to peace and security, peace enforcement operations are carried out involving international armed forces. These troops are given permission to use military equipment not only for self-defense, but also for the destruction of military facilities or armed formations.

Peacekeeping operations and peace enforcement operations have fundamental differences both in their nature and in scope. The deployment of peacekeeping operations initially required the consent of the warring parties, because of previous formal armistice agreements. Therefore, the troops had only light weapons for self-defense, and their functions were limited to monitoring the cease-fire. They were

¹ URL: <http://www.golos.com.ua/article/293914> (access.: 22.07.2018).

not authorized to exercise coercion to end some violence between the parties or surrender territory. It was believed that peacekeeping operations were a transitional stage from a temporary truce to the establishment of a lasting peace.

Peace enforcement operations carried out under *Chapter VII of the UN Charter* provide for more stringent and radical measures. In this case, political, economic or military sanctions are used to force the aggressor to stop actions that threaten international peace and security. The military coercion is considered an extreme method of influence and is always combined with political or economic pressure. The use of force against the aggressor provides for the use of armed forces, superior to the forces of the aggressor both with material equipment and numerically. In this case, the consent of the warring parties is no longer mandatory. Over the past decades, the bloody armed conflicts within countries have challenged one of the fundamental principles of the UN on the inviolability of state borders and brought the principle of protecting fundamental human rights and freedoms to the first place.

All this is dictated by the fact that today's conflicts, which are often called "new generation conflicts", can lead to very serious negative consequences in contrast to past ones even when they are intrastate. A vivid example of this is the situation prevailing in the former Yugoslavia¹.

The ultimate goal of peace enforcement action should be the peace restoration. Therefore, the last mechanism of peacekeeping, namely, peace restoration operations, is very important. The value of restoring peace in a post-conflict environment should be assessed realistically. If the issue is left without proper attention, the conflict may explode again. Therefore, 90 % of conflicts of the XXI century took place in countries that have already experienced a civil war, and every civil war, since 2003, has been the restoration of the past war¹.

¹ Matsiah M. M. Mechanisms for the establishment and main tenance of peacein the activities of the United Nations. Lviv university. Journal, International relations. 2008. Vol. 25. P. 47–53.

¹ World development report 2011//UN. URL: <http://wdr2011.worldbank.org/sites/default/files/pdfs/WDR201> (access.: 22.07.2018).

This testifies in favor of the fact that post-conflict settlement is a too weighty element of the world formation, a kind of bridge, a transition from conflict to stability.

Electoral operations can also be considered as a new form of peacekeeping activity, which can be both independent and as part of larger-scale post-conflict settlement operations. The UN has experience in conducting such operations in Mozambique, Angola, El Salvador, Nicaragua and Cambodia, where they had the largest scale¹.

The preventive function of the UN deserves some special attention. Almost all the peacekeeping operations can perform a preventive function, since their goal is to prevent an outbreak of violence and conflicts. However, a truly preventive deployment will occur before the outbreak of an armed conflict. In the entire history of peacekeeping operations with a preventive deployment mandate, only three operations have taken place: in Central African Republic, Macedonia and Haiti. The essential feature of these operations was that the conflict developed without the use of violence. However, the international community is not always willing to contribute to their implementation, since the problem is not always obvious, and preventive deployment requires cost and quick response.

It is precisely preventive diplomacy, involving all interested parties, that can help prevent and reduce the conflict escalation before it gets out of control. It is the preventive approach to international politics that is extremely important today. It is much easier to prevent conflicts than to manage conflicts that have already begun. Preventive diplomacy requires the parties to implement confidence-building measures; early warning; preventive deployment; the formation of demilitarized zones. UN Secretary-General D. Hammarskjöld firstly spoke about preventive diplomacy in the late 1950s. Then, the report of the UN Secretary-General Boutros Ghali, *An Agenda for Peace* (1992), was devoted to the idea of preventive diplomacy in new historical conditions conceptual for peacemaking and expanding the UN's ability to maintain international peace and security. B. Ghali noted the

¹ Perepelytsia G. M. Relations of the Ukraine with the countries of Latin America. Annals "Foreign Policy of Ukraine: Strategic Assessments, Forecasts and Priorities". R. Iv. Kyiv: Stilos., 2013. P. 263–265.

links between preventive diplomacy and diplomatic methods that are used in the early stages of the conflict to avoid discrepancies between the parties, preventing escalation of conflicts that can grow into larger conflicts and limiting the scope of conflicts after they occurred. The action opens up the possibilities of an approach, theoretically justifies direct outside intervention, which is done to limit the escalation of the conflict by using peaceful means, or, if necessary, means of coercion¹.

B. Ghali has noted in his well-known report that the task of preventive diplomacy is to use peacekeeping efforts to solve the causes of the conflict, to promote the implementation of armistice agreements, and to establish peace between warring nations. In addition, preventive diplomacy provides for the elimination of the root causes of the conflict: economic, social injustice, political pressure. The Secretary-General stresses that peacekeeping is an action aimed at encouraging the parties to a truce through the means indicated in *Chapter VI "Peaceful Dispute Resolution" of the UN Charter*.

The concept of preventive diplomacy was continued in the affairs of the next UN Secretary-General, Kofi Annan (1997–2006), who emphasized the need to apply the following areas of preventive diplomacy, namely measures to strengthen mutual trust, gathering and establishing facts for early warning of conflicts, preventive deployment, and creating demilitarized zones¹.

He put forward the idea of creating a High Level Group on Threats, Challenges and Changes and the Peacemaking Commission. His ideas were realized thanks to the creation of the bodies proposed by him.

Thus, in the UN, conceptual approaches to preventive diplomacy were formed, the basis of which consisted of three elements. The first element, "the preventive deployment of the UN forces", provides for

¹ Boitros-Ghali B. An Agenda for Peace. Preventive diplomacy, peace-making and peacekeeping. Report of the Secretary-General Pursuant to the Statement Adopted by the Summit Meeting of the Security Council on 31 January 1992 (A/47/277-S/2411117) / B. Boitros-Ghaliurl. URL: <http://www.cfr.org/peacekeeping/report-un-secretary-general-agenda-peace/p23429> (access.: 22.07.2018).

¹ Djibom J. An analysis of theory of preventive Diplomacy. URL: <http://www.peaceopstraining.Org/theses/djibom.pdg> (access.: 22.07.2018).

the possibility of deploying military contingents under the UN auspices, as well as creating demilitarized zones to end the conflict, preventing its escalation, and escalating into a regional one. The second element, “establishing trust”, provides for diplomatic methods of negotiation, mediation to constrain a conflict, and the settlement of disputes. The third element of early warning involves searching for information to identify a conflict in the latent phase for the application of other elements of preventive diplomacy.

It is also worth noting that, in the practice of the United Nations, besides the methods for the peaceful settlement of disputes defined by *Chapter VI of the Charter*, good offices are widely used. Their goal is primarily to bring the conflicting parties to the negotiating table. Good offices can be provided by the UN Secretary General as well as by the individual states or groups of states and can be considered preventive measures subject to use in time.

It is clear that preventive measures to resolve conflict situations cost a lot of money for the international community, but these costs are meager compared to the real budget of international peacekeeping activities. For example, in 1963 such operations cost \$ 400,000,000, Then in 1992, \$ 1,5 billion, and in 1994, already \$ 4,3 billion. In particular, only the maintenance of a UN peacekeeping force in Cyprus for 20 years – from 1964 to 1984 – cost about \$ 14,2 billion.

Simultaneously, it can be recalled that the annual budget of the international forces of the African Union Member Countries in Somalia (AMISOM), which is also partially funded from the UN budget, has increased from \$ 350 to 900 000 000 along with various accompanying assistance programs from 2009 to 2016. In addition, over time, there was a need to finance payments to the families of the dead and injured military and mission headquarters / missions in Kenya and Ethiopia.

Today, the most costly peacekeeping missions of all the current 16 operations are the UN operations in the Congo (\$ 1,51 billion), Mali (\$ 895,000,000) and Lebanon (\$ 54,900,000). And the UN budget for peacekeeping activities for the current fiscal year (from July 1, 2017 to June 30, 2018) has already been agreed at \$ 6,8 billion¹.

¹ How much do peace keepers cost? URL: <https://milnavigator.tv/skilky-koshtuyut-myrotvortsii> (access.: 22.07.2018).

Of course, in modern conditions peacemaking is becoming increasingly important in the development of global and regional security and peace. That is why one of the important methods for the peaceful resolution of conflicts is to appeal to regional organizations. *Chapter VIII of the UN Charter “Regional Agreements”* points out the desirability of applying at the regional level means that it can help resolve conflicts in the region. At the same time, the inviolability of the UN priority in this issue was noted. Therefore, the unconditional consent of the UN Security Council to the coercive actions of regional organizations or coalitions of individual states, its direct control over these actions, excluding any independence is required. In other words, when direct intervention of the UN is deemed inappropriate, the Security Council authorizes regional or other international organizations, such as the European Union (EU), the North Atlantic Treaty Organization (NATO), the Organization for Security and Cooperation in Europe (OSCE), the African Union (AU), the Economic Community of West African States (ECOWAS), or “coalitions of willing countries”, to perform certain functions of maintaining peace or peace enforcement.

Regional organizations and independent states have different financial and military capabilities for conducting peacekeeping operations, however, given the importance of such activities, they are trying to participate and conduct both independent peacekeeping activities as well as under the UN auspices. For example, the European Union deployed 23 civilian and military missions in response to various crisis situations, from peacekeeping in the Aceh tsunami-affected province to protecting refugees in the Republic of Chad and fighting piracy off the coast of Somalia and the Horn of Africa¹.

The OSCE’s experience in dealing with crisis events is also large, but the Organization is limited to observation missions or fact-finding missions. Its powers include the monitoring and the implementation of armistice agreements and cease-fires; collecting facts about the conflict and the human rights situation in the conflict zone; facilitating the

¹ Common Foreign and Security Policy. URL: http://eeas.europa.eu/delegations/russia/key_eu_policies/common_foreign_security_policy/index_ru.html (access.: 22.07.2018).

negotiation of conflicting parties, mediation; provision of humanitarian aid and assistance to refugees. Since 1992, the OSCE, alone or under the auspices of the UN, has joined to 12 operations in conflict regions.

Despite the fact that most of the conflicts occurring on the African continent, as many as three regional organizations are involved in peacekeeping. The Organization of African Unity (OAU) implemented six operations: the Republic of Chad (1981–1982), Congo (1993), Togo (1993), the Central African Republic (1997), Somalia (1997), Rwanda (1996–1997)). Having significantly less experience, the Economic Community of West African States (operations in Liberia and Sierra Leone) also joined the peacekeeping activities. In 1997 in Zimbabwe, under the leadership of the South African Development Community, military exercises were conducted in nine African countries as to the cooperation in peacekeeping operations.

The Association of South-East Asian Nations (ASEAN) acted directly on its territory of influence and took part in 2 operations related, rather, to post-conflict peace restoration (since 1992 in Cambodia assisted in drafting and implementing the Paris Peace Agreements and elections; in 1993, Vietnam, implementation of the peace agreement).

The peacekeeping activities of the North Atlantic Alliance are often very controversial. The decision to join a solution to a conflict is usually taken at the request of the UN or OSCE (delegation of authority) with an additional decision of the NATO Council on each appeal. In 1999, NATO independently initiated a decision (mandate) to intervene in the situation in the Federal Republic of Yugoslavia, but based on the provisions of the new “Strategic Concept” in the 1999 version, this could become a new rule for the Alliance. Now we can say that the Alliance does not conduct operations in a changed world after the events of September 11, 2001 in the United States, but in a certain sense it serves as a necessary set of “military instruments” used by the UN. The Alliance was even more in demand for peacekeeping and stabilization operations. This was due to NATO’s reorientation of collective defense towards collective security. The list of operations with which the Alliance has joined is quite long both in terms of the geography of distribution and in terms of the goals that have been set for it. The

Organization's assets include the well-known operation "Desert Storm" (Iraq, 1991), and then NATO made the Sea blockade of the Adriatic coast of Bosnia and Herzegovina (1994), and also had experience of air support of the UN forces in the operations of the UN peacekeeping mission in Croatia and in Bosnia and Herzegovina during the Yugoslav war (UNPROFOR). Thirteen operations were carried out.

The peacekeeping activity of the Organization of American States (OAS) does not seem so active. The organization conducted an operation in Grenada in 1983 with the help of the US armed forces, and in cooperation with the UN forces – in Haiti in 1991–1993.

In the Commonwealth of Independent States, together with the creation of the organization, the practice of making concrete decisions of political settlement of conflicts on its territory was carried out. One of the priority activities of the CIS is the prevention, localization and resolution of conflicts on the territories of the participating countries. The CIS peacekeeping efforts demonstrate the potential for sponsorship and are in line with the practice of the UN and the OSCE in resolving local and interstate conflicts. CIS peacebuilding is ineffective, because the organization has not received a single UN mandate to conduct an international peacekeeping operation on its territory. The first attempt at peacekeeping was carried out in 1992 in Tajikistan (contingents of four states under the CIS mandate with the leading positions of the Russian Armed Forces), and the second operation was in 1994 in Abkhazia (Georgia) using only the armed forces of Russia¹.

History of peacekeeping has cases of operations with elements of coercive measures implemented under the mandate of the UN, but by the forces of individual states or coalitions. In such cases, the UN determines the political orientation of the operation, but does not command the operation militarily, does not finance it, and the entire control is the responsibility of the coalition Member States. With the leading role of the United States and the political resistance of the USSR in 1950, an operation was carried out in Korea because of

¹ Nikitin A. I. Peacekeeping operations: World practice and experience of the CIS: avtoref. dis. na competitor. nauch. degreedoct. Polit. Sciences: spec. 23.00.02 "Political Institutions and Processes". Moskva, 2000. P. 16.

which a demilitarized zone was created between the Democratic People's Republic of Korea and South Korea¹.

An interesting and quite progressive in the method of warfare was the war in the Persian Gulf, the so-called "Desert Storm" (August 2, 1990 – February 28, 1991) between Iraq and a coalition of 28 countries led by the United States. The invasion and annexation of Kuwait by Iraq on August 2, 1990, provoked a transfer of US forces deploying more than 500,000 men to Saudi Arabia. Britain sent 42 thousand people, France – 15 thousand, Egypt – 20 thousand, other countries – fewer contingents. After the air attacks lasting 6 weeks, as a result of which one-third of all the weapons of Iraq were destroyed, the ground war lasted hundred hours, and the remnants of 500 thousand of the Iraqi Army were defeated in and adjacent to Kuwait.

The conflict is known for the unprecedented scope of the use of air strikes in history. In the opinion of many experts, it was marked as a new era in military affairs: the mass total battle, a large mechanized connection, fire suppression on the squares was replaced by information and precise weapons that leveled the total numerical advantage of the enemy, and also demonstrated the superiority of the concept of "limited goals," which prevails in the US foreign policy strategy.

Findings

Many more examples can be cited when the international community resisted, through well-coordinated collective efforts, various conflicts and aggression and achieved its goal. History shows that peacekeeping is the most effective way of reconciling the conflicting parties, stopping cases of massive violations of human rights; preventing humanitarian disasters; promoting democratic change; organizing elections, helping to restore government and social structures, reorganizing law enforcement agencies and the armed forces, managing the local administration, supporting demining activities, restoring infrastructure, and many other tasks that contribute to international peace and security.

According to the findings contained in the *Global Peace Index 2018*, the *Institute of Economics and Peace* experts point out the

¹ URL: <https://uk.wikipedia.org/wiki> (access.: 22.07.2018).

unconditional link between the global peace indexes (GPI) and the foundations of well-being and development prospects of each country. It should be clarified that the Institute applies to its calculations the following categories for each of the countries: the perception of crime; the assessment of security personnel and police; killings; prisons; access to weapons; intensity of internal conflicts; violent crime; political instability; political terror; import of weapons; terrorist influence; mortality due to internal conflict; current internal conflicts; military experience. In particular, specialists from the *Institute of Economics and the World* point out the unconditional link between the GPI index and the foundations of well-being and development prospects of each country. That is, the GPI index accordingly has positive or negative effects on the country's economy. The negative trend of gradual reduction of peace has a quite material reflection in the life of countries and regions, in particular, according to experts of the Institute. The cost of violence for the global economy in 2017 amounted to almost \$ 148 billion, and then there are about 2 thousand dollars for each inhabitant of the planet. Therefore, the expediency of all collective efforts to overcome conflict situations in the international arena is obvious and indisputable both from a humanitarian point of view and from the standpoint of the economy and development¹.

1.6. Synergy of “Soft” and “Hard” Power: Global Dimension

Fesyk Olesya

The chronology of the events taking place in the international arena, in particular the intensification of competition between actors, the shift in the power balance in the Asia Pacific direction, and the

¹ Global Peace Index 2018, 15 June 2018. URL: http://bintel.com.ua/uk/article/06_15_gpi (access.: 22.07.2018).

© *Fesyk Olesya* – Head of Public Relations Department of the Lesya Ukrainka Eastern European National University.

increase of regional conflicts number, are indications that the state of turbulence is now characteristic of the International Relations system. It is due to the destruction of the traditional security system, which is replaced by a system of global competition between the leading actors for material resources and spheres of influence.

In terms of global rivalry, the issue of national security and the realization of national interests become key issues in the foreign policy agenda of each state. The stability of the international system is ensured by a constant correlation of the strength potentials of the leading countries of the world, which can be described as a hierarchically structured, integral set of participants in International Relations, which are interrelated by interconnected relationships¹. It is obvious that in the international system the participants' hierarchy is formed only by one criterion – the balance of powers.

After the Second World War, the balance of power and the international system stability were determined by two states – the USA and the USSR, which were constantly competing for satellites, rivaling in the arms race, educational, scientific, sports and other spheres. With the collapse of the USSR, the situation changed radically, with the formation of a single center of power headed by the United States.

It is clear that the international system is constantly evolving, and new leaders – the European Union, which united the most developed countries of the European continent, the Russian Federation, the People's Republic of China, began to form. Thus, recovering after the collapse of the Soviet Union, the Russian Federation once again began to “collect” their lost republics and announced its ambitions in the geopolitical level. Similarly, China began to increase its status and role in the world. To compete with the US, these countries with much lower power potential than the US began using asymmetric foreign policy strategy.

Asymmetry is present at different types of the International Relations system, but mostly it is typical for a unipolar system. According to the American researcher R. Kaigan, in today's conditions, asym-

¹ Malskyj M. Z., Macyax M. M. Teoriya mizhnarodnyx vidnosyn: pidruchnyk. 3-tye vyd., pererob. i dop. Kyiv: Znannya, 2007. 461 s.

metry manifests itself on the principle of “weak power” and “weakness of the strong” of global politics actors, so force is a complex concept and is not determined by the combination of power, economic and human resources¹. In practice, in a conflict situation, the advantage in economic or military power can be offset by other constituent forces of the state or by their more successful combination, depending on the situation.

Classically, each state interacts, and therefore conflicts with other actors in the context of three strategies of geopolitics, geoeconomics and geoculture using a combination of military, economic, diplomatic, cultural, educational and other fields of activity.

In the theory of International Relations, three basic approaches to the understanding of force have been formed – attributive, behavioral, and structuralist. In the first half of the twentieth century the military potential and its tools of influence were the dominant factor, which is characteristic of the attributive approach of realists. With the development of technologies and means of communication the emphasis shifted to the widespread attraction of “soft” instruments of influence, especially information.

The category of “power” is one of the most researched, but at the same time, the most controversial. The category of “power” was studied by R. Armitage, Z. Brzezinski, R. Kagan, R. Keohane, H. Kissinger, A. Cohen, M. Cox, M. Libitzky, S. Sweet, H. Morgenthau, J. B. Mattern, P. Owens, I. Parmar, J. Z. Rubin, D. M. Snow, K. Waltz, M. Fraser, F. Fukuyama, P. van Ham, S. Hill and others¹.

H. Morgenthau, an American political scientist, considers international politics as a force policy and allocates such elements of the power of the actor – military resources, natural resources, industrial

¹ Kejgan R. O rae y syle. Ameryka y Evropa v novom myrovom porjadke. Moskva: Dom yntellektualnoj knygy, 2004. 103 s.

¹ Lucenko A. V. Strategiyi “myakoyi syly” v geopolityci Spoluchenyx Shtativ Ameryky, Yevropejskogo Soyuzu ta Rosijskoyi federaciji: avtoref. dys. na zdobuttya nauk. stupenya kand. polit. nauk: specz. 23.00.04 “Politychni problemy mizhnarodnyx system ta globalnoho rozvytku”. Kyiv, 2010. 24 s.

potential, demographic indicators, national character and morals, the quality of diplomacy and state leadership¹.

Behavioralists view their force potential solely through the prism of behavior and the effectiveness of the actor's interaction on the international scene. The approach that united these two directions became structuralist. R. Aron, a French sociologist, understood the category of "power" as the influence of the state on other actors through a wide range of ties and interactions between states. Ideologists of neo-Marxism (I. Wallerstein, A. G. Frank, F. H. Cardoso) argued that power is a complex concept that consists of an economic, political and social factor. However, they give the main role to the economy.¹ One of the first who drew attention to the shifting of competition between states from the military, economy, culture, education, and religion became theoreticians of interdependence – the neo-liberalists R. Keohane and J. Nye junior, H. Alker, J. N. Rosenau, M. Nicholson, Ch. Lipson, S. Strange, A. Hirschman².

In the theory of International Relations, there are many definitions of the category "power", but all the different-vector definitions outline that "power" means the ability to influence the behavior of another state in the desired direction and the ability to establish different forms of dependence of one state on the other. The strategy for the realization and use of power in the international arena requires operational parameters, clear goals and the formation of long-term relations or more precisely certain dependence.

¹ Kapitonenko M. "Syla" v teorii mizhnarodnyx vidnosyn: konceptualni paradoksy. Visnyk KNU imeni Tarasa Shevchenka. Mizhnarodni vidnosyny. 2005. URL: <http://journals.iir.kiev.ua/index.php/knu/article/view/1913/1677> (access.: 22.07.2018).

¹ Shergin S. Paradygmalna evolyuciya v politologiyi mizhnarodnyx vidnosyn. Social-Science. URL: http://www.socialscience.com.ua/publikaciya/739_Paradygmalna%20evolyuciya%20v%20politologiyi%20mizhnarodnyx%20vidnosyn (access.: 22.07.2018).

² Nikulishyn N. Ponyattya "syla" u suchasnyx teoriyax mizhnarodnyx vidnosyn. Ukrayinska nacionalna ideya: realiyi ta perspektyvy rozvytku. Vyp. 25. 2013. URL: <http://ena.lp.edu.ua/bitstream/ntb/21120/1/23-130-134.pdf> (access.: 22.07.2018).

The founder of the school, J. Nye Jr. divided the force into “hard” and “soft”. According to his belief, “soft power” is based on three components – culture, political values and foreign policy. This is one of the forms of the country’s foreign policy, as well as a comprehensive mechanism of influence through the system of “attractive preferences”¹. The resourceful arsenal of “power” makes up military and economic potential. “Soft power” has much more resource support – cultural, image and public diplomacy. The effectiveness of using this resource arsenal of each country depends on the efficient combination of tools from these two blocks and their synergy. This requires a clear-cut strategy at the state level, and in the case of a conflict or threat, it is necessary to differentiate the threat of power and its application. It is a complex multilevel system that allows the state to solve its tactical and strategic tasks in the international arena at the official and informal level and is based on the management of interdependence.

The general confrontation in the international system and globalization in all spheres of human activity have made it necessary to use a synergistic approach in formulating a foreign policy strategy to ensure national interests, to analyze and predict the evolution of the international system at moments of bifurcation and fluctuations. It is logical that in each system that is self-organized there are both invariant (symmetric) and variant (asymmetric) components. The cascade of bifurcations causes the cascade of symmetry disturbances, which lead to irreversible changes in the system. Currently, the system of International Relations is also actively evolving and asymmetry is its main feature, that is, the violation of the former order and the emergence of a completely new one, which cannot be foreseen¹. These very processes are observed in the international arena, as the US and the EU are not able to withstand the asymmetric approaches in foreign policy of

¹ Byelousova N. B. “Myaka” syla yak potencial zovnishnopolitychnogo vplyvu derzhavy. Aktualni problemy mizhnarodnyx vidnosyn. 2012. Vyp. 107 (1). S. 148–152.

¹ Asymetriya mizhnarodnyx vidnosyn: teoretychnyj vymir. Naukovyj visnyk Dyplomatychnoyi akademiyi Ukrainy. 2012. Vyp. 19. S. 122–127.

such new centers of power as the Russian Federation and the People's Republic of China. So, each state faces the task of developing an effective strategy to counteract the asymmetric actions of "weaker" players which seek to strengthen their influence on the international arena and the symmetric strategy of "strong players" which seek to preserve their influence. The situation is also complicated by the fact that in the struggle for domination in a globalized world the United States, Russia, North Korea and China are becoming the main initiators of conflicts in the international system.

Thus, we can state that globalization, the strengthening of interdependence of states in the field of economy, asymmetric strategies of leading actors, the rapid development of science and innovation and their implementation in the people's daily lives, the membership of the initiators of fluctuations in international security organizations have led to the need to use a synergistic approach and to modify the arsenal and mechanisms of power potential implementation to achieve their own national interests in external relations with new and "old" power centers. The only concept that makes it possible to combine different power tools in an external asymmetric approach and the synergy is the concept of "smart power". The author of this concept is J. Nye, who in 2003 understood that the effectiveness of a state's policy cannot be determined only by "soft" means of influence in order to withstand asymmetric challenges and threats at the global level. So he introduced a new term – "smart power", which means "the ability to combine "hard" and "soft power" into an effective strategy¹. Only the complex combination of "soft power" and "hard power" in domestic and foreign policy can contribute to the state's long-term goals. "Smart power" includes strategic use of diplomacy, persuasion, capacity development and projection of force and influence in a manner that is most cost-effective in terms of domestic and foreign political circumstances and has political and social legitimacy. The concept emphasizes the need for a strong army and, at the same time, for investing heavily in alliances, partnerships and institutions. Consequently, "smart power" is a combination of diplomatic, economic, military, political, legal and

¹ Nye J. S., Jr. *The Powers to Lead*. Oxford: University press, 2008. 226 p.

cultural instruments of foreign policy. The “smart power” policy does not exclude military operations or humanitarian military missions in response to violence and aggression.

Aware of the high level of interdependence and the limited resources available on the planet, the strategy of “smart power” rejects the logic of the arms race and goes to the logic of formation and support of constant combat readiness of the compact ultra-modern forces in the state; in quantitative correlation they meet the objectives of defense sufficiency.

Each year, the Elcano Royal Institute publishes the results of a study on the global presence of countries in the world. It is formed from an economic (40 %), military (20 %) presence and soft power (40 %) of the state¹. According to 2018 results, the three leaders are as follows: the United States, China and the United Kingdom. If you look at the figures in a section, it is clearly observed that the main competitor of the United States for the economic and “soft” power is the People’s Republic of China. At the same time, for a military presence, this is the Russian Federation, which ranks second in this indicator, while the rest of the countries are far behind the two leaders. The high level of militarization should be noted in countries such as China, India, Japan – in the East, and in Europe – Britain and France. The top 20 military presence also include Turkey, Egypt, South Africa, Ethiopia, Uganda, and Bangladesh. Only two countries – Turkey and South Africa increase their “soft” presence in the world – 13 and 18 positions respectively. In view of these indicators, the trade war between the United States and China, which began in January 2018, is quite logical². The various sides of the Russian Federation and the United States are in armed conflicts that continue in Ukraine and Syria, indicating a choice of strategy with the domination of influence

¹ ELCANO GLOBAL PRESENCE REPORT 2018. Real Instituto Elcano. 2018. URL: http://www.globalpresence.realinstitutoelcano.org/en/data/Global_Presence_2018.pdf (access.: 22.07.2018).

² Kachalova G. Kejyu Dzhyn: Kytaj – spravzhnya zagroza pozyciyi SShA yak superderzhavy. Internet-vydannya “Ekonomichna pravda”. 2018. URL: <https://www.epravda.com.ua/publications/2018/10/3/641217/> (access.: 22.07.2018).

instruments at the global level. China prefers economic levers of influence and arsenal of “soft power”, the Russian Federation, on the contrary, pays the least attention to the “soft” presence in the world arena, and actively uses military and economic levers of influence over its competitors.

So, the significant reduction in the role of the military factor in ensuring national security of the state does not have to be argued, although there is a significant increase in the role of economic and information aspects of security. With the onset of the armed conflict in Ukraine, the annexation of the Crimea and the Syrian war, the world returned to the *realpolitik* strategy. Classic representations about the war between states or blocs have remained in the past. First of all, the reasons for the beginning of hostilities have changed; officially no one declares the war, because potential destabilizing factors may involve:

- crisis phenomena of social and political life in the capital of the state;
- ethnic territorial delineations in the geopolitical structure of the world regions;
- massive human rights violations;
- providing support to “terrorist states”;
- violation of international regimes governing military-political issues of international security, etc.¹

Thus, for example, analyzing the armed incursion of the Russian Federation into the territory of Ukraine it becomes clear that the RF follows the new methods of warfare, using a fairly wide force of tools, which is typical of the “smart power” strategy and asymmetric confrontation. The signs of the asymmetric approach in the conflict (the war between opponents, whose military potential is significantly imbalanced or which use radically different strategies and tactics) include the use of non-traditional means of warfare – guerrilla warfare, passive resistance, terrorist acts, psychological warfare, support for

¹ Shevchenko M. M., Zhytnyk O. M. Obyektyvni ta subyektivni chynnyky vplyvu na formuvannya polityky nacionalnoyi bezpeky suchasnoyi derzhavy v umovax vijskovoyi globalizatsiyi. Elektronne naukove faxove vydannya “Derzhavne upravlinnya: udoskonalennya ta rozvytok”. 2016. № 9. URL: <http://www.dy.nayka.com.ua/?op=1&z=1001> (access.: 22.07.2018).

anti-government groups and anti-government movements (parties), etc. The peculiarities of such a war are represented by its multidimensionality (the involvement of the regular army, irregular military formations, terrorist financing, the fight against the enemy in the information, economic, social, energy and cyber spheres), and the unique coordination and interconnection of action, the dynamism and flexibility of their use, as well as increase in the significance of the information factor¹.

The use of the asymmetric approach has several key benefits: actors emphasize military security and non-contact combat through the use of high-precision weapon capabilities, which is the logistical basis for the wars of the sixth generation; the use of irregular military groups and their mobility also has a number of advantages, this is the lack of accountability to the world community, security organizations and the effectiveness of the tasks. One of the theorists of “hybrid wars”, M. van Creveld and other military experts believe that regular armed forces are often simply “powerless” in modern armed conflicts¹. They are not capable of effective and successful struggle with irregular formations.

It is clear that the equipment, the level of advanced technologies modernization, investments in the military sector directly depend on the state economic strength. Therefore, the next factor of “hard power” and its role in the modern system is the economic power of the state. The economic power is considered as the ability of the residents to influence other subjects of international economic relations by economic agents (as well as their own subnational entities of economic activity) and to withstand external influence. D. Nehtlerlein, T. Cannes, B. Bruce-Brings and other representatives of neo-Marxism have emphasized on the effectiveness of its use. At the same time, econo-

¹ Alimpiyev A. M., Pyevczov G. V. Osoblyvosti gibridnoyi vijny RF proty Ukrainy. Dosvid, shho otrymanyj Povitryanymy Sylamy ZSU. Nauka i tekhnika Povitryanyx Syl Zbrojnyx Syl Ukrainy. 2017. № 2 (27). 2017. URL: <https://www.ukrmilitary.com/2017/05/experience-received-by-the-armed-forces-of-the-armed-forces-of-ukraine.html> (access.: 22.07.2018).

¹ Problemy komplektuvannya Zbrojnyx Syl Ukrainy vijskovosluzhbovcyamy sluzhby za kontraktom: socialnyj aspekt analizu: [monografija]/ kol. avt.: T. D. Glushkova, V. V. Yefimova, I. S. Pechenyuk ta in.; za zag. red. M. M. Shevchenko. Kyiv: NDCzGPZSU, 2007. 172 s.

mic power can be considered both as an action or a process of such influence. To economic levers, researchers include: taxes, subsidies, direct restrictions on import and export (duty), lending, sanctions, investments, retrocessions, creation of international economical associations and membership in them, etc. Economic sanctions are restrictive measures of an economic nature, applied by a country or group of countries to another country or group of countries in order to force the governments of these countries to change their policies¹. Sanctions can be expressed in the total or partial prohibition of imports of goods from these countries, export of goods to these countries, and also in the limitation of financial transactions – including cross-border settlements and investments – with these countries.

Important agents in the field of economy and finance should include the International Monetary Fund and the World Bank Group, which, in particular, have instruments of direct financial impact on the basis of loans denial, or vice versa providing macrofinancial assistance in exchange for certain decisions, actions.

Significant influence on the military strategy and tactics was carried out by information and communication technologies: clear boundaries between different levels of hostilities disappear, the geographically determined traditional theater of military operations disappears as well, operational and tactical actions in the information space are ahead of purely physical actions of the military. In addition, “information aggression” may in some cases prevent the beginning of hostilities.

The following statistics shows the significant impact of Internet communications: according to the *Global Digital Statshot*, in 2017, the number of social networking users in the world has exceeded 3 billion, with the total population of the planet being 7,524 billion people. A Facebook has reported about an audience of 2 billion users – it is obvious that this social network dominates its competitors by popularity¹.

¹ Manuyilova K. V. Ekonomichni sankciyi yak instrument zovnishnoyi polityky. Aktualni problemy mizhnarodnyx vidnosyn. 2014. S. 38–44.

¹ Internet 2017 roku v cyfrax (infografika). GO “Detektor media”. 2018. URL: http://osvita.mediasapiens.ua/web/social/internet_2017_roku_v_tsifrakh_infografika (access.: 22.07.2018).

An important aspect of using social networks is the presence of artificial communication, carried out by fake structures, Internet bots, and clones of reputable leaders and organizations, which greatly complicate the search for the necessary information, ideas exchange and manipulate the public attitudes within the communities.

The effectiveness of digital technologies and social networks used during the “Arab Spring” proves their expediency not only to build democracy in the Middle East, but also to establish authoritarian regimes. Both US presidents – Barack Obama and Donald Trump have focused on digital technology in their election campaigns. The analysis of the US election campaign in 2016 proves the main tools for working with voters included Big data, micro-targeting and CRM-systems. Therefore, the latest Internet technologies have become quite convenient for different types of citizens manipulations¹.

That is exactly how the Russians managed to make a significant impact on the results of the US presidential election. The level of Russian intervention in the US election process in 2016 is constantly being discussed by the international community and a hearing is being held at the Senate of the United States, where the high-ranking establishment of the country serves as witnesses. The indictment on Russia’s interference with the US presidential election was issued on February 16, 2018. The third paragraph of the indictment summarizes the essence of the crimes charged to 13 Russian citizens and 3 organizations: “The defendants deliberately and intentionally entered into a conspiracy to interfere in the US political and electoral process, including the 2016 presidential election”².

According to the report of the International human rights organization *Freedom House* in 2017 manipulation and disinformation

¹ Savanevskij M. Yak cyfrovi tehnologiyi dopomogly Trampu staty prezydentom SshA. Internet-vydannya Watcher. 2016. URL: <http://watcher.com.ua/2016/11/18/yak-tsyfrovi-tehnolohiyi-dopomohly-trampu-staty-prezydentom-ssha> (access.: 22.07.2018).

² Dokazy vtruchannya Rosiyi u vybory prezydenta SshA. Radio Svoboda. 2018. URL: <https://www.radiosvoboda.org/a/29048425.html> (access.: 22.07.2018).

tactics played a significant role in elections of at least 17 countries. The authority in about 30 countries of the world used social networks to spread pro-government ideas or to suppress critics inside their country. Due to manipulation the RF spread its influence on other states, and this is only the beginning¹.

One of the instruments of geopolitical confrontation and conflict is the war in cyberspace. The term “cyberwarfare” has firmly entered the vocabulary of the military, experts in information security and politicians, security structures, the media and is interpreted as the use of the Internet and its related technological and information means by one state with the purpose of causing damage to the military, technological, economic, political, information security and sovereignty of another state¹. An example of a “cyberattack”, which is now in history, is the failure of the Iraqi air defense control system during *Desert Storm* Operation. US intelligence agencies managed to infect a special computer virus with the memory of printers purchased for this system in one commercial firm². The actors also do not refuse to use cyberattacks to solve other tasks. In particular, this is a material leakage scandal “Paradise Papers”³, “Petya virus” hacker attacks on banks, state and business enterprises around the world⁴, Russian attack against the

¹ Kostyuk Bogdana Socialni merezhi – misce manipulyacij suspilnoyu svidomistyyu. Radio Svoboda. 2017. URL: <https://www.radiosvoboda.org/a/28856229.html> (access.: 22.07.2018).

¹ Merezhko O. Problemy kibervijny ta kiberbezpeky v mizhnarodnomu pravi. URL: <http://www.justinian.com.ua/article.php?id=3233> (access.: 22.07.2018).

² Kybernetycheskaya bezopasnosty svoboda ynformacyy. URL: <http://mediakritika.by/article/kiberneticheskaya-bezopasnost-i-svoboda-informacii> (access.: 22.07.2018).

³ “Rajskyj” skandal: v ofshornyx paperax figuruyut drug Yanukovycha i kolyshnij vice-premyer. UNIAN. 2017. URL: <https://www.unian.ua/politics/2226906-rayskiy-skandal-v-ofshornih-paperah-figuruyut-drug-yanukovicha-i-kolishniy-vitse-premer.html> (access.: 22.07.2018).

⁴ Vid WANNACRY do PETYA.A. najmasshtabnishi xakerski ataky v Ukraini ta sviti. 2017. URL: https://tsn.ua/svit/vid-wannacry-do-petya-a-naymasshtabnishi-hakerski-ataki-v-ukrayini-ta-sviti-952558.html?utm_source=page&utm_medium=readmore (access.: 22.07.2018).

Organization for Prohibition of Chemical Weapons in The Hague¹, etc. In general, the space used for “cyber weapons” is wide enough and at the moment it is one of the most promising tools of “soft power”.

If we consider the global level, then Russia itself acts as an actor who makes the most effort to reformat the geopolitical map of the world. Therefore, this country is the leader in using the asymmetric approach. The United States and the People’s Republic of China are more committed to use the “smart power” strategy in foreign policy to preserve geopolitical dominance and the realization of national interests. Instead, Russia prefers a tough “realpolitik” and opened its asymmetric approach to change the balance of power and the world order for the first time in 2008 when it came into conflict with Georgia. The preconditions for the transition of the conflict to the active phase, the so-called “five-day war”, were caused by the following factors: the Georgian-Abkhaz conflict, the interception of gas-oil corridors on the territory of Georgia, which deduced energy flows beyond the limits of the influence of Moscow and the liquidation of the Saakashvili regime. In the conflict with Georgia, the ideology and technology of the new Russian irredentism was used. Russia, when it introduced its troops, declared its moral and legal legitimacy to help its compatriots who suffered from the conflict between Georgia and South Ossetia. The Georgian-Russian war was preceded by a preparatory stage, namely, several years before the hostilities, thousands of residents of Georgian territories legally received passports and, respectively, Russian citizenship. So, this made it possible to use them as a powerful pro-Russian “fifth column” to justify and implement any interference in the affairs of sovereign states-neighbors¹.

Few days before the Georgian-Russian war, the Russian armed forces demonstrated their full readiness for rapid relocation and

¹ YeS zasudyv sprobu kiberataky RF proty OZZX. Yevropejska pravda. 2018. URL: <https://www.euointegration.com.ua/news/2018/10/4/7087774> (access.: 22.07.2018).

¹ Kyrydon A. M. Prychyny rosijsko-gruzynskogo konfliktu: regionalnyj vymir. Visnyk Kyyivskogo mizhnarodnogo universytetu. Seriya: Mizhnarodni vidnosyny. Kyiv: KyMU, 2008. Vyp. 7. 283 s. URL: <http://vmv.kymu.edu.ua/v/08/kyrydon.htm> (access.: 22.07.2018).

effective military operations, while recognizing the independence of Abkhazia and South Ossetia showed readiness to confront the West, increase its capabilities and resolve to assert its own interests, as well as asymmetric mechanisms that it is ready to use to prevent the integration of the post-Soviet states into the EU and NATO. By such actions Russia showed the limitations of the US influence in Eastern Europe and began openly resist the policy of the EU. But, in our opinion, the main consequences of the Russian-Georgian conflict were ineffective activities and the response of international security structures to the actions of the conflict parties, the international community unpreparedness to asymmetric challenges at the global level and the crisis of international law.

The strategy and tactics of the Russian Federation are really effective, although there are many scholars and skeptics, but at the moment, due to an asymmetric approach in foreign policy, they have managed to move the US from Eastern Europe to concentrate them on own internal problems, eliminate their influence on the political situation in the Caucasus and in the Middle East, to initiate processes of destabilization in the EU – the Brexit, the referendum on the Catalonia independence, the migration crisis, etc. In opposition to the EU, including those related to the war in Ukraine, the Russians used the economic and information influence levers to a greater extent. First of all, this is a one-way economic interdependence in the energy sector; the arguments of the Russian Federation regarding the construction of the North Stream have been more effective than the sanctions imposed by the EU and the US. With the completion of the construction of this facility and in the future of the Turkish flow, Ukraine may lose the function of a gas and oil transit to the EU, as a consequence of support from Europeans in conflict with the Russian Federation will be minimal. But greater danger is the deployment of more active hostilities in Ukraine. Although the “soft” power toolkit is not among the top priorities in Russian strategy, but pretty effective. Having powerful foreign information agencies in the arsenal, which broadcast information around the world in different languages, Russian centers in the EU, active cooperation with the Diaspora – Russians skillfully affect the civic consciousness of Europeans. This should include the financing

of certain political projects, and not without success – Moldova, Hungary, Italy, which contribute to disintegration processes in the EU, increase the number of “Eurosceptics”, decrease of sanctions against Russia, recognition of the annexation of the Crimea, etc.

Summing up, it should be noted that the military factor remains the most important in ensuring global security. The UN and OSCE require adjustment to be effective in asymmetric approaches to their own members. Detection and localization of the threat at the preparatory stage is the most important, because only at this stage aggression can be stopped. In the conditions of globalization, asymmetry and the use of innovative instruments of influence the equilibrium of forces in the international arena is very shaky. Therefore, the security of each state is a conditional characteristic – it is a constant competition for the consciousness of its citizens, education, innovation, culture, linguistic identity, economic power etc. Arrangements and international agreements no longer guarantee their signatories any obligations, as there is nobody who will follow their compliance. In fact, in the field of national security, each country in the world has to adhere to the “smart power” strategy, i. e. use the synergistic combination of different power tools and rely only on its own resources.

Chapter 2

INFORMATION SECURITY

2.1. Human Security – the Main Concern of the 21st Century

Kaźmierczak Danuta

Security environment is usually diagnosed with the following indicators: opportunities, threats, risks, uncertainties and vulnerabilities. Sometimes in the literature these terms are used interchangeably.

The NATO handbook presents the following explanation of these concepts and differences among them.

Risks encompass threat and opportunity. Risk is a source of variability of positive and negative consequences. An opportunity is also an uncertain event since it is a possible future event. So, both threats and opportunities are covered by this same description of risk as “uncertainty that matters”. Yet, the opportunities are favorable events (good risks) whereas threats unfavorable ones (bad risks).

Frank H. Knight in his book “Risk, Uncertainty, and Profit” distinguishes risks from uncertainties. Risk is present when future events occur with measurable probability. Uncertainty is present when the likelihood of future events is indefinite or incalculable¹.

The impact of events (threats):

Threat – An unfavorable condition or situation, a negative set of circumstances, a negative set of events, a risk that will have a negative impact on a project objective if it occurs, or a possibility for negative changes.

Vulnerability – T. O’Riordan defined vulnerability at the societal level as: “the incapacity to avoid danger, or to be uninformed of impending threat, or to be so politically powerless and poor as to be forced to live in conditions of danger.

© *Kaźmierczak Danuta* – PhD, Pedagogical University of Krakow, Poland.

¹ NATO Risk Management Guide for Acquisition Programmes, 2012.

G. Wilches-Chaux identified 11 types of vulnerability: natural, physical, economic, social, political, technical, ideological, cultural, educational, ecological and institutional vulnerability.

D. Nathan distinguishes two types of vulnerability:

– a tendency to undergo damages, i.e. a state of fragility, or a set of conditions, that raise the susceptibility of a community to the impact of a damaging phenomenon;

– an incapacity to anticipate, cope with, resist to, adapt to and recover from hazards. Vulnerable units are either not resistant, i.e. not capable to withstand the shock (without adapting); and/or not resilient, i.e. not capable to absorb the shock and adapt to come back to an acceptable state¹.

The global security environment is full of natural risks and man-made ones called by N. Bostrom anthropogenic existential risks (threats) – that is, those arising from human activity and mostly linked to future technological advances that may dramatically expand our ability to manipulate the external world or our own biology².

Yet, N. Bostrom emphasizes that existential catastrophes are not especially bad because they would occur causing a precipitous drop in world population or average quality of life but because they would destroy the future³.

Consequently, human vulnerability should be measured in terms of the damage to future livelihoods, and not just as damage to life and property at the time of emergency⁴.

Moreover, there is the connection between the risks people face and the reasons for their vulnerability, which is mainly their well-being. Disasters (risks) should be dealt with within the socio-economic context. Yet, there is a danger in concentrating too much on the disasters themselves, and not nearly enough on the surrounding social environment¹.

¹ Brauch H. G. Threats, challenges, vulnerabilities and risks in environmental and human security. United Nation University. Germany. P. 34.

² Bostrom N., Existential Risk Prevention as Global Priority. Global Policy. Vol. 4. Issue 1. February 2013. OUP. P. 15–16.

³ Ibid.

⁴ Wisner B., Blaikie P., Cannon T. and Davis I. At Risk: natural hazards, people's vulnerability and disasters. UNDP follow up to the Hyogo Framework for Action. 2005. P. 9.

¹ Ibid.

The argument of anthropogenic nature of contemporary risks (threats), which are a resultant of disaster and human vulnerability determined by social frameworks and their crushing impact on future life in general, create the huge area of research and activity for human security. As H. G. Brunch indicates individuals and mankind are the reference object of human security; survival and quality of life are values at risks and sources of threats, namely, state, globalization, nature, terrorism¹. The recent security reports list also cybercrime and nuclear weapon.

According to the recent Globalization report by *Credit Suisse Research Institute (CSRI)* globalization is changing and gradually replaced by a multipolar world, which involves the shift of power in terms of trade, GDP, foreign direct investment (FDI), budget size and population. These powers will be less concentrated in a specific region and will be shared across different regions. Three main poles are: the US, Europe and China centric Asia, regions distinct in terms of their economies, laws, cultures and security networks.

The report identifies 10 trends that pose a threat to globalization. These are:

1. The health of trade.

The Trans Pacific Partnership (TPP) between the US, Japan and a group of Asian countries as well as the Transatlantic Trade and Investment Partnership (TTIP) between the US and the EU may not be approved. Trade obstructions across the world are growing.

2. Debt.

Zero and negative interest rates mean that more debt can be taken on.

3. Immigration.

Immigration is a big problem in Europe and is one of the contributing factors that led to the UK voting to leave the EU.

4. The next recession.

Given high debt levels in China and low corporate margins the recession is lurking.

5. Military confrontation by accident or design.

The South China Sea is frequently mentioned as a theatre for large power confrontation. Other areas that may also spark conflict are Japan and Syria, where the conflict is becoming even more complex.

¹ Brauch H. G. Threats, challenges, vulnerabilities and risks in environmental and human security. United Nation University. Germany. P. 30–33.

6. Stealth attacks or cyber war.

Cyber-attacks on companies are becoming more common and they may start having more far-reaching effects.

7. Central banking accidents.

A policy move causes a central bank to lose credibility, e. g.: a central bank push for inflation may cause the currency exchange increase.

8. People tire of consumerism.

The decline in consumer demands and changing preferences are observed. Difficult labor market conditions in developing countries where consumers were less optimistic about their income outlook, and growing wealth inequalities may reduce consumer demand for material acquisitions.

9. Multipolar jurisdictions harden.

In order to maintain geopolitical and economic power, more countries may ignore international law. Different regions may start adopting “their own way of doing things” to the detriment of trade and potentially human rights.

10. Climate events.

The year 2016 was the hottest year since 1880, the repeat of this may strain farms, food supply chains and could provoke a humanitarian crisis¹.

In the multipolar world *Credit Suisse Research Institute* predicts considerable changes in the area of human security: increased restrictions on immigrants, selective skill-based movement of labor, rural-urban migration to dominate cross country movement, more unequal living standards, local economies wealthier in aggregate, in emerging market economies rising consumer (income, consumption and wealth)².

The expanding system of global security governance in its current stage of development remains inchoate, disputatious, inefficient, and prone to tragic mistakes¹. In the multipolar world it will be charac-

¹ Getting over globalization – Outlook for 2017. The Credit Suisse Research Institute. URL: https://www.credit-suisse.com/corporate/en/articles/media-releases/_getting-over-globalization---what-to-watch-for-in-2017--201701.html (access.: 22.07.2018).

² Ibid (access.: 27.08.2018).

¹ Human Security Report: War and Peace in the 21st Century. URL: <http://gsdrc.org/document-library/human-security-report-war-and-peace-in-the-21st-century> (access.: 27.08.2018).

terized by more competitiveness, regional hegemons, covert conflicts, and new institutions with exclusive membership. Yet, some Human Security Reports have argued, the evidence suggests that it has also been effective in driving down the number and deadliness of armed conflicts¹.

Yet, the pattern of conflicts has changed. According to the *Human Security Report 2012*, the number of high-intensity conflicts – those causing 1,000 or more battle deaths a year – has declined, but the number of low-intensity conflicts has increased. Also, organized and transnational criminal violence has increased. Death rates in some countries exceed those in the deadliest wars currently being waged around the world². Civilian fatalities in wartime have climbed from 5 per cent at the turn of the century to more than 90 per cent in the wars of the 1990s. “Any and all tactics are employed, from systematic rape, to scorched earth tactics that destroy crops and poison wells, to ethnic cleansing and genocide”³. Even humanitarian activities, relief convoys, health clinics and feeding centers that were once safe from attack are now treated as legitimate military targets.

Cybercrimes⁴.

“There are two main kinds of cyberattack currently present – those targeting individuals, and those targeting the state”, claims T. Uren, a cybersecurity expert at the *Australian Strategic Policy Institute*.

Criminals, usually based in Eastern Europe or Indonesia employ all sorts of ransomware, straight-up fraud, blackmail and sometimes credential threats to steal people’s money, yet banks and other corporations would also come under victims.

Cyberespionage is another kind of cybercrime, which poses a specific threat not to individuals themselves but to global security.

¹ Human Security Report 2013. The Decline in Global Violence: Evidence, Explanation, And Contest, Human Security Press. URL: https://www.files.ethz.ch/isn/178122/HSRP_Report_2013_140226_Web.pdf (access.: 27.08.2018).

² Ibid.

³ Patterns in conflict: Civilians are now the target. UNICEF. URL: <https://www.unicef.org/graca/patterns.htm> (access.: 27.08.2018)

⁴ URL: <https://www.thesun.co.uk/news/5600173/dangerous-threats-world-2018-nuclear-weapons-cyber-criminal-terrorism> (access.: 27.08.2018).

The big states, China, Russia and Iran are mostly concerned with getting information on advancing the national interest¹.

Nuclear weapon.

CIA Director M. Pompeo estimates there was “no indication there’s any strategic change” in North Korean leader Kim Jong-un’s desire to remain a nuclear threat. Yet, T. Uren states that the probability of a nuclear strike isn’t likely at this stage as the impact on the world economy would be devastating.

Terrorism.

Islamic State militants have lost significant power in Iraq and Syria, but they most likely attempt to regroup.

The threat to the UK from terrorism is currently ranked as “severe”.

T. Uren convinces that the IS is a “non-existential” threat as it is not capable of destroying the world economy².

Natural disasters.

Kh. Zarin lists top 10 natural disasters of 21st century in the order with the greatest number of casualties on the top.

2010 Haiti earthquake – the worst natural disasters with approximately 220,000 casualties and more than 300,000 injured. More than 3 million people become homeless.

2004 the Indian Ocean – Tsunami epicenter was under the ocean in the earth and it violently shook the ocean that resulted into destructive waves that were up to meters high. On the first day more than 150,000 people were killed and millions were missing.

2005 Kashmir Earthquake – according to the government of Pakistan statistics 100,000 people died, more than 70,000 injured and more than 4 million people became homeless. This is considered to be the deadliest natural disasters ever happened in the region.

2003 European heat wave – the deadliest in last 500 years’ time. Death toll was more than 70,000 in Europe including France, Portugal, Germany, Netherland, Spain and Italy. Usually these countries do not have a hot summer but during the heat wave average temperature was over 45 °C.

¹ Fernando G., Danger Zone, Most Dangerous Threats to the World In 2018. The Sun. URL: <https://www.thesun.co.uk/news/5600173/dangerous-threats-world-2018-nuclear-weapons-cyber-criminal-terrorism> (access.: 29.08.2018).

² Ibid.

2001 Gujarat Earthquake – the epicenter was near a village in the district of Gujarat. Earthquake also affected some areas of Bangladesh and approximately 20,000 people were killed in the natural disaster. Nearly 167,000 were injured and more than 400,000 homes and buildings were collapsed.

2011 Tohoku Earthquake, Japan – earthquake was followed by the Tsunami that caused waves of height up to 40 meters. According to Japan's National Police Agency 15,889 deaths were confirmed. Nearly 6,152 people were injured and more than 2,600 were missing. Millions of buildings were completely collapsed.

2005 Hurricane Katrina – on average it was a category 4 storm. It hit the state Florida and some of the most damaged cities were Mississippi, New Orleans, Biloxi and Gulfport. Approximately 1833 people were died. This natural disaster caused more than 100 billion USD property damage.

2008 Afghanistan Blizzard – it reduced the temperature up to -30 °C. Death toll was about 1000 according to government figures but it mainly disturbed the animals. More than 315,000 cattle, 100,000 sheep and goat died in this deadliest disaster. Lack of transportation and poor health conditions in the affected areas forced the people to walk barefoot in the freezing temperature.

2011 East Africa drought – Somalia, Kenya, Djibouti and Ethiopia were the main victims. Lives of more than 9 million people were threatened. A large number of people migrated from Somalia to Kenya and Ethiopia which became overcrowded. That caused a lot of issues like unsanitary conditions and malnutrition problems as well and further followed to thousands of deaths. Food crisis spread even up to Sudan and Uganda.

2000 Mozambique Flood – a flood in Mozambique made thousands of people homeless. More than 800 people died in the disaster and about 20,000 herds of cattle were lost. It was the deadliest natural disaster in the country in last 50 years. It started in South Africa but major damage was in Mozambique. Government spent more than 15 million USD for citizens but even in 2015 many of them were still living in recovery shelters¹.

¹ Zarin K. 10 Deadliest Natural Disasters of the 21st Century. Scienceve. URL: <http://www.scienceve.com/10-deadliest-natural-disasters-of-21st-century> (access.: 29.08.2018).

Currently in 2018 the following most serious disaster including man-made ones were reported:

05-07 Kilauea: Hawaii volcano destroys dozens of homes;

04-23 Toronto: van attack: 10 pedestrians killed;

04-19 Puerto Rico hit by first island-wide blackout since Hurricane Maria Puerto Rico;

04-17 Southwest Airlines engine explosion linked to prior accident in Philadelphia;

04-11 Algeria military plane crash: 257 dead near Algiers Boufarik, Algeria;

04-07 Canada hockey team crash: entire country in shock, Saskatoon, Saskatchewan, Western Canada;

04-07 Trump Tower fire: a man dies in blaze, Trump Tower, Manhattan;

04-02 Elephants loose on motorway in Murcia, Spain, Albacete, Murcia, Spain¹.

People suffer from different natural disasters floods, droughts, earthquakes as well as man-made ones in all region of the world. They lose their lives and property. Some of them have not recovered yet, even though a quite long time has passed since the disaster happened.

R. Glasser, a United Nations disaster risk official, said: “If we do not succeed in understanding what it takes to make our societies more resilient to disasters, then we will pay an increasingly high price in terms of lost lives and livelihoods”².

J. J. Bogardi and H. G. Brauch, building on a UN Secretary General Kofi Annan’s human-centered perspective¹ and perspective of

¹ URL: <http://www.mapreport.com/disasters.html> (access.: 27.08.2018).

² Galvin G. 10 of the Deadliest Natural Disasters of 2017. U. S. News URL: <https://www.usnews.com/news/best-countries/slideshows/10-of-the-deadliest-natural-disasters-of-2017> (access.: 27.08.2018).

¹ For UN Secretary General Kofi Annan (2001) “human security can no longer be understood in purely military terms, rather, it must encompass economic development, social justice, environmental protection, democratization, disarmament, and respect for human rights and the rule of law” [...]. “freedom from want, freedom from fear, and the freedom of future generations to inherit a healthy environment – these are the interrelated building blocks of human – and therefore – national security” / H. G. Brauch. Threats, challenges, vulnerabilities and risks in environmental and human security. United Nation University. Germany. 2001. P. 34.

the UNDP (United Nations Development Program, 1994), argue that societal vulnerability should be reduced through poverty eradication programmes (UNDP 1994; CHS 2003); vulnerability to hazards – by enhancing coping capabilities of societies (UNU-EHS 2004); and vulnerability to extreme weather events – by reducing the probability that hazards may pose a survival dilemma (UNESCO, HSN)¹.

The *Sustainable Development Goals* (SDGs 2016–2030) defined in the *United Nation Development Program* are a universal call to action to end poverty, protect the planet and ensure that all people enjoy peace and prosperity. They include such new areas as climate change, economic inequality, innovation, sustainable consumption, peace and justice, among other priorities. The goals are interconnected – tackling one problem often needs dealing with another. Achieving these goals requires also the engagement and cooperation of governments, private sector, civil society and citizens².

B. Wisner (et al) answers that resilience to disasters of different groups of people is determined by the context of global and national political and economic systems³. This applies not only to natural but all kinds of risks also military and nonmilitary conflicts.

Pinker calls the gentle commerce to have the pacifying effect of economic interdependence – the rule known long ago in the Middle Ages and still working in the 21st century, which means the growth of the positive-sum economics of trade and the division of labor that create new behavior pattern of avoiding violence when pursuing economic gain: When it is cheaper to buy something than to steal it, that changes the incentives, and you get each side valuing the other more alive than dead. Other factors like democratization, the growth of international institutions and increasing levels of education bring about centuries-long socio-cultural, violence-constraining changes¹.

¹ Brauch H. G. Threats, challenges, vulnerabilities and risks in environmental and human security. United Nation University. Germany. P. 34.

² URL: <http://www.undp.org/content/undp/en/home/sustainable-development-goals.html> (access.: 20.08.2018).

³ Wisner B., Blaikie P., Cannon T. and Davis I. At Risk: natural hazards, people's vulnerability and disasters. UNDP follow up to the Hyogo Framework for Action. 2005. P. 9.

¹ Human Security Report: War and Peace in the 21st Century. URL: <http://gsdrc.org/document-library/human-security-report-war-and-peace-in-the-21st-century> (access.: 27.08.2018).

Social and economic factors also determine vulnerability to natural disasters. B. Wisner (et al) present the example of the earthquake of 1976 in Guatemala: “Slum dwellers in Guatemala City and many Mayan Indians living in impoverished towns and hamlets suffered the highest mortality. The homes of the middle class were better protected and more safely sited, and recovery was easier for them. The Guatemalan poor were caught up in a vicious circle in which lack of access to means of social and self-protection made them more vulnerable to the disaster. The social component was so apparent that a journalist called the event a ‘class-quake’”¹.

Yet, U. Beck claims that for ecological risks and terrorism that are global problems, no political or economic systems on the national level work: “Trying to solve these transnational problems on a national level by locking the national territory is like raising a garden fence to avoid the smog in town – you simply cannot escape it by doing so”². We need global governance to resolve them.

All types of risks, ecological, natural disasters or the ones provoked by human activity, no matter whether they have local, regional or global range, all of them affect a human being. The combination of economic, political, social factors and the particular characteristics of a person or group and their situation determine their capacity to predict, prepare, respond, resist and recover from the impact of threats they experience.

On the one hand, the technological, economic and social development brings about the changes and risks (opportunities and threats), make the security environment less and less predictable and people more vulnerable to all hazard. On the other hand, the same technological economic and social development is indispensable to resolve, as U. Beck claims, the side-product of man-made actions¹.

¹ Wisner B., Blaikie P., Cannon T. and Davis I. *At Risk: natural hazards, people’s vulnerability and disasters*. UNDP follow up to the Hyogo Framework for Action. 2005. P. 16.

² Wimmer J., Quandt T. *Theory Review Living in the Risk Society*. An interview with Ulrich Beck. *Journalism Studies*. 7:2. P. 336–347. DOI: 10.1080/14616700600645461.

¹ Ibid.

These intricate dependencies between security, development and human rights and well-being are the realm of human security which is reflected in its strategic goals, research, practical programs and projects on global scale. The human-centric approach in security seems the most effective as all these risks we should respond to are detrimental to human population and to a future in general.

2.2. European Union Information Security Practice

Karpchuk Nataliia

The notion of “information security” arose with the emergence of the first means of information communications between people when they understood that some of their interests could be damaged by influencing information communications, the latter ensured the development among all the elements of the society. On the international level the issue of “information security” has been on the agenda since the Russian Federation in 1998 first introduced a draft resolution in the First Committee of the UN General Assembly. It was recognized that few technologies had been as powerful as information and communications technologies in reshaping economies, societies and international relations; cyberspace touched every aspect of people’s lives; the benefits were huge, but the challenges and threats were enormous as well. Making cyberspace stable and secure can only be achieved through international cooperation¹.

In numerous scientific investigations the concept is understood as a state, a process, activity, property, function, system of safeguards; so various definitions of information security were elaborated, namely:

© *Karpchuk Nataliia* – Doctor of Political Sciences, Professor of International Communications and Political Analysis Department, Lesya Ukrainka Eastern European National University.

¹ Developments in the field of information and telecommunications in the context of international security, URL: <https://www.un.org/disarmament/topics/informationsecurity> (access.: 06.01.2018).

- preservation of confidentiality, integrity and availability of information¹;
- protection of information and information systems from unauthorized access, use, disclosure, disruption, modification, or destruction in order to provide confidentiality, integrity, and availability²;
- information security ensures that only authorized users (confidentiality) have access to accurate and complete information (integrity) when required (availability)³;
- the process of protecting the intellectual property of an organisation⁴;
- the protection of information and minimization of the risk of exposing information to unauthorized parties¹;
- a multidisciplinary area of study and professional activity which is concerned with the development and implementation of security mechanisms of all available types (technical, organizational, human-oriented and legal) in order to keep information in all its locations (within and outside the organization's perimeter) and, consequently, information systems, where information is created, processed, stored, transmitted and destroyed, free from threats²;
- the condition of the information environment security that meets the interests of the state; it ensures the formation, use and

¹ ISO/IEC 27000:2009 (E). Information technology. Security techniques. Information security management systems. Overview and vocabulary. 2009. URL: <https://www.iso.org/standard/41933.html> (access.: 06.01.2018).

² Committee on National Security Systems: National Information Assurance (IA) Glossary, CNSS Instruction No. 4009. 26. April 2010. URL: <https://www.cdse.edu/documents/toolkits-issm/cnssi4009.pdf> (access.: 07.01.2018).

³ ISACA, 2008, Glossary of terms. 2008. URL: <http://www.isaca.org/Knowledge-Center/Documents/Glossary/glossary.pdf> (access.: 06.01.2018).

⁴ Pipkin D. Information security: Protecting the global enterprise, Hewlett-Packard Company. New York, 2000.

¹ Venter H. S., Eloff J. H. P. A taxonomy for information security technologies. *Computers & Security*. 2003. 22 (4). P. 299–307. Doi: 10.1016/S0167-4048(03)00406-1 (access.: 06.01.2018).

² Cherdantseva Y., Hilton J. Information Security and Information Assurance. The Discussion about the Meaning, Scope and Goals. Organizational, Legal, and Technological Dimensions of Information System Administrator. Almeida F., Portela, I. (eds.). 2013. IGI Global Publishing.

development opportunities regardless of the impact of internal and external information threats¹ etc.

Since modern information security is associated with threats and dangers of ICTs, the term “cybersecurity” has been synonymously used (though Ukrainian academic circles have vigorous disputes as to the differences / similarities if these terms. In any case, this problem is not topical for the offered article).

However, in the paper we will use the definition offered by the *European Union Agency for Network and Information Security (ENISA)* as one of possible treatment of information / cybersecurity: “<...> the collection of tools, policies, security concepts, security safeguards, guidelines, risk management approaches, actions, training, best practices, assurance and technologies that can be used to protect the cyber environment and organization and user’s assets. Organization and user’s assets include connected computing devices, personnel, infrastructure, applications, services, telecommunications systems, and the totality of transmitted and/or stored information in the cyber environment”².

The whole world is interconnected and interdependent by means of ICTs; they facilitate the work of different institutions (including the EU) and pose grave threats. In order to prevent / overcome such threats the EU developed appropriate legislation and strategies, established the relevant structures. The practice of the EU could be beneficial for Ukraine in its attempt to regulate the sphere of information / cybersecurity.

EU Legislation on Information Security

*Regulation (EC) No 45/2001 on the Protection of Individuals with Regard to the Processing of Personal Data by the Community Institutions and Bodies and on the Free Movement of Such Data*¹

¹ Avramenko A., Haseskyi V. Information security in Ukraine as the component of its national security. Collection of works. Kyiv: UADU, 2012.

² Definition of Cybersecurity – Gaps and overlaps in standardization, December 2015. URL: <https://www.enisa.europa.eu/publications/definition-of-cybersecurity> (access.: 06.01.2018).

¹ Regulation (EC) No 45/2001 on the Protection of Individuals with Regard to the Processing of Personal Data by the Community Institutions and Bodies and on the Free Movement of Such Data. URL: <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32001R0045& from=EN> (access.: 06.01.2018).

imposes a set of obligations on data controllers within EU institutions and agencies with regard to handling personal data of employees and other affected data subjects in order to protect the privacy of these data subjects. The Regulation stipulates that EU institutions and bodies are only allowed to collect personal data that serves specified, explicit and legitimate purposes. The data collected have to be adequate, relevant and not excessive when evaluated against the collection purpose, as well as accurate and up to date. EU institutions and agencies may only process personal data when the data subject has given his or her consent. Addressing both physical and electronic data processing operations, the Council and the European Parliament have identified four operations they consider to pose particular challenges with regard to protecting the privacy of data subjects: 1) the processing of data related to health, suspected offences, offences, criminal convictions or security measures; 2) the processing of data pertaining to professional or personal qualities of the data subject, including his / her ability, efficiency and conduct; 3) processing operations allowing data set linkages not in accordance with national or EU legislation; 4) processing operations for the purpose of excluding individuals from rights, benefits or contracts.

*Regulation (EC) No 1049/2001 of the European Parliament and of the Council of 30 May 2001 regarding public access to European Parliament, Council and Commission documents*¹ defines principles, conditions and limits governing the right of access to European Commission, Council and European Parliament documents. The Regulation stipulates that EU documents are to be made accessible to the public in electronic form or through a register. This provision applies, in particular, to legislative documents, which are drawn up or received in the course of procedures for the adoption of legally binding acts. However, the Regulation restricts access to the documents, which disclosure would negatively affect: the public interest as regards public security, defence or international relations, and the financial, monetary or economic policy of the EU or a Member State; an individual's

¹ Regulation (EC) No 1049/2001 of the European Parliament and of the Council of 30 May 2001 regarding public access to European Parliament, Council and Commission documents. URL: http://www.europarl.europa.eu/RegData/PDF/r1049_en.pdf (access.: 06.01.2018).

privacy; a person's commercial interests; court proceedings and legal advice; the purpose of inspections, investigations and audits.

Framework Decision on combating fraud and counterfeiting of non-cash means of payment (2001)¹, which defines the fraudulent behaviours that EU States need to consider as punishable criminal offences. The Commission is assessing the need to revise this Framework Decision to cover new forms of money transmissions like virtual currencies and other aspects.

*Commission Decision of 16 August 2006 C (2006) 3602 concerning the security of information systems used by the European Commission*² constitutes the main framework document on security measures and organisational guidelines for the protection of the Commission's information systems and the information processed therein. However, the security measures and organisational guidelines defined in the Decision are applicable to a broad range of EU institutions and agencies, specifically: all European Commission DGs and Departments; the Joint Research Centre; EU delegations in third countries; offices with administrative links to the Commission; all Executive Agencies using the Commission's information systems; persons under contract to the Commission and subcontractors who have access to and use the Commission's information systems. The Decision primarily covers the use of encryption technologies, responses in the case of security incidents, and the general security capabilities of information systems.

*European Commission Security Standard on Logging and Monitoring*¹ (2010) supplements Commission Decision C (2006) 3602 (mentioned above). Rooted in three international norms, namely

¹ EU cybersecurity initiatives: working towards a more secure online environment. January 2017. URL: http://ec.europa.eu/information_society/newsroom/image/document/2017 (access.: 06.01.2018).

² Commission Decision of 16 August 2006 C (2006) 3602 concerning the security of information systems used by the European Commission. URL: http://ec.europa.eu/internal_market/imi-net/docs/decision_3602_2006_en.pdf (access.: 06.01.2018).

¹ European Commission Information System Security Policy C (2006) 3602. Standard on Logging and Monitoring. URL: https://www.eba.europa.eu/documents/10180/21209/7--Annex-2---logging_monitoring_standard.pdf (access.: 06.01.2018).

ISO/IEC 27001 (second edition of 15/06/2005), *ISO/IEC 17799* (second edition of 15/06/2005), and the *NIST SP 800-92 Guide to Computer Security Log Management*, SSLM provides mandatory instructions for the procedures to be used for logging and monitoring on all ICT systems that are capable of generating information security-related log events, including but not limited to: servers, workstations, portable PCs, other portable computing devices, such as mobile phones and PDAs, storage devices, network equipment. The Commission SSLM provides a comprehensive list of required logging practices with regard to individual device types.

Directive on combating the sexual exploitation of children online and child pornography (2011) better addresses new developments in the online environment, such as grooming (offenders posing as children to lure minors for the purpose of sexual abuse)¹.

*Council Decision 2013/488/EU on the Security Rules for Protecting EU Classified Information*¹ sets out basic principles and minimum standards for protecting EU Classified Information (EUCI), including provisions on processing EUCI through ICTs. The Decision applies to the handling of EUCI by a wide range of EU institutional actors, specifically: the Council, Council preparatory bodies, and the Council Secretariat, the Commission, the European External Action Service (EEAS), Common Foreign and Security Policy (CFSP) agencies and bodies, EU Special Representatives, and EU crisis management operations personnel, Europol and Eurojust, the European Parliament.

The Council's understanding of "information assurance" encompasses five concepts: 1) authenticity, i. e. the guarantee that information is genuine and from bona fide sources; 2) availability, i.e. the property of being accessible and usable upon request by an authorised entity; 3) confidentiality, i. e. the property that information is not disclosed to unauthorised individuals, entities or processes; 4) integrity,

¹ EU cybersecurity initiatives: working towards a more secure online environment. January 2017. URL: http://ec.europa.eu/information_society/newsroom/image/document/2017 (access.: 06.01.2018).

¹ Council Decision 2013/488/EU on the Security Rules for Protecting EU Classified Information. URL: <https://publications.europa.eu/en/publication-detail/-/publication/d43001e3-356d-11e3-806a-01aa75ed71a1/language-en> (access.: 06.01.2018).

i. e. the property of safeguarding the accuracy and completeness of information and assets; 5) non-repudiation, i. e. the ability to prove an action or event has taken place, so that this event or action cannot subsequently be denied. The Council aims at the cultivation of a range of technical and non-technical security measures: deterrence, i. e. the dissuasion of any adversary planning to attack ICTs; prevention, i. e. the blocking of an attack on ICTs; detection, i. e. the discovery of an attack on ICTs; resilience, i. e. the limitation of negative effects of an attack on information or ICT assets and the prevention of further damage; recovery, i. e. the reestablishment of a secure situation for ICTs. Cryptographic products, which protect EUCI classified as SECRET and TOP SECRET, require final approval by the Council before they can be used within EU institutions and agencies and/or Member States. Cryptographic products that protect EUCI classified as CONFIDENTIAL and RESTRICTED require approval by the Secretary-General of the Council or by Member States on the national level¹.

*A Directive on attacks against information systems*² (2013), which aims to approximate the criminal law of the Member States in the area of attacks against information systems by establishing minimum rules concerning the definition of criminal offences and the relevant sanctions and to improve cooperation between competent authorities, including the police and other specialised law enforcement services of the Member States, as well as the competent specialised Union agencies and bodies, such as Eurojust, Europol and its European Cyber Crime Centre, and the European Network and Information Security Agency³.

¹ Robinson N., Gaspers J. Information Security and Data Protection Legal and Policy Frameworks Applicable to European Union Institutions and Agencies. 2014. URL: https://www.rand.org/pubs/research_reports/RR557.html (access.: 06.01.2018).

² Directive 2013/40/EU of the European Parliament and of the Council of 12 August 2013 on attacks against information systems and replacing Council Framework Decision 2005/222/JHA. URL: <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32013L0040&from=EN> (access.: 06.01.2018).

³ European Union Agency for Network and Information Security (ENISA). URL: https://europa.eu/european-union/about-eu/agencies/enisa_en (access.: 06.01.2018).

In December 2015, two new pieces of EU legislation were agreed, namely General Data Protection Regulation and Network and Information Security Directive (came into force in 2016).

General Data Protection Regulation (GDPR) represents a profound reform of data protection law in Europe, shifting the balance of power towards the citizen to whom the personal data belongs, away from organisations that collect, analyse and use such data. The changes to be introduced include:

- data breaches must be reported as soon as possible and, where feasible, no later than 72 hours after discovery of a breach;
- personal data now extending to location, IP address, RFID identifiers, as well as whole new swathes of medical data, including genetic information;
- the “right to be forgotten” being enshrined in law, allowing people to request of search engines to delete links to the data in question;
- regulation will apply to companies headquartered outside of Europe as long as they have operations in Europe;
- greater rigour around consent to use personal data
- new requirements to carry out Privacy Impact Assessments (PIAs) to ensure that personal data is sufficiently protected and privacy of the individual maintained¹.

Network and Information Security Directive (NISD) can be regarded as a complementary law to GDPR, designed to create a focus on the protection of IT systems in European critical national infrastructure (CNI). The Directive builds on three main pillars:

- ensuring Member States preparedness by requiring them to be appropriately equipped, e. g. via a Computer Security Incident Response Team (CSIRT) and a competent national NIS authority;
- ensuring cooperation among all the Member States, by setting up a Cooperation Group, in order to support and facilitate strategic cooperation and the exchange of information among Member States, and a CSIRT Network, in order to promote swift and effective opera-

¹ New European cyber laws GDPR and NISD. URL: <https://www.cgi-group.co.uk/systems-integration-services/cyber-security/nisandgdpr> (access.: 06.01.2018).

tional cooperation on specific cybersecurity incidents and sharing information about risks;

– ensuring a culture of security across sectors which are vital for the EU economy and society and moreover rely heavily on ICTs. Businesses with an important role for society and economy that are identified by the Member States as operators of essential services under the NIS Directive will have to take appropriate security measures and to notify serious incidents to the relevant national authority. These sectors include energy, transport, water, banking, financial market infrastructures, healthcare and digital infrastructure. Also key digital service providers (search engines, cloud computing services and online marketplaces) will have to comply with the security and notification requirements under the new Directive. Similar requirements already apply to telecom operators and internet service providers through the EU telecoms regulatory framework¹.

EU Strategies in the Sphere of Information Security

The e-Commission Initiative 2012–2015 follows on from *the e-Commission Initiative 2006–2010* (which set out how the European Commission aimed to implement objectives identified in *the e-Government Action Plan*) and *the 2009 Digital Agenda*. This Initiative sets out a number of actions according to principles under a common vision of delivering efficiently, effectively and transparently user-centric digital services and IT solutions to support both EU policies and the Commission’s own internal administration. Specific actions outlined in the Communication relating to security included: protection of the corporate infrastructure (extension of access and identity management system); implementation of an IT security policy framework; reinforcing business continuity management of the Commission’s critical services and systems; a corporate user authentication system as the mandatory building block for all Commission information systems².

¹ EU cybersecurity initiatives: working towards a more secure online environment. January 2017. URL: http://ec.europa.eu/information_society/newsroom/image/document/2017 (access.: 06.01.2018).

² Robinson N., Gaspers J. Information Security and Data Protection Legal and Policy Frameworks Applicable to European Union Institutions and Agencies. 2014. URL: https://www.rand.org/pubs/research_reports/RR557.html (access.: 06.01.2018).

EU Cybersecurity Strategy (2013), launched by the Commission and the European External Action Service, sets five priorities: 1) increasing cyber resilience; 2) drastically reducing cybercrime; 3) developing EU cyber defence policy and capabilities related to the Common Security and Defence Policy; 4) developing the industrial and technological resources for cybersecurity; 5) establishing a coherent international cyberspace policy for the EU and promote core EU values¹.

Fighting cybercrime more effectively is one of the three priorities under the new *European Agenda on Security 2015–2020*¹. Underlining that cybercrime requires a coordinated response at European level, the Agenda sets out the following actions:

- giving renewed emphasis to implementation of existing policies on cybersecurity, attacks against information systems, and combating child sexual exploitation;
- reviewing and possibly extending legislation on combatting fraud and counterfeiting of non-cash means of payments to take account of newer forms of crime and counterfeiting in financial instruments;
- reviewing obstacles to criminal investigations on cybercrime, notably on issues of competent jurisdiction and rules on access to evidence and information;
- enhancing cyber capacity building action under external assistance instruments.

Trust and security are essential to reap the benefits of the digital economy. This is why the *Digital Single Market Strategy* presented in May 2015 includes a public-private partnership (PPP) on cybersecurity. The partnership was signed on 5 July 2016 by the Commission and the European Cyber Security Organization (ECSO) – an industry-led association, which includes a wide variety of stakeholders such as large companies, SMEs and start-ups, research centers, universities,

¹ EU cybersecurity initiatives: working towards a more secure online environment. January 2017. URL: http://ec.europa.eu/information_society/newsroom/image/document/2017 (access.: 06.01.2018).

¹ European Agenda on Security 2015–2020. URL: https://ec.europa.eu/home-affairs/what-we-do/policies/european-agenda-security_en (access.: 06.01.2018).

end-users, operators, clusters and association as well as public authorities. The goal of this partnership is to stimulate European competitiveness and help overcome cybersecurity market fragmentation through innovation, building trust between Member States and industrial actors as well as helping align the demand and supply sectors for cybersecurity products and solutions. The partnership helps to: 1) gather industrial and public resources to deliver innovation against a jointly-agreed strategic research and innovation roadmap; 2) focus on targeted technical priorities defined jointly with industry; 3) maximize the impact of available funds; 4) provide visibility to European research and innovation excellence in cybersecurity¹.

On July 2016 the Commission adopted *Communication: Strengthening Europe's Cyber Resilience System and Fostering a Competitive and Innovative Cybersecurity Industry*². It is aimed at:

- stepping up cooperation across Europe: the Commission encourages Member States to make the most of the cooperation mechanisms under the NIS Directive and to improve the way in which they work together to prepare for a large-scale cyber incident. This includes more work on education, training and cybersecurity exercises;

- supporting the emerging single market for cybersecurity products and services in the EU: for example, the Commission will explore the possibility of creating a framework for certification of relevant ICT products and services, complemented by a voluntary and light weight labelling scheme for the security of ICT products; the Commission suggests also possible measures to scale up cybersecurity investment in Europe and to support SMEs active in the market;

- establishing a contractual public-private partnership (PPP) with industry, to nurture cybersecurity industrial capabilities and innovation in the EU.

¹ EU cybersecurity initiatives: working towards a more secure online environment. January 2017. URL: http://ec.europa.eu/information_society/newsroom/image/document/2017 (access.: 06.01.2018).

² Communication: Strengthening Europe's Cyber Resilience System and Fostering a Competitive and Innovative Cybersecurity Industry. URL: <https://ec.europa.eu/digital-single-market/en/news/communication-strengthening-europes-cyber-resilience-system-and-fostering-competitive-and> (access.: 06.01.2018).

EU Security and Privacy Organisations

Directorate-General for Informatics (DIGIT) has the mission to enable the European Commission to effectively and efficiently use ICTs in the course of achieving its organisational and political objectives. Towards this end, DIGIT is responsible for the: definition of the European Commission's IT Strategy; provision of IT infrastructure solutions and e-services, support services and telecommunications facilities to the Commission and other EU institutions and agencies; delivery of information systems for EC corporate business processes; promotion and facilitation of pan-European e-government services for citizens and enterprises. Firstly, DIGIT provides the Commission as well as other European institutions and agencies with a secure and reliable high-performance ICT infrastructure. Secondly, DIGIT is responsible for the acquisition of ICT tools used within the Commission, the lifecycle management of ICT components, and the provision of support and training services related to the use of ICT equipment¹.

Since 2011, DIGIT has been host to a *permanent Computer Emergency Response Team (CERT-EU)*, which is supervised by the Director-General of DIGIT and steered by a group chaired by the Council. CERT-EU's task is to support EU institutions and agencies in their fight against cyber threats. Towards this end, CERT-EU engages in information sharing, threat assessment and awareness-raising activities².

The *DIGIT Security Operations Centre (SOC)* is managed by a *Local Information Security Officer (LISO)* who also acts as an advisor to the Information Security Steering Committee. The LISO analyses the security requirements of DIGIT's ICT systems and proposes policies that govern the ICT systems in line with the latter's needs³.

¹ Robinson N., Gaspers J. Information Security and Data Protection Legal and Policy Frameworks Applicable to European Union Institutions and Agencies. 2014. URL: https://www.rand.org/pubs/research_reports/RR557.html (access.: 06.01.2018).

² CERT – EU. URL: <https://www.enisa.europa.eu/topics/csirts-in-europe/capacity-building/european-initiatives/cert-eu> (access.: 06.01.2018).

³ Robinson N., Gaspers J. Information Security and Data Protection Legal and Policy Frameworks Applicable to European Union Institutions and Agencies. 2014. URL: https://www.rand.org/pubs/research_reports/RR557.html (access.: 06.01.2018).

In 2010, the General Secretariat of the Council of the EU launched the *Network Defence Centre (NDC)*¹. Its objective is to strengthen the protection of EU sensitive and classified Communication and Information Systems against all forms of technical attacks, including Advanced Persistent Threats, through the development of the capability to detect and respond to security incidents.

The *European Agency for the operational management of large-scale IT systems* became fully functional on 1 December 2012 and has since been responsible for the operational management of IT systems in the area of home affairs. The Agency's core task is to ensure the uninterrupted exchange of data between national authorities. However, the Agency is also responsible for adopting and implementing security plans to prevent the unauthorised reading, copying, modification or deletion of personal data during transfers of personal data or transport of data media. The Agency is to ensure that no system-related operational information circulates in the communication infrastructure without encryption¹.

A *European Data Protection Supervisor (EDPS)* as well as an Assistant Supervisor and an institutionally independent supporting structure were established in January 2004. The EDPS's mission is to ensure that EU institutions and agencies respect individuals' fundamental rights and freedoms, specifically their right to privacy, when processing personal data or developing new policies. In order to fulfill this mission the EDPS enjoys several competences and powers, including the right to: give advice to data subjects in the exercise of their rights; make proposals for improving the protection of data subjects; order that requests to exercise certain rights in relation to data be complied with; order the rectification, blocking, erasure or destruction of all personal data that have been processed in breach of

¹ Network Defence Operational Centre of the General Secretariat of the Council of the European Union. URL: <https://www.trusted-introducer.org/directory/teams/gsc-ndc-oc.html> (access.: 07.01.2018).

¹ Robinson N., Gaspers J. Information Security and Data Protection Legal and Policy Frameworks Applicable to European Union Institutions and Agencies. 2014. URL: https://www.rand.org/pubs/research_reports/RR557.html (access.: 06.01.2018).

the provisions governing the processing of personal data; impose a temporary or definitive ban on the processing of personal data; intervene in actions brought before the Court of Justice; obtain access to all personal data and to all information necessary for his/her enquiries¹.

The *European Union Agency for Network and Information Security (ENISA)* was set up in 2004 to contribute to the overall goal of ensuring a high level of network and information security within the EU. ENISA helps the Commission, the Member States and the business community to address, respond and especially to prevent NIS problems. The main activities run by ENISA include:

- collecting and analysing data on security incidents in Europe and emerging risks;
- promoting risk assessment and risk management methods to enhance capability to deal with information security threats;
- running of pan-European cyber exercises;
- supporting Computer Emergency Response Teams (CERTs) cooperation in the Member States;
- awareness-raising and cooperation between different actors in the information security field¹.

In order to boost the overall level of online security in Europe, each October the agency organises the Cybersecurity Month awareness campaign, with the support of NIS contact points in all Member States.

The *Europol's Cybercrime Centre (ECC)* was set up in 2013 as integral part of Europol and has become a focal point in combatting and preventing cross-border cybercrime by:

- serving as the central hub for criminal information and intelligence;

¹ Robinson N., Gaspers J. Information Security and Data Protection Legal and Policy Frameworks Applicable to European Union Institutions and Agencies. 2014. URL: https://www.rand.org/pubs/research_reports/RR557.html (access.: 06.01.2018).

¹ European Union Agency for Network and Information Security (ENISA). URL: https://europa.eu/european-union/about-eu/agencies/enisa_en (access.: 07.01.2018).

- supporting Member States’ operations and investigations by means of operational analysis, coordination and expertise;
- providing strategic analysis products;
- reaching out to cybercrime related law enforcement services, private sector, academia and other non-law enforcement partners (such as internet security companies, the financial sector, computer emergency response teams) to enhance cooperation amongst them;
- supporting training and capacity building in the Member States;
- providing highly specialised technical and digital forensic support capabilities to investigations and operations;
- representing the EU law enforcement community in areas of common interest (R&D requirements, internet governance, policy development).

Ukraine’ Information Security Experience in the Context of its European Integration

Since the days of EuroMaidan and the annexation of the Crimea Russia has used cyber attacks as part of its hybrid war against our state. Various special units of the security structures attacked the state information resources and the personal data of individual politicians and public figures. The most known cases of such actions are DDoS attacks on government resources (the Ministry of Foreign Affairs, the site of the President of Ukraine, sites of the security and defense sector), targeted attacks on state agencies through fraudulent e-mails, attempts to disrupt the work of the Central Election Commission during the presidential elections and parliamentary elections of 2014, as well as the functioning of the Uroboros virus, which, with high probability, is identified as Russian. It had all the signs of using the cyber-skirmish campaign against Ukraine, and the web-resources of public authorities (including law enforcement agencies), the media, financial institutions, and large industrial enterprises fell under the influence of the virus.

In the opinion of ESET researchers, the BlackEnergy virus was deliberately targeted against Ukraine aimed at collecting data from hard disks of affected computers, taking screen shots of users, intercepting data entry and much more. Approximately, state organizations, business structures and the industrial sector were affected. In

addition, the KosmicDuke virus (modification of the Miniduke virus, the purpose of which is theft of information) was used against Ukrainian institutions. There are the data proving the use of FireEye virus for espionage after Ukrainian officials. Besides there are a number of indirect cyber attacks using social networks with their thousands of “fake” accounts for spreading false information about events in the state and provoking unrest, as well as more traditional attacks with the help of social engineering¹.

Russian intelligence services used the power of some of Ukraine’s largest mobile operators to listen to Ukrainian subscribers’ phones, identify their location, and receive all the necessary data concerning the users. This information is used in a variety of ways: from the implementation of psychological pressure and the use of the data obtained to guide the artillery of the aggressor in positions of Ukrainian military in the ATO zone.

June 27, 2017 is known as the “black Tuesday” for the cyber security of our country. Within a day, the computer virus “Ransom: Win32 / Petya” attacked the private and public sectors of the Ukrainian economy, in particular banks, airports, state railway companies, television and telecommunication companies, large supermarkets, energy companies, state fiscal services, state authorities and local government, etc. The virus also infected private and state actors of other countries, but experts in this area agree that Ukraine has suffered the most².

Since Ukraine has officially declared its course to European integration, it is to bring its legal frameworks in accordance with the EU standards. The EU experience in the sphere of cybersecurity is quite positive. In Ukraine some steps have already been made and some are expected to be implemented.

Until recently, the development of the cyber security sector in Ukraine was rather specific, and sometimes fragmented. The respec-

¹ Horbulin V. U poshukakh asymetrychnykh vidpovidei: kiberprostir u hibrydnii viini. 2015. URL: https://dt.ua/internal/u-poshukah-asimetrichnih-vidpovidey-kiberprostir-u-gibridniy-viyni-_html (access.: 16.03.2018).

² Hrabovyi A. Zakon pro kiberbezpeku ta stratehiia kiberbezpeky Ukrainy. 2017. URL: http://uz.ligazakon.ua/ua/magazine_article/EA010553 (access.: 16.03.2018).

tive norms have been dispersed in a number of different laws and regulations; even the legal (not academic) definition of the term has not been properly elaborated. However, there is the law on state secret (1994), and the law on processing personal data (it coincides with the provisions of the *EU Regulation (EC) No 45/2001 on the Protection of Individuals with Regard to the Processing of Personal Data by the Community Institutions and Bodies and on the Free Movement of Such Data*) and the law on access to public information (it contains similar provisions as *Regulation (EC) No 1049/2001 of the European Parliament and of the Council of 30 May 2001 regarding public access to European Parliament, Council and Commission documents*) were adopted in 2013. However, the law on processing personal data seems to have a lot of gaps as there are cases of unauthorized usage of private information.

In order to solve this problem to author's opinion, in Ukraine it is necessary to establish the position like the EU European Data Protection Supervisor with the same powers and rights, namely: the right to: give advice to data subjects in the exercise of their rights; make proposals for improving the protection of data subjects; order that requests to exercise certain rights in relation to data be complied with; order the rectification, blocking, erasure or destruction of all personal data that have been processed in breach of the provisions governing the processing of personal data; impose a temporary or definitive ban on the processing of personal data; intervene in actions brought before the Court of Justice.

Since 2011, many attempts have been made to solve the regulation issue at the legislative level, mainly within the framework of the relevant law of Ukraine. The necessity of such a law was regularly discussed at the National Security and Defense Council meetings, but there were still no particular developments in this issue. One of the reasons was the interagency controversies and the difficulty in finding a compromise between government structures. Each institution does not want to give way to its interests and powers, believing that it should become a "key" structure. Often, this discussion was reduced to the need to create a completely new state structure that would deal with the issues of cybersecurity.

On March 16, 2016 the President P. Poroshenko approved the *Cyber security Strategy of Ukraine*¹. In the draft discussions the experts and authors claimed to have taken into account the EU strategies on cyber security issues. The Strategy includes a set of measures, priorities and directions for the provision of cybersecurity in Ukraine, in particular, the creation and operational adaptation of the state policy aimed at developing cyberspace and achieving compatibility with relevant EU and NATO standards, forming a competitive environment in the field of electronic communications, providing information security and cybernetic services protection. In addition, the Strategy provides for 1) the involvement of expert potential of scientific institutions, professional and public associations in the preparation of draft conceptual documents in this area; 2) increase of digital literacy of citizens and culture of behavior safety in cyberspace; 3) development of international cooperation and support of international initiatives in the field of cyber security, including deepening Ukraine's cooperation with the EU and NATO.

In June 2016 the *National Coordination Center for Cyber Security* was created (its functions remind the respective functions of the EU DIGIT). The main tasks of the Center include the analysis of the condition of cybersecurity; monitoring of the national cybersecurity system; control of the readiness of the subjects concerning providing cybersecurity and counteracting cyber threats; analysis of national legislation fulfillment in the sphere of cyber defense of state electronic information resources and information; collection of data on cyber incidents in relation to state information, etc.²

It is necessary to mention that a *Cyberpolice* as a structural unit of the National Police was created a year before, on October 5, 2015 with the purpose to reform and develop the units of the Ministry of Internal Affairs of Ukraine, to ensure the training and functioning of highly qualified specialists in the expert, operational and investigative

¹ Prezydent zatverdyl Stratehiiu kiberbezpeky Ukrainy. 2016. URL: https://dt.ua/POLITICS/prezident-zatverdiv-strategiyu-kiberbezpeki-ukrayini-202619_.html (access.: 16.03.2018).

² Prezydent zatverdyl Polozhennia pro Natsionalnyi koordynatsiinyi tsentr kiberbezpeky. 2016. URL: <http://www.president.gov.ua/news/prezident-zatverdiv-polozhennya-pro-nacionalnij-koordinacij-37329> (access.: 06.01.2018).

units of the police engaged in the fight against cybercrime and capable of applying the latest technology in operational and service activities at the highest professional level. The main tasks of Cyber police are to implement state policy in the field of combating cybercrime; to early inform the population about the emergence of the latest cybercrime; to use software tools for the systematization and analysis of information on cyber incidents, cyber threats and cybercrime; to respond to inquiries of foreign partners received by channels of the National round-the-clock network of contact points; to participate in the training of police officers concerning the use of computer technologies in counteracting crime; to take part in international operations and cooperation in real time; to counteract cybercrime, specifically in the area of using payment systems etc. The Development Strategy claims the application of methodology elaborated by Europol¹.

On October 5, 2017 the law on *Basic principles of providing cybersecurity of Ukraine* was adopted being based on national legislation and Convention on cybersecurity. Coordination of activities in the sphere of cybersecurity as a component of national security of Ukraine is carried out by the President of Ukraine through the Council of National Security and Defense of Ukraine headed by him. The National Cybersecurity Coordination Center, as the working body of the National Security and Defense Council of Ukraine, coordinates and monitors the activity of the security and defense sector, which provides cybersecurity, makes proposals to the President of Ukraine on the formation and refinement of the Cybersecurity Strategy of Ukraine. The Cabinet of Ministers of Ukraine shall ensure the formation and implementation of state policy in the field of cybersecurity, protection of human and civil rights and freedoms, national interests of Ukraine in cyberspace, fight against cybercrime; organizes and provides the necessary forces, instruments and resources for the functioning of the national cybersecurity system; establishes requirements and ensures the functioning of the information security audit system at the objects of critical infrastructure².

¹ Cyberpolice. URL: <https://cyberpolice.gov.ua> (access.: 07.01.2018).

² Zakon Ukrainy “Pro osnovni zasady zabezpechennia kiberbezpeky Ukrainy”. 2017. URL: <http://zakon2.rada.gov.ua/laws/show/2163-19> (access.: 16.03.2018).

The Law underlines that the functioning of the national cyber-security system is provided by development and operational adaptation of the state policy on cybersecurity aimed at developing cyberspace, achieving compatibility with the relevant standards of the European Union and NATO; deepening Ukraine's cooperation with the European Union and NATO in order to strengthen Ukraine's cyber security capacity, participating in confidence-building measures in the use of cyberspace, held under the auspices of the Organization for Security and Cooperation in Europe.

Governmental Response Team for Computer Emergencies of Ukraine CERT-UA, established under the support of the ENISA, is responsible for the accumulation and analysis of data on cyber incidents, keeping the state register of cyber incidents; providing owners of cyber defense objects with practical help in preventing, detecting and eliminating the effects of cyber incidents on these objects; organizing and conducting practical seminars on cyber defense issues for subjects of the national system of cybersecurity and owners of objects of cyber defense; preparing and publishing on its official website recommendations on the counteraction to modern types of cyber attacks and cyber threats; interaction with law enforcement agencies, ensuring their timely information on cyber attacks etc.¹

In spite of general positive perception of the law, it contains a number of provisions that may create conditions for abuse in the future and will provide the government with the tools the officials might use to put pressure on businessmen and at the same time it could hinder raising the level of cybersecurity of Ukraine to the corresponding world level. The law does not define a single body, which carries out operational command of the subjects of cyber-security in peacetime. The National Security and Defense Council of Ukraine, and the President carry out only coordination and strategic management. Ministry of Defense of Ukraine and General Staff of the Armed Forces of Ukraine perform operational management in the relevant period. In practice, cyber attack and cyber warfare are never declared or stopped. Some experts are concerned about the power of the Security Service of Ukraine (granted by the Law) which has the

¹ CERT – EU. URL: <https://www.enisa.europa.eu/topics/csirts-in-europe/capacity-building/european-initiatives/cert-eu> (access.: 06.01.2018).

right to carry out secret inspections of cybersecurity of all objects of critical infrastructure. This, in essence, gives the Service the right to attack a private business¹.

The EU supports its IT professionals. Ukraine as well is not lagging behind in the sphere of IT specialists' education as in this state annually several thousands of IT professionals graduate from Universities, the level of training of many is consistent with the world standards. Ukrainian IT specialists have the ability to work quickly and efficiently and possess a high motivation to confront external aggression. Ukrainian engineers and programmers create fully competitive software and hardware products that can be used to enhance the cybersecurity of the state. However, the biggest problem is financing. Unfortunately, the state does not offer salaries of the world standard to the highly qualitative specialists. As the result, we face the outflow of brains.

In the condition of a hybrid warfare, the state must rely not only on defensive, but also on offensive technologies, including – cybersecurity. The rival should know that, trying to use cyberspace to the detriment of Ukraine's national interests, he may face a large-scale cyber response. This proposal obviously contradicts all peacekeeping measures being taken at the global level with the demilitarization of cyberspace, but we can no longer pretend that we do not notice reality in this area, replacing it with ineffective talks. We are asking our Western partners for conventional weapon assistance being able to create cyber weapon on our own.

One of the latest coordination steps between Ukraine and the EU was done on March 12, 2018 when President of Ukraine P. Poroshenko agreed with the High Representative of the EU on Foreign Affairs and Security Policy – Vice President of the European Commission F. Mogherini to strengthen cooperation in combating fake news and cyber attacks².

¹ Hrabovyi A. Zakon pro kiberbezpeku ta stratehiia kiberbezpeky Ukrainy. 2017. URL: http://uz.ligazakon.ua/ua/magazine_article/EA010553 (access.: 16.03.2018).

² Poroshenko i Moherini domovylysia posylyty borotbu z reikovymy novynamy. 2018. URL: <https://www.ukrinform.ua/rubric-politics/2419794-porosenko-i-mogerini-domovilis-posiliti-borotbu-z-fejkovimi-novinami.html> (access.: 16.03.2018).

The European Union has developed a powerful base for counteracting the threats and challenges that have been provoked by the widespread use of ICTs in all areas of society's life. Information technologies are improving, the negative influences also become more "sophisticated", but the EU is constantly improving its regulatory framework as well, creating new structures for counteracting information threats, trying not only to eliminate dangers, but to prevent them. It should be noted that the EU pays great attention to the protection of personal data of ordinary citizens, to combating fraud and to security standards development.

Having been suffered from cyber attacks, being under the influence of hybrid warfare, Ukraine developed some cybersecurity and related legislation, established some cybersecurity structures following the EU experience. However, we are at the beginning of the process, so Ukraine is sure to need the EU assistance in this activity, specifically in the field of cyber defence skills and capabilities development; cyber security policy, legislation and strategy development; and material and technical assistance.

2.3. Mass Collaboration as a Factor of Information Security of Society and States

Fedoniuk Sergii

The idea of a network intelligence community was advanced in the last century, and Donald Tapscott was the main contributor². The network character of the emerging social structures was noted by Manuel Castells et al³. The dominant idea of these concepts is a stable network of information communications and interactions at all levels

© *Fedoniuk Sergii* – PhD in Geographical Studies., Dean of the International Relations Faculty, Lesya Ukrainka Eastern European National University.

² Tapscott Don D. *The Digital Economy: Promise and Peril In The Age of Networked Intelligence*. New York, NY: McGraw-Hill, 1997.

³ Castells M. *The Rise of the Network Society. The Information Age: Economy, Society, and Culture*. Vol. 1. Wiley-Blackwell, 2010.

of social organization. Moreover, such a society acquires a global character through the absolute universalization and standardization of communication systems and information technologies.

At the end of 2008, Donald Tapscott and Anthony Williams released a book called *Wikinomics: How Massive Cooperation Changes Everything*¹. The important point is that this work, which was devoted to the comprehension of the phenomenon of “open” network economy, itself became a spectacular example of an open project. The authors substantiated and demonstrated the transition of modern business and society in general from a traditional and closed one to an open, harmonious, transparent model, or Wikinomics.

At the beginning of the XXI century, companies started to use the principles of mass collaboration, peer collaboration, and open source to achieve commercial success. Wikinomics includes expanding or even “blurring” the boundaries of a traditional enterprise that is increasingly using external knowledge and resources for profit, instead of relying on internal, closed, and hierarchical models. Additionally, network corporations that interact with experts and customers globally are emerging due to global communications channels. This system of information interaction gradually involves almost all users of the Internet, which, in turn, is changing from being the mere means of representation of information into the information space of a new generation with unlimited intelligence, able to meet the needs of both consumers and product providers.

The concept of mass cooperation is closely linked to the principle of crowdsourcing and is well-known in the field of innovation for a long time (for example, the evidence can be found in works by Eric von Hippel)². Crowdsourcing is a way to use the potential of the general public. Manufacturers can rely on consumers not only in the formulation of needs but also in creating products and modifications that meet these needs. The prediction that consumers would be willing to share their ideas with the company for free or for a small price, with the sole interest in seeing these ideas embedded in the production,

¹ Tapscott D. and Williams A. D. *Wikinomics: How Mass Collaboration Changes Everything*. New York, NY: Penguin. 2008.

² Von Hippel E. *The Sources of Innovation*. New York; Oxford: Oxford University Press, 1988.

turned out to be correct. This approach is very effective today, especially in the area of product development (Susumu Ogawa, Frank Piller)¹. Also, crowdsourcing turns into a dominant form of content generation in the context of mass communication – primarily in social networks. Today, the sources of content for news and entertainment are also nonprofessional actors, including individuals who are information end users.

The system of mass communication on the basis of open cooperation has the following characteristics:

- network organization;
- principle of an open model;
- elimination of closed models (companies);
- formation of a significant number of nodes-consumers (small enterprises, corporations, political parties, states) and nodes that are resource providers (research laboratories, specialized companies, and individuals);
- unlimited participation in the supply of resources on the basis of universal access to information.

Results of research and their substantiation

Open collaboration involves a number of the following communication and processing features that may affect information security in all its aspects. These aspects include confidentiality as protection against unauthorized access, integrity of protection against unauthorized information distortion, damaging or elimination, accessibility (protection against unauthorized blocking), as well as observability (the property of information that allows capturing the activities of users and processes, set their identifiers) and authenticity (the property of information that allows identification of the source of its origin (to establish/assign authorship).

These are the features of communication and information processing in an open co-operation:

Firstly, these are the technical and technological features of open communication.

¹ Ogawa S., Piller F. T. Reducing the Risks of New Product Development. Sloan Management Review. Jan. 01. 2006. URL: <https://sloanreview.mit.edu/article/reducing-the-risks-of-new-product-development> (access.: 16.03.2018).

A significant number of subjects of communication. Unlike the traditional scheme, mass communication of open co-operation is characterized by much higher involvement of communicants, whose potential is also limited only by network parameters. This means a much higher probability of violating information security by communication subjects, as the number of active hardware and software, network equipment and communications equipment is also increasing.

Significant expansion of the data environment (cable and wireless data transmission channels), which increases the number of probable data access points and their points of leakage. Particularly critical aspect is rapid increase of vulnerability of data communication participants who use mobile devices and are practicing simultaneous access to their resources from different devices and through public (unprotected) wireless networks, not caring enough about protection from unauthorized access. In the aspect of open cooperation in social networks, along with the increasing number of contacts, the information security threat is elevating too and it is associated with social engineering methods, targeting not the information/technical component of the information system, but the person as the weakest component/participant in this interaction.

Problems, connected with technical and technological parameters of communication on the basis of open cooperation, can be solved due to the use of adequate means and methods of technical information protection and improving standards of information security management.

Secondly, another potential information security threat can be the specifics of the organization of open communication.

Leveling the “classical” structure of media communication with professional communicators and nonprofessional consumers of an information product. Open co-operation creates conditions for the development of professional consumption (prosumption) and mass communication is implemented through the efforts of all participants who are technically capable of generating content. Thus, anyone who can publish in a social network can potentially reach an audience that is limited only by the physical size of the network. The threat to information security may come from the “unprofessionalism” of those who distribute messages on the networks. Indeed, unlike professional

journalists, these people are not trained or instructed and they do not have any formal constraints on the level of contracts, but they only depend on the internal policy of the social network. A special issue is the ethics of the network, which, unlike a journalistic one, has not yet established itself as a social norm.

“Extraterritoriality” of communication, the complexity of identification and localization of the source of content. Today, network communication is, in essence, globalized, i. e., news feeds from a social network user get messages from contributors from different countries and in different languages. Moreover, identifying a real author is quite difficult. It is also difficult to establish the reliability of the information provided since it remains to rely on the personal responsibility of the non-identified source or the administrators of the social network. Despite the existence of such levers of control as self-control of communication participants or the blocking of provocative posts, the likelihood of a special formation of networks of opinion leaders in order to promote ideas, including other countries, is high. The dissemination of unconfirmed or deliberately fabricated or distorted information is worsened by lack of levers of formal or ethical control.

Thirdly, the expansion of communication in social networks actualizes socio-psychological factors of information security.

The quasi-statistical ability of people to identify the “climate” of public opinion. The social networks user is able to determine the direction of the public opinion movement before the relevant studies are conducted and their results are announced. Expansion of communication in social networks confirmed the well-known theory of “spiral of silence”, according to which people, seeing that the dominant social settings distributed by the media or their immediate social environment, contradict their own position, tend to “silence” and try to avoid expressing their point of view, fearing to be in the minority. And the more widespread the dominant point of view seems to be for them, the more they “silence”¹. Under conditions of mass cooperation, such a “herd instinct” is manifested in the fact that a person, seeing a

¹ Noelle-Neumann E. Elisabeth. The spiral of silence: Public opinion, our social skin. Chicago: University of Chicago Press, 1993.

large number of responses under a message in the network (comments and likes), gives such a statement greater importance and joins the majority. In the case of a small number of responses, the person does not pay much attention to that information or post in most of the cases. Similarly, a person most likely will join a group which audience is several tens of thousands, rather than a small one with dozens of participants.

Today, the effects of the “spiral of silence” effect in communication in the social media environment have already been proved¹.

The above phenomenon of “an antenna” that can capture changes in the “social wind” is associated with the phenomenon of trust in the information that is published on the network². The user generally does not double-check the information received and accepts as true and correct, only on the basis that it is published by a well-established group with a significant audience. On the other hand, the opposite is often the case when users with suspicion relate to overly “promoted” messages and ideas, perceiving them as a product of propaganda or advertising. In this case, people have more trust in the opinions of immediate witnesses, volunteers, and “casual witnesses”, although their messages, again, quickly gain a leading position.

The user trusts “opinion leaders” who can be independent individuals or a group or page in a social network, sometimes considering them to be the most reliable source on certain issues, notwithstanding that they may submit non-verified, unskilled, or specially fabricated information for manipulation purposes. Using such “opinion leaders”, interested individuals can provide a commitment of the audience or persuade the public in personal ideas, imposing individual vision of important events and phenomena in various spheres of the state and society.

A striking example of the manifestation of the above-mentioned effects of mass cooperation is the expansion of space for the realization of post-truth policy (or post-truth culture), which is gene-

¹ Malaspina C. The spiral of silence and social media: analysing Noelle-Neumann’s phenomenon application on the Web during the Italian Political Election of 2013. London: Media LSE@London, 2014.

² Griffin E.. A First Look at Communication Theory. New York, NY: McGraw-Hill, 8th Ed, 2012.

rally based on the “blurring” of true information in untrusted content streams generated in a social media environment under conditions of free exchange of information. Another example is the ability to manipulate public opinion through the uncontrolled distribution of content in an open communication environment.

The main feature of post-truth politics, as a type of political culture, is that discourse is mainly shaped by appealing to the audience’s emotions and personal beliefs, and the details of political reality remain ignored. Post-truth politics is characterized by the repetition of the same arguments and consistent ignoring of objective facts that contradict the given concept. In the context of post-truth politics, debates are formulated primarily by appeals to emotions detached from political details, as well as repetitive statements focused on point or micro-segments of the target audience, and actual refutations are ignored. Post-truth differs from traditional propaganda and falsifications by rejecting and ignoring facts, and expert opinions have a secondary significance in relation to appealing to emotions.

In recent years, political commentators have identified post-truth politics as emerging in many countries, in particular, the United States, the United Kingdom and Russia, where public discourse is formed on a combination of a 24-hour news cycle, biased media and pervasive social networks¹.

Ralph Keyes (2004) aptly revealed the specificity of the post-truth: “Even though there have always been liars, lies have usually been told with hesitation, a dash of anxiety, a bit of guilt, a little shame, at least some sheepishness. Now, clever people that we are, we have come up with rationales for tampering with truth so we can dissemble guilt-free ... Post-truth exists in an ethical twilight zone. It allows us to dissemble without considering ourselves dishonest. When our behavior conflicts with our values, what we’re most likely to do is reconceive our values”¹. That is, we are adjusting to the general trend of “incomplete” honesty in mass communication, justifying ourselves

¹ The post-truth world: Yes, I’d lie to you. *The Economist*. Sept 10, 2016. URL: <https://www.economist.com/briefing/2016/09/10/yes-id-lie-to-you> (access.: 16.03.2018).

¹ Keyes “The Post-Truth Era: Dishonesty and Deception” in *Contemporary Life*. New York: St. Martin’s Press, 2004. P. 12–13.

that everything is doing so, especially when communication goes into the plane of social networks. And this is a way to untwist half-truths and lies by those who are interested in it.

The phenomenon of post-truth also arises through the audience's adherence to the likelihood of advertising, which is perceived as a norm. In conditions of free communication and content generation in social networks, leaders' of opinion publications are gaining popularity due to effective measures and technical methods.

The tendency of network users to take the position of "ordinary" communicators is widely used in the propaganda war, on the part of Russian interested groups. In particular, the organization of "Kremlin" or "Olginsky" trolls became known, which actively acted in favor of Russia's political interests in a number of propaganda campaigns. These include, in particular, Russian interference during the hybrid war in Ukraine and the US presidential election campaign¹. There is an organization, disguised as "Internet Research Agency" in St. Petersburg where hired commentators (provocateurs, trolls) work in special offices and get money for comments in social networks, or other resources on the Internet. Provocatively picked and distorted text and graphical messages became one of the components of the Russian information war against Ukraine, in which events in Ukraine are highlighted in terms of a favorable propaganda for Russia.

Today, the issue of protection against threats connected with open cooperation has been hardly implemented in the regulatory field, especially in terms of threats of socio-psychological nature. Thus, the European Union legislation only contains conceptual directions for ensuring information security within the framework of the *CAPS* concept, or the *Platform for Collective Awareness on Sustainable Development and Social Innovation*. This concept is based on the research by *Collective Awareness Platform for Sustainability and Social Innovation: An Introduction* (2014)¹, a paper called *Collective*

¹ Seddon M. BuzzFeed. 2 June 2014. [Online]. URL: <https://www.buzzfeednews.com/article/maxseddon/documents-show-how-russias-troll-army-hit-america> (access.: 16.03.2018).

¹ Arniani M. et al. *Collective Awareness Platform for Sustainability and Social Innovation: An Introduction*. Brussels: European Commission, *Collective Awareness Platforms for Sustainability and Social Innovation (CAPS)*, 2014.

Awareness Platform for Sustainability and Social Innovation (CAPS), Understanding Them and Analyzing Their Impacts (Antonella Passani et al., 2015)¹. Influence of CAPS platforms is analyzed in the study of F. Bellini, A. Passani, M. Klitsi, V. Vanobberghen (2016)². Today, two directions of CAPS are presented: innovative actions and coordination actions and support. The first one is based on Collective Awareness Platforms (CAPs) that enable the organization of upward innovation and social collaboration models based on common tools and digital hyperlinking, open source data and knowledge, open source software and equipment, and use of crowdsourcing. One of CAPS' innovative areas of focus is *Innovative ethics of digital innovation, such as social entrepreneurship, direct democracy, confidentiality and digital rights*³. However, we emphasize that these documents only address the technological and organizational issues of open communication, mainly in the context of the new concept of the Digital Single Market of the EU.

The situation is somewhat improved by the regime established by the *General Data Protection Regulation (GDPR)* document (EU (2016/679, effective May 25, 2018)¹, which is designed primarily to provide EU citizens and residents with control over their personal data and to simplify the regulatory environment for international business by unifying regulations within the EU. It is important that this Regulation substantially strengthens the control over the use of personal data of Internet users, including social networks, which is

¹ Passani A., Spagnoli F., Bellini F., Prampolini A., Firus K. *Collective Awareness Platform for Sustainability and Social Innovation (CAPS)*. in *Organizational Innovation and Change*. Lecture Notes in Information Systems and Organisation/C. Rossignoli, M. Gatti, M. R. Agrifoglio, eds. Vol 13. Springer, Cham, 2016. P. 103–114.

² Bellini F., Passani A., Klitsi M., Vanobberghen W. *Exploring Impacts of Collective Awareness Platforms for Sustainability and Social Innovation*. Roma, Italia: Eurokleis Press, 2016.

³ HORIZON 2020 – Work Programme 2016–2017. Information and Communication Technologies (24 Apr. 2017) European Commission Decision C(2017)2468. URL: http://ec.europa.eu/research/participants/data/ref/h2020/wp/2016_2017/main/h2020-wp1617-leit-ict_en.pdf (access.: 16.03.2018).

¹ Regulation (EU) 2016/679 of the European Parliament and of the Council (27 Apr. 2016). Official Journal of the European Union. 04.05.2016.

especially relevant in the aspect of today's investigations into the use of personal data in election campaigns (regarding Britain's withdrawal from the EU and the election of Donald Trump as the President of the United States)¹.

Cambridge Analytica is a private English company that uses in-depth data analysis technologies (in particular, social networks data) to develop strategic communications during online election campaigns. The success of the company is based on the implementation of a model of psychological behavioral analysis using Big Data on users of social networks and effective targeted advertising. Cambridge Analytica uses the development of Big Data, which is based on the analysis of the "trail" left by any user in social networks and the Internet². Cambridge Analytica was accused of interfering in elections throughout the world, stealing personal data from potential voters in social networks and manipulating their minds with information technology. A significant portion of the data was received by Cambridge Analytica from Facebook³.

On the other hand, open collaboration has become a source of opportunities for solving various practical issues of information security.

One of the open collaboration benefits is the use of content generated by its members to explore the interconnection between different objects and events. Today, thanks to the activity of social networks users, such data sets are formed that they are sufficient to make reliable conclusions about the activities of both the participants in social interactions and their related entities, which can be successfully used to achieve the goals of intelligence. Today, there is a

¹ Cadwalladr C., Graham-Harrison E. Revealed: 50 million Facebook profiles harvested for Cambridge Analytica in major data breach. *The Guardian*. 2018. 17 Mar.

² DC Inno on Twitter. Inside the Tech That Puts Political Ads on Your Screen. 26 Feb. 2016. URL: https://twitter.com/dc_inno/status/696665513787846657 (access.: 16.03.2018).

³ Solon O. Facebook says Cambridge Analytica may have gained 37m more users' data. *The Guardian*. Apr. 4. 2018. URL: <https://www.theguardian.com/technology/2018/apr/04/facebook-cambridge-analytica-user-data-latest-more-than-thought> (access.: 16.03.2018).

well-known discipline called *Open source intelligence (OSINT)*, which includes the search, collection, and analysis of information from public sources. Such sources are, for example, social networks that already provide enough material to conduct effective analytical research in various fields (an opportunity of using the potential of social media in political analysis is summarized, for example, in the work of S. Stieglitz and L. Dang-Xuan (2012))¹. In practice, effective tools are used to analyze materials from social media, such as *Crimson Hexagon*, an American company specializing in social media analytics. It has more than 500 billion social media messages in its database (documents from social networks such as Twitter and Facebook, as well as blogs, forums, and news)².

However, the OSINT concept only points to the universality of the source (as opposed to secret sources and sources of limited use) and is not linked directly to the concept of open source or public intelligence, such as OSINT, which is used in CIA practice, within which the *DNI Open Source Center (OSC)* operates since November 2005. OSC provides the necessary information from the Internet, traditional media (e. g. television, radio, newspapers, and magazines), specialized journals, conference materials, photos, geospatial information sources (for example, maps and commercial images).

Despite the fact that intelligence has always received the bulk of information from open sources, the essence of OSINT radically changes with the spread of open cooperation on the basis of information and communication technologies. It is no coincidence that the creation of the OSC unit in the CIA coincided in time with the emergence and rapid deployment of social networks.

We are speaking about the emergence of a direction in OSINT, which is associated with the activities of independent content generators on the Internet (social networking members, bloggers, authors' photo and video materials on popular media platforms etc.).

¹ Stieglitz S., Dang-Xuan L. Social media and political communication: a social media analytics framework. Springer-Verlag. 13 Jul. 2012.

² Rohr E. Crimson Hexagon Indexes 500 Billion Social Media Posts For On-Demand Consumer Insight. Crimson Hexagon. Sept. 23. 2014. URL: <https://www.crimsonhexagon.com/blog/press/crimson-hexagon-indexes-500-billion-social-media-posts-for-on-demand-consumer-insight> (access.: 16.03.2018).

There are also quite a few actors in the network who are interested in thematic collection and analysis of information, and they act independently or are united in interest communities, which often operate on the basis of personal interest and for free. An example is the activity of Elliott Higgins, a British journalist and blogger who uses open sources and social media for his research, and is best known for launching the popular Bellingcat project, which focuses on extremely relevant knowledge of the war in Syria, Russian military intervention in Ukraine and such separate events as the crash of the Malaysia Airlines Flight 17.

On July 2014, Higgins launched a website called Bellingcat to unite the efforts of civilian journalists in investigating current events from open sources such as video- and photo materials, satellite images and more. Among other projects, Bellingcat has investigated the Boeing 777 disaster in Donetsk Oblast, having determined that the missile that targeted the aircraft was released from the military installation of the “Buk-M” missile from the 53rd group from Air Defense Forces of Russia based in Kursk. Bellingcat also provides details of the operation, including the names of the Russian military involved in the commission of the crime¹. The Higgins method includes both the use of geolocation data and visual markers on images and the interpretation of free satellite images, videos, maps and other open source information.

In essence, we can talk about a special open source-based exploration based on open co-operation – Collaborative OSINT or COSINT. Taking into account the trends of the development of open communication and referring to the quote from Douglas J. Naquin, the Director of the OSC CIA (“An organization that invests in open source today is akin to an individual who invested in Google in its first year. OSINT has always been an integral component in intelligence, but in five years, I believe the value proposition can only increase. An organization with an appreciation for OSINT’s value and

¹ Bellingcat о трагедии MH17: Установлены личности управлявших “Буком”. Deutsche Welle (Russian). Jan. 5. 2016. URL: <https://is.gd/FNEgjN> (access.: 16.03.2018).

MH17 – The Open Source Evidence – Final_ru.docx. Bellingcat. URL: <https://www.bellingcat.com/news/uk-and-europe/2015/10/08/mh17-the-open-source-evidence> (access.: 16.03.2018).

potential will be the most effective in the future”¹), it can be argued that the OSINT value will continue to grow.

Another important manifestation of open cooperation in the aspect of the information security of society is its systematic influence on the general system of organization of social relations. As open cooperation is associated with a radical reorganization of relations between the authorities, citizens and civil society institutions, contributing to the establishment of models of openness, the elimination of control levers and elimination of the influence of power on the environment of communication and the dissemination of information, it naturally leads to the consequent destruction of traditional schemes of state control. During certain conditions, this process also leads to deterioration of the most powerful institutions; such consequences, for the example, were the revolutions of “Arab Spring” and “Revolution of Dignity” in Ukraine.

Based on preliminary studies², it can be argued that the basis of the revolutions in the regions of North Africa and the Middle East was the rapid informatization, the increased access of population to information technology, especially to mobile technology and to the Internet in the context of free information exchange and a significant restriction of civil and political freedoms. The situation in Ukraine was developing similarly, where the hideous policy of the authorities did not correspond to the ideas and needs of citizens who received such instruments of mass communication as social networks, video streaming, and independent Internet TV¹. The combination of these

¹ INTelligence: Open Source Intelligence. Central Intelligence Agency, 2010. URL: <https://www.cia.gov/news-information/featured-story-archive/2010-featured-story-archive/open-source-intelligence.html> (posted: Jul 23, 2010 02:17 PM).

² Fedoniuk S. V. *Komunikatyvni rushii revoliutsii. Aktualni problemy mizhnarodnykh vidnosyn i zovnishnoi polityky krain svitu: Mizhnar. nauk.-prakt. konf. Lutsk, 2011. C. 194–196.*

Fedoniuk S., Strilka O. *Masove spivrobitnytstvo yak chynnyk revoliutsii “Arabskoi vesny”*. Naukovyi visnyk Skhidnoevropeiskoho natsionalnoho universytetu imeni Lesi Ukrainky. Seria: Mizhnarodni vidnosyny. 2014. № 14. S. 157–163.

¹ Fedonyuk S. *Factory obschestvennoy informatsionnoy kollaboratsii v ukrainskoy “revolyutsii dostoinstva” v sravnenii s predposylkami “arabskoy vesny” v Ukrainskiy vopros: bezopasnost, ekonomika, obschestvo*. Red. T. Stempnevski i A. Shabatsyuk. Lyublin: Izdatelstvo Lyublinskogo Katolicheskogo Universiteta Ioanna Pavla II, 2017. S. 171–185.

factors with the rapid deployment of mass cooperation in the social media environment, while experiencing the inability of the authorities to control the situation, became the main reason for the rapid development of revolutionary events.

Conclusions and perspectives of further research

Therefore, open cooperation is an essential factor in the information security of society and the state. The result may be an impact on socio-political processes through the personalization of communication and the massive involvement of human resources. Research in this area has prospects in connection with the development of information and communication technologies, forms and methods of mass communication.

2.4. Problems of Information Space Protection and National Information Security

*Mytko Antonina
Shuliak Nazarii*

The relevance of the research topic is due to the fact that the issue of information security in the context of national information security is increasingly subject of consideration in scientific, political, economic circles. In Ukraine, interest in this problem is due to the rapid pace of development of the elements of the information space and the growing role of information as such. Currently, ways to overcome the dangers, variants of conducting information wars, attracting «soft power» resources, etc. are actively looked for. Based on this, the task of the research is to determine the general features of the strategy and threats to the information security of our state within the framework of the formation of information democracy. Objective is the fact that the need for information security arose with the

© *Mytko Antonina* – Doctor of Political Sciences, Professor of International Communications and Political Analysis Department, Lesya Ukrainka Eastern European National University.

© *Shuliak Nazarii* – Master of the International Relations Faculty, Lesya Ukrainka Eastern European National University.

emergence of the mass media as a means of communication between people, including the political sphere, and the awareness of the commonality of interests, the provision of which is possible through the media. Inflicting loss and harm to communications networks lead to the destruction of information exchange between the various elements of the political system. Instead, information security measures can become a new strategic impetus for the activities of state authorities, civil society institutions, and for the formation and implementation of a democratic information policy.

Each state establishes its own network of foreign-policy communication, which promotes its national interests. The task of foreign policy institutions, namely their PR units, is to develop a strategy for the management of information flows, using the technologies of public relations. Modern society is less and less exposed to the means of direct agitation. Therefore, in international relations, new technologies of influence on the target audience are used. As a consequence, foreign policy institutions in their operations actively use such psychotechnologies as spin doctoring or gatekeeping. The ability to manage them is one of the conditions of information security. Therefore, we aim to investigate the problems of the information space and national information security in the conditions of information democracy; to find out the regulatory and legal foundations of Ukraine's information security; internal aspects of information sovereignty and identify threats to Ukraine's information security; to analyze manipulative technologies of interference in the information space; and provide some recommendations for protecting the information space.

Information security as a legislative constant

The concept of "information security" was firstly defined in the *National Security Concept (the basis of state policy) of Ukraine*, which was adopted by the Verkhovna Rada of Ukraine in 1997¹. It is argued that protection of national security is one of the most important functions of the state. In the context of information democracy formation, information security is considered as minimizing harm due

¹ Resolution of the Verkhovna Rada of Ukraine "On the Concept (Fundamentals of State Policy) of National Security of Ukraine". 1997. No. 3/97 VR. Voice of Ukraine.

to incompleteness, lack of timeliness or unreliability of information or negative information influence through the consequences of the functioning of information technologies, as well as the unauthorized dissemination of information¹.

Information security envisages the possibility of unhindered realization of society's and its individual members' constitutional rights related to the possibility of the free reception, creation and dissemination of information. The concept of state information security should also be considered in the context of ensuring the secure conditions for the existence of information technologies, which include issues of information security such as state information infrastructure, the information market and the creation of safe conditions for the existence and development of information processes. The necessary level of information security is provided by a combination of political, economic and organizational measures aimed at preventing, detecting and neutralizing those circumstances, factors and actions that may harm or impair the realization of information rights, needs and interests of the country and its citizens¹.

The state, performing the function of information security, should take into account the importance for further development of democratic values in Ukraine and implement an integral state program through the use of relevant doctrines, strategies, concepts and programs. According to the experts of *the Ukrainian Center for Economic and Political Studies (UCEPS)*, *the National Security Concept (the basis of state policy) of Ukraine*, which had been approved by the parliament, did not fulfill the function of a basic document for the construction of the information security system of Ukraine. Therefore, in 2001, the specialists prepared their own draft of the Concept, taking into account the opinions and proposals of a wide range of specialists, scientists and representatives of state structures. The authors of the Concept believe that the negative trends in the development of the

¹ Barinov A. Informational sovereignty or information security? National Security and Defense. 2001. No. 1. P. 70–76.

¹ Galambba M., Petrik V. Information Security of Ukraine: Concept, Essence and Threats. Juristical Journal. URL: <http://www.justinian.com.ua/article.php?id=2463> (access.: 11.10.2016).

information space of Ukraine, the ineffectiveness of state information policy, the crisis situation in the country's economy create the preconditions for escalating threats to Ukraine's information security and thereby endanger informational democracy. According to some indicators, the level of information security in Ukraine is approaching the critical threshold, leading to the loss democratic principles and principles of state activity, the return to authoritarianism, and Ukraine's isolation on the international arena¹.

After analyzing the legislation of Ukraine, and other documents dealing with information security issues, we can identify the following factors that threaten the formation of information democracy in Ukraine:

1. Introduction of political censorship. Public authorities are trying to conduct political censorship in print, audiovisual, electronic mass media, and on the Internet at national and regional levels. This contradicts democratic transformations in society, restricts the rights of citizens to receive and disseminate information, and forms the image of Ukraine as an undemocratic state in the eyes of the world.

2. Different kinds of pressure on the media. The media is influenced through economic sanctions and selective financial support from the state. The heavy tax burden on the media, high paper prices, monopolization of certain types of information services, limited advertising market and investment, low solvency of the population are responsible for the non-profitability of the vast majority of the media, especially the socio-political direction¹. We consider it appropriate to solve the first two problems by recognizing a fundamentally new status at the legislative level for the mass media – independent from the pressure of state structures; furthermore, the rejection of state regulation of the media sphere in those issues in which international practice proves the expediency and efficiency of the sector's self-regulation².

¹ The Concept (Fundamentals of State Policy) of Information Security of Ukraine. 2001. P. 3–59. National Security and Defense. No. 1 (access.: 11.10.2016).

¹ Ibid. P. 3–59 (access.: 11.10.2016).

² Mytko A. M. Mass media and the image of the authorities: regional aspect. Lutsk, 2010. P. 205–206.

3. Manifestation of political extremism against journalists. The manifestation of political extremism against the media in the form of physical harassment with journalists are notoriously known, cases of violence and their death, which are not disclosed by law enforcement agencies. This creates fear in society and hinders the democratization of public life, and creates a negative Ukraine's image in the eyes of the world.

4. Insufficient openness of public authorities for public accountability. The information society puts forward new requirements for public authorities, which is connected with the transition from administrative-command to democratic variant of functioning in the system of "power – mass media". In our opinion, openness of power as an axiom is a key to protecting the population from the negative effects of manipulation through the MMC¹.

Information sovereignty and security of Ukraine: the internal aspect

The need to create opportunities for reaching information adequacy for decision-making by public authorities, citizens and associations of citizens, other subjects of law in Ukraine; guarantee of freedom of information activity and right of access to information in the national information space of Ukraine; the comprehensive development of information infrastructure are also mentioned in the draft Law of Ukraine *On Information Sovereignty and Information Security of Ukraine*, which was submitted for consideration by the People's Deputy of Ukraine Levko Lukyanenko. Converting the media into mass media of propaganda and manipulation, the emergence of new information products in the country is almost always clearly oriented to the fulfillment of political tasks in the interests of founders of political parties or financial groups, which are focused on the incumbent power. In fact, all mass media are distributed between influential financial and political circles. The function of informing is minimized and turned into propaganda. The media, as an important element of political capital, proves the "usefulness" of financial and political groups for the authorities, generating the spread of non-

¹ Mytko A. M. Mass media and the image of the authorities: regional aspect. Lutsk, 2010. P. 205.

objective information, self-censorship of journalists, reducing their social status, especially on a regional level, high rates of staff turnover in the media and other negative phenomena¹.

Regional studies confirm that the vast majority of mass media cannot be called independent, financially independent publications, as the authorities and local self-government are the founders of the most of Volyn mass media. There are still a large number of state and municipal MMCs. Despite the existence of isolated examples – both at the national and regional levels – of the development of the media as successful projects, media are broadly seen as a tool for political manipulation². According to E. Makarenko, the task of legislative, executive and departmental structures, the mass media and communications is the formation of a politically mature Ukrainian society, the establishment of state authorized national cultural values. Practitioners and theorists, legislators, and politicians should think about the future: will the Ukrainian information space become an instrument, a means of establishing state priorities, or will the media space become a field for a large business without any political prospect for the state?¹ During the round table discussion *Information Security of Ukraine: The Essence and Problems* in 1998, O. Baranov also drew attention to the problem of overcoming the manipulation of the media space, and, based on the classical interpretation of the information space, believed that the state should ensure each subject of information relations the right to receive complete, reliable and timely information; no one has the right to violate the interests of the subject of information relations by some informational influence. Self-interests should be combined with the interests of others².

¹ The Concept (Fundamentals of State Policy) of Information Security of Ukraine. 2001. National Security and Defense. No. 1. P. 3–59 (access.: 11.10.2016).

² Mytko A. M. Mass media and the image of the authorities: regional aspect. Lutsk, 2010. P. 210.

¹ Makarenko E. Information Security of Ukraine in the Context of Contemporary Challenges and Threats. Education of the Region. URL: [http://www.socialscience.com.ua/jornalcontent/51/political problems](http://www.socialscience.com.ua/jornalcontent/51/political%20problems) (access.: 11.10.2016).

² Barinov A. Informational sovereignty or information security? National Security and Defense. 2001. No. 1. P. 70–76.

Only ten years after the adoption of the *National Security Concept of Ukraine* National Security and Defense Council of Ukraine (NSDC) completed the preparation of the draft of the *Doctrine of Information Security of Ukraine*. The document of 2008 emphasized the task of overcoming the same problems faced by the Ukrainian state in 1997. The NSDC proposes to provide information security of Ukraine, on the basis of the principles of information democracy:

- freedom of creating, collecting, storing, using and disseminating information;
- ensuring the reliability, completeness and impartiality of information;
- limiting access to information solely by law;
- harmonization of personal, public and state interests;
- prevention and neutralization of offenses in the information sphere of economic feasibility;
- harmonization of Ukrainian and international legislation in the information sphere;
- priority of the national information product.

Threats to Ukraine’s information security

The insufficient regulatory and legal framework pertaining to the development of the information society and ensuring the protection of the information space is exacerbated by other factors. In particular, such examples include:

1. The lack of systemic and mutually beneficial communication in the triangle “society – media – power”, although this kind of communication is the fundamental basis for the existence of any developed democracy. Despite the positive dynamics of freedom of speech in Ukraine in comparison with the backdrop of global indicators and the intensive development of the domestic information sphere, an increasing percentage of our citizens feel isolated from access to information guaranteed by the legislation “open, accessible, objective, complete and accurate” on public life and activity of state bodies.

2. Monopolization of media markets. First of all, it concerns the broadcasting market, which has already been divided between large and some smaller media groups, and, to a lesser extent, the press market. These processes objectively narrow the “corridor of opportunities” of new media actors to enter the market and, consequently, the

exercise of the constitutional right of citizens to freedom of speech and information. At the same time, relations of ownership of key domestic media remain opaque and insufficiently controlled by the state, and the legislative regulation of this sphere is not sufficiently effective.

3. The absence of a public service broadcasting sector, that is, a public counterbalance to private media, aimed at ensuring a balanced, dual nature of the national media system. Global experience shows that developed structures of public broadcasting are an integral part of modern democracy, a condition and an indicator of its successful development.

4. Insufficient professional level of Ukrainian journalism, with undeveloped corporate ethics. This situation ultimately negatively affects both the quality of the domestic media product and the adherence in the Ukrainian media to the principles of freedom of speech, objectivity, and commitment to the public interest.

5. An overabundance of politically engaged and negative messages in the information space of Ukraine. One of the reasons for these phenomena is the inadequate level of the public responsibility within the media; an incomplete awareness of their own social function. An important role is played by the dependence of private media activity on market conditions, as well as by the interests of the owners, which give rise to their political engagement.

6. Unevenness and unequal conditions of access to information of different regions, that is, the presence of zones of low information saturation and “white spots” on the information map of Ukraine due to the lack of capacity and the number of transmitters of domestic audio-visual media.

7. Postponement and difficulties in switching to digital broadcasting due to: a) lack of a sufficiently effective and consolidated action plan; b) the inconsistency of activities and areas of competence of specialized agencies in this matter; c) the lack of coordination of mechanisms for providing all segments of the population with means of reception of digital broadcasting signals; d) insufficient awareness of citizens about its features and benefits.

8. Weak development of infrastructure, which reflects the level of development of the information society and defines the prospects for the development of e-democracy.

9. Fragmentation and segmentation of the national information space, which leads to a colossal backlog of most states from the level of development of developed democracies and, as a result, limited access to information resources.

Spin doctoring and gatekeeping as a threat to information security

The development of information space and the implementation of information democracy involves such a phenomenon as the openness of power, which is the accessibility of information that is of public interest to citizens, and concerns the personal interests of individuals, systematic informing citizens about decisions that are adopted or are expected to be adopted; and the control by citizens over the activities of state bodies, political organizations or officials. This given position of the state is defined by such a concept as information democracy. Nowadays, in our opinion, infodemocracy is limited by a large number of factors, which is manifested in the use of the help of such specialists as spin doctors, gatekeepers, and others¹.

As a rule, the spin doctor is often involved in the correction of various deformations of event image in the media after the information event has undergone unfavorable development. A specific feature of the spin doctor's work is that it operates both verbally and in nonverbal spheres. There were numerous examples of how the circles of monarchs, kings and presidents "prepared" the audience for various ceremonies (the triumph of the crowd at the coronation, the "Potemkin villages", "stormy, prolonged applause" at party congresses, etc.), which are known from the history. All of this is an illustration of the work of the spin doctors – people who model the information situation².

The specifics of the activities of the spin doctor in the political sphere (the so-called "political spin") manifests itself in the fact that it: works with political structures and leaders, state bodies of executive

¹ Rudnev V. Yu. Using spin-doctor technologies in the activities of foreign policy institutions and agencies. Management in the conditions of transformational innovations: challenges, reforms, achievements. 2007. P. 128–131.

² Spin Doctor and his work: Nontraditional Methods of Information Space Management. TeleCritics. 2001.

and legislative power; consults on the issue of political conversations, speeches and their consequences; uses information flows for specific political purposes; applies opposition to power structures; is based on its personal authority, personal acquaintance in the media, knowledge of the information structure; uses informal contacts; organizes speeches in response to statements by opponents – for these purposes, the press services of governments and parliaments systematically meet journalists.

Ukrainian spin doctors primarily manage the media space in general, filling it with that informational product, which, in their view, is the most adequate to the goals set. Ukraine looks weaker in crisis situations. Practically all recent examples – from the “cassette scandal” to the Ukrainian missile striking the Russian plane – show inadequate information behavior. The information space in Ukraine was formed and is now further developing through private initiatives, and politicians ignore this sphere. As a result, the democratic opportunities themselves and undemocratic tendencies in the structure of political communications in Ukraine lay at the heart of determining the current problems and perspectives of the dynamics of the entire political system of our state, in particular the nature of its political regime¹.

An important and promising direction of media support of the state (from top management to separate departments) and the means of avoiding negative spin doctoring are establishing a stable, systematic feedback from the authorities on the basis of the positions of the leaders of the opinions of social media. This should become a constant practice. There are some possible mechanisms and practices which are necessary to solve this problem. The meeting should be held between officials and main representatives of the Ukrainian blogosphere in an informal setting. Obviously, one will also have to invite extremely critical bloggers to such meetings, who, of course, will try to return to the negative-resonance hot topics. This will increase the risks of such a meeting and will require additional training by the press service of

¹ Kovalevsky V. Structure of political communications of modern Ukraine. Modern Ukrainian politics. Politicians and Political Scientists About It. № 17. Ukrainian Center for Political Management. Kyiv; Mykolaiv, 2009. P. 143.

the authorities and local self-government. At the same time, providing exclusive information to bloggers will demonstrate, firstly, the openness of authorities to new forms of communication, and secondly – the willingness to provide “exclusive” stories to the leaders of public opinion on the Internet.

In their speeches officials should mention more often the results of investigations and legal actions of similar self-organized associations (either press secretaries of senior officials or individual press officers may be responsible for monitoring the reports), which would demonstrate, on the one hand, that these individuals personally use the resources of the network, and on the other hand, that such messages do not remain unnoticed by the state leadership.

It is necessary to provide a real opportunity for constant bilateral contacts with representatives of state bodies, officials, etc. to “leaders of opinion” and participants of social networks. Such communication is also desirable on the basis of official state online resources and thus it is possible to avoid distortion of information and to reduce the level of gatekeeping to a minimum.

The crises such as revolutions, wars, armed attacks, military invasions require the greatest use of spin. Given the situation in the country as a result of aggressive actions by representatives of foreign states in early 2014, it is expedient to consider the experience of leading countries in the use of so-called “digital dispatches”, that is, participants of social networks (bloggers) that would react promptly to any destructive actions for interests of state and society in network activity, timely turning off the appropriate threats. However, as for a significant number of countries it is important to position the state policy on foreign (overseas) information platforms, then for Ukraine, work in the internal media space is paramount, in particular, given the acute need to increase public confidence in state politicians (at least – through their explanation) and ensuring their loyalty to the current authorities. Therefore, although in most countries such structures have been created under the Ministries of Defense or the Ministries of Foreign Affairs, in Ukraine such activity, at the initial stage, is appropriate to be attributed to the responsibilities of communicative units of state authorities.

To resolve conflicts and stabilize relations between different groups of civil society, organizations and institutions, the state should appoint a Commissioner for Information who will consider the information as the active force of changes and not simply as a factor in efficiency. Frankness and transparency do not simply mean easier access to information. It is not enough to convince an agency to place all the data online. It is necessary to work to facilitate comparison and data analysis. This includes everything: from data retrieval to the way in which these data are presented, how easy it is to compare the data of different organizations and at different periods of time. Data should also be easily processed so that third parties, whether commercial information services or journalists, can visualize them.

Having analyzed the external and internal aspects of the information security issue and the protection of the information space we can conclude that more and more in recent decades the democracy ideas are actualized as the result of the world community struggle with totalitarian and authoritarian forms of government. The successful socio-economic, political and cultural development of democracies with the construction of an information society leads to focusing researchers on norms and values that are based on ensuring citizens' right to information and legal regulation of the openness principle as well as accessibility of institutions and state authorities. Moreover, guaranteeing the right to information imposes constitutional obligations on administrative bodies to disclose information of public interest. In Ukraine, during the period of independence, certain legal principles of the establishment of information society have been formed, and the right to information as the basis of information democracy is a fundamental right of a person and it is guaranteed by the *Constitution of Ukraine*, as well as the *Convention for the Protection of Human Rights and Fundamental Freedoms*.

It is worth bearing in mind that the information and communication opportunities gained by the political system as a result of information security encourage it to control the information space, Internet traffic of citizens, adjust the information space with the help of spin doctoring. In the world there is a fairly widespread practice of applying measures to control information flows in the media environ-

ment and in the Internet in particular. The use of manipulative technologies leads to the solution of such an important problem as the need for information security and the protection of the information space from the interference of foreign powers in the information space and distortion of information. The use of spin doctoring indicates that the event in the symbolic world differs from the real world event. The spin doctor is the specialist in the world of news, precisely in its symbolic aspect. The conscious distortion of information is a real threat to the development of the theory of information democracy.

2.5. Modern Hybrid Threats

Wasiuta Olga

Wasiuta Sergiusz

Russian invasion in Ukraine proves shortcomings in understanding the complexity of contemporary warfare. The armed conflicts of new type have evolved. Moreover, our culture and understanding of war do not help stabilize the situation between Russia and Ukraine and fight insurgents successfully¹.

At present, the debates are held on future threats which are often defined as a dichotomous choice between fighting terrorists or insurgents and traditional war. However, instead of enemies applying basically different approaches, we should expect all forms of warfare to be used, even simultaneously. These kinds of mixed threats are often called hybrid. Hybrid threats include a range of various means of warfare which refer to standard armory, conventional weaponry, irregular tactics and formations, terrorist attacks as well as criminal

© *Wasiuta Olga* – prof. dr hab. Instytut Nauk o Bezpieczeństwie, Uniwersytet Pedagogiczny im. Komisji Edukacji Narodowej w Krakowie.

© *Wasiuta Sergiusz* – prof. dr hab. Instytut Politologii, Uniwersytet Pedagogiczny im. Komisji Edukacji Narodowej w Krakowie.

¹ Wasiuta O. Geneza pojęcia i zmiany podejścia do wojny hybrydowej w zachodnim dyskursie politycznym i wojskowym. *Przegląd geopolityczny*. 2016. T. 17. S. 27.

behavior used in the combat zone to achieve the political goals¹. Joint hybrid means are used to gain an asymmetric advantage over the enemy. These types of wars are concealed and waged mainly in political, economic and information spheres.

The attention of strategists has been drawn to a new form of threat to security, an irregular, armed aggression below the open war threshold. It has become a serious challenge for state authorities, defense systems responsiveness and decision-making processes of international security institutions. It is impossible to analyze any warfare without considering political context and many areas of human interactions beyond a military area.

Warfare was, is and will be in the nearest future a sad part of states activity. The Swiss, Jean-Jacques Babel counted that since 3500 B. C. mankind had lived without wars only 292 years. Over this period there were 14,550 big and small wars during which 3,66 billion people died of hunger, plague and other causes¹. Analyzing the history of warfare over this whole period of human existence it should be pointed out that the higher military art has always been about defeating the enemy, complete all military tasks without engaging the army².

The efforts of many philosophers, since the Ancient Times (Sun Tzu³, Heraclites, Appian⁴), the Renaissance (N. Machiavelli⁵), the New Times (C. von Clausewitz⁶, A. Jomini⁷) and the Modernity

¹ The origins of the concept of a hybrid war. Electronic journal "The Bell". 2015. 28 Feb. URL: <http://www.thebellforum.com/showthread.php?t=130013> [dostęp: 19.01.2016].

¹ Malyisheva E. M. *Mirovyie voynyi i lokalnyie voennyye konfliktyi v istorii: posledstviya, uroki w: Vestnik Adyigeyskogo gosudarstvennogo universiteta*. 2005. Nr 1. C. 69.

² Senchenko N. I. *Teoriya i praktika nevidimyyih voyn. Seriya: "Chetvertaya mirovaya latentnaya vojna"*. Kiev: KIT, 2009. S. 58.

³ SunTzu. *Sztukawojny*. Wydanie III. Helion, 2012.

⁴ Appian. *The Civil Wars*. Read How You Want.com, 2006.

⁵ Niccolò Machiavelli. T. 1. *Tradition 2012*; Niccolò Machiavelli. *The Prince: Second Edition*. University of Chicago Press, 2010.

⁶ Carl von Clausewitz. *O wojnie*. Kraków: Wydawnictwo Mireki, 2003.

⁷ Antoine Henri baron de Jomini. *The Art of War*. Michigan: University, 2006.

(B. Alexander¹, M. Gareev, M. Davey, M. Martin van Creveld², W. Slipchenko³, A. Toffler⁴, W. H. Hofmeister), were undertaken to identify, describe and justify crucial features of war and its changing content and shapes.

In geopolitics the nature of controlled chaos warfare is about geopolitical destruction of a state – prey, neutralization its geopolitical features, that is the size of its territory, number of population, a status on the international stage, economic capacity, military power, complete capacity.

The result of the Russian Federation activities, during 2014 demonstrates the global and regional security system as well as present international legal system were completely distorted¹. The term antiterrorist operation (ATO) and “hybrid warfare” are not the answer to a question what is happening to Ukraine – considering the annexation of Crimea and acts of war in Donbas with all possible weapon used except nuclear one. Thus, there is no answer also to other important questions: What should Ukraine do in the light of the international law and the Ukrainian Constitution? What should Ukraine expect from the international community?

From the international law perspective nobody can provide Ukraine with military support, because if there is no war on Ukrainian territory caused by aggression of another country but only the civil war or conflict, nobody is entitled to intervene from outside. That is the reason why V. Putin advocates the term “internal civil conflict in Ukraine”, which blocks possibility of any military support for Ukraine, including weapon.

¹ John B. Alexander. Ph. D. Future War: Non-Lethal Weapons in Modern Warfare. Macmillan, 2010.

² Martin van Creveld. Zmienne oblicze wojny. Od Marny do Iraku. Rebis: Dom wydawniczy, 2008.

³ Slipchenko V. I. Voynyi shestogo pokoleniya: oruzhie i voennoe iskusstvo buduschego. Moskva: Veche, 2002.

⁴ Toffler A. Wojna i Antywojna. I wyd. Warszawa: Muza, 1997.

¹ Donbas i Krym: tsina povernennia: monohrafiia / za red. V. P. Horbulina, O. S. Vlasiuka, E. M. Libanovoi, O. M. Liashenko. Kyiv: NISD, 2015. S. 35.

Almost all international security warranties for Ukraine (including the Budapest Memorandum) have proved to be useless when the aggressor became one of the guarantors – the Russian Federation¹. Neither the leaders of the Old Continent nor their citizens are fully aware of the fact that the aggression against Ukraine is an indirect aggression against the European Union and its values. Putin's regime is based on the rule of power, which is demonstrated with repressions, and outside the borders – with aggression. Yet, he manages to achieve – at least for a short run- a tactic advantage over the EU and the United States, which try to avoid military confrontation by any means. Violating treaty obligations Russia took over Crimea and set up separatist enclaves in the eastern Donbas. Gaining control over strategic points on the peninsula and in the eastern Ukraine by the Russian Special Forces was followed by a propaganda campaign for a few years.

The sense of insecurity evoked by open and long borders strengthened an attachment to the army and its almost mythologic role. The strong connection between prestige of the state and the prestige of the army retained and the military goals were more important than any other. The difficult geopolitical position and neighboring different civilizational circles gave the syndrome of the “Siege mentality”¹. The traces of this policy are still present.

The European Union and the Great Britain made “catastrophic mistakes” while interpreting mood of the Moscow Kremlin before the crisis in Ukraine and entered this crisis “like sleepwalkers” announced Christopher Tugendhat, the leader of the EU Commission of the House of Lords in the Report of the British parliamentary commission published in February 2015.

The Report concludes that EU did not realize how deep Russia's hostility towards Brussels is, the latter plans on deepening relations

¹ Pro vnutrishnie ta zovnishnie stanovysheche Ukrainy u sferi natsionalnoi bezpeky. Analitychna dopovid Natsionalnoho instytutu stratehichnykh doslidzhen do pozacherhovoho Poslannia Prezydenta Ukrainy do Verkhovnoi Rady Ukrainy. Kyiv: NISD, 2014. S. 17.

¹ Gomar T. Paradoks nepostoyanstva. Rossiya v globalnoy politike. 2006. Nr 3. S. 63–64.

with Ukraine¹. According to the Report the EU – Moscow relations have been long based on an “optimistic assumption” that Russia is heading towards democratic system. The Great Britain has had an exceptional commitment to Ukraine, as it was one out of four signatories of the Budapest Memorandum in 1994, which guaranteed integrity of the Ukrainian territory in exchange for renouncement of strategic nuclear weapon – the British parliamentary commission claims. In their opinion neither the Great Britain nor the European Union had any strategic plan how to deal with Russia in a long-run¹.

“New Ukraine” is explicitly pro-European and ready to fight for Europe, fighting for its own independence. The support for Ukraine is the most beneficial investment for the European Union. Ukraine could even help revive the spirit of unity and common welfare, which underlies the EU. To cut it short, saving Ukraine the Union could save itself².

Adam D. Rotfeld, a former minister of foreign affairs, deputy chairperson of the Polish – Russian Group for Difficult Matters emphasized that “Russia has been preparing itself and has been preparing the world for this conflict for at least seven years – since Putin’s speech in 2007 at the Security Conference in Munich. In spite of this, the West is confounded by these developments to which it did not elaborate an effective response. We have a problem. It amounts to the fact, that the very foundation of the international political and legal order has been destroyed, that is the foundations on which the peace and security of Europe have stood over 70 years after the war”³.

¹ Konflikt na Ukrainie. Brytyjski raport: katastrofalne błędy UE. URL: <http://www.polskieradio.pl/5/3/Artykul/1382532,Konflikt-na-Ukrainie-Brytyjski-raport-katastrofalne-bledy-UE> (dostęp: 19.01.2016).

¹ Konflikt na Ukrainie. Brytyjski raport: katastrofalne błędy UE. URL: <http://www.polskieradio.pl/5/3/Artykul/1382532,Konflikt-na-Ukrainie-Brytyjski-raport-katastrofalne-bledy-UE> (dostęp: 19.01.2016).

² Soros G. Putin pomoże w walce z Państwem Islamskim, w zamian dostanie Europę Wschodnią. To tragiczna pomyłka Ameryki. URL: <https://wszystkoconajwazniejsze.pl/george-soros-putin-pomoze-w-walce-z-panstwem-islamskim-w-zamian-dostanie-europe-wschodnia-to-tragiczna-pomyłka-ameryki> (dostęp: 11.01.2016).

³ Wroński P. Rotfeld: Rosja przygotowywała się do konfliktu co najmniej od siedmiu lat. URL: http://wyborcza.pl/politykaekstra/1,136829,15685855,Rotfeld_Rosja_przygotowywala_sie_do_konfliktu_co.html (dostęp: 11.01.2016).

The head of the British counterintelligence MI5 Andrew Parker¹ for the first time in the history has given an interview² for *The Guardian*, in which he has warned that Russia is a growing threat to the stability of the Great Britain, uses a range of means to attempt to influence the situation inside the United Kingdom. Russia has had spies and agents on the whole territory of Europe long since. “Russia uses all organs and capacity to realize its foreign policy outside the country in an increasingly aggressive way, i. e. using propaganda, spying, subversion and cyberattacks. They operate over whole Europe and also the Great Britain – and it is our task to stand in their way” – said A. Parker. Russians have had a lot of traditional spies and agents in Europe for a long time. Yet, the new phenomenon is an increasing importance of cyberwar which aims at military secrets, industrial projects and governmental information about a foreign policy. Russia stands more and more in opposition to the West. It is noticeable, for example in Russia’s operation in Russia and Syria¹. Russia has been concealing its desires for decades. The relations between Russia and the West have worsened since the Crimea annexation, the war in Ukraine and bombing insurgents’ positions in Aleppo to support president of Syria Bashar Assad².

¹ Parker A. The head of MI5 since 2013, former Deputy General.

² This has been the first interview of the head of this service in the 100 year history of this service. Till 1939 the identity of secretary general of counterintelligence services was secret, later it was advisable to restrain from public activities and avoid media. The guiding principle was speak as little as possible and speak discretely (Exclusive: ‘There will be terrorist attacks in Britain,’ says MI5 chief. In the first interview of its kind, Andrew Parker talks to the Guardian about the ‘enduring threat’ to the UK, surveillance and greater public understanding. URL: https://www.theguardian.com/uk-news/2016/nov/01/andrew-parker-mi5-director-general-there-will-be-terrorist-attacks-in-britain-exclusive?CMP=Share_iOSApp_Other (dostep: 02.11.2016).

¹ Kremlin pours cold water on MI5 chief’s claims of Russian threat. Andrew Parker’s warnings of hostile measures against the UK ‘do not correspond to reality’, says Kremlin. URL: <https://www.theguardian.com/uk-news/2016/nov/01/kremlin-pours-cold-water-on-mi5-chiefs-andrew-parker-claims> (dostep: 02.11.2016).

² MI5 head: ‘increasingly aggressive’ Russia a growing threat to UK. Exclusive: In first newspaper interview given by a serving spy chief, Andrew Parker talks of terror, espionage and balance between secrecy and privacy. URL: <https://www.theguardian.com/uk-news/2016/oct/31/andrew-parker-increasingly-aggressive-russia-a-growing-threat-to-uk-says-mi5-head> (dostep: 02.11.2016).

The hybrid warfare changes basic rules, creating an alternative reality, not a new border but an alternative picture. Formally, there is no war and there is no aggression. There are internal conflicts, political fight, crisis management and some cases of armed confrontation. There is no aggressor and aggression. Yet, the Russia's aim is not to change the rules of a hybrid warfare but to change the border (and not necessarily on the map). Simply, the formal border loses its significance and the state is not controlled by its government but outside powers.

At present, the "hybrid warfare" is considered as many-sided term. Hybridity can refer, first of all, to a military situation and conditions, strategy and tactics of the adversary; to the type of forces which the state should create and maintain¹. Hybrid warfare differs from the typical war as it lets the adversary engage simultaneously into many stages and has different expectations of the armed forces².

The main pillars of the Russian hybrid warfare are: the aggressor's presence, frozen or potential conflicts on the territory of a particular state, victims of the active recruitment of agents of influence and indifference of bureaucracy. At present, we can observe the shift of the borders of the democratic and civilized world from the eastern Ukrainian border to the west. Russia wages the war not against Ukraine but the whole democratic world. Actually, it is the conflict of worldviews, the conflict of scenarios for the social development³.

Russian hybrid warfare has questioned a traditional idea of unified, free and peaceful Europe and important institutions supporting this idea – NATO and the European Union.

¹ The origins of the concept of a hybrid war. Electronic journal "The Bell". 2015. 28 Feb. URL: <http://www.thebellforum.com/showthread.php?t=130013> (dostęp: 28.10.2016).

² Demidov A. Upravlyaemyy haos. Ofitsialnyiy sayt zhurnala "Strategiya Rossii". 2015. Nr 5. May. URL: http://sr.fondedin.ru/new/fullnews.php?subaction=showfull&id=1430428108&archive=1430773984&start_from=&ucat=14& (dostęp: 28.10.2016).

³ Sazonow K. Obiektem ataku nie jest Ukraina. Obiektem jest cała Europa. URL: <http://jagiellonia.org/wojna-przeciw-polsce-trwa-polsko-obudz-sie-2> (dostęp: 24.11.2016).

Hybrid warfare is often interpreted as something new, but most of its elements occurred and were used almost in all wars in the past¹. Cohesion and consolidation of these elements, their dynamics and flexibility when applied are exceptional. And additionally, the information component plays a special role; it has become an independent and as important as a military component. That is the reason why Russian annexation of Crimea and aggression in the east of Ukraine have become an impulse to analyze and estimate the phenomenon of the contemporary “hybrid warfare”.

The western military theories of the 20th century offered various concepts of future warfare. The so-called concept of proxy war was defined for the first time in 1964 by Karl Deutsch, who considered this war an international conflict, which is apparently an internal conflict, fought between two powers on the territory of the third party- state. In Deutsch opinion proxy war uses the social capacity, resources and territory of the state in a civil war as the tool to achieve the strategic goals of the external parties¹. The above quoted definition reflects the context of the cold war, when two superpowers with the nuclear weapon at their disposal avoided a direct confrontation transferring it to the territories of “The Third World”².

Whereas, Andrew Mumford identifies four crucial changes in the nature of the contemporary warfare and claims that these changes indicate the potential increasing engagement of states in the proxy strategies. These kinds of wars are the logical activity on the international stage of states, which aim at achieving their strategic

¹ Michael W. Isherwood. Airpower for Hybrid War. URL: <https://higherlogicdownload.s3.amazonaws.com/AFA/6379b747-7730-4f82-9b45-a1c80d6c8fdb/UploadedImages/Mitchell%20Publications/Airpower%20For%20Hybrid%20Warfare.pdf> (dostęp: 11.03.2016).

¹ Deutsch K. W. External Involvement in Internal Wars. [w]: H. Eckstein, Internal War: Problems and Approaches, Free Press of Glencoe. Nowy Jork. 1964. P. 102.

² Mumford A. Proxy Warfare and the Future of Conflict. [w:] The RUSI Journal. Vol. 158. 2013. Issue 2. P. 40–46; F. Bryjka. Rosyjska wojna zastępcza w Donbasie. [w:] Ante Portas – Studia nad Bezpieczeństwem. 2016. Nr 1 (6). S. 204–205.

goals and avoiding direct, costly and bloody wars at the same time¹. The author defines the proxy wars as a conflict in which the third party intervenes indirectly to influence the strategic outcome for the benefit of the supported coalition².

In spite of the rich expert literature a lot of questions are still unanswered and a dynamic political reality brings new factual material every day modifying challenges, repealing old and creating new threats. Before the term “hybrid warfare” was coined, the terms “asymmetric threats”¹, “asymmetric conflict”², “asymmetric warfare”³ were used.

So, in December 2000 the CIA *Report “Global Trends 2015: A Dialogue About the Future with Nongovernment Experts”* was released⁴. Among the threats of the 21st century it listed “asymmetric

¹ Mumford A. Proxy Warfare and the Future of Conflict. [w:] The RUSI Journal. Vol. 158. 2013. Issue 2. P. 40.

² Ibid.

¹ Newman N. J. Asymmetric Threats to British Military Intervention Operations. Royal United Services Institute for Defence Studies. 2000; McKenzie K. F. Jr. The Revenge of the Melians: Asymmetric Threats and the Next QDR, DIANE Publishing. 2001; Blank S. Rethinking asymmetric threats, Strategic Studies Institute, U. S. Army War College. 2003; Blank S. J. Rethinking Asymmetric Threats. Strategic Studies Institute. LULU Press. 2014.

² Paul T. M. Asymmetric conflicts: War initiation by Weaker Power. New York: Cambridge University Press, 1994; Arreguin-Toft I. How the Weak Win Wars: A Theory of Asymmetric Conflict. Cambridge: University Press, 2005; Stepanova E. A. Terrorism in Asymmetrical Conflict: Ideological and Structural Aspects, OUP Oxford, 2008; Resnick U. Dynamics of Asymmetric Territorial Conflict: The Evolution of Patience. Palgrave Macmillan, 2013.

³ Cordesman A. H. Arab-Israeli Military Forces in an Era of Asymmetric Wars, Greenwood Publishing Group, 2006; The Moral Dimension of Asymmetrical Warfare: Counter-terrorism, Democratic Values and Military Ethics. Ed. by Th. A. Van Baarda, D. E. M. Verweij, Martinus Nijhoff Publishers, 2009; Manwaring M. G. The Complexity of Modern Asymmetric Warfare, University of Oklahoma Press, 2012; Banks W. Counterinsurgency Law: New Directions in Asymmetric Warfare. Oxford: University Press, 2013.

⁴ Global Trends: A Dialogue About the Future With Nongovernment Experts. 2015. URL: <http://fas.org/irp/cia/product/globaltrends2015/> (dostę: 27.10.2016).

threats”, i. e., a hidden war in which state and nonstate adversaries avoid direct engagement, methods of cyberwarfare are used by economically weak countries, well military organized communities or unconventional delivery of weapon of mass destruction (WMD)¹.

The concept of “asymmetric warfare” was introduced by American strategist in the 1970s during the analysis of the USA war operations in Vietnam¹. The British researcher of international relations Andrew J. R. Mack was the first who explained the term “asymmetric warfare” in 1975. Influenced by the results of the freshly ended Vietnam War he presented 7 types of asymmetry, which can be applied in the limited conflicts².

Gradually the stress in interpretation of terms is being shifted which is reflected by usage of stable words “asymmetric threats”. *The Report of the American secretary of defense in the Bill Clinton William Cohen’s administration* released in 1997 concludes that “the USA conventional military capacity can generate among adversaries the pursuit of asymmetric capabilities against USA forces <...>. They will try to gain the advantage over the USA with nonconventional measures to minimize US strengths and exploit perceived US weaknesses³.

This Report was wildly quoted and in subsequent documents the definition of the asymmetric strategy of warfare which can be used by

¹ Global Trends: A Dialogue About the Future With Nongovernment Experts. 2015. URL: <http://fas.org/irp/cia/product/globaltrends2015/> (dostęp: 27.10.2016).

¹ Madej M. Zagrożenia asymetryczne bezpieczeństwa państw obszaru transatlantyckiego. Warszawa: Polski Instytut Spraw Międzynarodowych, 2007. S. 38–39.

² Andrew J. R. Mack. Why Big Nations Lose Small Wars: The Politics of Asymmetric Conflict. *World Politics*. Vol. 27. Issue 2. January 1975. P. 175–200.

³ William Sebastian Cohen – amerykański polityk, działacz liberalnego skrzydła Partii Republikańskiej, który w latach 1979–1997 pełnił urząd senatora ze stanu Maine, a następnie sekretarza obrony (1997–2001) w administracji prezydenta, demokraty Billa Clintona. Jednym z pierwszych głównych obowiązków Cohena było przedstawienie Kongresu budżetu obronnego na rok 1998.

the USA adversaries, almost literary included all the issues from the Report by W. Cohen.

In 1998 W. Cohen noticed a paradox that in a new strategic environment the American military advantage really increases the risk of nuclear, biological, chemical attacks in the asymmetric threats¹. In that context asymmetric conflict (asymmetric warfare) applies to blackmail when a weak actor threatens with using WMD against civilians of the adversary state².

In *the Review of Common Strategies of 1999* asymmetry is defined as an attempt to weaken or destroy USA strength exploiting USA weaknesses with methods that significantly vary from those the USA expects³.

In the report by the USA secretary of defense Robert Gates⁴ (February 2010) the term asymmetry is applied with the same meaning⁵. Asymmetry defines strategy and tactics chosen by the USA adversaries with poorer military and security capabilities. From this point of view asymmetric is an antonym of “conventional”, “normal” or “traditional” in the definitions of threats, attacks and military operations.

¹ William S. Cohen. Report of the Quadrennial Defense Review. May 1997. URL: <http://www.bits.de/NRANEU/others/strategy/qdr97.pdf> (dostęp: 11.03.2016).

² Center for Defense Information. Military Domination or Constructive Leadership? Defense Monitor. 1998. Nr 27 (3). P. 8.

³ Cohen E. *Wojna i technologie*. W: *Strategia we współczesnym świecie*/ pod red. J. Baylis, J. Wirtz, C. S. Gray, E. Cohen. Kraków: Wydawnictwo Uniwersytetu Jagiellońskiego, 2009. S. 165.

⁴ Meinhart R. Strategic planning by the Chairmen, Joint Chiefs Of Staff, 1990 to 2005. April 2006. URL: <http://www.comw.org/qdr/fulltext/0604meinhardt.pdf> (access.: 10.03.2016); Meinhart R. M. Joint strategic planning system insights: chairmen. fs of staff 1990 to 2012. June 2013. Strategic Studies Institute and U.S. Army War College Press. URL: http://www.globalsecurity.org/military/library/report/2013/ssi_meinhart.pdf (dostęp: 10.03.2016).

⁵ Robert Michael Gates – sekretarz obrony Stanów Zjednoczonych od 18 grudnia 2006 do 20 stycznia 2009 w gabinecie George’a W. Busha, a od 20 stycznia 2009 do 1 lipca 2011 w gabinecie Baracka Obamy; były zastępca dyrektora Centrali Wywiadu Williama Caseya (Deputy Director of Central Intelligence – DDCI), od 6 listopada 1991 do 20 stycznia 1993 dyrektor Centrali Wywiadu – DCI, od 2002 prezydent Texas A&M University.

The issue of asymmetric threats, military strategies and operations is actively studied in research centers at war colleges and higher education institutions in the USA¹ and in the professional magazines. One of the first works of this series *Challenging the United States Symmetrically and Asymmetrically: Can America be defeated?* was published in 1998².

The Report *Asymmetry and U.S. Military Strategy: Definition, Background, and Strategic Concepts* by the *Institute of Strategic Studies* identifies two kinds of asymmetry – positive and negative. Positive asymmetry gives the USA the military advantage whereas negative asymmetry is when the adversaries direct their attacks against the USA defenseless and weak points³.

A lot of analysts and “strategists” surprised by the Russian activity in Crimea and in the east of Ukraine try to explain their previous “peaceful” analysis with the Russia implementing completely new methods and classify them as “hybrid warfare”. Meanwhile, Russia explicitly tries to prove that their tactics of 2014 have been used in the world since long – by western countries among others. *Myth of hybrid war* by a head of the Centre of Strategic Analysis and Technology, Ruslan Pukhow⁴, published for the first time in the magazine *Nezavisimoe Voiennoe Obozrenie (Independent Military Review)* is an especially interesting article. R. Pukhow explains various aspects of “intermediate and asymmetric methods” and connects them to decisions of the updated *Military Doctrine of the*

¹ Gates R. Quadrennial Defense Review. February 2010. P. 80, 87. URL: <http://www.strategicstudiesinstitute.army.mil/pdffiles/qdr-2010.pdf> (dostep: 10.02.2016).

² Strategic Studies Institute of the US Army War College (SSI). URL: <http://www.strategicstudiesinstitute.army.mil> (dostep: 10.03.2016).

³ *Challenging the United States Symmetrically and Asymmetrically: Can America be defeated?*/ed. by Lloyd J. Matthews. U.S. Army War College Strategic Studies Institute Carlisle Barracks, Pennsylvania (1998). URL: <http://www.strategicstudiesinstitute.army.mil/pdffiles/pub230.pdf> (dostep: 15.02.2016).

⁴ Metz S. *Asymmetry and U.S. military strategy: definition, background, and strategic concepts*. Carlisle Barracks, PA: Strategic Studies Institute. 2001. URL: <http://www.strategicstudiesinstitute.army.mil/pdffiles/PUB223.pdf> (dostep: 15.02.2016).

Russian Federation. This work is interesting not only because of the presented views but also because it shows how small chances the West has, for the time being, to win Russian people's "souls" in the propaganda war with Kremlin.

R. Pukhov noticed that this kind of hybrid warfare is a serious challenge for the NATO because it is in so called "grey area" of the NATO commitments (it is not embraced by the standard definitions of warfare). Russians realized that with adequately arranged operations it is theoretically possible to cause the political breakdown between NATO members when one of the member state asks for help. According to the author, "hybrid wars" have been waged over past decades or even centuries many times, but previously they were defined as "low intensity conflicts". "It is difficult to imagine using the military force without any communication and information systems, economic sanctions, and methods of "hidden war", an attempt to weaken the adversary or exploit conflicts (ethnic, social, economic, political) on the adversary's territory. This has been the alphabet of every war since the ancient times"¹.

At the beginning of March 2016, the new thesis about preparations of "colorful revolutions" in different parts of the former Soviet Union by the West, occurred in the Russian national security documents. The reasons for that was the closing conference of 27 February 2016, where the commander of the Russian General Staff, General V. Gierasimov confirmed again that the Russian army started to develop methods of hybrid warfare².

The fact that for the Russian Federation "hybrid warfare" have become a dominating way to wage wars for long years, is confirmed in the latest article by general V. Gerasimov *From Syria Experience*. This article defines the main priorities perceived by the Russian Federation as the main goals of the "hybrid warfare" (and how this

¹ Według australijskiego badacza J. Besemeres, nie wolno używać terminu "kryzys ukraiński", ponieważ to była inwazja Rosji na Ukrainę w połączeniu z aktywną i gwałtowną destabilizacją (J. Besemeres, *Essays on Russia and East-Central Europe since World War II/The Australian National University*. Canberra; Acton, A.C.T. ANU Press, 2016. P. 367).

² Puhov R. N. Mifo "gibridnoy voyne". URL: http://nvo.ng.ru/realty/2015-05-29/1_war.html (dostęp: 18.05.2016).

war is treated – “blitzkrieg of the 21st century”) – to achieve political goals with a minimal military influence on the adversary¹.

V. Gerasimov claims that the “hybrid warfare” should involve mainly destabilization of military and economic capacity of the adversary, information and psychological pressure, active support of internal opposition, subversion and guerilla. It is difficult to disagree with one of the most important conclusion: “right now a combination of traditional and hybrid warfare constitutes a distinctive feature of any military conflict. Moreover, the hybrid warfare can be applied without open support of military force whereas the traditional warfare cannot”².

It is difficult to define accurately who in Russia is an author of the theory on “hybrid warfare”. Yet, Russia has the precursors of theories on non-conventional warfare. In 1945 George Issaron³ in his book *New forms of combat* (an essay researching modern war)⁴ emphasized that “War is not declared, it simply starts... Mobilization and concentration do not refer to the beginning of war... but are imperceptibly and gradually organized long before. Certainly, it is not possible to conceal these operations completely.

Russia has one more modern war theorist – E. Messner, who coined the concept of future wars that would be wars for the soul of the nation rather than territories or resources and psychological agitation and propaganda will be more important than weapon. These wars will be the insurgent wars, (miatezhnye voiny)⁵, wars of chaos, a dominating form of military conflict in the 21st century, in his

¹ Obyichnyimi voyskami nevozmozhno voevat. Gerasimov rasskazal generalam, kak protivostoyat “gibridnyim voynam” Zapada. URL: <http://www.nakanune.ru/news/2016/3/1/22429056/#sthash.iRu4ro8r.dpuf> (dostęp: 15.05.2016).

² Gerasimov V. Po opyitu Sirii. URL: <http://vpk-news.ru/articles/29579>. (dostęp: 15.05.2016).

³ Ibid.

⁴ Isserson George (1898–1976) – sowiecki dowódca wojskowyi teoretyk wojskowy, profesor Akademii Sztuki Operacyjnej Sztabu Generalnego, pułkownik (1940), jeden ztwórców teorii głęboki choperacji.

⁵ Hodakov I. Neuslyishannyiy prorok. URL: http://nvo.ng.ru/history/2010-07-02/15_isserson.html (dostęp: 18.02.2016).

opinion¹. Conflicts, in which the explosives are national or social differences and disinformation, are actually the psychological wars by nature, waged by fueling tension and propaganda. In his opinion traditional warfare has been exhausted: “In the past the wars were waged in two-dimensions – in the sea and on the land, later evolved to the third dimension – the air. Now the most important is the fourth dimension – the psyche of the adversaries. We talk about the information warfare, but this is actually a psychological warfare because the information flow should give effects in the people’s minds². This is just the aim of the information warfare³.”

This warfare would be completely different from those known so far – without huge armies, front lines, bombing and mobilization. Small insurgent groups, radical organizations, terrorists, criminal groups, corporations, agents, journalists, non-governmental organizations, propaganda experts, diplomats, financiers and businessmen should play the main role. The aim is to imprison the adversary mentally rather than physically who, when defeated, will realize our goals by themselves⁴.

At the turn of the 20th and 21st centuries there are a lot of studies on the nature of future military conflicts and wars⁵ – the fourth-generation wars (sometimes the term *the fifth-generation wars* is used). Describing these wars, the authors drew attention to joining

¹ Messner E. E. *Vsemirnaya myatezhevoina*. Moskva: Kuchkovo pole, 2004. C. 15.

² *Hochesh mira, pobedi myatezhevoinu!* Tvorcheskoe nasledie E. E. Messnera. Moskva: Voennyiy universitet, Russkiy put. 2005.

³ Messner E. E. S. 57; *Hochesh mira, pobedi myatezhevoinu!* Op. cit., S. 109.

⁴ Messner E. E. Op. cit. S. 62.

⁵ Petuchov Yu. *Chetvertaya Mirovaya. Vtorzhenie. Hronika okkupatsii Vostochnogo polushariya*. Moskva: Metagalaktika, 2004; Panarin I. N. *Informatsionnaya voyna i geopolitika*. Moskva: Pokolenie, 2006; Filatov V. I. *Voyna: svodki s frontov iudeyskoy imperii*. Moskva: Algoritm, 2006; Shershnev L. *Chetvertaya mirovaya voyna i ee istoricheskie osobennosti*. Moskva: MOF “Fond natsionalnoy i mezhdunarodnoy bezopasnosti”, 2005; Grodnenskiy M. *Chetvertaya mirovaya: SShA v voyne za mirovoe gospodstvo*. Minsk: Ilin, 2004.

conflict situations in which the strong adversary is not able to protect themselves and defeat the weak. The author draws attention to main characteristics of asymmetric conflicts:

- unpredictability of the outcome in spite of the open differences in military capacity and status of adversaries;
- a weak actor applying the strategy of identifying “weaknesses of a strong actor”;
- a weak actor applying the forbidden warfare;
- “indirect” tactics of a weak actor;
- inability of a strong actor to defend their position and definitely crush a weak actor¹.

Military theoreticians S. Chekinov and S. Bogdanov considering L. Deriglazova’s studies presented their own concept of the new generation war². Their model of war consists of eight subsequent phases³:

- the first phase: non-military asymmetric warfare including information, morality, psychology, ideology, diplomacy and economic measures used to create favorable political, economic and military configuration;
- the second phase: special operations to mislead political and military leaders carried out by coordinated actions via diplomatic

dunarodnyie protsessyi. 2010. T. 8, nr 2 (23). S. 51–64; Deriglazova L. V., *Idealnyiy proval: vojna SSHA v Irake cherez prizmu teorii asimmetrichnogo konflikta*. Svobodnaya myisl. Moskva, 2010. Nr 3. S. 5–16; Deriglazova L. V. *Asimmetrichnyiy konflikt: uravnenie so mnogimi neizvestnyimi*. Tomsk: Izd-vo Tomskogo universiteta, 2009; Deriglazova L. V., Minasyan S. *Nagornyiy Karabah: paradoksi silyi i slabosti v asimmetrichnom konflikte*. Analiticheskie dokladyi Instituta Kavkaza. 2011. Nr 3. Yanvar. S. 9–28.

¹ Deriglazova L. V. *Paradoks asimmetrii v mezhdunarodnom konflikte*. B: *Mezhdunarodnyie protsessyi*. Sentyabr-dekabr 2005. T. 3. Nr 3 (9). S 86.

² Chekinov S. G., Bogdanov C. A. *O haraktere i sodержanii voynyi novogo pokoleniya*. Voennaya myisl. 2013. Nr 10. C. 13–25; Chekinov S. G., Bogdanov C. A. *Asimmetrichnyie deystviya po obespecheniyu voennoy bezopasnosti Rossii*. Voennaya myisl. 2010. Nr 3. C. 13–22; Chekinov S. G., Bogdanov C. A. *Vliyanie nepryamyih deystviy na karakter sovremennoy voynyi*. Voennaya myisl. 2011. Nr 6. C. 3–13.

³ Chekinov S. G., Bogdanov C. A. *O haraktere i sodержanii voynyi novogo pokoleniya*. Voennaya myisl. 2013. Nr 10. C. 15–22.

channels, media and governments, military agencies, false data, orders and instructions;

– the third phase: threatening, deceiving, bribing governments and officers to give up their duties;

– the fourth phase: destabilizing the situation with propaganda, increasing social discontent strengthened by sabotage and subversive operations of various military organizations and paramilitaries;

– the fifth phase: demarcating the no-fly zone over the invaded country, blockade of roads, bridges and transportation hubs, using private military organizations, opponents of social and political order of the attacked country;

– the sixth phase: the start of the military operations followed by thorough reconnaissance and intelligence actions with various technologies, means and forces including special forces, signal units, diplomacy and secret service and industrial espionage;

– the seventh phase: combination of targeted information operations, military operations of signal units, operations in cyberspace of air forces, using various weapon systems and platforms (far-reaching artillery, new physical principles of weapon (beam, geophysical, wave, non-lethal biological weapon);

– the eighth phase: gaining control over the remaining adversary resistance points and destroying hostile elements with special forces, operations carried out by reconnaissance units to identify hostile forces that survived and inform rocket and artillery units about their position (coordinates); destroy the adversary fire protection strips with advanced weapons, surround the adversary territory with land forces¹.

Martin van Creveld² characterized the new type of war as a “non-trinitarian war” which does not match the trinity paradigm of government – army – society³. Whereas an American expert A. Cohen

¹ Więcej na ten temat: M. Wojnowski, *Koncepcja “wojny nowej generacji” w ujęciu strategów Sztabu Generalnego Sił Zbrojnych Federacji Rosyjskiej*. Przegląd Bezpieczeństwa Wewnętrznego. 2015. Nr 13 (7). S. 16–17.

² Martin van Creveld analityk wojskowy, profesor historii wojskowości na Uniwersytecie Hebrajskim, eksperta w kwestiach strategicznych, konsultant w Departamencie Obrony USA.

³ *Voyna i sovremennoe gosudarstvo*. Stenogramma lektzii profesora istorii Ierusalimskogo universiteta Martina van Krevelda. URL: <http://polit.ru/article/2006/09/26/kreveld> (dostęp: 15.02.2016).

divided modern military conflicts into three categories: conflicts which use rockets, tanks and knives respectively¹. According to experts' estimations, in the last years knives were used in 90 % out of 130 military conflicts instead of missiles or tanks. However, as Martin van Creveld noticed "history shows that 90% of tanks does not know what to do with knives"².

The gradual dominance of the term "hybrid warfare" grew together with the concept of "three block war"³. The thrust of the concept is that modern militaries must be trained to conduct full scale military action in one city block, peacekeeping operations in the second one and humanitarian aid in the third block, simultaneously.

Today, the "hybrid warfare"⁴ is in a center of attention, widely discussed in media; it has become a subject of expertise research. The public perception of warfare has also changed⁵. Moreover, the

¹ Cohen E., Eisenstadt M., Bacevich A. Knives, Tanks, and Missiles: Israel's Security Revolution. Washington Institute for Near East Policy. 1998. URL: <https://www.washingtoninstitute.org/uploads/Documents/pubs/KnivesTanksandMissiles.pdf.pdf> (dostęp: 11.03.2016).

² Voyna i sovremennoe gosudarstvo. Stenogramma lektcii professora istorii Ierusalimskogo universiteta Martina van Krevelda. URL: <http://polit.ru/article/2006/09/26/kreveld> (dostęp: 15.02.2016).

³ Boot M. Beyond the 3-Block War. Armed Forces Journal. March 2006; Krulak Ch. The Three Block War: Fighting in Urban Areas. Vital Speeches of the Day. 1997. 15 December. Vol. 64. Nr 5.

⁴ D'Agostino D. M. Hybrid Warfare. DIANE Publishing, 2011; Tomes R., Natter W. 3rd, Brister P. Hybrid Warfare and Transnational Threats: Perspectives for an Era of Persistent Conflict. CENSA, 2011; Hybrid Warfare: Fighting Complex Opponents from the Ancient World to the Present, edited by Williamson Murray, Peter R. Mansoor, Cambridge University Press, 2012; Johnson D. E. Military Capabilities for Hybrid War: Insights from the Israel Defense Forces in Lebanon and Gaza. Rand Corporation, 2014; Jordan L. R. Hybrid War: Is the U.S. Army Ready for the Face of 21st Century Warfare? – War College Series, BiblioLife, 2015; Reeves S. R., Barnsby R. E. The New Griffin of War. Hybrid International Armed Conflicts. Academic journal article "Harvard International Review". 2013. URL: <https://www.questia.com/library/journal/1G1-316203914/the-new-griffin-of-war-hybrid-international-armed> (dostęp: 15.02.2016).

⁵ Rid T., Hecker M. War 2.0: Irregular Warfare in the Information Age. ABC-CLIO. 2009. P. 5.

research was conducted by world experts: W. J. Nemeth, F. Hoffman, D. Lasikom, G. Davis, N. P. Freier, D. Kilcullen (USA), F. van Kappenom (Holand). A lot of researchers and scientists indicate the “hybrid” nature of warfare, its conceptualization are clear and full. In the western theories of 2005–2009 the term “hybrid warfare” occurs, yet, in many cases it was not unified precisely enough to avoid controversies among experts worldwide and interpretations in other terms and concepts. Today the situation is different.

Carl von Clausewitz¹ predicted in his war book almost 180 years ago that war has its own forms and conditions in every period, so every period should have its own independent theory of war².

The state which wages the hybrid war enters into transactions with non-state contractors: military groups, local people’s groups, the connections with which are formally denied. These contractors can conduct actions the state itself cannot as it is obliged to comply with the *Geneva Convention*, *Hague Convention* with respect to the laws and customs of war on land and agreements with other countries. The dirty work can be commissioned to non-state groups and organizations. This happens now in the east of Ukraine. Yet, the peculiarity of this conflict is information propaganda which can be treated as an information warfare.

In March 2015 the NATO Deputy Secretary General Alexander Vershbow presented the following definition: “hybrid warfare” employs a broad mix of instruments – military force, technology, crime, terrorism, economic and financial pressures, humanitarian and religious means, intelligence, sabotage, disinformation³.

¹ Carl Philipp Gottlieb von Clausewitz (1780–1831), Prussian general and military theoretic, fought against Napoleon I in the Russian army 1812–1814 and Prussian 1814–1815. During 1818–1830 a head of Allgemeine Kriegsschule in Berlin (future Berlin War Academy). R. Kuźniar, *Polityka i siła. Studia strategiczne – zarys problematyki*. Wyd. 2. Warszawa: Wydawnictwo Naukowe SCHOLAR, 2006. S. 46.

² Colonel Leslie F. Brown, Colonel Timothy D. Brown. Twenty-first century warfare will be hybrid. USAWC CLASS of 2011. P. 9.

³ ESDP and NATO: better cooperation in view of the new security challenges. Speech by NATO Deputy Secretary General Ambassador Alexander Vershbow at the Interparliamentary Conference on CFSP/CSDP. Riga, Latvia, 2015. 5 March. NATO. URL: http://www.nato.int/cps/en/natohq/opinions_117919.htm?selectedLocale=en (dostęp: 15.02.2016).

Hybrid warfare can be defined as a non-warfare because a lot of operations are conducted between the army and civilians. The example of this are “the little green men” on Crimea where the Russian propaganda denied accepting them as militaries for a long time because they did not have military insignias and at the same time acted as civilians disguised in uniforms, which according to V. Putin could be bought in a shop. Yet, they have weapon but “little green men” avoided using it. It was to serve as a deterrent¹.

2.6. Information Terrorism as a Modern Dynamic Part of International Terrorism

Vozniuk Eugenia

In the history of mankind, information confrontation was present in every war in one form or another. However, after the World War II this direction acquired a special “sound” and reached a more systemic level, which was fixed in various official documents. Different sources use different terms and definitions – information confrontation, information operation, psychological operation, – as well as the corresponding abbreviations such as IO, PSYOPS. It should be clarified that what was previously widely used in Western countries cannot always be completely copied for today’s realities of Ukraine. It can also be said that in the developed countries of the world (for example, the United States, other NATO countries) there is a reconsideration of the information component of the confrontation and there is a tendency to use more cautious language.

Accordingly, in the world relatively new formulations have appeared and are being actively implemented on the agenda – “soft power strategies”, “strategic communications”, MISO and so on.

¹ Rol informatsii v gibridnykh voynakh. URL: http://osvita.mediasapiens.ua/trends/1411978127/rol_informatsii_v_gibridnykh_voynakh (dostep: 17.02.2016).

© *Vozniuk Eugenia* – PhD of Political Sciences, Associate Professor of International Relations and Regional Studies Department, Lesya Ukrainka Eastern European National University.

If we make a historical digression during the Cold War, in the West, in the context of armed confrontation, the term “psychological operations” (PSYOP) was more often used, while on this side of the “iron curtain”, in the Soviet Union and other Warsaw Treaty countries, the term “ideological activity and propaganda work” was more typical. Within the framework of the classical PSYOP, there were also several components, and very often propaganda was considered as a component technology of psychological operations.

It should be noted that the problems of international terrorism, and in particular, its manifestation as information terrorism, are reflected in a significant revision of modern domestic and foreign scholars. It is an analysis of the criminal law and political science dimensions of contemporary international terrorism (V. Antypenko, V. Evdokymov, V. Komisarov, V. Lipkan, E. Lyakhov, K. Salimov, O. Bardin, V. Vozniuk, N. Lazarev, S. Teleshun, A. Yats’ko and others); the concept of information terrorism, the signs and the main tendencies of its evolution (A. Barinov, O. Boychenko, K. Gerasymenko); manifestations of the information component of political terrorism¹. However, despite the large number of works on this issue, it needs further scientific development, as well as a more detailed consideration of the problem.

A prerequisite for the formation of clearer representations about the essence of information terrorism is a deep understanding of the notion of “globalization” and “terrorism”.

Today there are many definitions of globalization. One of them, most notably, belongs to the former UN Secretary-General Kofi A. Annan. According to him, globalization is a general term, which means an increasingly complicated complex of cross-border interactions between individuals, enterprises, institutions and markets².

¹ Jerrold M. From Car Bombs to Logic Bombs: The Growing Threat from Information Terrorism. NATO Library at: Terrorism and political violence. Vol. 12. No. 2. 2000. P. 97–122.

Thevenet C. Cyber-terrorisme, mythe ou réalité? Série Mémoires et Thèse. Université de Marne-La-Vallée, 2005. 57 p.

Chambet P. Le cyber-terrorisme. URL: <http://www.chambet.com/publications/Cyberterrorisme.pdf> (access.: 11.02.2018).

² United Nations Secretary-General. Kofi Annan 2001. URL: <https://www.un.org/sg/en/subsite-section/kofi-annan?page=320> (access.: 16.03.2018).

The research of Ukrainian scholars testifies their weighted interpretation of modern globalization processes, which allows us to determine the characteristic features of this phenomenon and to show the threats and challenges to humanity.

In their view, the comprehensive process of globalization today testifies not only to the onset of a new stage of civilization development but, at the same time, is accompanied by an ever-increasing anti-globalist rebellion that triggers the emergence of a number of other unpredictable events and conflicts that have gained considerable international resonance.

First of all, it concerns such a socio-political phenomenon as terrorism.

Traditionally, terrorism was defined as an attempt on the life of a state or public figure, violence or a threat to violence, aimed at forcing the authorities to make decisions that are advantageous to terrorists or terrorist organizations. Therefore, it is not surprising that in 1848 German radical K. Heinzen assured all supporters that the prohibition on murder does not apply to the political sphere and the physical elimination of hundreds of thousands of people is justified by “higher goals”. At that time (and not by modern terrorists, as some people think) the “philosophy of the bomb” was formed, which included the use of new technologies in carrying out terrorist attacks¹. Here it is worth mentioning the statement of the famous Charlie Chaplin, a great actor and public figure: “One murder makes a person a criminal, millions of murders make him a hero. The whole thing is on a scale”.

A well-known domestic researcher on the nature of terrorism V. Lipkan, interprets this definition from the following positions:

– in the broad sense of the socio-legal phenomenon, it is “characterized by the union of aggressive layers of organized crime with the distribution on the hierarchical level and the allocation of leaders who personally do not participate in the commission of acts of terrorism, but carry out ideological, managerial, organizational and administrative functions”;

¹ Chaliand G., Blin A. The History of Terrorism: From Antiquity to al Qaeda. 2007. 484 p. URL: [http://www.orgsites.com/va/asis151/HistoryofTerrorism-FromAntiquitytoalQaeda\(Ucla2007\).pdf](http://www.orgsites.com/va/asis151/HistoryofTerrorism-FromAntiquitytoalQaeda(Ucla2007).pdf) (access.: 10.03.2016).

– in the general legal sense, it is a negative social phenomenon expressed in the commitment (or threats) of violent acts by a person or a group of persons who are trying to achieve the goal with the help of coercion;

– in criminal law interpretation it is threats or dangerous actions aimed at endangering the life and health of children and property damage, and in general, undermining the stability of society¹.

Consequently, we can generalize: terrorism is qualified as an anti-human and antisocial criminal act, which leads to inhumane actions and is characterized by malicious tendencies and organizational security. Actually, a terrorist act is the act of any type of violence in order to intimidate the society and create conditions conducive to the realization of certain selfish goals of a separate group of people.

Terrorism develops along with the society that generates it. Modern terrorism is characterized by the large-scale involvement of a large number of people and is well-structured and organized. The activities of terrorist organizations are often directed not only to exacerbate and destabilize the situation in a particular region, but to achieve far more serious goals, that is, the seizure or redistribution of power, the violent change in the state system, the imposition of their own orders, morals, and rules of cohabitation.

The scope of terrorist operations requires, firstly, the attraction of significant human resources, including high-level specialists in various fields of knowledge, replenishment and expansion of its quantitative composition and the development of an intelligence network around the world. After all, the present terrorism is not only saboteurs - the singleton and stealers of planes. Secondly, the wide scale of the goals of modern terrorism requires the involvement of the material and financial resources needed to equip terrorist organizations with technical means and weapons, the creation of specialized schools and training bases for the training of members of terrorist groups. And thirdly, it requires a well-developed infrastructure. It is about the establishment of complex relations between terrorist groups

¹ Lipkan V. 2003. The Necessity of Formation of the National Security System. P. 23–24. URL: file:///C:/Users/User/Desktop/Pib_2003_2_2_7.pdf (access.: 10.03.2016).

from different countries, combining such spheres as operational combat training, logistical cooperation, including in the field of armaments, as well as joint action.

Terrorism is becoming a kind of an export-oriented industry, turning into a business where you can make big money. In the theory of world practice, three main types of terror are known:

- internal: the corresponding actions of citizens of one state against compatriots in their own territory;

- transnational: the corresponding actions of citizens of one state against compatriots in the territory of other states;

- international: the respective actions of groups of citizens, single or mixed in national composition, against any persons in the territory of third countries.

Today, international terrorism has grown to such an extent and resonance that it actually became planetary in scale, creating a direct threat to the gradual world civilization.

In scientific terms, the concept of “international terrorism” appeared in the early seventies of the last century and has a number of different interpretations, as well as some difficulties of objective and subjective nature. In particular, it is interpreted as an international crime that threatens peace and security, degrades human dignity; as violent acts aimed at undermining international relations, an established international political system. They are contrary to existing norms of morality and law; as a terrorist activity directed against foreign citizens, organizations or governments with the aim of overthrowing a state system or undermining the international order and others.

At the *VII Congress of the United Nations in 1990*, the report of the UN Security Council read: “International terrorism can be described as terrorist acts, in the creation of which the executors plan their actions, receiving certain instructions, come from different countries, fleeing, seeking refuge or receiving assistance in any form not in the country or countries where they create this act”¹.

In our view, the problem of international terrorism should be considered comprehensively and, above all, in the format “globaliza-

¹ UN News Centre. URL: <https://news.un.org/en> (access.: 19.01.2018).

tion – anti-globalization”, to a degree as a “call – response”. It is conceptually important to proceed from the fact that the actual phenomena of globalism, as well as terrorism, are not a hallmark of the present: they have the corresponding measurements of a predominantly local scale and a considerable history. Summarizing the above: international terrorism phenomenon performs a role in the system of international relations, individual countries, their leaders are also used as an effective mechanism for the implementation of a particular globalization strategy, in particular, the comprehensive spread of stabilizing hegemonic aspirations.

In the field of political, philosophical, legal, aesthetic, religious and other views and ideas, that is, in the spiritual sphere, information terrorism is carried out where is the struggle of ideas. There is a large number of definitions and concepts of information terrorism. Some experts associate it with high-tech applications of conventional terrorism, while others argue that information terrorism is directed not towards society but on individuals in everyday life that has nothing to do with politics and international relations.

Information terrorism is the use of information technologies, mass media, dissemination of information for the purpose of targeted influence on the selected object, its discredit¹. There is another widespread name of it – “cyber terrorism” – the use of computer and telecommunication technologies (especially the Internet) for terrorist purposes. Legislation of Ukraine defines: “Cyber Terrorism is a terrorist activity carried out in cyberspace or with its use”. This is a killing attack aimed at intimidating in order to achieve political results or harming computer networks, especially personal computers connected to the Internet, using such means as computer viruses.

However, all experts are united in one: information terrorism has a primarily negative impact on the person, society and the state of all existing types.

¹ Bondar Yu. V. Freedom of speech as a factor in information security. The Actual problems of international relations. International Information Security: Contemporary Concepts and Practices. Issue 102 (Part I). Kyiv, 2011. P. 127–129.

The Law of Ukraine *On the Fundamentals of National Security of Ukraine* specifies the threats to the national security of Ukraine in the information sphere:

- manifestations of restriction of freedom of speech and access to public information;
- the dissemination by the media of a cult of violence, cruelty, pornography;
- computer crime and computer terrorism;
- disclosure of information constituting state secret, or other information with restricted access aimed at meeting the needs and ensuring the protection of the national interests of society and the state;
- attempts to manipulate social consciousness, in particular by disseminating inaccurate, incomplete or biased information¹.

One of the most dangerous types of information terrorism is mental terrorism, namely human manipulation. Mass manipulation is a hidden verbal, pictorial, gesture-movement influence on society, which purpose is the spread of mass sentiment, the formation of public opinion, its correction. Mass manipulation is also related to the actualization or change of attitudes, value orientations or actions hidden from citizens. The effectiveness of manipulation is determined by the degree of unconscious imitation or the degree of reflection of the self-regulation of members of the mass on the basis of misleading notions about the causes and consequences of what is happening. Mass infections are of great importance for effective mass manipulation; they precede manipulation or occur in parallel with it.

Terrorist acts, as a rule, are one-off, one-time and have a destructive force. Information terrorists aspire to the only one objective, i. e., to make the greatest noise and to reach the desired goal as soon as possible: to influence the psyche of people, to spread panic, insecurity in the future, fear, distrust of power, etc.

It is worth highlighting such a special kind of psychological terrorism as media information terrorism, namely, the abuse of information systems, networks and their components for the commis-

¹ Law of Ukraine “On the Fundamentals of National Security of Ukraine”. URL: <http://cis-legislation.com/document.fwx?rgn=17928> (access.: 19.01.2018).

sion of terrorist acts and other related actions. This type of terrorism is characterized as a set of information warfares and special operations involving national or transnational criminal structures and special services of foreign states.

Significant economic damage, as well as the complete destruction of information infrastructure, can be inflicted by innocent, at first glance, computer viruses. As an example, it is possible to carry out a resonant infection with the virus Petya.

Speaking about information terrorism as a factor of the negative influence of one state on the public opinion of another, one should also concentrate on internal information terrorism. A vivid example can be presented by individual facts cited in the article by the head of the Center for Research of Russia V. Ogryzko: according to a survey conducted by Levada Center in Moscow in March 2015, namely, Russia's citizens consider its main enemies to be the United States (73 %), the EU (64 %), Ukraine (55 %). On the contrary, Russia's friends are Belarus (85 %), China (76 %). 50 % of Russians consider the justification of V. Putin's statement about the possibility of using nuclear weapons during the annexation of the Crimea. 49 % consider the main achievement of foreign policy to be a return of Russia to the status of "great power"¹.

In a poll conducted by the same Center in May 2015, one should pay attention to the following figures:

- only 6 % of Russians believe that the war in eastern Ukraine is continuing in connection with the interference in the conflict with the leadership of Russia, which supports the *DNR* and *LNR* with their troops, weapons and military equipment;

- 38 % chose the answer: "Even if there are Russian troops and military equipment in Ukraine, but in the current international situation, to deny these facts is the right policy for Russia";

- 56 %, that is every second Russian, considers what is happening in eastern Ukraine as an aggression of the West, which supports the war in eastern Ukraine in order to weaken Russia's influence in the world;

¹ Levada-Center. URL: <http://www.levada.ru/en/category/publications> (access.: 22.01.2018).

– 60 % of Russians in March 2015 believed that the best form of political system in Russia is the Soviet system or the current regime of V. Putin. Only 11 % of Russians would like to live in a democratic Western-style society¹.

Obviously, the results of public opinion polls are unlikely to be the basis for far-reaching conclusions. At the same time, they clearly indicate certain tendencies in the mood of society and its general condition. In other words, the Russian information propaganda warfare against its own people gave its results: the society managed to get isolated from the truthful information, and Putin's regime is provided with maximum support.

After the events of September 11, 2001, the administration of the White House succeeded in such actions. In recent years, decisions have been taken by governments and parliaments of a number of European countries. The use of many sites, especially social networks – Facebook YouTube, has been banned for more than a year in the People's Republic of China. Ukraine in its turn banned Odnoklassniki, VKontakte and mail.ru.

Despite some negative reaction in society, such actions have had an effect, as the organization of rallies of strikes, even terrorist acts through social networks have quickly lost popularity.

International terrorism is one of the most dangerous and difficult phenomenon that threatens international security and is characterized by special dynamism and versatility, as well as the ability to adapt and modernize in the conditions of the main civilizational tendencies of the present globalization and informatization. Thus nowadays, one of the most dangerous manifestations of international terrorism is information terrorism.

It is worth highlighting such a special kind of psychological terrorism as media information terrorism, namely, the abuse of information systems, networks and their components for the commission of terrorist acts and other related actions. This type of terrorism is characterized as a set of information warfares and special operations

¹ Levada-Center. URL: <http://www.levada.ru/en/category/publications> (access.: 22.01.2018).

involving national or transnational criminal structures and special services of foreign states.

In connection with the threat of information terrorism, individual countries of the world try, if not to restrict, at least to impose tough control of the information flows. That is why the fight against information terrorism at the stage of the formation of the information society in Ukraine requires a professional approach, first of all, the creation of an appropriate legal framework, international cooperation, the functioning of special units for combating computer crime, etc.

2.7. Role of Cybersecurity as a New Element of National Informational Security

Mykhaliuk Nazar

Over the past ten years, the role of technologies and the Internet has grown more and more: the creators of software and technological devices or the maintenance of existing networks and systems are the largest multinational companies (Market value of Apple is \$ 752 billion, Alphabet is \$ 579,5 billion, Microsoft is \$ 507,5 billion, Amazon.com is \$ 427 billion, Alibaba is \$ 264,9 billion)¹; the number of Internet users is over 4 billion people, which is about 54 % of the total population². Technologies are deeply integrated into the everyday lives of ordinary people (telephones, computers, televisions, smart gadgets such as watches, air conditioners, kettles, refrigerators, light bulbs, sockets, locks, house management systems).

© *Mykhaliuk Nazar* – PhD of Political Sciences, Senior Lecturer of International Communications and Political Analysis Department, Lesya Ukrainka Eastern European National University.

¹ The 100 largest companies in the world by market value in 2017. URL: <https://www.statista.com/statistics/263264/top-companies-in-the-world-by-market-value> (access.: 14.05.2018).

² Internet World Stats. URL: <https://www.internetworldstats.com/stats.htm> (access.: 14.05.2018).

The existing lifestyle and the comfort of people's existence depend entirely on access to the Internet and technologies. However, at the same time, new threats and dangers are faced by ordinary citizens, as well as entire organizations, countries and super-state entities, namely, threats to personal data, illegal data collection and analysis of users' activities at the Internet, threats to secrecy of correspondence, threat of loss of sensitive governmental information, hacker attacks on government sites, resources, portals, failures and discrediting national systems (such as the M.E.Doc tax reporting system in Ukraine, the attack on the German government information network), intervention in electoral campaigns and referendums of different states (the USA, France, Germany, the Netherlands, Hungary), distortion of information and manipulation of public opinion (Ukraine, Russia, France, Germany). All these threats pose a danger to the destabilization of the political order of states, the functioning of the existing world order. In this regard, the problems of cyber security and information security are actualized at all levels of society and states. Countries are forced to change their legislation in line with new realities and technologies, create additional security systems, and implement counter-measures to cyber-threats.

It is safe to say that modern threats to states are moving into a new dimension, which can be called cyberspace. Today, there is no definite international recognition of the definition of cyberspace, and those interpretations that occur depend to a large extent on the point of view, from which the concept of cyberspace is considered. Thus, the *International Organization for Standardization (ISO)* regards cyberspace as a complex environment that arises and functions as a result of human activities, software and Internet services using technological devices connected to different levels of networks that do not exist in any physical form¹. M. Bezkorovnyi and A. Tatzovdefine the cyberspace as a sphere of activity in the information environment, formed by a set of communication channels of the Internet and other

¹ ISO/IEC 27032. Information technology. Security techniques. Guidelines for cybersecurity. 2012. URL: <https://www.iso.org/standard/44375.html> (access.: 14.05.2018).

telecommunication networks, technological infrastructure that ensures their functioning, and any other forms of human activity (individuals, organizations, states)¹. The reference resource like *Technopedia* interprets the notion of cyberspace as a sphere of activity that belongs to the virtual computer world, an e-mediator used to create a global computer network and promote online communications². *Encyclopedia Britannica* describes cyberspace as an amorphous, virtual world, created by connections between computers, devices with Internet access, servers, routers and other components that build the Internet³.

However, modern information threats to countries, organizations and individuals are not limited to cyberspace. So, Deputy Defense Minister of the Russian Federation Yuriy Borisov notes that the concept of a cyber warfare has already become real, and military battles are not happening in the real world, they originally occur in the information space, cyberspace⁴.

Modern powerful countries recognize the problems and prospects for the development of information technologies, and therefore the development of information security and allocated significant resources in this area, both human and financial. Constant threats, such as cyberattacks, hacker activity, misinformation, interference with elections raise the challenges of modern times. With the Britain's exit from the European Union, the problem of a permanent veto on attempts to create a common army and information security system in the EU disappears, so EU member-states are already discussing the

¹ Bezkorovonyi M. M., Tatusov A. L. Cybersecurity. Approaches to Definition, Cybersecurity. 2014. Issues № 1 (2). URL: <https://cyberleninka.ru/article/v/kiberbezopasnost-podhody-k-opredeleniyu-ponyatiya> (access.: 14.05.2018).

² Cyberspace – What Does the Cyber Space mean. URL: <https://www.techopedia.com/definition/2493/cyberspace> (access.: 14.05.2018).

³ Cyberspace. Communication. URL: <https://www.britannica.com/topic/cyberspace> (access.: 14.05.2018).

⁴ Development of artificial intelligence is necessary for the successful conduct of cyberwar. URL: <https://tvzvezda.ru/news/forces/content/bd20f6ee0af3b449f6198a98e6d61774b8bab82a3c0ee083d1371acacec22790> (access.: 14.05.2018).

possibilities of joint coordination of actions in the field of cyber security¹.

Cyber-threats

All cyber threats can be categorically divided into internal and external ones² [9]. Internal threats occur directly within the system, the state and include employees with the right to access certain information or systems, decision-making processes, contractors and partners, as well as compromised internal accounts. External threats arise from any participant who is not involved in the management of the processes of the state or business. The latter include cybercriminals, criminals who are sponsored by other states, direct cyber-attacks of other states and hackers.

The motives of such attacks can be different. However, it is possible to distinguish for internal threats such as: obtaining financial benefits, personal advantage over competitors, professional revenge, external influence. External threats motives can involve economic gains, corporate or national espionage, political or military advantage, political or social changes. According to Verizon, 59 % of internal cybercrime cases were motivated by financial gain or espionage, while 89 % of external cybercrime were motivated by economic benefits and political espionage³. According to these data, it can be concluded that the practically all external threats are aimed at achieving the economic superiority of one state over the other and the implementation of national espionage.

As for the purpose of committing cybercrime, internal crimes may endanger intellectual property and corporate information, business plans, various personal and financial information. Concerning

¹ Modern security is more than military spending, Report Friends of Europe. URL: <https://www.friendsofeurope.org/publication/modern-security-more-military-spending> (access.: 14.05.2018).

² Insiders vs. outsiders: what's the greater cybersecurity threat? (infographic). URL: <https://digitalguardian.com/blog/insiders-vs-outsiders-whats-greater-cybersecurity-threat-infographic> (access.: 14.05.2018).

³ Verizon 2016 Data Breach Investigations Report. URL: https://www.verizonenterprise.com/resources/reports/rp_DBIR_2016_Report_enxg.pdf (access.: 14.05.2018).

external cybercrimes it is financial and personal information, an important national infrastructure, state and large private companies, communication networks that are vulnerable. The most common methods for committing cybercrime are social engineering, physical abduction, the use of official position, the use of computer viruses, server overloads, and the blocking of access to information¹.

However, states, even knowing the existing threats, their types and sources, remain unprepared to reflect cyber-attacks in various levels. According to *CompariTech*, China, Taiwan and Turkey have the highest percentage of computers infected with a particular type of virus (malicious software, spyware, blackmail programs) – 49 %, 47 %, and 41 %, respectively. In addition to these states, up to 10 countries with the highest number of infected computers comprise Russia (4th place – 38,9 %), Guatemala (5th place – 37,5 %), Mexico (6th place – 36,8 %), Peru (7 place – 36,2 %), Ecuador (8th place – 36,2 %), Brazil (9th place – 34,6 %) and Poland (10th place – 33 %). At that time, the top ten least infected countries are Sweden (19,8 %), Finland (20,6 %), Norway (21,63 %), Japan (22,2 %), Belgium (22,7 %), Great Britain (23,3 %), Switzerland (23,9 %), Germany (24,1 %), Denmark (24,3 %) and the Netherlands (24,8 %).²

Different countries are vulnerable to various types of cyber threats and malware. The largest number of users who have come into contact with software-demanders are in India (9,6 % of users), the Russian Federation (6,4 %) and Kazakhstan (5,75 %). In the United States, victims of hacking WEB-applications have become 66 % of users of all attacks in cyberspace, in the second place is Brazil with 5 %. The United States also ranks first among the countries affected by cyber-espionage – 54 % of all cyber-attacks, and South Korea's – the 2nd position with 6 %. The largest number of DDoS attacks (a kind of cybercrime that reloads traffic and servers of certain web resources,

¹ Insiders vs. outsiders: what's the greater cybersecurity threat? (infographic). URL: <https://digitalguardian.com/blog/insiders-vs-outsiders-whats-greater-cybersecurity-threat-infographic> (access.: 14.05.2018).

² Terrifying Cybercrime and Cybersecurity Statistics & Trends. URL: <https://www.comparitech.com/vpn/cybersecurity-cyber-crime-statistics-facts-trends> (access.: 14.05.2018).

after which they stop working) come from China (29,5 %), the United States (21,6 %), and the United Kingdom (16,1 %)¹.

Financial and political risks

The urgency and importance of the problem of cybercrime at all levels is also evidenced by financial losses. So in the USA, the average amount of damage caused by one cyberattack is over \$ 17 million, in Japan – more than \$ 8 million, in Germany – more than \$ 7 million, in the UK it is about \$ 7 million. In total, the average cost of cybercrime in the world has grown over the past 5 years from \$ 7,2 million in 2013 to \$ 11,7 million in 2017, an increase of over 60 %². Approximate cost of cybercrime for the global economy is estimated at \$ 6 trillion by 2021 for each year³.

Particular attention is also paid to cyber threats that have the purpose of influencing the political situation in the country, because they endanger the existence of a particular state, lead to its destabilization, as well as pose the danger to the existing world order. For example, the dangers of misinforming the population may lead to distortions in the promotion of the situation in or outside the country, election interference will lead to significant changes in world politics, changes in trends and vectors of development, and interference with referenda will change the political map of entire regions. Therefore, the issue of the impact of cybercrime on the state, international organization as a guarantor of security and stability needs further research.

Recommendations

In 2014, the *Cyber Security Coordination Group (CSCG)* has developed and published recommendations on digital security⁴. The

¹ Insiders vs. outsiders: what's the greater cybersecurity threat? (infographic). URL: <https://digitalguardian.com/blog/insiders-vs-outsiders-whats-greater-cybersecurity-threat-infographic> (access.: 14.05.2018).

² Cost of cybercrime study. 2017. URL: https://www.accenture.com/t20170926T072837Z_w_/us-en/_acnmedia/PDF-61/Accenture-2017-CostCyberCrimeStudy.pdf (access.: 14.05.2018).

³ 2017 cybercrime report. URL: <https://cybersecurityventures.com/2015-wp/wp-content/uploads/2017/10/2017-Cybercrime-Report.pdf> (access.: 14.05.2018).

⁴ Cybersecurity Strategy of the European Union: An Open, Safe and Secure Cyberspace. URL: http://ec.europa.eu/newsroom/dae/document.cfm?doc_id=1667 (access.: 14.05.2018).

recommendations are designed to ensure the further development of the *European Cybersecurity Strategy*. The goal of the EU cybersecurity strategy is to increase the sustainability and capacity building of the cyber security of the EU member states (strengthening the fight against cybercrime, developing an effective security infrastructure, developing the principles of international cybersecurity policy).

According to the results of the study of the peculiarities of the organization of the cybersecurity system in the EU countries, it has been found out that it is virtually impossible to achieve a single decision on cybersecurity issues adopted at the pan-European level. Not all EU countries are ready today to formulate a national response to incidents in the field of computer security. There is no single body capable of making pan-European decisions in this area. An analysis of the culture and practice of European IT companies shows that even having a solid legal basis, they regularly work isolated and are experiencing serious problems not only during transboundary information transfer, but also when trying to interagency information exchange. Therefore, the most important aspect of the strategy is the harmonization of the possibilities of providing information security of European states and the unification of the infrastructure for ensuring cybersecurity through changes in national legislation, the creation of national response teams for computer incidents, the formation of competent national authorities, equipped with professional and material resources, which will monitor the situation in their countries and manage cyber-risks, as well as to maintain their interaction with the European Commission. The strategy envisages strengthening cooperation between the public and private sectors as well as the development of conceptual documents that provide common concepts and approaches to form a single pan-European perspective on the organization and conduct of information operations within the framework of the developed strategic concept of joint defense and security policy¹.

¹ Proposal for a Directive of the European parliament and of the council concerning measures to ensure a high common level of network and information security across the Union. URL: http://ec.europa.eu/newsroom/dae/document.cfm?doc_id=1666 (access.: 14.05.2018).

Also, the EU is actively discussing the role of standards in strengthening the security of the Internet and protecting personal data in the framework of the implementation of the EU cybersecurity strategy. It is worth paying attention to the importance of harmonized cybersecurity standards for the formation of a single European market. It is also worth agreeing on the use of key terms such as cybersecurity, network and information security and cybercrime in the EU based on existing definitions. At present, all three terms are officially used without fixing the differences between them, which entails the risks of different interpretations in the EU Member States (or in different national languages).

Consequently, we can conclude that the problem of cybercrime acquires and becomes more and more relevant in the modern world. The use of technology in all areas of activity of both the individual and the state will generally contribute to the emergence of new problems and weaknesses in networks and systems that will require the consolidation of significant human and financial resources. The use of modern technologies in world politics has already demonstrated its effectiveness (for example, the conflict in Ukraine, the referendum in the Netherlands and the UK, elections in the US, Germany, France, Hungary). Therefore, this problem requires further in-depth study and analysis.

2.8. Information and Communication Factor of Climate Diplomacy as a Component of International Security Programs

Tykhomyrova Yevheniia

The scale and complexity of the challenges and threats in the modern international security environment have been rising quite rapidly recently. The newest threats of the early XXI century,

© *Tykhomyrova Yevheniia* – Doctor of Political Sciences, Professor of International Communications and Political Analysis Department, Lesya Ukrainka Eastern European National University.

sometimes called non-traditional ones, include global climate change. They are treated as a “threat multiplier”¹, which complicates the existing dangers.

Today the information and communication factor of climate change plays an important role in implementing climate diplomacy, promoting awareness of climate change, providing information needs of target audiences. The ability of people to adapt to climate change can be strengthened by disseminating information on climate change, as awareness of change plays an important role in decision making and is the basis for mobilizing targeted communities. The effects of climate change are tangible all over the world, and therefore have a strategic priority in international diplomatic relations.

Scientists argue that there is a huge amount of scientific data on climate change, but much less attention is paid to how to communicate to the public about climate change research. Therefore, communicators are often not sure how to interact better with non-academic audiences, that is, with representatives of the general public. The clarification of this is facilitated by a combination of knowledge of the science of communication and climate sciences that are exploring climate change.

According to modern researchers, communication on climate change is a fairly new industry. In the 1990’s, this problem appeared in scientific journals, which mostly focused on public understanding of climate change and the perception of the risk associated with them. The purpose of these studies was, on the one hand, to research the public opinion on climate change and, on the other hand, to inform the public through efficient communications on climate risks.

That is why the communication on climate change has spread, covering a wide range of philosophical and research traditions, including humanistic rhetorical analysis, interpretative qualitative research, and socio-scientific quantitative surveys and experiments. Much of the research on climate-related communications focuses on public understanding of the security risks of climate change and

¹ Climate Change and Security in Eastern Europe, Central Asia and the Southern Caucasus. URL: <https://www.osce.org/projects/climate-change-and-security> (access.: 12.04.2018).

factors that affect their perceptions by the population of different countries, coverage of relevant topics in the media, and the study of the impact of mass media on risk perception. Less widespread, but growing areas of research include public participation, organizational communication and convincing strategies for influencing attitudes, beliefs and behavior associated with climate change. According to scientists, there is a need for expanding communication studies on climate change in different regions of the world.

The importance of this problem is evidenced by the fact that in 2007, the *Intergovernmental Panel on Climate Change* and former US Vice-President A. Gore received the Nobel Peace Prize for their work to provide policy makers and the wider public around the world with a scientific basis to understand the growing threat of climate change and the fight against it. It was emphasized that “large changes in the climate can threaten the living conditions of most of the whole humanity. They can cause large-scale migration and lead to more competition for Earth’s resources. Such changes will be a particularly heavy burden for the most vulnerable countries in the world. Inside the states and between them, the danger of violent conflict and war may increase”¹.

The significance of this new threat is confirmed by a poll by the *American Pew Research Center*. The survey raised the issue of eight possible threats. So, people around the world regard the Islamic state and climate change as the main threats to national security. Although the focus of concern depends on the region and the country, these factors are most often referred to as security risks in the 38 surveyed countries. In 13 countries, mainly in Latin America and Africa, the population determines global climate change as the highest threat (in Latin America, on average, 74 % of respondents believe global climate change to be the main threat to their country)².

¹ The Nobel Peace Prize for 2007. URL: https://www.nobelprize.org/nobel_prizes/peace/laureates/2007/press.html (access.: 10.04.2018).

² Poushter J., Manevich D. Globally, People Point to ISIS and Climate Change as Leading Security Threats. Pew Research Center. August, 2017. URL: http://assets.pewresearch.org/wp-content/uploads/sites/2/2017/07/31101043/Pew-Research-Center_2017.07.13_Global-Threats_Full-Report.pdf (access.: 30.09.2018).

Theoretical and practical aspects of climate communication are increasingly discussed in foreign publications, where climate change is treated as a problem of scientific communication¹, as the application of knowledge about climate change in communications with non-academic audiences and scientists of physical, natural and social sciences². A unique overview of the theory, methodology, and best practices of climate change communications is provided in the three-volume guidebook on *Climate Change Communication Practices*, where information, ideas and experiences are shared through successful projects and initiatives that discuss new methodological approaches aimed at improving understanding of the adaptation to climate change, and presenting documents and disseminating the experience currently available in this area³. Some research studies the role of the Internet and social networks in climatic communications⁴.

The analysis of studies and publications revealed a clear lack of research in the Ukrainian scientific tradition aimed at studying the problem of the correlation of climate change and danger in political science discourse. As climate change and its consequences are characterized by complex interaction of natural, ecological, technological, economic, political and social processes, this problem is mainly the subject of scientific natural and economic discourse.

Nowadays there is the lack of social and political works in which the effects of climate change on the security of world society would be

¹ Handbook of public communication of science and technology / edited by Massimiano Bucchi and Brian Trench. Taylor & Francis. 2008. URL: [https://moodle.ufsc.br/pluginfile.php/1485212/mod_resource/content/1/ Handbook-of-Public-Communication-of-Science-and-Technology.pdf](https://moodle.ufsc.br/pluginfile.php/1485212/mod_resource/content/1/Handbook-of-Public-Communication-of-Science-and-Technology.pdf) (access.: 13.10.2018).

² A Guide to the Science of Climate Change Communication. URL: <https://climateoutreach.org/resources/guide-science-of-climate-change-communication> (access.: 12.09.2018).

³ Leal Filho W. et al. (ed.). Handbook of Climate Change Communication: Vol. 1. Theory of Climate Change Communication. 2017. 419 p.

Ibid. Vol. 2. Practice of Climate Change Communication. 2017. 397 p.

Ibid. Vol. 3. Case Studies in Climate Change Communication. 2018. 398 p.

⁴ Schäfer M. S. Online communication on climate change and climate politics: a literature review. Wiley Interdisciplinary Reviews: Climate Change. 2012. T. 3. №. 6. C. 527–543.

considered. In the Ukrainian political science studies devoted to the consideration of the problems of climate change are presented by the works of O. Shevchenko¹, in the philosophical framework – by the articles of S. Borysiuk² and T. Gardashuk³.

In the context of increasing the importance of climate risks the analysis of the information and communication strategy on climate change requires particular attention. That is why *the purpose of this study* is to interpret the concepts of “climate diplomacy”, “climate change”, “climate risks”, “climate danger”; to find out the relations between climate change and security; to identify the role that the information and communication factor plays in climate security.

Nowadays there is no generally accepted definition of climate diplomacy since this type of international activity is only designated as one of the areas of diplomatic activity. We offer to define *climate diplomacy* as the main component in the structure of international cooperation in the field of ecology, the theory and practice of creating an international climate regime, climate through multilevel, collective and public diplomacy, which is based on the soft power tools that are owned and actively used by official persons of states, international organizations, informal institutions, transnational structures and civil society, among which the special role belongs to the negotiation

¹ Shevchenko O. Diialnist mizhnarodnykh orhanizatsii shchodo podolannia hlobalnykh klimatychnykh ryzykiv: informatsiina skladova. Mizhnarodni vidnosyny. Seriiia “Politychni nauky”. 2018. №. 17. URL: http://journals.iir.kiev.ua/index.php/pol_n/article/view/3329 (access.: 10.04.2018).

Shevchenko O. Problema hlobalnoi zminy klimatu v konteksti mizhnarodnoi bezpeky. Aktualni problemy mizhnarodnykh vidnosyn. 2017. Vyp. 130. S. 24–38.

² Borysiuk S. L. Napriamky znyzhennia nehatyvnykh naslidkiv imovirnoi hlobalnoi zminy klimatu na terytorii Ukrainy. Zbirnyk naukovykh prats Tsentru voienno-stratehichnykh doslidzhen Natsionalnoho universytetu oborony Ukrainy. 2013. № 1 (47). S. 17–20.

³ Hardashuk T. V. Klimatychna spravedlyvist: adaptatsiia do vyklykiv suchasnosti. Naukovi visnyk Natsionalnoho universytetu bioresursiv i pryrodokorystuvannia Ukrainy. Seriiia: Humanitarni studii. 2016. Vyp. 246. S. 128–137.

process resulting in a clear legal and organizational design of climate change architecture¹.

Climate diplomacy can be characterized as a “soft” way of international interaction, which is increasingly used by both states and international organizations. It is realized in signing bilateral and multilateral climate agreements, organizing and conducting international climate-related events, participating in international climate projects and programs. Climate diplomacy includes multifaceted information and communication activities on interaction with foreign countries and international organizations in the field of environmental change. One can agree with the scholars that if properly implemented, it can become an efficient tool for expanding international relations of a state and building its attractive external image, and in some cases it may become the brand of this state, its strong competitive advantage². The researchers claim that “the environment and sustainable development have become the most important diplomatic goals that include such aspects as climate change, greenhouse effect, biodiversity, desertification, exploitation of seas and oceans, thus defining the prospects for international cooperation over the next decade”³.

The term “*climate change*” usually refers to global climate change or long-term changes in the average temperature of the planet. However, it can also be used more broadly to indicate local and regional weather changes. The global average temperature is affected by many interacting systems, which together are called the climate system. But, of course, global climate change also affects the regional climate. Researchers believe that climate change is a large-scale long-term change in the weather conditions of the planet or its average temperatures. They are directly or indirectly related to human activity, which changes the composition of the world atmosphere and complements the natural variability of the climate over certain periods

¹ Tykhomyrova Ye. B. Do pytannia pro klimatychnu dyplomatiiu. Visnyk NU “Iurydychna akademiia Ukrainy imeni Yaroslava Mudroho”. Seriia: Filosofiia, filosofiia prava, politolohiia, sotsiolohiia. T. 2. № 37. S. 134.

² Boholiubova N. M., Nykolaeva Yu. V. Fenomen “Zelenoi dyplomatii”: Mezhdunarodnyy opyt. Uchenyie zapiski Rossyyskoho hosudarstvennoho hydrometeorolohicheskoho universyteta. 2014. № 36. S. 190.

³ Ibid. S. 191–192.

of time. Human activities include pollution caused by industrial activities and other sources of greenhouse gases. These gases, such as carbon dioxide, have the ability to absorb the spectrum of infrared radiation and contribute to the warming of our atmosphere.

For 4,5 billion years, the earth has had a tropical climate, and the glacial period. In recent years, the average temperature has increased and in general our climate is changing:

- the research shows that the average surface temperature of the planet from 1901 to 2012 has increased by 0,89 °C;

- the amount of precipitation has changed between seasons in different regions;

- changes in the nature cause changes in the behavior of species, such as butterflies and birds that alter their migration patterns;

- since 1900, the sea level has increased by about 10 cm around the United Kingdom and about 19 cm around the world;

- the world's glaciers retreat - in the Alps, Rocky Mountains, the Andes, the Himalayas, Africa and Alaska;

- Arctic sea ice has been declining since the late 1970s, decreasing by about 4 %, or 0,6 million square kilometers (the size of Madagascar) for ten years. At the same time, Antarctic sea ice has increased, but slower – about 1,5 % over ten years;

- Greenlandic and Antarctic ice fields that save most freshwater in the world are shrinking¹.

Researchers point out that in the political literature, the negative effects of climate change are often called a *security threat*. They even compare it with the threats of terrorism. However, scientists prefer to speak about *security risks*. They emphasize that climate change should not be viewed as mainly external in nature. Climate change is more likely to reveal the risks inherent in modern societies, which lead to danger. Although responding to threats is often based on the logic of zero-sum games, where the defeated and the winners are identified, the approach to risk recognizes the difficulty of dividing the network of risks in modern societies. Thus, the approach to risk can recognize the interdependence that is crucial for responding to the multifaceted

¹ What is climate change? URL: <https://www.metoffice.gov.uk/climate-guide/climat> (access.: 12.04.2018).

characteristics of the climatic risks associated with the safety of people and society¹.

Climate risks are multifaceted, varied short, medium or long-term effects of climate change, covering their multidimensional range from local to global. This is the effect of events related to weather conditions (storms, floods, heat waves, etc.). They are factors of climate change, but do not cause violent conflicts (security threats), only affect the parameters that may be important for their occurrence².

Analyzing the development and maintenance of peace the *Stockholm International Peace Research Institute (SIPRI)* proceeds from the fact that conflicts are rarely caused by one factor. According to researchers, one of the factors determining the impact of climate threats to people's livelihoods is governance. According to the analysts of this institute, "non-climate" factors, in particular unequal rights to land, poor infrastructure, trade barriers, also increase the danger to life. Countries lacking institutional capacity, economic stability and civil society institutions face greater risk of political instability in the face of more frequent and more severe climate impacts on livelihoods³.

Recent SIPRI studies focus on issues of climate change for peace and security, in particular the project of the Institute for Climate Change for Peace and Security has three interdependent goals: 1) deepening knowledge about how and under what circumstances climate change increases the security risks, including a violent conflict; 2) the analysis of how political organizations and practices respond to these risks; and 3) providing suggestions on how political organizations can strengthen effective and sustainable responses to these risks.

¹ Mobjörk M., Gustafsson M.-T., Sonnsjö H. et all. *Climate-Related Security Risks: Towards an Integrated Approach*. SIPRI and Stockholm University. October, 2016. 88 p. URL: <https://www.sipri.org/sites/default/files/Climate-related-security-risks.pdf> (access.: 17.04.2018).

² SIPRI 2016: Shchorichnyk: Ozbroiennia, rozzbroiennia ta mizhnarodna bezpeka: per. z anhl./Stokholm. mizhnar. in-t doslidzhennia myru; Ukr. tsentr ekon. i polit. doslidzhen im. O. Razumkova; redkol. ukr. vyd.: L. Shanina (holov. red.) ta in. Kyiv: Zapovit, 2018. S. 417.

³ Ibid. P. 409.

SIPRI¹ examines seven complex risks that can be affected by climate change and which, in certain situations, may pose a higher risk to the stability of states and societies, as well as the emergence of a conflict. These risks include: competition for local resources; danger to life and migration; weather disasters and catastrophes; instability of food prices; instability of cross border water use; sea level rise and coastline destruction; unpredictable results of policies aimed at adapting to climate change and mitigating their effects.

1. *Competition for local resources.* The effects of climate change directly affect the availability, quality and access to natural resources, especially water, arable land, forests and minerals, under the conditions of increased demand for them due to population growth and consumption. If there are no adequate governing bodies or mechanisms for resolving disputes, then increasing competition when the supply is not able to meet demand can lead to instability and even violent conflict. This is especially true of vulnerable states, where governance and security institutions, in particular the courts and the police, are weak or corrupt. The conflict risk increases when supply-demand changes in resources coincide with other factors: dependence on a limited resource base, past conflicts, social marginalization, and ineffective use of resources. Although the intensification of competition usually manifests itself primarily at the local level, but under certain circumstances, tensions can quickly reach national, regional or international levels. In the worst case, competition for natural resources can lead to regional instability or civil conflict. Thus, land disputes were an important factor in 27 (out of 30) civil conflicts in Africa in 1990–2009².

2. *Danger to life and migration.* Climate change increases the danger to people whose existence depends on natural resources. Increasing the danger to people makes them migrate or seek alternative, illegal sources of income that can lead to conflict. Climate change already causes an increase in the frequency and magnitude of

¹ SIPRI 2016: Shchorichnyk: Ozbroiennia, rozzbroiennia ta mizhnarodna bezpeka: per. z anhl./Stokholm. mizhnar. in-t doslidzhennia myru; Ukr. tsentr ekon. i polit. doslidzhen im. O. Razumkova; redkol. ukr. vyd.: L. Shanina (holov. red.) ta in. Kyiv: Zapovit, 2018. S. 403–436.

² Ibid. P. 407.

droughts and floods. This directly and significantly affects activities depending on the structure of atmospheric precipitation (first of all, agriculture and cattle breeding), as well as water-dependent industries, in particular extractive industries.

SIPRI analysts argue that the risks associated with climate change have a different impact on the gender and regional peculiarities of migration. In particular, when migration is chosen as a survival strategy, its consequences often depend on the regional context. In Central America and South Asia, men spend most of their earnings leaving the household for women. In other regions, for example, in Southeast Asia, cultural traditions force women to migrate. In many countries, women, compared with men, have fewer economic, political and social opportunities, limiting their ability to adapt in the absence of a breadwinner. The reasons for the migration, the choice of the destination, the prospects for employment and the consequences, from the point of view of relations in the host society or upon returning home – all have gender differences. Therefore, when considering the potential impact of climate change on migration, it is important to take into account both gender and regional aspects¹.

3. *Weather disasters and catastrophes.* Such disasters as cyclones increase the risk of violent conflict and instability. For instance, in 2011 in Thailand the population suffered from floods caused by unprecedented monsoon rains. Monsoons damaged dams and reservoirs, purposely filled to mitigate the effects of the insufficiently intensive rainy season of 2010. After an unsuccessful response to an emergency, an angry crowd destroyed a sandbag wall in Bangkok, which protected the rich district from rising water levels. It was a public manifestation of disappointment by the Government due to its discrimination and protectionism. During this crisis, hundreds of people went out on the streets in protest of discrimination against the *Flood Response Operation Center* and unfair distribution of water, electricity, housing and food. Public unrest and actions of dissatisfaction with the Government continued until the military coup

¹ SIPRI 2016: Shchorichnyk: Ozbroiennia, rozzbroiennia ta mizhnarodna bezpeka: per. z anh1./Stokholm. mizhnar. in-t doslidzhennia myru; Ukr. tsentr ekon. i polit. doslidzhen im. O. Razumkova; redkol. ukr. vyd.: L. Shan-hina (holov. red.) ta in. Kyiv: Zapovit, 2018. S. 408–409.

in 2014. The consequences of disasters and weak governance often exacerbate each other, since disasters cause additional pressure on already weak governance¹.

4. *Instability of food prices and supply.* Climate change in combination with other factors, including population growth, rising energy prices and the rapid development of bio-plant production, increased the instability of food supplies and prices in the world, which increased the risk of civil disturbances. Such effects of climate change as rising temperatures, changes in the structure of precipitation, droughts and floods affect the quality and quantity of food in the world. Changes in their proposals cause fluctuations and price goes up. Although high food prices do not always lead to violent conflicts, but sudden price jumps are an important factor in civil unrest and protests. As analysts say, in 2008 the global food crisis has provoked riots in response to rising food and fuel prices in 48 countries, particularly in Bangladesh, Burkina Faso, Haiti and Pakistan².

5. *Cross border water use.* Common water resources are often thought to be a source of cross border tension. As the impacts of climate change affect supply and water quality and demand for water continues to grow, competition for water resources can be a factor in the pressure on existing joint water use agreements and management structures. According to analysts, shared water use can give both a chance for cooperation, and lead to a risk of increasing tension between users. Almost all countries with common borders are forced to share water with their neighbors. International pools of lakes and rivers cover 46 % of the land surface and provide about 60 % of the world's river flow. Many of the cross border river basins, including the Nile, the Ganges, the Indus, the Tigris and the Euphrates, the Mekong, the Amudarya and the Syrdarya, are located in historically vulnerable and conflict regions. When water sources are depleted and demand is rising, climate change can exacerbate the risk of

¹ SIPRI 2016: Shchorichnyk: Ozbroiennia, rozzbroiennia ta mizhnarodna bezpeka: per. z anhl./Stokholm. mizhnar. in-t doslidzhennia myru; Ukr. tsentr ekon. i polit. doslidzhen im. O. Razumkova; redkol. ukr. vyd.: L. Shanina (holov. red.) ta in. Kyiv: Zapovit, 2018. S. 412.

² Ibid. P. 411.

vulnerability in cross-border basins. In the future, the situation can change, as increasing droughts, warming, melting glaciers may change cross border water resources and access to them¹.

6. *Increased sea level and coastline destruction.* Increasing the sea level threatens the viability and life of the lowlands. Frequent flooding and the risk of flooding the area result in resettlement, migration and public unrest. Changing the level of the water surface can also lead to appeals to existing sea borders and legal access to ocean resources. Particularly sensitive to this are small island states threatened by the loss of the entire territory, as well as cities built in the river deltas and on the coast (such as Karachi in Pakistan and Lagos in Nigeria), where floods and storms can significantly affect economic development and damage a large, highly concentrated population².

7. *Unpredictable results of policies aimed at adapting to climate change and mitigating their effects.* Policy responses to adaptation to climate change may increase the risk of conflict if this policy does not take into account the context of vulnerable or affected countries and leads to an unpredictable negative impact on vulnerable populations. Since this policy is more often implemented in the world, the risks of unpredictable adverse effects, especially in the context of vulnerability, will continue to increase. Any reaction to climate change affects natural resources and the dynamics of local determinants. The so-called vulnerability to climate change, neglect of the impact of policies on the existing driving forces of the conflict can deepen the risks of conflict and further increase vulnerability to climate risks, hampering economic development, exacerbating political problems and increasing the danger to people³.

The growth in the significance of climate-related problems contributed to their transformation into one of the priority themes of

¹ SIPRI 2016: Shchorichnyk: Ozbroiennia, rozzbroiennia ta mizhnarodna bezpeka: per. z anhl./Stokholm. mizhnar. in-t doslidzhennia myru; Ukr. tsentr ekon. i polit. doslidzhen im. O. Razumkova; redkol. ukr. vyd.: L. Shan-hina (holov. red.) ta in. Kyiv: Zapovit, 2018. S. 413.

² Ibid. P. 414.

³ Ibid.

international security. The effects of climate change are becoming increasingly destabilizing, have a devastating impact on the economy, the social and environmental systems. They become political, socio-economic and environmental stressors of social development. It is a fertile ground for the formation or intensification of conflicts, extremism and radicalism. Climate changes create an additional burden for existing civil protection, national and international security systems¹.

Climate danger can be treated as the *risks that affect security*, namely:

1) increasing competition for access to natural resources can *lead to violent conflict* if efficient dispute resolution mechanisms are not created²;

2) the growing frequency of climate extreme weather phenomena and disasters can *worsen political instability and endanger the source of existence*, which in turn can force people to migrate on a large scale or move on to obtaining illegal sources of income;

3) breach of food production and rising food prices may *lead to social instability, violent and civil protests*;

4) reducing energy efficiency caused by higher temperatures and lower precipitation, as well as threats for energy production and transmission infrastructure from extreme weather events, *endanger the supply chain and energy security*³;

5) growing demand for water resources and the irregular supply of water increase the pressure on existing water management mechanisms and may *complicate political relations, especially in the area of cross border basins*, where there is already a certain tension¹.

¹ Porfirev B. N., Kattsov V. M., Roginko S. A. *Izmeneniya klimata i mezhdunarodnaya bezopasnost*. Moskva, 2011. 291 c.

² SinaYi A. *Klimatichni zmIni posilyuyut konflikti*. URL: <https://zbruc.eu/node/53883> (access.: 10.04.2018).

³ *Climate Change and Security in Eastern Europe, Central Asia and the Southern Caucasus*. URL: <https://www.osce.org/projects/climate-change-and-security> (access.: 12.04.2018).

¹ *Climate change and security*. Organization for Security and Co-operation in Europe. 2017. URL: <https://www.osce.org/secretariat/330586?download=true> (access.: 12.04.2018).

The Concept of Realization of the State Policy of Ukraine in the Field of Climate Change for the period until 2030 claims that at the beginning of the XXI century the global community has recognized that climate change is one of the major challenges to global development with potentially serious threats to the global economy and international security as a result of increasing direct and indirect risks associated with energy security, food security and drinking water, the sustainable existence of ecosystems, risks for health and life of people. The low ability of countries to adapt to such manifestations of climate change as floods, droughts, coastal destruction and long periods with abnormal heat, can lead to social and economic instability. Over the past two decades, the issue of climate change has become one of the most acute problems of the world economy and politics in the context of developing strategies for reducing greenhouse gas emissions and the gradual transition to low carbon development of all sectors of the economy and human life activity components¹.

According to the Ukrainian professor V. Shatokha, significant changes are now taking place in the overall political context in the field of climate. If in the 1990s the policy in this area was largely determined by the position of the leading powers, then in the 2000s the political context became more polycentric. He refers to the opinion of S. Oberthür, a political scientist with strong international law experience, a specialist on international and European environmental governance, who believes that new players now perform an important role at the local, regional, national, supranational and international levels as well as public and private organizations operating on the basis of their own understanding and preferences regarding the future climate regime. In most countries, national legislation on climate has been developed and the relevant authorities implementing it have appeared. Many international (bilateral and multilateral) agreements and initiatives have been concluded. Active players are represented by industrial companies from various sectors of the economy. The role of

¹ Kontseptsiiia realizatsii derzhavnoi polityky u sferi zminy klimatu na period do 2030 roku. 7 hrudnia 2016 p. URL: <https://www.kmu.gov.ua/ua/npas/249573705> (access.: 11.04.2018).

social movements has increased, in particular regarding the cessation of the use of fossil fuels¹.

Analyzing the problem of leadership in relation to the context of international efforts to prevent climate change, V. Shatokha addresses the analysis of the approach of European researchers in environmental problems and climate change – J. Gupta and M. Grubb – who identified the following typology of this phenomenon:

– *Structural leadership* that uses motivation based on a political and economic dimension (a kind of whip and stick method). At the same time, not only the overall political weight, but also importance in terms of preventing climate change is significant, in particular in relation to the current and projected future levels of emissions, as well as to the economic resource that a country can afford to attract.

– *Instrumental leadership* that is based on diplomacy to create “victorious” coalitions that reach consensus on mutually beneficial decisions on some occasion. It should also prevent the emergence of blocking coalitions – that is, alliances are able to block decisions that are in line with the EU position.

– *Leading leadership* that proceeds from an idea and its own achievements in order to influence the approaches of other countries in the sense of desirable and possible.

The Ukrainian researcher uses this approach to characterize European leadership in international climate change prevention policies: it is partly structural because the EU has a significant political weight and international respect for the environment; partially instrumental, since the EU has repeatedly demonstrated its diplomatic skills and the ability to balance certain internal disagreements between Member States; and, finally, the EU often uses a steering type of leadership, especially at critical stages of the climate process, when, by setting a “high standard” of tasks, it provides an increase in the ambition of tasks undertaken by other countries¹.

In response to the risks of climate change, climate security has been integrated into the *EU's Global Strategy for 2016* and several

¹ Shatokha V. I. *Liderstvo Yevropeiskoho Soiuzu u zapobihanni zminy klimatu: monohrafiia*. Dnipro: Aktsent PP, 2017. S. 98–99.

¹ *Ibid.* P. 101.

other initiatives. The EU has taken concrete measures on matters of relevance to addressing climate security issues such as food security, water security and disaster resilience. The problem of climate change has become a priority of the EU security activity. That is why it is integrated into the EU foreign policy and retains its leading role in the field of climate diplomacy at the global level and with its own example; with the help of diplomacy, persuasion and argumentation it contributes to reaching international agreements on combating global climate change.

In early 2018 scientists of SIPRI stated that the EU intensifies its efforts to become a “global leader in tackling climate-related security risks”. Analyzing recent conclusions of the *Council on Climate Diplomacy* (February 2018), they have drawn attention to the fact that the Council’s conclusions are more oriented towards new actions than those adopted earlier. They illustrate not only the fact that the EU is stepping up its efforts to become *a world player* when it comes to the implementation of the *Paris Pact on Climate Change* in 2016, but also the fact that the EU is now paying much more attention to the need to resolve problems and mitigate security risks associated with climate change. It also discusses the key steps that the EU needs to strengthen its climatic mitigation work¹.

Today many states and international organizations in the field of climate diplomacy actively use various information and communication methods to provide public understanding of security issues in the context of climate risks. They influence the perception of the population of different countries of the mentioned problem, coverage of the relevant topics in the media, and the study of the influence of the mass media on the perception of risks. These include: joint information campaigns at the EU level and embassies of the Member States aimed at key decision makers and agents of change, including

¹ Brember N., Mobjörk M. European Union steps up its efforts to become the global leader on addressing climate-related security risks. URL: <https://www.sipri.org/commentary/essay/2018/european-union-steps-its-efforts-become-global-leader-addressing-climate-related-security-risks> (access.: 17.04.2018).

governments, parliamentarians, non-governmental organizations, green industries and civil society in the broad sense. One can talk about the strengthening of collective public diplomacy; the participation of the EU Delegations and Embassies of the Member States in the joint organization of the *Days of Climate Diplomacy*; joint work of the EU and the Member States with partners to formulate an understanding of the content of climate policy; support of partners in developing implementation plans and establishing liaison with relevant financial and technical support structures; the EU diplomatic services participate in encouraging timely ratification of the adopted climate agreements¹.

On the initiative of, for example, the French Ministry of Foreign Affairs, at Embassies the so-called network of “correspondents on the environment” was set up to mobilize diplomatic efforts to address climate problems. They are responsible for discussing any “environmental” issues in their country of residence and international organizations, informing, advocating and promoting French positions on issues related to ecology and sustainable development, participation in bilateral and multilateral environmental events. Climate diplomacy should be aimed at requiring from states to create conditions for reducing the harmful effects of gas emissions into the atmosphere, the greenhouse effect and temperature rise, and to rely on concrete actions, mostly international, or at least pan European¹.

Various actions are implemented by the committees of the *French Alliance*, one of the most important external representations of France, which activities are aimed at creating a favorable image of the country in the world. The project *Green Alliances* (Alliances vertes), launched in 2011–2012 in Dubai, was a new interesting project of the French Alliance. It is aimed at creating ecological thinking among

¹ Klimatychna diplomatiia v YeS: vysnovky ta rekomendatsii dlia Ukrainy. Analitychnyi dokument. Ekspertno-doradchyi tsentr “Pravova analityka”. 2017. URL: <http://www.rac.org.ua/uploads/content/371/files/climate-diplomacy.pdf> (access.: 11.10.2018).

¹ Bogolyubova N. M., Nikolaeva Yu. V. Fenomen “Zelenoy diplomatii”: mezhdunarodnyiy opyt. Uchenyie zapiski Rossiyskogo gosudarstvennogo gidrometeorologicheskogo universiteta. 2014. №. 36. S. 192.

schoolchildren through school education. Another ecological program of the French Alliance is called *Indalo*, which means “nature” in one of the languages of South Africa. This program has been implemented since 2008 in Port Elizabeth, with the support of the Association of Renewable Energy Center. The project was aimed to reduce carbon emissions in the process of energy campaigns. In 2009, Lesotho, Botswana and Swaziland joined the program¹.

Within the framework of the *Green Embassy* project and on the occasion of the *European Sustainable Development Week*, the French Embassy to Ukraine conducted a simulation of the international negotiations on the results of the *UN Conference on Climate Change – COP21* at the Lyceum of Anna Kyivska in Kyiv². Participants joined this event to discuss goals that would keep temperatures below 2 °C up to 2100³.

Based on the partnership between Egypt and Germany in the fields of environment and energy, in 2011 the German Embassy initiated a dialogue platform for exchanging experiences, raising awareness and promoting cooperation between politicians, enterprises, academia and civil society. Cairo climate talks are organized jointly by the German embassy and the *Ministry of Foreign Affairs and the Environment of Egypt*. Negotiations were held on a variety of topics, including the role of young people in discussing climate change issues, and the acquaintance of urban communities with environmentally sound solutions for Egypt. In 2016, the dialogue, involving hundreds of civil society actors, circles of politicians, practitioners and

¹ Bogolyubova N. M., Nikolaeva Yu. V. Fenomen “Zelenoy diplomatii”: mezhdunarodniy opyt. Uchenyie zapiski Rossiyskogo gosudarstvenogo gidrometeorologicheskogo universiteta. 2014. №. 36. S. 192.

² Konferentsiia OON z pytan klimatu 2015 r. prokhodyla v Paryzhi u lystopadi-hrudni 2015 r. Tse 21-sha konferentsiia, prysviachena klimatychnym zminam, yaka provodylas v mezhakh Ramkovoï konventsii OON pro zminu klimatu (SOR 21) i 11-ta – v ramkakh narady storin za Kiotskym protokolom (CRP-11).

³ Simulation de négociations internationales inspirées de la COP 21 – Lycée Anne de Kiev. URL: <https://ua.ambafrance.org/Simulation-de-negociations-internationales-inspirees-de-la-COP-21-Lycees-Anne-de> (access.: 17.09.2018).

experts from academia, focused on climate change financing and the Paris Agreement¹.

On September 9, 2014, the first *German-British-French Climate Diplomacy Day* took place. The *Climate Diplomacy Week* is the time when the EU delegations around the world turn to communities and partner organizations, highlighting positive global actions and cooperation in climate change. The events that took place on that day in German, British and French missions in more than 30 countries highlighted the importance of partnerships with climate diplomacy, demonstrated successful climate projects and stressed the need for current climate action. Since then Climate Diplomacy Day has been held annually².

In 2015, the *Minister of Nature Protection of the Republic of Armenia*, within the framework of the European Climate Diplomacy Day, received a delegation from the diplomatic corps of the EU countries concerned about the dangers of climate change and global warming. He, underlining the importance of consolidating efforts to combat climate change, welcomed the EU's initiative to organize a meeting and, in particular, mentioned: "Climate change and its dangerous consequences do not recognize borders, therefore, all countries, regardless of the magnitude of the impact of these changes, must take decisive action in order to avoid irreversible consequences in the future. That is why, although the volumes of greenhouse gas emissions in Armenia are not significant, we are actively cooperating with various European and international institutions and ready to assume voluntary commitments to reduce emissions. We share the concern of the international community about preventing the effects of rising temperatures"¹.

¹ Climate diplomacy. Foreign Policy Responses to Climate Change. Adelphi. 2017. URL: <https://www.climate-diplomacy.org/file/3144/download?token=Re6bOQWS> (access.: 17.09.2018).

² Climate Diplomacy Week 2018. URL: <https://library.ecc-platform.org/events/climate-diplomacy-week-2018> (access.: 27.09.2018).

¹ Ministr ohranyi prirodyi RA v ramkah dnya evropeyskoy klimaticheskoy diplomatii prinyal delegatsiyu diplomaticheskogo korpusa stran ES. URL: <http://www.mnp.am/ru/post/1558> (access.: 11.10.2018).

An example of the events of 2016 is the exchange organized by the Federal Ministry of Foreign Affairs of Germany, the activities of the German Embassy in Seoul and in the EU Delegation to Moscow¹.

In June-July 2017 the Delegation of the European Union and the Embassies of the EU Member States conducted various events within the framework of the Week of Climate Diplomacy. The EU's international initiative was aimed at attracting new partners to the global community that fights climate challenges and supports the political impetus of climate change after the Paris Agreement. In particular, they were attended by the embassies of Belgium, the United Kingdom, Spain, Germany, the Netherlands, Finland, France and Sweden².

In 2018 the Weeks of Climate Diplomacy took place twice: on June 18–24 and on September 24–30. In the EU, the Talanoa Dialogue was the central topic of the Climate Diplomacy Week in 2018. This is the Pacific tradition of explicit and inclusive exchange of ideas through the narrative of stories, a facilitation process that helps to see progress in reaching the global goals of the Paris Agreement before the start of CP24 (24th Conference of the Parties)¹.

The same year one more diplomatic action is scheduled to take place in December in Katowice, Poland, which should promote the problem of climate change in the world. It will be the 24th *Conference of the Parties to the United Nations Framework Convention on Climate Change* and the 14th *session of the Meeting of the Parties to the Kyoto Protocol*. The event will be attended by about 40,000 guests from all over the world. M. Krupa, President of Katowice, said that the organization of the summit would be, on the one hand, a global promotion of the city; on the other hand, it will contribute to raising the level of awareness of the inhabitants on climate protection and ecologically responsible development of the environment. The *UN*

¹ Climate Diplomacy Week 2018. URL: <https://library.ecc-platform.org/events/climate-diplomacy-week-2018>(access.: 11.10.2018).

² Nedeli klimaticheskoy diplomatii 19 iyunya – 2 iyulya 2017. URL: https://eeas.europa.eu/delegations/russia_ru/28505202017 (access.: 11.10.2018).

¹ Climate Diplomacy Week 2018. URL: <https://library.ecc-platform.org/events/climate-diplomacy-week-2018> (access.: 11.10.2018).

Climate Summit is a great opportunity to show how our city has changed in recent years”¹.

As global climate change poses a danger to people living in many parts of the world, national and international programs to prevent such changes are also being actively developed today. We will analyze a number of programs proposed by the EU in the European region.

Clima East (October 2012 – April 2017) is a package of projects funded by the European Union and assisting the countries of the Eastern Partnership (Armenia, Azerbaijan, Belarus, Georgia, Moldova and Ukraine) and Russia in defining approaches to reducing the impact on climate change and mitigation of consequences. The package of projects includes two components: the *first* one is implemented by the United Nations Development Program; it includes a number of pilot projects, which support the development of ecosystem approaches to climate change; the *second* component is a policy project aimed at assisting partner countries in improving policies, strategies and market mechanisms in the field of climate change by supporting regional cooperation of partner countries and improving their access to information on policies, regulatory frameworks and the EU expertise in climate change¹.

The *Climate Forum East* (CFE I January 2013 – December 2014, CFE II January 2015 – June 2017) was held with the support of the European Union, the Austrian Development Agency, the Austrian Red Cross and the World Wildlife Fund. The project, implemented in six countries of the Eastern Partnership (Armenia, Azerbaijan, Belarus, Georgia, Moldova and Ukraine), aims to strengthen the capacity of civil society in its interaction with decision makers on these issues and to mobilize young people and local communities to respond to the challenges that their countries face in terms of climate change. Accordingly, one of the key objectives of the project is the assessment

¹ Międzynarodowa konferencja klimatyczna w Katowicach. URL: <http://slaskie.naszemiasto.pl/artukul/miedzynarodowa-konferencja-klimatyczna-w-katowicach,4657891,art,t,id,tm.html> (access.: 11.10.2018).

¹ Clima East Policy Project: selected results at a glance. URL: <http://1067656943.n159491.test.prositechosting.co.uk/wp-content-sec/uploads/2017/04/Clima-East-Final-Brochure-2017.pdf> (access.: 13.09.2018).

of the major climate risks and vulnerabilities in each country by national public organizations, as well as the development of recommendations for public organizations and decision makers about possible approaches to adaptation to climate change¹.

The CFE II project in Ukraine provided the members of the *Ukrainian Climate Network NGO* with the opportunity to implement practical projects related to climate change and adaptation, as well as to improve the organizational capacity of their institutions. Thanks to it, for the first time in Ukraine, adaptation plans for climate change have been developed for several villages, large industrial cities and protected areas. One of the indirect consequences was the adoption of the first regional strategy for adaptation to climate change in the Rakhiv district. The opportunity to receive additional financial aid helped to implement six pilot projects for adaptation to climate change: a herd of buffaloes from Transcarpathia to Denmark was transported, drainage systems needed in Kamyanyets were upgraded, webcams were installed in the churches for monitoring fires in wetlands, and reservoirs to collect rainwater in kindergarten were constructed¹.

The educational component of the program has become extremely useful in terms of disseminating information on climate change and adaptation. More than 100 teachers and representatives of non-formal education gathered at the first annual Culture Education Forum in 2016 to exchange experiences, interesting ideas and projects, as well as to take part in the *Children's Climate Games* master class for "The Game Changes the World". The project *Ministry of Climatic Magic* continued the work of the youth, it was attended by 150 students from five cities who participated in trainings on climate change, environmental activity, implemented projects in their schools on environmental issues. Then the students participated in the final

¹ Otsinka vrazlyvosti do zminy klimatu: Ukraina. Klimatychnyi forum skhidnoho partnerstva (KFSP) ta Robocha hrupa hromadskykh orhanizatsii zi zminy klimatu (RH NUO ZK). 2014. URL: <https://climateforumeast.org/uploads/other/0/571.pdf> (access.: 06.09.2018).

¹ CFE II project results in. URL: <https://climateforumeast.org/news/88/CFE-II-project-results-in-Ukraine> (access.: 17.09.2018).

camp in the Carpathians. An interesting experiment titled “Energy independence is our common agreement” was held in the information tour on climate change and energy conservation, which enabled the activists of the Ukrainian Climate Network to visit 10 cities and publish information on climate change, adaptation to them and energy efficiency. They met with local authorities on energy efficiency in cities and adaptation to the effects of climate change¹.

The ENVSEC initiative launched the *Climate Change and Security Change Program* in Eastern Europe, Central Asia and the South Caucasus (2013–2017, Azerbaijan, Belarus, Armenia, Georgia, Kazakhstan, Kyrgyzstan, Moldova, Tajikistan, Turkmenistan, Ukraine, and Uzbekistan). It is supported by the EU and the Agency for the Development of Austria, the Organization for Security and Co-operation as a lead organization with the participation of the United Nations Economic Commission for Europe, the United Nations Environment Program, the United Nations Development Program and the Regional Environmental Center for Central and Eastern Europe. The project aims to improve understanding and awareness of climate change as a security issue, and the need for regional and cross-border cooperation in the field of adaptation; as well as to strengthen the capacity of national and local stakeholders to predict, prevent and mitigate, in a timely and effective manner, the potential security risks associated with climate change. These goals should be achieved on the basis of joint assessments of the impact of climate change on security for each region; creation and dissemination of information on the impact of climate change on security and the necessary adaptation measures; and the development of an experimental adaptation strategy for climate change for a cross border river basin (the Dniester river basin)¹.

This project identifies and assesses areas of special focus on climate change and security in Eastern Europe, Central Asia and the

¹ CFE II project results in Ukraine. URL: <https://climateforumeast.org/news/88/CFE-II-project-results-in-Ukraine> (access.: 17.09.2018).

¹ Climate Change and Security in Eastern Europe, Central Asia and the Southern Caucasus. URL: <https://www.osce.org/projects/climate-change-and-security> (access.: 12.04.2018).

South Caucasus. The data of this zone are determined geographically and are characterized by a stable state of stress, environmental problems or two factors at the same time. In each of these areas, climate change in one or more spheres can undermine existing social or economic models, endanger infrastructure or lifestyles, or threaten with the political and social contradictions, conflicts or instability. Areas with weak authorities or inefficient mechanisms for cooperation in the field of cross-border environmental or security issues are particularly vulnerable. The analysis of areas of special interest, which is discussed with stakeholders in the countries of the region during several consultations, takes into account the spheres of tension associated with the value of available resources. Such a tension may be due to criminal activity that conflicts with their legitimate use, or due to emerging issues as to who can use these resources and how. The issue how climate change can affect all these situations is of particular interest¹.

Consequently, since international responses to climate threats were “slow and inadequate”, countries need to integrate climate change into their security policies to prepare for the worst scenarios¹.

To formulate appropriate responses to the risks associated with climate security, climate prevention needs to be addressed, which will require the continued integration of climate security into existing mechanisms for early warning and conflict prevention. To provide security in a climate-tense world, more active and intensive approaches are needed to address instability issues in strategically important regions with high levels of protests and weak governance.

Today one of the problems is the need to attract the efforts of the world community to overcome the climatic risks, which requires a large-scale promotion of climate events and the appropriate solution to

¹ Climate Change and Security in Eastern Europe, Central Asia and the Southern Caucasus. URL: <https://www.osce.org/projects/climate-change-and-security> (access.: 12.04.2018).

¹ Mabey N. Delivering Climate Security: International Security Responses to a Climate Changed World (WHP 69. URL: <https://rusi.org/publication/whitehall-papers/delivering-climate-security-international-security-responses-climate> (access.: 17.09.2018).

a number of communicative tasks, in particular: providing citizens with access to information on various aspects of climate change and educational work in this area. In order to strengthen climate diplomacy, better information flows and better dissemination of climate change information are needed through formalized local meetings, climate change focal points for embassies of individual countries; studying the learning needs and satisfying them through a variety of activities in different information formats; integrating climate policy into wider dialogues and meetings, for example, annual meetings or regional conferences of delegations; preparing materials for climate change available to different target audiences (press kits, infographics, case studies, expert lists, etc.)¹.

Prospects for further research in this area may include problems of public awareness and knowledge about climate change, factors affecting them, changing public opinion about climate change, the role of political ideology in the public understanding of climate change, dominant discourse on climate change in the media and Internet sources, the most effective and convincing climate change message strategies targeting individual target audiences, as well as analysis of climate communication strategies and practices in individual countries, in particular Ukraine, and social training in the structure of climate communication.

¹ European climate diplomacy after COP21 (Council conclusions (15 February 2016). URL: <http://data.consilium.europa.eu/doc/document/ST-6061-2016-INIT/en/pdf> (access. 09.04.2018).

Chapter 3

ECOLOGICAL SECURITY

3.1. Ecological Security of Smart Cities Development: Reality and Expectations

*Pavlikha Nataliia
Kolomechiuk Vladyslav*

To date, there are not many smart cities that meet eco-city standards. They vary in their diversity ranging from European cities to highly developed smart cities in Asia. A large number of such cities are self-proclaimed eco-cities which means, for example, changing the attitude towards sustainable development in existing cities. Classification presented in the *Eco-Cities – Global Survey review*³ shows that many eco-cities include only a fraction of the aspects of the sustainable development of a smart city such as transport links, waste recycling or energy efficiency. Most of them are small in size or exist as an extension of already existing cities and rarely develop individually. Likewise the attitude towards eco-cities in Europe is also very different. For example, some countries want to develop and even sell renewable energy sources while others are marked by the opposite behavior because they have such a resource in their abundance. This diversity and relatively small number of eco-cities or ecological quarters are reflected in the recommendation to focus on medium-sized cities supplemented by goals for United Nations eco-cities, namely:

© *Pavlikha Nataliia* – Doctor of Economics, Professor, Head of the International Economic Relations and Project Management Department of Lesya Ukrainka Eastern European National University.

© *Kolomechiuk Vladyslav* – PhD student, International Economic Relations and Project Management Department of Lesya Ukrainka Eastern European National University.

³ Joss S., Tomozeiu D., Cowley R. *Eco-Cities – Global Survey. Eco-City Profiles*. University of Westminster. 2011. URL: <http://www.westminster.ac.uk/?a=119909> (access.: 09.05.2018).

- green city mosaic;
- striving for compact cities;
- diversified local economy;
- advanced network schematics;
- green water and energy-efficient urban environments;
- protection of eco-systems;
- preserving the green industry and jobs in clusters¹.

Such UN criteria may have arisen as a result of significant environmental changes on a small to medium scale. Large cities, the number of which has grown massively in Asia and other parts of the developing world, cannot be considered as truly environmental. This is precisely the problem of identifying a modern and smart eco-city.

Contemporary emerging cities seeking to become a smart city very often face many challenges including unsanitary, air and water pollution, resource constraints, energy supply and other problems that affect the functioning of society. For example, in many cities where the population exceeds a million, in the last few decades the conditions in the low income regions have improved but there are still many areas lacking appropriate services and conditions in the housing and utility services sector and sanitation. The large size of individual cities where the population exceeds a million (Mumbai, Mexico, Delhi etc.) negatively affects the supply of freshwater, most of which is groundwater, which leads to land subsidence, flooding and pollution with industrial and human waste. Cities are also faced with the well-known problem of air pollution caused by the volumes of various industries and mass motorization. Finally, the growth in the number of millions of cities is irreversibly changing all local ecosystems. Except for extractive resources and waste, cities also receive environmentally significant impacts from land use. Cities in the world occupy only about 3 % of Earth's surface². Concentrating a large percentage of the

¹ International Ecocity Framework and Standards Initiative. The United Nations Sustainable Development Knowledge Platform. URL: <http://sustainabledevelopment.un.org/index.php?page=view&type=1006&menu=1348&nr=66> (access.: 09.05.2018).

² Grimm N. Global change and the ecology of cities. Science 319. 2008. URL: https://libres.uncg.edu/ir/uncg/f/S_Faeth_Global_2008.pdf (access.: 09.05.2018).

world's population on a small square, global urbanization contributes to the decline of much larger volumes of the earth's surface. In addition, over time, the density of cities diminishes which means that today's Asian and African cities with a high density will probably be much less dense in the future. The degree of density reduction will have a profound aggregate impact on the number of cities in the area where they are located.

At the regional level urban growth means the expansion of neighboring rural and forest landscapes. Expansion, as a rule, occurs along road and other transport routes, as a result of ambiguity of investment in real estate or with the help of other differentiated means. Territories adjacent to cities are often reminiscent of mosaic environments consisting of built-up areas as well as agricultural land, wooded land and other regions. Such pre-city landscapes extend to tens and even hundreds of kilometers from city centers which of course cannot meet the standards of a smart city especially in terms of infrastructure. Over time such cut-off urban areas unambiguously can and should merge with the overall urban development strategy¹.

Fragmentation of the landscape reduces the large areas of surrounding forests and other areas that affect the biodiversity of flora and fauna. The expansion of the built environment contributes to the consolidation of soil and erosion (soil erosion is accelerated by an increase in rain runoff from solid surfaces) and as a rule it causes local water pollution². As a result, neighboring agricultural lands are decreasing, thereby increasing the distance from agricultural production areas to city centers.

At the global level in order to strengthen the environmental security of cities and to overcome other problems of the present most modern development strategies suggest not only maintaining the

¹ Making Room for a Planet of Cities/S. Angel, J. Parent, D. Civco, A. Blei. Cambridge, Mass.: Lincoln Institute of Land Policy. 2011. URL: http://www.lincolninst.edu/pubs/1880_Making-Roomfor-a-Planet-of-Cities-urban-expansion (access.: 09.05.2018).

² Grimm N. Global change and the ecology of cities. *Science* 319. 2008. URL: https://libres.uncg.edu/ir/uncg/f/S_Faeth_Global_2008.pdf (access.: 09.05.2018).

sustainability of cities but also introducing new concepts of smart cities. Indeed, at the moment, most of the world's most sustainable cities are also among the richest cities. The northern and central European cities are well known for their involvement in sustainable urban development and today they are also in the development of the concepts of a smart city. The first places in these field are occupied by many large cities of such powerful countries of Europe as Denmark, Sweden, Estonia, Norway, Great Britain, Spain, etc. Copenhagen is one of the leading green and innovative cities in Europe. The city has proven to be the leading green city in the world. Copenhagen headed the *Siemens Green City index* in Europe, and was selected as the *European Green Capital* in 2014¹. The city has one of the lowest carbon level in the world (less than two tons per capita). Copenhagen also carries the most ambitious carbon emission reduction plan. They seek to achieve neutral carbon emissions by 2025. To achieve such an ambitious goal the city has set important goals including energy efficiency and renewable facilities as well as green building standards etc. It is impressing that in the city about 40 % of all displacements occur with cycling².

Another European city, Barcelona, is developing a variety of innovation types and ideas for a smart city. The city which annually organizes and holds the *World Congress Smart City Expo* is undoubtedly the leader in Europe in implementing the concepts of a smart city. Barcelona became the first city in Spain that received the status of a smart city in 2013, ranked fifth in Europe, ahead of such well-known cities as London and Paris³. Undoubtedly, Barcelona is the epicenter of technology and innovation. However technologies and innovations not always make the city smart. According to Boyd

¹ Environment. European Green Capital. URL: <http://ec.europa.eu/environment/europeangreencapital/winning-cities/2014-copenhagen> (access.: 09.05.2018).

² Copenhagen Smart City. URL: http://www.almanac-project.eu/downloads/M2M_Workshop_Presentations/Session%204/Mia_Copenhagen_smart_city_2015.pdf (access.: 09.05.2018).

³ Smart Cities. The World's 5 Smartest Cities. URL: <http://www.ioti.com/smart-cities/world-s-5-smartest-cities> (access.: 09.05.2018).

Cohen, a well-known urban and climatic strategist, the status of a smart city is received only after the introduction of the following indicators: smart economy, smart environment, smart management, smart mobility, smart life and society¹. The city is also known for introducing the concept of green development which undoubtedly has a significant impact on the environmental safety of society. It brings together entrepreneurs in the green sector and various institutions that contribute to the development of green concepts. Like in Copenhagen, in Barcelona, about 50 % of all city traffic is carried out by foot or on a bicycle and only 20 % of trips in the city center are carried out by means of motorized transport². The plan for greening and biodiversity in the city describes how the authorities plan to redistribute the use of abandoned territories, contaminated buildings and even individual sections of the road to create new green areas. The state's vision includes a network of connected green areas that spread evenly across the city, contributing to the existence and development of flora and fauna. The idea is that the promotion of natural life in the city will have not only a positive impact on the mental and physical well-being of its inhabitants but also on human society as a whole structure through the reduction of CO₂ emissions and biodiversity protection³.

However not all major cities in the world have the experience and resources to develop an environmentally safe or more smart eco-city. Some cities in the world are in low- and middle-income countries or in countries that have only recently begun to benefit from the introduction of new concepts and strategies. Singapore is one of the cities that made both an innovative breakthrough and an economic one. The city receives quite high estimates for the policy of

¹ Cohen B. The Smart City Wheel. URL: <https://www.smart-circle.org/smartcity/blog/boyd-cohen-the-smart-city-wheel> (access.: 09.05.2018).

² Environment. European Green Capital. Barcelona. URL: <http://ec.europa.eu/environment/europeangreencapital/winning-cities/previous-finalists/barcelona> (access.: 09.05.2018).

³ Barcelona green infrastructure and biodiversity plan 2020. URL: <http://ajuntament.barcelona.cat/ecologiaurbana/sites/default/files/Barcelona%20green%20infrastructure%20and%20biodiversity%20plan%202020.pdf> (access.: 09.05.2018).

sustainability and the introduction of smart city technologies¹. Until the 1970's there were many problems in Singapore that still exist in Asian cities including poverty, depopulation of certain areas, overpopulation and most importantly the problems of air pollution, water and sanitation. The city renewal schemes began slowly but efficiently. Housing subsidies eliminated informal settlements of the colonial era and replaced them with modern high-rise multi-apartment buildings. By 1980 almost every inhabitant on the island had access to municipal water. As a result most of the infectious diseases such as cholera have disappeared. The Singapore experience is unique as it involves a series of comprehensive planning tools that may not be available elsewhere. Environmental sustainability is a prominent place on the agenda of the city government reflecting the awareness of the situation with the natural resources of the city (scarce land, natural gas shortages and limited supply of freshwater), the economic benefits of increasing environmental efficiency and understanding that this activity will improve Singapore's global position.

To date, it can be argued that environmental security focuses on how environmental factors affect national and global security implications. The key point is that changing environmental conditions can affect traditional local security conditions. Changes in the environment can lead to conflict and violence between states and between groups within states. The idea is that a deficit or a large amount of natural resources such as fossil fuels, minerals and fresh water can destabilize relations between states and between groups within states which leads to conflicts. The degradation of ecosystems as a result of excessive exploitation, extreme pollution and the effects of climate change can have the same negative effects. However the other side of the industry focuses on the fact that environmental change, on the contrary, can contribute to more peaceful co-operation between states and between groups within states. The idea is that environmental cooperation with environmental problems (for example

¹ Spatial Planning for a Sustainable Singapore. Singapore: Springer Science, Business Media B. V. 2008. URL: <https://download.e-bookshelf.de/download/0000/0044/73/L-G-0000004473-0002337222.pdf> (access.: 09.05.2018).

cooperation on transboundary fresh water sources) can lead to increased confidence between competing states and, ultimately, to the transition to more traditional security policy arenas that will contribute to peacekeeping.

Today the main factors that affect the environmental security of cities around the world include the energy problem, water security and, of course, the climatic component. Cities of the world consume about two thirds of world energy consumption. It is forecasted that by 2030 this share will have increased to 73 % of the total. Urbanization in developing countries is a major cause of increasing global demand for energy for the needs of cities. Today, cities residents of China or India consume twice as much energy as the average national indicator¹. Cities consume energy in different ways but mostly it is direct consumption, for example, fossil fuels burned in the city, energy consumed by motor vehicles. There is also indirect energy consumption when the energy used within the city is formed from outside its boundaries where part of the electricity used in cities is generated by hydroelectric power stations and nuclear power plants².

However, it may seem paradoxical that developing cities face a dual problem with energy and its wise usage. They are in search for ways to provide electricity and fuel for cells of new wealthy townspeople while providing basic energy services to a large number of poor people who are forced to live without the required amount of electricity or limited access to modern forms of energy supply. In both cases the problem is usually defined as the creation of sufficient energy supply (and the provision of services) to meet growing demand.

Alternative energy, increasing the efficiency of production and energy consumption, changing lifestyles and smart urban planning, can significantly alter the negative energy performance indicators. Carbon-low minerals, renewable energy sources such as solar and wind power etc., can significantly change the situation. The efficiency of energy production can be maximized due to wider use of

¹ World energy outlook. International energy agency. 2008. URL: <https://www.iea.org/media/weoweb/2008-1994/WEO2008.pdf> (access.: 09.05.2018).

² Droege P. Urban Energy Transition: From Fossil Fuels to Renewable Power. Peter Droege. Elsevier. 2008.

cogeneration units. Such installations use waste heat from electricity generation and redirect it for useful purposes, in particular, hot water supply and domestic heat supply in the nearest residential and commercial buildings. Such a practice is typical for European smart cities.¹

Another issue of ecological security of smart cities is that cities and their inhabitants are significant direct consumers of fresh water. With regard to energy, world cities are responsible for consuming most of the world's freshwater supply. Delivering quality fresh water to big cities has always been a difficult issue. All residents of the city demand reliable supply of healthful water for everyday needs although the definition of "healthful" depends on the type of a user (private individuals and households require quality drinking water while factories and utilities usually require water of lower quality). In today's living conditions the aggregate demand for water is always rising both in rapid urbanization and in the rising level of wealth of society. Frequently, in order to eliminate problems with fresh water, urban water demand often does not correspond to geographical demand. Cities located on the rivers or nearby have a stock of surface waters but the amount of water flowing through the city is rarely sufficient when cities start to grow fast. In addition rivers flows are subject to seasonal fluctuations (especially in arid and semi-arid areas) and therefore they are not always reliable. Local groundwater loading is another type of water supply but this form of water accumulation is unstable in the long run. As cities rapidly increase local supply of fresh water they are forced to feed water from distant sources which, accordingly, can lead to the destruction of entire ecosystems².

Finally, such a component as climate change will add water problems to cities in the coming decades acting as additional problematic impacts on local and remote sources of fresh water. Even

¹ Droege P. *The Renewable City: A Comprehensive Guide to an Urban Revolution*. West Sussex: Wiley-Academy, 2006. 322 p.

² Huang S. Current Opinion in Environmental Sustainability: the transition to an urbanizing world and the demand for natural resources. 2010. URL: <https://www.sciencedirect.com/journal/current-opinion-in-environmental-sustainability/vol/2/issue/3> (access.: 09.05.2018).

the absence of drought conditions, high temperatures and precipitation will depend on both the quantity and the seasonal availability of fresh water for many cities. Cities in dehydrated or semi-arid regions that are dependent on river systems will be significantly affected. Climate change can also affect to water quality in various ways, for example, through higher sea levels which will increase the penetration of salt water to the supply of groundwater to coastal cities. This will definitely worsen the already complex problem¹.

At the same time, cities and their populations are very vulnerable to the effects of climate change. The effects of climate change will be wide-ranging and influence almost every aspect of urban life. Problems include rising sea levels, storms and other extreme weather conditions, impacts on public health, increased energy consumption, changes in freshwater supply, air pollution, urban biodiversity changes and significant economic impacts.²

In the 21st century we are faced with the tremendous pace and scale of globalization, urbanization, urban environmental impact, resources, water and energy requirements. Today, environmental security must undoubtedly mean security in the territories inhabited by most of the world's population and most of the world's population live in cities now. Eco-cities spread around the world in many different forms and with different interests. They can be a step towards an ambitious, less lucrative lifestyle in a more sustainable environment, according to their broad context and future needs. As the population grows, accordingly the number of urban problems increases. It is expected that such growth will continue with increasing levels of pollution, resource shortages, catastrophic climate change and many other issues. Today, cities are faced with new environmental, economic, technological challenges that they have to meet to ensure sustainable and smart development. It is time to use technology

¹ Kamal-Chaoui L., Alexis R. *Competitive Cities and Climate Change*. Paris: OECD publishing. 2009. URL: <https://www.oecd.org/cfe/regional-policy/44232251.pdf> (access.: 09.05.2018).

² Watkiss P. *A review of the economics of adaptation and climate-resilient development*. 2015. URL: <http://www.vfmadaptation.com/Working-Paper-205-Watkiss.pdf> (access.: 09.05.2018).

and create smarter systems that will optimize the use of scarce resources. That is why today such factors determining the modern smart eco-city can be identified as: biodiversity conservation in the urban environment, ecosystem conservation, efficient natural resource management, integrated water management system, effective air pollution control system, disaster risk reduction system, improvement of city sustainability as a result of climate change, creation of a large number of low-carbon environments, focus on the development of renewable energy sources etc. A large number of countries in the world have already started their way to implementing the concepts of smart eco-cities but still there are some countries where the gradual decline of cities is felt every year.

3.2. Ecologically Secure City Development: Experience, Modernity and Future

Voichuk Maksym

The term “environmental security” is commonly used in relation to attempts to preserve the flows of resources, infrastructure and services at the national level, as well as in relation to the *Urban Ecological Security*, which is currently informing about strategies for reconfiguring cities and their infrastructure in such a way as to support environmental and material reproduction. Although the debate on economic, social and environmental reproduction has historically been viewed as interconnected, in an era of scarce resources and climate change, it can be argued that support or striving for strengthening economic growth means that issues of economic, social and environmental reproduction have become strategically intertwined with urban level. The value is to create additional layers for economic and local competition between cities, which is typical of the post-

© *Voichuk Maksym* – PhD student, Department of International Economic Relations and Project Management, Lesya Ukrainka Eastern European National University.

Keynesian urbanization. “Renaissance” in recent decades of the certain subnational territorial forms of organization¹ can be considered as informed and information selective competition (national) strategy², in order to create both the context of economic globalization and the spatial response to it.

Cities are not a complete ecosystem. Rather, cities need to support environmental processes that extend far beyond their borders. In order to survive, city dwellers need constant supply of energy, raw materials, food, goods, water and finished products. Such materials are treated in any useful form (materials used for buildings and streets or finished products such as furniture and appliances) or are waste. Much, but not all, waste is exported beyond the city boundaries, which leads to pollution of air, water and soil. Thus, cities use both ecological sources and cesspools: forests, rural landscapes, freshwater reservoirs and oceans. The exchange between urban and non-urban areas is not neutral. As “intense energy nodes, material transformation and consumption”, cities consume a clean flow of ecosystem services, creating a clean outflow of environmental pressures³.

Observers have long recognized such true information about cities and developed metaphors for describing and measuring environmental and urban transformation. Among the most popular were urban metabolism and environmental metaphors. Metaphor for urban metabolism has intellectual roots since the late XIX – early XX centuries. But recently it has been associated with the engineer Baltimore Abel Wallman, who published the main document on this issue in 1965. Wallman argued that cities could be considered as metabolic systems characterized by flows of resource revenues

¹ Sassen S. *Cities in a World Economy*. Thousand Oaks: Pine Forge Press, 2000. 424 p.; Scott A. *Globalization and the rise of city-regions*. *European Planning Studies*. 2001. № 9.7. P. 813–826.

² Jessop B. *The future of the capitalist state*. Cambridge: Polity Press, 2002. 343 p.; Brenner N. *New state spaces: urban governance and the rescaling of statehood*. New York: Oxford University Press, 2004. 372 p.

³ *Ecosystems and Human Well-being: Current State and Trends. Findings of the Condition and Trends Working Group of the Millennium Ecosystem Assessment* / G. McGranahan, R. Hassan, R. Scholes, N. Ash. *Urban Systems*. 2005. P. 798–806.

(materials and energy) and waste (sewage, pollution, etc.). He argued that cities are the centers of ecological transformation, where the useful forms of matter and energy (low entropy) turn into less useful forms (high entropy). Scientists and engineers who are now dominant in this niche focus on tracking and understanding the flows of material and energy resources through cities, as well as developing mechanisms for increasing the flow efficiency. In particular, the metaphor prioritises the understanding, detection and quantification of material and energy flows in and beyond cities, as well as building accounting systems to track these flows. Perhaps the most critical is that the metaphor provides theoretical support for the idea that cities should reduce their dependence on those natural sources and cesspools that exist outside of them¹.

Environmental security focuses primarily on how environmental factors affect national and global implications for overall security. Its central message is that changing environmental conditions can affect traditional or “severe” security conditions on the ground. There are two main ways to do this. First, environmental change can lead to conflict and violence between States and between groups within states. The idea is that a deficit or a large amount of natural resources, such as fossil fuels, minerals and fresh water, can destabilize relations between states and between groups within states, which leads to conflicts. The degradation of ecosystems as a result of excessive exploitation, extreme pollution and the effects of climate change can have the same negative effects. Secondly, other parties argue that environmental change, on the contrary, can contribute to more peaceful co-operation between states and between groups within countries. The idea is that cooperation on environmental issues (for example, cooperation on transboundary sources of fresh water) can lead to greater trust between the competitive powers and, ultimately, the transition to a more traditional arena of sound security that will contribute to peacekeeping.

¹ Urban Metabolism Literature Review. URL: <http://www.environment.ucla.edu/media/files/Urban-Metabolism-Literature-Review2012-44-fea.pdf> (access.: 19.08.2018).

Conceptual roots of environmental security can be traced back to the Cold War, especially until the 1970s and 1980s. The branch was formed during these decades against the backdrop of increased attention to the world reserve of natural resources and its complex of ecosystems. The generalized risks associated with pollution and its consequences, food shortages due to overpopulation, climate change and other scarcity of natural resources have become commonplace fears. Although these problems were often associated with influential but speculative predictions, such as the report of the 1972 *Club of Rome* entitled *Restrictions on Growth*, other developments were very real. The most significant of these were the oil turmoil of 1973 and 1979, which sent Western economies into the corkscrew and turned oil into a geostrategic issue for politicians around the world. During the 1980's the list of anxieties became bigger. Detecting the "ozone hole" over Antarctica, confirming the hypothesis of climate change and concerns about deforestation from tropical rocks have shown that there is a serious environmental problem. During the late 1980s and early 1990s, the field of environmental security became institutional. In 1987, the *Brundtland Commission* released *Our Common Future Report*, which is by far the most well-known concept of sustainable development. In addition, it was argued that the environment could be the cause of human conflicts and violence. On the contrary, the report related to the war and preparation for war stands in relation to the degradation of the environment. In order to direct these ideas, in 1988 and 1989 Mikhail Gorbachev proposed "environmental security" as a priority of International Relations. Gorbachev wanted environmental issues to rise to the top of the agenda of the United Nations through formal institutional changes¹.

Although the ideas of the Soviet leader have not disappeared, the end of the Cold War nonetheless provided environmental security. By looking for a framework for understanding the world after the Cold

¹ Dabelko G. An Uncommon Peace: Environment, Development, and the Global Security Agenda. *Environment: Science and Policy for International Development*. 2008. S. 32–45; Report of the World Commission on Environment and Development: *Our Common Future*. 1987. URL: https://openlibrary.org/works/OL13549738W/Our_Common_Future (access.: 19.08.2018).

War, scientists such as Thomas Homer-Dixon formulate the fundamental concepts that are still informing the industry. He and others argued that a natural resource shortage due to increased demand, reduced supply or unequal access could threaten national and international security. Against this background, they developed similar considerations regarding the scale of the environment, in which control over critical natural resources (oil, precious minerals, etc.) can cause regional conflicts; this is the so-called thesis of “bloody diamond”. Finally, they argued that human intervention in the Earth’s ecosystem would aggravate environmental problems such as drought and various kinds of catastrophes. For example, climate change will disrupt freshwater regimes all over the world, increase pressure on agricultural production, and will likely increase natural disasters, such as more frequent and more powerful storms. Skeptics, however, cast doubt on the assertion, challenging environmental compliance with traditional security issues, noting the extreme complexity of overcoming the causal links between the environment and the conflict while arguing that empirical evidence of maintaining a relations between the environment and conflict is changing at best¹.

The area of environmental protection did not completely exclude cities from its sphere of activity, but at the same time was deprived of the opportunity to integrate them into a comprehensive critique. David Michel of the Stimsons Center says: “Environmental students recognize that the coastal cities from Alexandria to Amsterdam will be

¹ Bernauer T., Böhmelt T., Koubi V. Environmental Changes and Violent Conflict. *Environmental Research Letters*. 2012. № 7. P. 1–9; Homer-Dixon T. Environmental scarcities and violent conflict: evidence from cases. *International Security*. 1994. № 19. P. 5–40; Homer-Dixon T. On the threshold: environmental changes as causes of acute conflict. *International Security*. 1991. № 16. P. 76–116; Ali S. Environment and Security. *Annual Review of Environment and Resources*. 2006. № 31. P. 14.1–14.7; Rethinking Resource Conflict. *World Development Report*. 2011. Background Paper. 2010. URL: openknowledge.worldbank.org/handle/10986/9192 (access.: 19.08.2018); Deudney D. The case against linking environmental degradation and national security. *illennium – Journal of International Studies*. 1990. № 19. P. 461–476. 43 Personal communication to the author, June 2013.

susceptible to storms and rising sea levels. But as cities are viewed from the standpoint of environmental security, it can be argued that they were more likely to be considered as individual cases, rather than as a full class [analysis]”¹. Such observation is a starting point. The fact that the cities were more diverse and curiosity in the field of environmental protection came to the fore, their existence was interpreted as unpredictable, and their value was poorly understood. This relative inattention may be related to the notion common to those who work one way or another on the environment, and believe that the “environment” is synonymous with “nature”, which in turn is defined as something that exists outside of human experience. From this point of view, the environment consists of natural ecosystems, namely, rivers, wetlands, forests, oceans, the atmosphere and other systems, on which, ultimately, life itself depends. In this paradigm, due attention to environmental security is paid to the human intervention in the data system, often causing their degradation and the effect of the boomerang, which is the cause of human suffering. The adoption of such a mental picture of the world requires that cities be considered as the ultimate human artifacts, completely out of nature and, therefore, outside of the discussion. There is nothing unusual here: significant intellectual parallels have been made in the history of the ecological movement itself. The logical consequence is that the subjects of environmental security are, first and foremost, rural and indigenous populations, that is, people who live in close proximity to nature and directly dependent on fishing, forest, pastures and subsistence farming for survival. Ultimately, rural and indigenous populations rather than urban ones are relatively poor.

In 2010, Christine Partermore and Will Rogers of the *Center for New American Security (CNAS)* spoke on the need to take the environmental security policy seriously¹. Otherwise, the brilliant articulation

¹ Engelke P. *The Security of Cities Ecology and Conflict on an Urbanizing Planet*. Washington: Atlantic Council and Henry L. Stimson Center, 2013. 60 p.

¹ Parthemore C., Rogers W. *Sustaining Security: How Natural Resources Influence National Security*. Washington: Center for a New American Security, 2010. 40 p.

of environmental security and its connection with traditional national security issues, as is written by Partermore and Rogers, consists of a number of intellectual thoughts. The authors focused their attention on fisheries, agriculture, irrigation, forest disappearance, soil erosion, loss of biodiversity, groundwater, minerals and energy. In short, they focused only on every industry except cities. If anyone without knowledge of the urban ecology reads the above report, then one can conclude that the cities are unlikely to be related to environmental and natural resources. In addition, in the text of the Report, attention was focused on almost all but the people living in cities – an impressive inaction of more than half of the world’s population. The authors focused on rural and indigenous peoples, particularly rural poor, and more specifically on peasants who live in an array of instability, from West Africa through the Middle East to Central and South Asia. The choice of such a complex was most likely not accidental. The authors seem to have recognized that the proper role of environmental security is to make the environment relevant to regions, conflicts and groups that receive relevant attention from those involved in national security policy. In the CNAS case, these regions are in this particular arc of instability, conflicts are not taken into account by US military planners during the 1990s and 2000s, and the conclusion is that these groups, poor rural and indigenous populations, are considered as such that it tends to affect environmental degradation, thus increasing instability by a mere presence for both their own countries and for the rest of the world.

In recent years, the challenge has been to imagine that urban infrastructure is largely depoliticized and can be reduced to technocratic and administrative mechanisms for the provision and distribution of public and private goods¹. Emerging disputes over infrastructure and information and communication technologies²,

¹ Graham S., Marvin S. Splintering urbanism: networked infrastructures, technological mobilities and the urban condition. London: Routledge, 2001. 532 p.

² Graham S., Marvin S. Telecommunications and the city: electronic spaces, urban places. London: Routledge, 1996. 452 p.

water supply¹, power engineering² and transport relate to reciprocity and dynamism, the flow of relations both indirectly and through urban infrastructure³: they jeopardize the distinction between technological, social and different levels of political activity in order to inform about the production of urban infrastructures. The shift of the role of the national state is decisive in terms of the formation of spatial differentiation in relations with subnational ones. In addition, with the privatization, liberalization and polling (at least rhetorical), the goals of universal service⁴, cities become differentiated in relation to national states and network infrastructures, but there is also polarization within city centers between “bonus” network spaces⁵ and horizontally related and profitable interests and places. However, there is also another way to exclude or disconnect from less-favored places. This raises problems with the adaptation of the existing infrastructure, its features and, thus, politicization.

Under the conditions of globalization, privatization and deregulation, which relate to many Western countries, this mutual capacity in industrial and transformational infrastructure has highlighted the potential for denial and political mobilization of infrastructures through certain geographical locations and forms of attribution, presentation and reconfiguration. The reconfiguration of infrastructures is interwoven with city management, highlighting how the city management configuration mobilizes the reflection and understanding of infrastructure transformations and the ways in which existing infrastructure configurations structure the capabilities and limitations of city management.

¹ Guy S., Marvin S., Moss T. Urban infrastructure in transition: networks, buildings and plans. London: Earthscan, 2001. 224 p.

² Hodson M., Marvin S. ‘Urban Ecological Security’: A New Urban Paradigm? *International Journal of Urban and Regional Research*. 2009. № 33.1. C. 193–215.

³ See reference Nr. 12.

⁴ See reference Nr. 10.

⁵ Graham S. Constructing premium network spaces: reflections on infrastructure networks and contemporary urban development. *International Journal of Urban and Regional Research*. 2000. № 1 (24). C. 183–200.

In this regard, the dominant theme in the urban governance literature points to the central role of cities as “engines of economic development” for business interests and thus provides justification for how capital flows and investments turn into “entrepreneurship” for managing urban growth.¹

The domination of economic thinking in urban governance is an important factor when it comes to the transformational opportunities that open the “re-emergence” of subnational in the last phase of globalization and “multilevel governance”, as well as the ways in which economic understanding in the narrow sense of transformational potential has become dominant in many Western countries.

Despite the fact that in the management of urban development methods of scalar and multilevel governance are used, literature around urban environmental governance is relatively neglected by scalar values, where space and scale, as a rule, are unmistakable. Environmental governance often reflects a cascade approach to a political scale, where there is a hierarchical and vertical set of relations based on the ratios between scales that often lack dynamism. The emphasis on international negotiations and the creation of international environmental agreements are essential for cascading approaches.

The national state is characterized by a peculiarity of its position, thus often neglecting a variety of opinions and in many respects it is considered as a black box. Negotiations on these agreements subsequently determine the role of ensuring (or not) compliance with the national state of a key subnational role, which will be subject to environmental commitments. This again uses a cascade to display the local level, usually a black box.

The consequences of this are taken from at least four positions¹. Firstly, attention is paid to the role of a national state, covering a relatively unitary position, often neglecting the wide variety of

¹ Logan J. *Urban fortunes: the political economy of place*. Berkeley: University of California Press, 1987. 383 p.; Harding A. *Elite theory and growth machines. Theories of urban politics*. 1995. P. 35–53.

¹ See reference Nr. 18. P. 15–18.

different positions in national contexts. Secondly, at the same time, this, and the look at the area of the so-called black box, strengthens relatively fixed views of the borders and the interaction of different scales of political activity. Thirdly, because of the review of the area as a container for the transfer and achievement of international agreements, the excessive stability of the management of the states is achieved and it reduces certain possibilities of local forms of agencies and spatial differentiation. Finally, this becomes especially important given the role of subnational governments in transnational governance networks. The arguments on the suppression of the state, on the “revival” of the subnational, and the ways in which the scalar configurations of the “new” forms of governance were produced, were largely absent from the debate on environmental governance¹. This highlights the problems, in particular, about how we understand the active ways of including environmental commitments in the city administration², whether it contradicts or agrees with the predominance of urban economic governance, or is actually a pre-formed coalition of city administration.

We increasingly argue that cities are developing more and more strategic thinking about their future resource needs. The decisive factor in this is the inclusion of natural resources and the ability to overcome environmental constraints in economic and social competition between cities. At one level, it becomes one of the indicators of productivity in competition between cities, but on the other hand it becomes a more profound indicator of the ability of cities (at least in the quest) to provide conditions that can “guarantee” their social, economic and material reproduction in the period of limited resources. The transition from the events of September 11th, where the protection of critical infrastructure from terrorism or the consequences of

¹ Desfor G. *Nature and the City: Making Environmental Policy in Toronto and Los Angeles* (Society, Environment, and Place). Tucson: University of Arizona Press, 2004. 274 p.; Keil R. *Urban political ecology*. *Urban Geography*. 2003. № 8 (24). P. 723–738.

² While A., Jonas A., Gibbs D. *The environment and the entrepreneurial city: searching for the urban ‘sustainability fix’ in Manchester and Leeds*. № 3 (28). P. 549–569.

environmental damage to the position in which the city can guarantee the state of material resources against the background of scarce resources and competition, have changed. In real terms, the new measure of competitive urban positioning is their ability to internalize, link and control their resources, supply, consumption and production.

Such strategies are seen as a new emphasis on economic growth on their own initiative. Pricing, carbon trading, decentralized technologies, new fuels and the physical strength of the city are all new opportunities for the development of environmental and economic services. Cities are actively seeking to integrate their environmental and infrastructure strategies with economic strategies and are actively seeking to replicate the wider sustainable urban resources initiatives (SURI) landscape in other national and international contexts. Increasingly, issues related to the environment and infrastructure are interwoven, where the ability to guarantee growth is linked to the preparatory environment and infrastructure, and such reconfiguration becomes a source of economic growth, since it is “deployable” and recurring in other situations.

A controversial strategy for such strategies is the development of emblematic spaces for piloting and experimentation of SURI technical corrections in wider regeneration and new urban strategies in cities around the world. For example, Thames Gateway is advertised as the world’s first “eco-friendly” region, which is becoming a key point for demonstrating water neutrality, waste neutrality, energy neutrality and energy independence – through conservative, decentralized and low carbon technologies¹. Dongtan, a major new extension of the city of Shanghai, is becoming a symbolic example of the desire for independence in energy security, water, food and closed loops for waste and energy reuse. An agreement was reached on the “deployment” of this model of eco-city in other parts of China, and since recently in London, recommendations have been developed in the style of Dongtan. London Mayor and London Development Agency are planning to develop Thames Gateway in London, based on the

¹ Thames Gateway Economic Development Investment Plan. London: Department of Communities and Local Government, 2007. 104 p.

principles of developing zero carbon content on the example of Dongtan in China¹.

3.3. European Union Ecological Security Ensuring

Skorokhod Iryna

Environmental factor has a significant impact on the economic development of many countries. Therefore, nowadays special attention should be paid to the regional environmental security. It is necessary to develop a new trend in the use of natural resources, to create a market mechanism which would enable the complex solution of environmental and economic issues related to the use of raw materials, waste production and in general, the natural resources. After all, the escalating environmental problems intensively affect the modern development of individual countries and the overall world economy.

Environmental security is one of the most important benchmarks for sustainable development of the regions. It ensures the constancy of the spatial system, determines the optimal level of load on environment. According to the concept of sustainable development, socio-economic development of the region should ensure the environmental security of people's lives. Although, any influence of economic development on the environment is negative in relation to its quality, as there is an increase in the technogenic load. At the same time, there are increasing possibilities for introducing resource-saving and environment-friendly technologies and the level of environmental culture among the population.

¹ Water matters: the Mayor's draft water strategy. March. Draft for consultation with the London Assembly and functional bodies. Greater London Authority. London. URL: <http://www.london.gov.uk/mayor/environment/water/index.jsp> (access.: 19.08.2018).

© *Skorokhod Iryna* – Ph. D. In Economics, Associate Professor of International Economic Relations and Project Management Department, Lesya Ukrainka Eastern European National University.

According to H. Anisimova, economic growth should be accompanied by adequate social transformations and contribute to solving the problem of improving environmental quality¹.

The main principle of ensuring environmental security in the EU is the transition to environmentally balanced models of production and consumption and the elimination of relations between economic development of the region and environmental degradation.

According to the *National Security Concept of Ukraine* approved by the Verkhovna Rada of Ukraine, environmental security is considered as an integral part of the state's national security². At the same time, among the many issues related to the provision of environmental security, the urgent task is to develop a national strategy for optimizing the use of natural resources in the context of market transformations and implementation of the Association Agreement with the EU.

We agree with V. Kravtsiv that environmental security is a public good, which has such features as the priority of environmental security, because it is a mandatory attribute of human rights and freedoms and it is included to the minimum standard of life support; the collective nature of the environmental security assignment, that is environmental security, knows no boundaries and cannot be the object of any property (neither private nor state); uncertainty of quantitative and qualitative parameters of environmental security, i.e. knowledge about the limits of ecological systems stability, and about dynamics and consequences of their changes¹.

The definition of the term “environmental security” is reflected in Table 1. Based on the theoretical views of various scientists to define

¹ Anisimova H. V., Skorobohatova N. V. Statystychnе doslidzhennia ekolohichnoi skladovoi stalohoro zvytku rehionu. Visnyk Zhytomyrskoho derzhavnogo tekhnolohichnogo universytetu. 2011. № 2 (56). Ch. 2. P. 194–199.

² Pro Kontseptsiiu natsionalnoi bezpeky Ukrainy: Postanova Verkhovnoi Rady Ukrainy vid 16.01.1997 №3/97-VR. Vidomosti Verkhovnoi Rady Ukrainy. 1997. № 10. St. 85.

¹ Kravtsiv V. S., Zhuk P. V. Kontseptualni zasady formuvannia mekhanizmu rehuliuвання ekolohichnoi bezpeky u transkordonnomu rehioni. Rehionalna ekonomika. 2015. № 4. S. 66–72.

the term of environmental security, there are the following levels: international, national, regional, micro level.

Table 1

Definition of the term “environmental security”

<i>Scientists</i>	<i>Definition</i>
1	2
A. Kachinsky, G. Khmil ¹	Ensuring protection of the vital interests of man, society, environment and the state from actual or potential threats posed by anthropogenic or natural factors
V. Lipkan ²	The component of national security and the process of managing the national security system, in which state and non-state institutions provide environmental balance and guarantee protection of the population’s habitat and the biosphere as a whole
Zh. Poplavska ³	The ability of specific enterprises to withstand the environmental risks that may arise due to violations of current environmental legislation
O. Prokopenko, S. Illiashenko ¹	The state of environment, which provides conditions for functioning, reproduction and development of present and future generations of people at a certain level
P. Skripchuk ²	It provides protection of vital interests of man, environment and state from the real or potential threats created by anthropogenic or natural factors to the environment

¹ Kachynskiy A. B., Khmil H. A. Ekolohichna bezpeka Ukrainy: analiz, otsinka ta derzhavna polityka/Rada Nats. bezpeky i oborony Ukrainy; Nats. in-t strateh. doslidzhen. Kyiv, 1997. 119 s.

² Lipkan V. A. Natsionalna bezpeka Ukrainy: navch. posib. 2-he vyd. Kyiv: KNT, 2009. 576 s.

³ Poplavska Zh. V., Poplavskiy V. H. Ekonomichni aspekty ekolohizatsii. Visnyk NAN Ukrainy. 2005. № 10. S. 26–34.

¹ Prokopenko O. V. Ekolohizatsiia innovatsiinoi diialnosti: motyvatsiinyi pidkhid: monohrafiia. Sumy: VTD “Universytetska knyha”, 2008. 392 s.

² Skrypchuk P. M., Bondar O. I., Rybak V. V., Matviichyk L. A. Otsinka ekolohichnoi bezpeky osushuvanykh silskohospodarskykh zemel: monohrafiia. Rivne: NUVHP, 2009. 334 s.

1	2
E. Khlobystov ¹	An integral part of national security; a certain state of productive force development, regulatory and legal relations in a society that can provide a sustainable reproduction of natural resource potential, favorable environmental conditions for the life of the population
A. Shmal ²	The mechanism which ensures the permissible negative impact of natural and anthropogenic factors of ecological hazard on the environment and the man

International environmental security is a systemic and multilevel process of integration, regionalization, liberalization and democratization of international relations, which components form a complex of environmental conditions of human existence and influence the functioning of environmental institutions and organizations, causing the creation of special relations between countries in order to prevent environmental hazards¹.

Limited natural resources lead to contradictions and conflicts that impede socio-economic growth. Today, environmental conflicts can be defined as conflicts at the interstate level, caused by incompatible interests of the parties, as well as their struggle for property rights, the use of or control over the resources and services of the environment. According to forecasts, the number and scale of environmental conflicts will increase.

A very critical situation is connected to use of water resources. Today, there is an increase in the number of “water” conflicts. According to the UN estimates, by 2030 more than 2 billion people on the planet may remain without access to clean water, and a large

¹ Khlobystov Ye. V. Ekolohichna bezpeka transformatsiinoi ekonomiky/vidp. red. S. I. Dorohuntsov; RVPS Ukrainy NAN Ukrainy. Kyiv: Ahentstvo “Chornobylynterinform”, 2004. 336 s.

² Shmal A. H. Metodolohiya stozdaniya natsyonalnoi sistemy ekolohicheskoy bezopasnosti. Ekolohicheskyy vestnik Rossii. 2005. № 7. S. 57–59.

¹ Bokhan A. V. Mizhnarodna ekolohichna bezpeka: suchasni vymiry ta pryntsyipy realizatsii. URL: <http://www.economy.nayka.com.ua/index.php?operation=1&iid=42> (access.: 19.08.2018).

number of countries will face water shortages, which inevitably will lead to an increase in domestic and international conflicts¹.

The increase in disproportions between the growth of the population of the planet, the needs of people and the limited capabilities of the biosphere with the maintenance of the welfare of humanity are among the main reasons for the increase of the number of environmental conflicts and the scale of their consequences.

The main reasons for the aggravation of the global environmental situation include: the excessive use of land resources; increase of volumes of emissions into the Earth's atmosphere; pollution of the World ocean through the extensive activities of multinational corporations; increase in population of the world; growth of volumes of energy consumption; an increase in volume of industrial and domestic waste. That is why the enhancing international cooperation in the environmental field becomes an urgent necessity.

The priority directions of ensuring environmental safety in the EU are the next: strengthening international cooperation on the rational use of natural resources; protection of flora, fauna and environment of their being; reducing emissions of air pollutants, such as hydrocarbons, and those that lead to the formation of photochemical oxidants.

The direct relations between regions of different countries, especially in the field of environmental security are an important form of interregional cooperation in the EU Member States.

Threats to national interests and national security in the ecological sphere of countries include:

- increased risk of man-made emergencies and natural disasters;
- irrational, exhausting use of mineral raw materials;
- deterioration of the ecological status of water basins, aggravation of the problem of transboundary pollution and reduction of water quality;
- uncontrolled import of environmentally hazardous technologies, substances, materials and plants, pathogens of diseases, which are dangerous to people, animals, plants and organisms;

¹ The 7th World Water Forum: World Water Council Final Report. Istanbul, 2015. URL: <http://www.worldwatercouncil.org/en/publications/final-report-7th-world-water-forum> (access.: 21.09.2018).

- ineffectiveness of measures to overcome the negative consequences of military and other environmentally hazardous activities;
- the danger of man-made emergencies, including nuclear and biological terrorism;
- outdated and insufficient efficiency of complexes for the disposal of toxic and environmentally hazardous waste¹.

Interregional ecological safety, in our opinion, is defined as a kind of interregional cooperation in which conservation, rational use, reproduction and improvement of the quality of the environment are ensured, and in which the national activities of certain states exclude the environmental damage to other countries.

Interregional environmental security can also be considered as a process of integration of interregional relations, which stimulates the creation of special modes of relations between countries in order to prevent environmental threats. Interregional cooperation is important because it provides environmental security to all EU Member States. It lets take into account the following activities in this area:

- to conduct research in the field of nature management, in particular, prospects and challenges of the development of traditional and alternative energy, dynamics and forecast of emissions, discharges, burials and disposal of pollutants and wastes, etc.;
- develop and implement a system of observation at the inter-regional level: the development of new surveillance systems, etc.;
- to create an integrated monitoring system;
- to develop theoretical and methodological principles of research of ecological changes on the basis of a combination of achievements in different branches of knowledge;
- to create and maintain complex interregional programs in the field of environmental policy, to provide financial and scientific support for regional intergovernmental projects, etc.¹

¹ Lipkan V. A. National Security of Ukraine. Tutorial. Condor, 2008. 552 s. URL: http://libfree.com/166481742politologiyianatsionalna_bezpeka_ukrayini_lipkan_va.html (access.: 21.09.2018).

¹ Kakutich P. Yu. International Ecological Safety: Issues of the Theory and Methodology of the Research. Ecological Management in the General Management System. Sumy: SSU. 2010. P. 1. P. 112–114. URL: <http://essuir.sumdu.edu.ua/bitstream/123456789/12410/1/1.doc> (access.: 21.09.2018).

The main institutions involved in environmental security at the international and interregional level are:

- the Organization for Economic Cooperation and Development (OECD); it belongs to a group of international organizations involved in the prevention of serious chemical accidents and the limitation of their consequences. It organizes workshops, publishes, makes decisions and recommendations on the field of environmental security;
- the International Labor Organization which prepares international conventions on the prevention of serious industrial accidents, which are included in the category of acts of international law;
- UN Economic Commission is preparing documents on the nature of international conventions, for example, on the transboundary effects of industrial accidents.

The formation and development of the sector of environmental goods and services is a special condition for ensuring environmental security in the EU countries. As the development of the market for environmental goods and services stimulates the rational use of natural resources, it helps to minimize the negative consequences of disturbing the ecological balance of natural systems, to improve the methodology and practice of assessing losses caused by deterioration of the quality of resources, etc., that has a direct impact on the state of the market of natural resources.

The link between the market for environmental goods and services in the technology market is specific. The development of energy- and resource-saving, small- and non-waste technologies actually means the simultaneous development of the market of environmentally safe goods and services, because the market of the corresponding technologies or technological resources is the market of the products of the sector of environmental goods and services. In modern conditions, the introduction of any modern technological line requires the complete set of its appropriate environmental equipment, which, in turn, forms the demand for products of the eco-industry¹.

¹ Petrushenko Y. M., Sadovyi V. O., Tarasenko S. V. International experience of formation of the market of ecologically safe goods and services. Mechanism of regulation of economy. 2009. № 4. P. 136–141.

According to the European Commission's methodology, two groups of services are environmentally friendly: specific environmental services and services related to the protection of the environment.

Specifically, environmental services consist of the results of a specific activity related to the protection of the environment or resource management. It is worth noting that the characteristic activity (according to the National Accounts system used in Europe and the OECD countries) is one that is typical of the research subject; in the case of the environmental goods and services sector it is an activity which purpose is to pursue environmental goals. This type of service is divided into: environmental protection services which purpose can be prevention of pollution or degradation of the environment, reduction, elimination of pollution, environmental education, management and so on; resource management services which purpose can be to prevent the exhaustion of natural resources, reduce their use, administration, education, etc.

As for the second group, the services related to environmental protection can be exclusively services or services related to the goods, which ensure their implementation. According to the system of national accounts, such services are services that are directly used, or are not used anywhere else, except for environmental protection or resource management. These services can be divided into: environmental protection services; resource management services; products for the provision of environmental protection services; products to reduce the use of resources or to provide resource management services¹.

According to experts, the volume of operations on the global eco-industry market is 600 billion euros annually, where almost a third of the market falls on the EU. The United States and Japan also occupy a significant niche in the global environmental market. Almost 40 % of the market is comprised of renewable energy technologies and waste management technologies and utilization. In the world market, there

¹ The environmental goods and services sector is a data collection manual. Luxembourg: Office for Official Publications of the European Communities, 2015. 196 p.

are such main competitors of the EU in the eco-industry as Japanese, Taiwanese and Chinese participants. The USA is a competitor of the EU in the field of bioplastmas and bio-fuel technologies¹.

Two segments of the world ecological market are allocated:

1. The market in developing countries, where demand for clean drinking water is actively formed and the main environmental service is the treatment of waste water;

2. The market of developed countries, where more complex and costly environmental products and services are realized.

A significant growth of the global eco-industry market is forecasted in the future. The importance of efficient use of resources and energy, the application of tough environmental rules in developed countries, which has led to the significant development of environmental industries around the world, is increasing.

Developing countries and countries with a developed market economy have formed the sector of environmental goods and services or the EGS sector. At the same time, a new environmental policy and rules for the participation of international business entities are being formed. The EGS sector produces such categories of environmental products as environmental services, ecological production, more efficient use of resources and environmental technologies.

The sector of environmental goods and services consists of producers of goods and services aimed at the protection of the environment and the rational use of natural resources. To assess the volume of production of environmental goods and services, data are used on national producers of economic activities that create environmental products within the *European System of National and Regional Accounts (ESA)*.

It is quite difficult to assess in a cost-effective manner the level of environmental services for ecosystems, where benefits will be

¹ SMEs in the environmental goods and services market: identifying areas of opportunity, policies and instruments. Case studies: Argentina, Chile, Colombia and Mexico/ Commission for Latin America and the Caribbean (ECLAC). URL: http://www.eclac.org/publicaciones/xml/2/26832/LCW42_en.pdf (access.: 21.09.2018).

available in the future. A comparative assessment is used to determine quantitative advantages and shows that one option is better than the other. It also takes into account the opinion of the population living in the ecosystem through a survey. The result of providing ecosystem services includes clean air and water and, in general, raising the environmental quality. You can partially set market prices for individual services, such as freshwater cleaning, etc. It is also worthwhile to estimate the losses incurred to the population, in particular, the number of deaths from floods or the impact on the health of contaminated air. But sometimes the costs and benefits are quite difficult to compare. Therefore, a powerful financial planning tool or a model for comparing the benefits of alternative options is used to evaluate them¹.

Environmental goods and services are provided for the purpose of preventing, reducing and eliminating environmental pollution, as well as maintaining and preserving natural resources. This sector is important and promising in the EU and its development can reduce environmental pressures, create new jobs and be economically viable for business.

In the EU the increase in energy expenditure in all areas is an important factor for the development of the eco-industry. Thus, many innovations and technological changes are aimed at reducing energy use (energy efficiency), reducing the use of natural resources (resource efficiency), efficient management of water resources and waste. The share of the EU countries in the global market for environmental goods and services in 2017 is shown in Fig. 1.

In the last decade, energy intensity in the EU countries has improved. However, significant differences remain and there is a gap between the EU-28 and the EU-15. The general trend in the EU-15 indicates the introduction of more energy-efficient technologies and production methods, promoting energy conservation and raising energy prices.

¹ Hassan Masum, David Zaks, and Chad Monfreda. Ecosystem goods and services series: valuation. URL: <http://www.worldchanging.com/archives/006048.html> (access.: 21.09.2018).

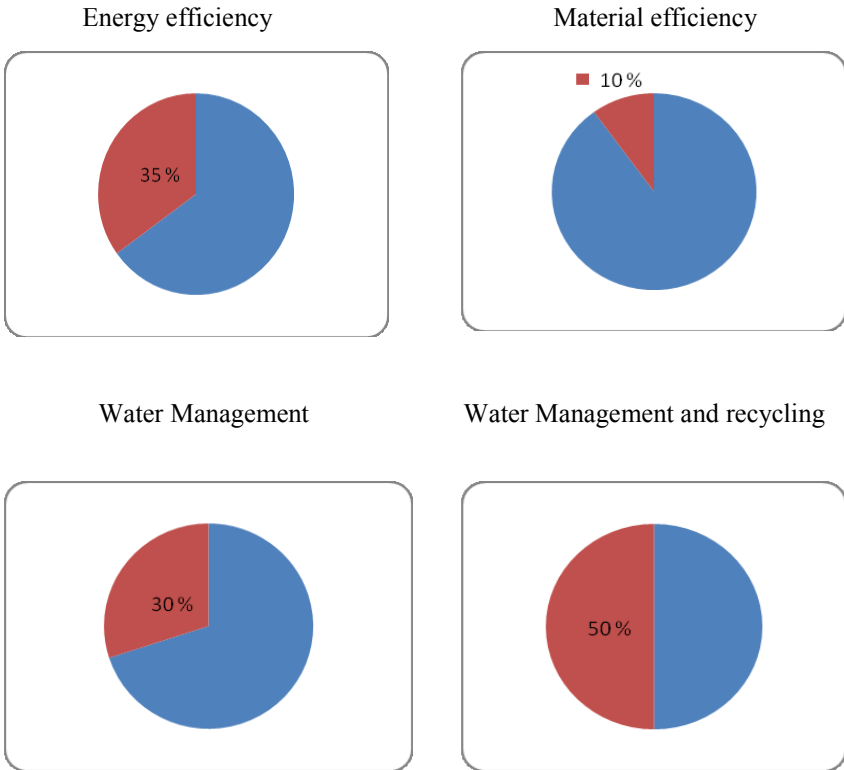


Fig. 1. *The share of the European ecological market in the global market for environmental goods and services in 2017¹*

With regard to the introduction of environmental innovations in European countries, the championship is held by Great Britain, Germany and the Netherlands, which demonstrates to the existing powerful inventive and innovative potential.

The US, Germany, Japan and other countries do not just compete with each other on their own markets, they also compete in markets of third countries, especially developing ones. Increased competition in

¹ The EU eco-industry in the world. URL: http://ec.europa.eu/environment/enveco/eco_industry/pdf/report%20_2017_competitiveness_part1.pdf (access.: 21.09.2018).

the market for environmental goods and services is due to the active participation of Asian countries that have been able to find a niche and are actively involved with exports. In particular, China has become a market leader in certain segments (for example, solar cells).

According to Eurostat, in 2017 production of the EGS sector amounted to 0,4 % (Finland), 1,3 % (Spain), 7,5 % (Sweden), 11,5 % (Austria) of the country's GDP. The highest figure can be attributed to the completeness of Austrian data, the lowest – limited to Finnish data (only renewable energy production and energy saving)¹.

There are three ways to implement environmental products. The product can be sold on the market, made for personal use and provided for use free of charge or at a negligible price (services provided by public authorities, such as supervision and control over the use of natural resources). In European countries, a significant proportion of the EGS sector is a market activity.

The volume of goods and services aimed at protecting the environment in 2017 ranges from 0,3 % of GDP (Finland) to 3 % of GDP (Austria), while goods and services aimed at the rational use of natural resources on the European market is comprised of 0,04 % (Italy) to 7,1 % (Austria) of GDP. The difference in the indicators of the environmental sector between countries is due to the lack of statistical data (for example, Italy reported only the use of water resources, while Austria included all data on the provision of goods and services aimed at the sustainable use of natural resources).

Environmental products and services related to environmental protection in the EU are made to stop and prevent air and water pollution, waste recycling, noise reduction, etc. Products related to resource management are aimed at the rational use of water, forest, energy resources (including alternative energy production) and mineral resources (including their processing).

The analysis showed that in the EU, about 72 % of the total output in the EGS sector involves waste management, wastewater

¹ EGSS production, % of GDP, by type of activity (market, non market, ancillary), latest available year. URL: http://ec.europa.eu/eurostat/nui/show.do?dataset=env_ac_egss2&lang=en (access.: 21.09.2018).

management and rational use of energy resources, that is, environmentally-specific services.

In 2017, the total amount of environmental products and environmentally specific services in Austria reached 65 % (almost 21 billion euros). The production of environmental services amounted to about 9,5 billion euros, and the production of environmental goods – 11,3 billion euros. Almost half of the environmental services (4,5 billion euros) were related to managing energy resources, for example, services to reduce energy consumption. In the Netherlands, 28 % of the EGS-sector amounted goods and services related to the use of energy resources. Services in the field of waste and sewage management are in second and third positions, respectively¹.

The volume of the environmental goods and services sector in the European Union is determined in accordance with the classification of environmental measures (CEPA) and the classification of resource use measures (CReMA). The data are collected and distributed using the following division. CEPA classification includes: atmospheric air and climate protection, including climate protection and ozone layer; wastewater management; waste management; protection and restoration of soils, underground and surface waters; reduction of noise and vibration; protection of biodiversity and landscapes; radiation protection; environmental research and development, including other environmental measures.

The classification of CReMA includes: the use of water resources; forest resource management; low-cost attitude towards flora and fauna; rational use of energy resources; management of mineral resources. However, there is no internationally agreed standard classification of resource management activities. Nevertheless, the classification of Resource Management developed in the EU environmental goods and services sector can be used to determine its overall volume, provided that countries are fully accounted for.

Relations between neighboring states are largely dependent on effective cooperation in the environmental sphere, which, in turn,

¹ Environmental goods and services sector. URL: http://epp.eurostat.ec.europa.eu/statistics_explained/index.php/Environmental_goods_and_services_sector (access.: 21.09.2018).

depends on the level of environmental education of the population, culture and education of the neighboring countries. The imbalance in environmental education, the discrepancy between levels of economic and socio-political development between states often lead to international misunderstandings.

Solving ecological problems of a global scale requires concerted action by government and non-governmental organizations, cooperation between states and regions, and the development of long-term environmental policy. Therefore, environmental security is increasingly becoming an integral part of global security¹

Environmental protection of transboundary areas should ensure international protection and improvement of the environment, especially in areas of high-waste mining, as well as in areas of radioactive contamination and extreme natural phenomena (floods, earthquakes, landslides).

Problems of international ecologization of the economy, as well as the need for cooperation between neighboring countries, show that significant attention should be paid to the study of the ecological state of the border areas in particular. To ensure the development of Ukrainian-Polish cross-border cooperation in the environmental sphere and the formation of a system of environmental safety of cross-border territories at the regional level, it is necessary to: establish partnerships in the ecological and economic sector; intensify ecological and economic international cooperation at various transboundary levels (micro, meso, macro); create a network of cross-border information ecological centers; influence the environmental education of the population of the border regions of neighboring countries, etc.

Thus, despite existing interstate problems of a political, legal, economic or other nature, ensuring the ecological safety of cross-border territories is urgent today. It is precisely in cross-border regions that environmental security must be ensured; it depends on measures

¹ Maslova-Lysyckina N. Ekolohichna bezpeka: stratehiia dovhostrokovoho vyzhyvannia. URL: <http://www.ucipr.kiev.ua/modules.php?op=modload&name=News&file=article&sid=1083&mode=thread> (access.: 21.09.2018).

taken not only by one country but also by neighboring states. This is especially needed in areas polluted by industrial and other wastes.

In the current ecological and socio-economic situation in the EU countries, in order to address regional environmental security issues, it is necessary:

- to form an ensuring system of environmental and social security with a view to reducing internal and external environmental conflicts;

- to form regulation mechanism of social, economic and environmental processes at internationally levels;

- to introduce environmentally friendly safe production technology, that will contribute release of environmentally friendly clean and competitive products;

- to create an effective system of prevention and response to emergency situation of any nature;

- to intensify integration of individual states into the European ecological system security.

Thus, in order to solve environmental threats in European countries, it is necessary to intensify efforts towards the formation of regional environmental security. To overcome environmental problems effectively, the most advanced forms of international cooperation based on common criteria, universally accepted universal approaches are necessary.

Further research on environmental security in the European Union should focus on studying the experience of creating an ecological market in certain foreign countries, as well as the role of cross-border cooperation in enhancing the development of the interregional market for environmental goods and services.

Chapter 4

ECONOMIC SECURITY

4.1. Economic Instruments for Environmental Security and Sustainable Development

Wasiuta Aleksander

Efficient economic instruments, which control proper utilization of environment, are important aspects of ecologization. There are two types of such economic mechanisms and instruments.

- general instruments and mechanisms which are effective for the whole country's economy, its sectors and branches (on the macro level);
- specific instruments and mechanisms, directly connected with environmental protection and natural resources usage (the use of own specific mechanisms of utilization of environment)¹.

Nowadays working out the effective concept of economic mechanisms, which manage utilization of environment, is possible according to following rules:

1. Effective utilization of environment and environmental protection can be developed and realized only after finding such concept for all separate sectors and whole economy.

2. Economic mechanism of utilization of environment should become an integral part of "global" economic mechanism; it can't be local and include only nature complexes and branches of industry which exploit nature. Mechanisms of protection of environment should be correlated with other economic mechanisms, which operate in other stages of processing resources – a good plan, connecting the primeval resources with final goods.

3. Economic mechanism of utilization of environment should be formed as synthesis for diverse fields of industry, and cover many

© *Wasiuta Aleksander* – dr, Poznań University of Life Sciences, Poland, Faculty of Economics and Social Sciences, Department of Economics.

¹ Wasiuta O. A. Problemy ekologicznoji strategii Ukrainy w konteksti globalnogo rozwytku. Ternopil: Gal-Druk, 2001. S. 238.

geographical regions. This cannot be done without taking into consideration basic economic processes which function in consumer society¹.

Any undertakings connected with environmental protection, require investment, but if those costs are not incurred then society has to pay for repair of environmental damages. Those expenses are very important in calculating ecological losses. We consider the first expenses to be the ones incurred on protection of environment in the sites where there is potential hazard. Second expenses deal with economic losses that are the result of not taking action connected with environmental security. It includes compensation for loss of resources, and expenses for repair of devastation and expenses for predicting feasible losses in the future.

Giving characteristics of economic mechanism in solving ecological problems, Ukrainian scientist O. Wekłyč noticed that economic mechanisms in environmental protection, exist in developed countries, and contain two major groups of ecological statutory regulations for industry².

The first group is oriented towards enforcement of some regulations for pollutants of environment. It is a unified system of regulations: money for waste, for storage or distribution of pollutants, charges for deterioration of natural environment, environmental taxes from company profits, when the production involves use of substances dangerous for the environment, compensations for breaching environmental policies, or environmental standards, for causing hazard to human health or flora and fauna.

The second group of regulations, which activates undertakings dealing with environmental protection, is meant to encourage introduction of the improvements to the present state of environment. This

¹ Wasiuta O. A. Problemy ekologicznoi strategii Ukrainy w konteksti globalnego rozwytku. Ternopil: Gal-Druk, 2001. S. 238.

² Wekłyč O. O. Analiz efektywnosci witeczynianogo ekonomicznego mechanizmu pryrodokorystuwannia szczodo ideistałogoro zwytku. Ekonomiczni reformy Ukrainy w konteksti perechodu do stałogoro zwytku: materiały 2-ch konferencij ta rekomendacii doproektu Nacionalnoi strategii: Instytut stałogo rozwytku. Kyiv: Intelsfera, 2001. S. 95.

group is the strongest instrument for improving the state of environment. On the one hand it is economically attractive for firms, which use natural resources; on the other hand, it creates possibility of converting to innovatory technologies, from monitoring the environment towards prevention. State subsidies, reduction of taxes, low-interest loans, depreciation of machines and equipment used for environmental protection, buying and selling of pollution permits, encourages the firms to consider pro-ecological solutions. Those economic measures create favourable conditions for organizing actions aiming at prevention and improvement of the state of natural environment¹.

All subsidies granted to firms for prevention and improvement of the state of natural environment come from the Budget or special ministerial funds. For example, in Austria there is natural environment fund, in Sweden – fund for prevention of pollution caused by burning of fossil fuels; in Turkey – fund for prevention of pollution of environment, and so on. Institutions, which finance and distribute subsidies, are able to function according to loan-financial methods. In majority of countries, there is a law, which stops the financial support when the requirements, which enable the use of subsidies, are not met. Fines for waste and bonuses for use of technologies which are environment friendly are “soft“ market instruments of economic policy, which is used by more developed countries such as the USA, Japan, Sweden and others. They are not greatly acknowledged in Europe².

There are three distinguished economic mechanisms for regulating the nature usage processes:

– “soft”, pushing mechanism – liberal for ecology. It is the most general limitation for industrial development without inhibiting it. This type of economic mechanism is directed towards decreasing negative impact on environment. It does not do much to eliminate the

¹ Weklycz O. O. Analiz efektywnosci witeczynianogo ekonomicznego mechanizmu przyrodokorystuwannia szczodo ideistalogo zwytku. Ekonomiczni reformy Ukrainy w konteksti perechodu do stalogo zwytku: materiały 2-ch konferencji ta rekomendacji doproektu Nacionalnoi strategii: Instytut stalogo rozwytku. Kyiv: Intelsfera, 2001. S. 95.

² Wasiuta O. A., Wasiuta S. I. Filipcuk G. G. Ekologiczna polityka: nacionalni ta globalni realii: U 4-ch tomach. Czerniweci: Zelena Bukowyna, 2003–2004 rr. T. 4. S. 261.

cause of the deterioration, it has little impact on the rate and scale of the industrialization. This mechanism is typical for industry-based development. This mechanism is being implemented in Ukraine;

– mechanism which encourages ecologically balanced and environment friendly industries and types of activities. The market principles form the basis of functioning of this mechanism. This mechanism encourages the increase of production, which uses new technologies; it promotes better utilization and protection of natural resources. Restrictions for farming in the country side are an example of such mechanism;

– “fixed”, top-down mechanism, which is based on administrative and market instruments. Its stiff tax and loan policy hinders some branches of industry. This type of mechanism is representative for stable socio-economic communities¹.

In reality those mechanisms do not exist separately and are tied together. It all depends on specific technologies, production and a type of business activity. For example, in the near future, if we want to promote ecological development, there will be the need for introducing both encouraging and fixed mechanisms, which will regulate functioning of separate firms and will be oriented towards final results.

The most important current problems of ecological policy is introducing reforms in tax system to promote ecological taxes, and strengthening the use of traditional instruments such as: the protection of water and forest complexes which are of key importance for efficient functioning of the Earth.

Instruments for environmental and resources management can be categorised in many ways; for example to what extent they are voluntary, whether they are centralized, what goals they aim to achieve, whether they are integrated with each other, whether they are in agreement with market mechanisms. Polish scientists divide the instruments of managing the environment into three groups²:

¹ Ekonomiczna encyklopedia: U 3-t. T. 3. Kyjiw: Akademia, 2002. S. 631.

² Field B.: Environmental Economics. An Introduction. New York: McGraw-Hill, 1994. P. 207–210, 226–246; Verbruggen H. The Trade Effects of Economic Instruments. Environmental Policies and Industrial Competitiveness. Paris: OECD, 1994. P. 55.

- 1) decentralized instrument;
- 2) command and control regulation – CAC;
- 3) incentive-based regulation – IB (economic instruments).

The decentralized instrument consists of general legal articles, for example, civil liability, criminal responsibility and property law. This group includes also moral persuasion by means of information and communication with different social groups.

The command and control regulation is instruments of administrative-legal character such as environmental standards, limits of emission and technological standards.

The range of incentive-based regulation – IB (economic instruments) is quite broad. It includes:

- 1) ecological charges (for emission within limits and for industrial use of environment);
- 2) ecological taxes (production charges);
- 3) deposit-reimbursement system;
- 4) transferable entitlements;
- 5) subsidies (grants, loans and tax reduction);
- 6) pledges;
- 7) fines¹.

The group of means of coercion includes such instruments as: fees, ecological taxes, deposit-reimbursement systems, transferable entitlements, standards, permit and so on. The group of voluntary instruments includes voluntary trade commitments, elements of ecological management (environmental management in a firm, Agenda 21), in so far as those actions are regarded as separate instruments.

Instruments, which are meant to accomplish local goals, are the fees and NO₂ and SO₂ limits, sewerage solid waste management, some ecological taxes, deposit-reimbursement system, and some spatial planning regulations and geological and mining laws. Among instruments concerning global issues are taxes for emission of CO₂ and taxes for emission of other greenhouse gases.

¹ Barde J.-Ph. Polityka ochrony środowiska i jej instrumenty. *Ekonomia środowiska i zasobów naturalnych* / H. Folmer, L. Gabel, H. Opschoor (red.), Warszawa: Wyd. Krupski i S-ka, 1996. S. 225.

According to market requirements the highest place in the hierarchy is taken by transferable entitlements, deposit-reimbursement systems, ecological taxes and fees. The administrative-legal instruments are of the highest priority.

Those tools can be classified according to degree of complexity. We regard fees and ecological taxes to be simple instruments and transferable entitlements, spatial planning, ecological management to be complex instruments¹.

Obviously, between separate instruments and groups of instruments there are important differences not only in the qualities and in structure but also in impact they have on the producers and consumers as well as on economy and society. There are also differences in their contracts and possibility of making independent decisions. We have to remember that just like there is instability of market as far as the environmental protection is concerned, there is instability of government meddling in this branch of economy (government failure). The main causes of such situation are considered to be the following:

- failure in enforcement of regulations and legal instruments;
- lack of adequate tools for constant and precise monitoring of environment;
- inertia, which results in the lack of flexibility and adequate reaction while working on creating ecological policy;
- lack of coordination of ecological policy with planning for other branches of industry, responsibility is not evenly divided among different institutions².

Possibility of states meddling with ecological policy can take the form of direct regulating, economic pressure, or uncertainties in management in environmental protection.

The ecological charges for emission are set according to the quantity and quality of emitted substances. It becomes a kind of substitute for charges for possibility of utilization of environment. It

¹ Jeżowski P. Związki ekonomii z ochroną środowiska. URL: http://www.pesk.org.pl/ekokonf_3.html (access.: 21.09.2018).

² Market and Government Failures in Environmental Management. Paris: OECD 1992. S. 72.

also includes charges for storage of waste in the rubbish dump. Charges for economic utilization of parts of environment are a variant of ecological charges, for example pumping water, utilization of water, use of natural resources, (charges for water, concession fees, and exploitation fees). The general specificity of ecological charges is based on the fact that they do not burden accompany directly, but are merely a part of its costs. Ecological charges are based on the “polluter pays” principle. We can see the influence of ecological taxes on final consumers of goods and services by looking at prices.

As far as economic instruments are concerned especially ecological charges, major role is played by some municipal rates and rates for use of energy. They are indirect methods, but since the use of energy and most municipal services are closely connected with environment, they are important instruments keeping the balance between demand for natural resources and environmental services and emission on pollution. Sometimes ecological charges contain charges for environmental services (for example for disposal and recycling of solid and liquid waste)¹.

Fines are most often paid for devastation of natural environment, or for exceeding a limit (breaking rules of utilization of environment). Extorting character of fines is based on the fact that the firm cannot include it in its expenses, because it charges company’s financial result.

Very often instead of using the phrase “ecological taxes” we use the phrase “productive charges” (ecotaxes). They are closely related to ecological taxes, but are constructed differently; ecological surcharge is added to prices of products which are harmful for environment.

Ecological taxes are based on new ecological economy: subscribing negative environmental effects rather than the products. In developed countries with market economy the role of ecological taxes is increasing and it stimulates the economy. They are supposed to deal with two tasks:

- to make the value of production more proportional to expenses;

¹ Jeżowski P. Związki ekonomii z ochroną środowiska. URL: http://www.pesk.org.pl/ekokonf_3.html (access.: 21.09.2018).

– to support policy, where losses are paid by the polluters, not by the society as a whole (realization of “polluter pays” principle).

The state has some impact only at the beginning, having influence only on the prices. All the rest is done by market mechanisms; they influence the behaviour of producer and consumer, the demand and supply, depending on the state of ecology, etc.

In general, tax reduction for producers can be estimated only taking into consideration the actions taken for preservation of environment. When there are some truly effective undertakings for preservation of environment there can be reduction of taxes profit, for example, lowering it by the amount which a firm has reinvested in those undertakings.

In some cases there can be no taxes. For example, ecological funds are tax free. This policy can be applied for profits, gained by recycling of used products and waste materials, for environmental tenders.

When the economy is set on the way of constant development, the tax system should expect the raise of taxes for branches of industry, which exploit the environment.

The regional aspect is also very important. In regions, where environment is more polluted, the tax system should be stricter compared with the one of ecologically clean regions. Reduced taxes can be given to a state and private firms, which produce machines and products which are environment friendly, or which provide ecological services (building and reconstruction of complexes which have something to do with preservation of natural environment).

Increase of taxes is reasonable when we assess production processes which are hazardous for environment. To give the factory time needed for converting the production process to make it more environment friendly, progressive taxation must be introduced.

Besides, ecological taxes are a much more reasonable solution than ecological fees, because they let examine the products which are generally used.

As it is emphasized by Polish scientist P. Jeżowski, the ecological fees (for emission) make sense for centralized production centres and larger factories. The ecological fees assume that there is monitoring of

emission and the use of environment, which calls for additional expenses. When we have small and scattered sources of emission, this monitoring is practically impossible, so the fees have a restricted use. Ecological taxes are discriminatory in the sense that they affect a large producer and concentrated production, because a small producer can avoid those charges¹.

There are also special mechanisms and instruments, which are directly connected with environmental protection and exploitation of natural resources, in particular economic mechanisms. For better efficiency those instruments should be used in those branches of state's economy where those methods cause less losses in comparison to direct actions taken for environmental protection.

We can distinguish following elements of economic mechanisms which regulate the use of natural environment:

- charges for polluting the natural environment;
- charges for the use of natural environment;
- system of economic stimulants of actions connected with environmental protection (taxes, subsidies, cheap credits for undertakings which have something to do with environmental protection, fast depreciation of environmental funds, ect.);
- creating the market of environmental protection reserves;
- improving the prices by including the ecological factor, especially for production in those branches of industry which exploit natural environment;
- ecological funds;
- ecological programmes;
- transferable entitlements;
- system “deposit-repayment”;
- ecological insurance.²

In general, active introduction of payment for exploitation of natural environment should enhance more adequate consideration of

¹ Jeżowski P. Związki ekonomii z ochroną środowiska. URL: http://www.pesk.org.pl/ekokonf_3.html (access.: 21.09.2018).

² Wasiuta O. A., Wasiuta S. I., Filipczuk G. G. Ekologiczna polityka: nacionalni ta globalni realii. U 4-ch tomach. Czerniweci: Zelena Bukowyna, 2003–2004. T. 4. S. 206.

ecological factor in economy and rational use of natural resources. Besides there is a need for reforms in whole tax system. In those countries where the tax system is distorted, introduction of new taxes and strengthening of traditional ecological taxes can give double profits. The reforms of tax system are about the improving of the state of environment as far as economic effects and social effects are concerned, and decreasing the negative impact on economy and social sphere created by distorted taxes. This concept of reforms of tax system is called the “double dividend”.

At the *First International Congress for Economists* which took up the subject of environment and natural resources in 1998, a group of scientists presented works devoted to “double dividend” that enabled drawing following conclusions:

- taxes for pollutants of environment in developing countries are important elements of ecological policy (it is needed not only to raise taxes but to reform the tax system as a whole based on the concept of “double dividend”);

- reforms of a tax system, for example, in Ukraine based on “double dividend” can give positive results (as far as economy, ecology and people’s welfare is concerned). That is why there is a need for drawing financially balanced model, which would strengthen encouraging role of the taxes and weaken the negative impacts where their role is distorted;

- in the conditions of weak competitiveness and under strong influence of trade unions on economy, effect of tax system reforms based on concept of “double dividend” can be minimal (the true results of putting the “double dividend” into practice can be only checked empirically)¹.

European experience, as well as the Polish one, shows that ecological taxes, together with taxes for production, which is hazardous for environment, are effective instruments of ecological policy where standard charges for pollution are higher then costs needed for prevention of ecological damages. Such ecological tax for leaded petrol was introduced in Sweden in 1988–1993 and resulted in reduction of

¹ Syniakiewicz I. Ekonomiczni instrumenty ekopolityki: teoria i praktyka. *Ekonomika Ukrainy*. 1999. № 10. S. 79.

contamination of environment by car fumes by 20 %¹. But we need to keep in minds that both taxes and pesticides need careful handling. Needless reforms of tax system often lead to undesirable changes in economy, which cannot be foreseen by the reformators.

Traditionally, economic sanctions for misuse of environment and natural resources are regarded as a legal mechanism of economic policy. In recent years many scientific papers have been written, the authors examine introducing economic sanctions for ecological harm as an instrument of economic environmental policy².

In economic literature economic sanctions for ecological harm are often wrongly considered as equivalent of ecological taxes, despite the fact that those mechanisms of ecological policy perform different roles. Ecological tax is to have stimulating and methodological function, and economic sanctions – stimulating and blocking functions and they have to function as an economic punishment.

Economic sanctions for ecological harm are expedient to implement in cases of breaking ecological standards. They have to bring full refund for ecological loss and be an instrument of economic punishment for misuse of natural environment and natural resources. We have to keep in mind that severe economic punishment in the case of industrial undertakings is risky and not appealing. In such a case most of the specialists consider not resorting to instruments of economic policy a better option. The creating of motivation for development of industry and better technology, which use the environment and natural resource wisely are preferable.

The fee for returned waste is an economic mechanism of ecological policy, which expects transformation of expenses from special funds to factories and institutions which introduced improvements and as a result reduced the amount of harmful waste in environment. At the first World Congress for Economists on environment and natural resources R. A. Hamilton (World Bank) proposed the creation of special national funds (ranging from 3 % of NPB) which should be

¹ Syniakiewicz I. Ekonomiczni instrumenty ekopolityki: teoria i praktyka. *Ekonomika Ukrainy*. 1999. № 10. S. 79.

² Syniakiewicz I. M. *Ekonomika pryrodokorystuwannia: nawczalnyj posibnyk*. Lwiw: IZMN, 1996. S. 156.

used for technological bonuses¹. Those funds are directed to the firms, which by introduction of environment friendly technologies achieved the improvement in the way they make use of environment and natural resources.

Ecological funds from outside the Budget (environmental protection funds) are important for financing conservation of environment. The main reason behind creation of those funds is having the Budget independent centralized source for financing environmental protection needs. Some of their goals are:

- financing and providing credits for environmental programmes and scientific-technical projects, directed towards improvement of state of environment and ensuring ecological safety of people;
- activation of financial supplies for undertakings and programmes connected with environmental protection;
- economic stimulation of rational utilization of environment, for bringing in clean technologies;
- supporting environmental education and ecological awareness.

Sources of financing ecological funds are mainly charges for storage, emission of contaminating substances, and for distribution of waste, mandatory fines for accidental contamination, mandatory fines for breaking environmental protection laws. Ecological funds gather financial reserves for the realization of ecological programmes, and enable shared financing of costs of conservation of environment. Without outside the Budget funds the solution of specific ecological problems would not be possible, especially with the chronic deficit in the Budget².

¹ Syniakiewicz I. Ekonomiczni instrumenty ekopolityki: teoria i praktyka. *Ekonomika Ukrainy*. 1999. № 10. S. 81.

² Wasiuta O. A., Wasiuta S. I., Filipczuk G. G. *Ekologiczna polityka: nacionalni ta globalni realii: U 4-ch tomach*. Czerniwec: Zelena Bukowyna, 2003–2004. T. 4. S. 227. Wtórny rynek długów utworzył się w 1982 roku wskutek rozwoju międzynarodowego kryzysu długów, który zapoczątkował Meksyk, deklarując niemożliwość obsługi własnych długów. Po raz pierwszy mechanizm konwersji długów został przyjęty w 1990 roku przez państwami-kredytodawcami Klubu Paryskiego, wskutek czego zostało rozszerzone koło zwykłych przedsięwzięć z wypłat oficjalnych dwustronnych

Ecological conversion of the external debt (or exchange of debts on environmental protection) is a new and perspective financial and economic instrument, which can play an important role in environmental protection. One of the forms of paying back the debts is conditional transfer from one kind of payment to another, for example, compensation of debts, or its part by shared, accomplishment of undertakings in the field of environmental protection.

Ecological conversion anticipate possibility of transformation of part of financial obligations to the Budget into taking obligation of financing undertakings in the field of environmental protection within the country's border, and in national currency up to set total¹. In most cases special earmarked fund manages the money of credited countries and lender-countries.

Some countries actively use transformation of external debt into internal one for financing undertakings connected with environmental protection. This transformation is quite common in Poland and Bulgaria. Both countries set conditional funds in national currency for undertakings connected with environmental protection in their countries, and creditor-countries lower their debts by certain amount. Poland has signed agreements for transfer of part of external debt for undertakings which are aimed at conservation with the USA, Switzerland, France, Italy, Norway and Sweden for the total amount of 571 mln USD. In Poland EkoFundusz was created to manage those funds².

Bulgaria signed an agreement with Switzerland. In 1997 transformation of external debt for financing undertakings aimed at

długów (Kurykin S. Uprawnienia u sferi ochrony dowkillia ta pryrodokorystuwannia w Ukraini: problemy ta szlacy jich wyriszennia. Do pytanntia wdoskonalennia uprawnlenia ochoronoju dowkilla ta wykorzystanniam pryrodnich resursiw. Kyjiw: WEGO "Mama", 2003. S. 38–39.

¹ Seminar perspektywy pryrodoochronnogo obminu borgiw w Ukraini i w regioni JeEKOON. URL: http://www.menr.gov.ua/index.php?mode=indexpage&entity_id=57&id_det=25&index_page_id=3 (access.: 21.09.2018).

² Kurykin S. Uprawnienia u sferi ochrony dowkillia ta pryrodokorystuwannia w Ukraini: problemy ta szlacy jich wyriszennia. Do pytanntia wdoskonalennia uprawnlenia ochoronoju dowkilla ta wykorzystanniam pryrodnich resursiw. Kyjiw: WEGO "Mama", 2003. S. 39.

conservation came to 4 mln 230 thousand USD. Those funds are managed by National Trust Fund.¹

Ultimately, indexes for fines for ecological violations should be changed. They should be high enough to exclude the possibility of gaining profits from breaking the set limits for pollution for companies which use the environment. In Poland for example, the sum of money paid for polluting the air is ten times higher than charges for buying limits of pollution. The possibility of high fine for ecological violations also enhances its function as protective economic regulator of utilization of environment².

The appearance of outer effects is attributed to the lack of markets, where exchange of goods and services would take place on the level of economic units. Most of scientists think that the lack of a market where firms could organize exchange of permits for emission of pollutants is the ultimate reason of too high presence of pollutants in environment. On the other hand some authors reckon that market mechanisms cannot effectively solve complex tasks connected with social and ecological aspects of environmental protection, some orthodox thesis claims that pollution is caused by private property and aspiration for maximal profits. Nowadays tendency for setting economic market for environmental protection is in the lead, but the range for implementation of market mechanisms as well as forms of countries' economic policy are still discussed.

However, the external costs become internal, when it finally reaches the violator³. Reaching optimum Pareto at the state of balance between competitors on the market requires zero compensations for the victims. Hence in environmental protection economy the first condition is sufficient for existence of external costs. It is proven by

¹ Kurykin S. *Uprawnienia u sferi ochrony dowkillia ta pryrodokorystuwannia w Ukraini: problemy ta szlachy jich wyriszennia. Do pyttannia wdoskonalennia uprawnienia ochronoju dowkilla ta wykorzystanniam pryrodnich resursiw. Kyjiw: WEGO "Mama", 2003. S. 39.*

² Weklycz O. *Udoskonalennia ekonomicznych instrumentiw ekologicznego uprawnienia w Ukraini. Ekonomika Ukrainy. 1998. № 9. S.72.*

³ Żylicz T. *Ekonomia wobec problemów środowiska przyrodniczego. Warszawa: PWN, 1989. S. 90.*

the definition by famous Polish economist and ecologist T. Żylicz, who says that appearing external effect is connected with challenging following premises, which are the basis of market balance¹:

1. Profit of every firm depends only on factors which are under its control and on the prices, which are shaped by demand and supply. These premises are undermined if decisions of other economic subjects have direct influence on the profit of a company not by the means of prices (production externalities).

2. The utility which is gained by every consumer depends on goods basket purchased on the market or comes from personal resources.

It is particularly important that external cost is transferred from the offender to the victim, which means it has some features of public or private antigoods. A typical example of public antigoods is the air pollution in the city or the greenhouse effect. Example of private antigoods is storing of company's waste on somebody's property. In the first case production of waste by the offender affects the well-being of many individuals at the same time. Furthermore, inhaling polluted air by every individual does not decrease the amount of pollution inhaled by others. In the case of private antigoods victims share the losses. If the waste is dumped on somebody's property, less of it is left². This differentiation is crucial when we plan a system of ecological policy instruments.

In the first case victims are helpless against offenders. All of them together can suffer losses which exceed offenders' profits. Every individual victim, if wanted to force the offender to cut down the pollution, would have to bear some costs, but if they succeed the benefits would be equal for everybody. Individual contribution in

¹ Żylicz T. Mikroekonomia. Warszawa: Uniwersytet Warszawski, 1993. S. 73; Żylicz T. Ekonomia środowiska i zasobów naturalnych. Warszawa: Polskie Wydawnictwo Ekonomiczne, 2004. S. 19; Żylicz T. Wymagania ekologiczne integracji z Unią Europejską. Aspekty ekonomiczne. W: Integracja Polski z Unią Europejską w dziedzinie ochrony środowiska. Łódź: Biblioteka, 2000. S. 21.

² Żylicz T. Wymagania ekologiczne integracji z Unią Europejską. Aspekty ekonomiczne. W: Integracja Polski z Unią Europejską w dziedzinie ochrony środowiska. Łódź: Biblioteka, 2000. S. 37.

those benefits would be comparably small in comparison to personal expenditure spend in the process of getting it.

In the case of small private companies individual victims, especially if they are not so numerous, have much stronger stimuli for putting pressure on the creator of external costs because in the case of reducing the amount of waste dumped in the given area, almost all the benefit goes to the land owner.

From the economic point of view what matters is not only physical size of emitted pollution, but also the losses caused by it. "Victims" have no influence on the size of emitted pollution, but they have some influence on the size of losses caused by it. If more people move into the polluted area, the value of external costs will increase. So in a way the victims are co-originators of external costs. Some scientists claim that it is the victims that should be taxed. The main reason behind this tax would be to force the victims into taking some actions aimed at minimizing losses caused by pollution. On the other hand, many Polish economists are for awarding victims compensation equivalent to the losses incurred as a result of pollution. The tax exemption for victims who renounce awarded compensation for their losses might be the most effective¹.

This problem is a real challenge for economist-theoreticians who claim that problem of external costs can be solved, if the market allows for creation of suitable price for anti-goods such as pollution. Such a price would have to be asymmetrical, i. e., one level of prices for consumer (victims) of external costs and the other for offenders. No normal market price would be able to meet this asymmetrical condition. If the buyer of a product would pay 10 monetary units, because of the mutual inverse of market transactions, the seller would have to get for his products exactly the same 10 monetary units. This price would then be effective one and assure optimum Pareto, where both the consumer and the producer are in balance. But when there are external costs, reaching the optimum Pareto requires positive price for

¹ Analiza skuteczności działania instrumentów ekonomicznych ochrony środowiska w Polsce/(red.) K. Górka. Kraków: Akademia Ekonomiczna w Krakowie, 1999. S. 33.

pollutants for production of external cost, and zero price for consumption of external effect of pollution for the victims. It cannot be a normal market price, which is symmetrical for the producer and consumer. So reaching economic effectiveness calls not for normal market prices, but for the fiscal instruments, which would have asymmetrical qualities. The optimal tax for environmental pollution have these qualities¹.

Understanding of environmental pollution in neoclassic economy is slightly different from the popular understanding. The physical effect of environmental pollution is important for the economists as much as it lowers the level of consumers needs and as much it forces the industry to bearing additional costs, to keep a certain level of production. So the losses rather than the physical changes in the environment are the subject of economic analysis. For economists this loss is (or should be) as real as any other wastage in the country's economy. That is why the loss for the environment is evaluated – neoclassical economy expresses it in price category².

The improvement of the condition of environment does not come automatically. Expenses which have to be borne to lower the level of pollution are for economists as real as losses caused by pollution. That is why in economic sense the optimal rather than the zero level of pollution is desired. That is one where public costs for repair of one unit of pollution equals the costs of loss done by this unit. In other words, it is such a level, where final profits caused by reduction of pollution equal the final public costs of this reduction.

Balance on every market is set in position, where the final profits for companies (taking-MR) equal the final costs (MC), in the case of consumers the final profits resulting from consumption of goods (MU) equals the final costs of purchasing those goods (MC). The general market balance reaches the Pareto optimum when $MR = MC$ and $MU = MC$.

¹ Żylicz T. *Ekonomia środowiska i zasobów naturalnych*. Warszawa: Polskie Wydawnictwo Ekonomiczne, 2004. S. 112.

² *Ekonomiczna wycena środowiska przyrodniczego*/(red.) G. Anderson, J. Śleszyński. *Wartościowanie dóbr i zasobów środowiska*. Białystok: Wydawnictwo Ekonomia i Środowisko, 1996. S. 45.

Final profits and final utility can be more generally called marginal benefits. Then the balance and Pareto optimum is reached only for producers and consumers, and the final profits equal the final costs $MB = MC^1$.

As it is emphasized by Polish economists, we talk about market defects when, there is a difference between final private profits (MPB) and final private costs (MPC), and corresponding optimal for public values: MSB and MSC. The Pareto optimum is then: $MSB = MSC^2$.

Theoretical models of regulation expect that appearing market defects, in other words – external effects, is enough a good reason for making some economic decisions only by the government. However, we have to differentiate between the correcting economic regulation and the need for correcting general system of country's economy aiming at defining and enforcement of property law, which are the basis of freedom of ventures.

Another crucial problem is general taxing as form of financing some elements of public life. It is known that general taxes, if they do not have qualities of flat-rate, distort final decisive relations and influence the market balance and effective allocation.

There are two basic types of regulations leading to reaching this goal³:

1) administrative – legal approach (prescriptive – banning) the direct regulation of amount of produced, sold, bought and consumed goods;

2) economic (price) approach, correction of prices for transactions, indirectly correcting the amount of goods.

Nowadays in the world there are two standard types of management in the field of environmental protection: administrative and market. Majority of countries which are effective in environmental

¹ Analiza skuteczności działania instrumentów ekonomicznych ochrony środowiska w Polsce. Praca zbiorowa pod redakcją Kazimierza Górki. Kraków: Akademia Ekonomiczna w Krakowie, 1999. S. 26.

² Ibid. S. 28.

³ Fiedor B. Podstawy ekonomii środowiska i zasobów naturalnych. Warszawa: C. H. Beck, 2002. S. 13.

protection are oriented towards market management – when there are no limits of waste but its price is known, which can be calculated in linear growth depending on the amount of waste. Such a system forces firms to optimize production processes and to introduce new technologies¹.

Theoretical basis of classical instruments of internalization of external effects, as they are discussed among economists, can be enumerated as follows:

– Pigou tax: taxing productive and consumerist undertakings which create external effect;

– broadening market-price mechanism on to a new subject without presence of external regulations. This way external effect can be treated as a good (Coase's statement);

– “internalization” of external effect by means of merging subjects which influence each other. Application of this method is so limited that it can be passed over².

The scientists illustrate the optimum of Pigou tax in the following way: net social benefits (NSB) from business activity can be calculated as gross income $P(Q)$ reduced by private costs of this business activity (PC – private costs) and by external costs (EC)

$$NSB = P(Q) - PC(Q) - EC(Q),$$

where P is a price, Q is a supply of business activity which causes pollution (price P does not depend on the value of supply Q , due to former premises of ideal competition)³.

Of course, setting by the government the optimum rates of Pigou tax requires being aware of individual function graphs, which are kept

¹ W Ukraini zbiliszać platu za zabrudnienia nawkolyszniogo seredowyszczca. Wseukrajinska gazeta “Deń”. 10 grudnia 2005. № 229.

² Fiedor B. Podstawy ekonomii środowiska i zasobów naturalnych. Warszawa: C. H. Beck, 2002. S. 14.

³ Analiza skuteczności działania instrumentów ekonomicznych ochrony środowiska w Polsce/(red.) K. Górka. Kraków: Akademia Ekonomiczna w Krakowie, 1999. S. 22.

secret by the companies and one should not expect that it will be disclosed to the government. Recognition of those function graphs requires not only precise monitoring of the emission, but also exact models for diffusion of pollution and evaluation of losses suffered by each victim. That is why governments often resort to second best solutions and tax emission of pollution, which are proportional to arduousness of a given pollutant, but identical for all companies within the same branch and often for all pollutants in the country.

4.2. Budgetary Security of the European Union: the Structure of Expenditures

Boiar Andrii

The question of how the European Union budget should be spent has been a subject for active discussion since early years of the establishment of the European Communities. Nevertheless, the issue stays important today also as we speak about secure financial provision of the further integration in Europe, especially in the light of recent recession, military-political and civil conflicts in Ukraine and in other parts of the world, immigrant flows, increased terrorist threat inside the EU, the Brexit and some other modern challenges. The EU budgetary system gets criticized for complexity and opacity and the budget expenditures – for significant irrelevance to the EU conventional goals, for inefficient structure etc. The issue of theoretical foundations for optimal structuring of supranational budget expenditures is also interesting from cognitive point of view as the international economic integration and international unions advance. Therefore in this section we aim at examining the structure of the EU budget

© *Boiar Andrii* – Doctor of Science in Economics, Vice-Rector, Professor at the Department of International Communication and Political Analysis, Lesya Ukrainka Eastern European National University.

expenditures and proposing the ways for its optimization based on pure scientific theory with economic theory being the core of the latter.

The theories that totally or partially are related to the question of structuring budget expenditures include: the theory of fiscal federalism, the political economy of multilevel governance, the public sector economics, the public choice theory, the theory of optimal currency areas, the Tinbergen rule, the principal of functional subsidiarity and others. Thus, our research is based on the works by J. Tinbergen¹, R. Musgrave², R. Mundell³, J. Buchanan and G. Tullock⁴, W. Oats⁵, Persson et al.⁶, S. Connolly⁷, J. Stiglitz⁸ and others.

Many attempts have been made to explain the interstate distribution of expenditures or the net budgetary balances in the EU and to substantiate the structure of the EU budget expenditures (Carruba⁹, Mattila¹,

¹ Tinbergen J. *On the Theory of Economic Policy*. Amsterdam: North-Holland Pub. Co., 1952.

² Musgrave R. *The Theory of Public Finance: a Study in Public Economy*. New York: McGraw Hill, 1959.

³ Mundell R. A. *A Theory of Optimum Currency Areas*. *American Economic Review*. 1961. 51(4). P. 657–665.

⁴ Buchanan J. M., Tullock G. *The Calculus of Consent: Logical Foundations of Constitutional Democracy*. Ann Arbor, MI: University of Michigan Press, 1962.

⁵ Oates W. E. *Fiscal Federalism*. New York: Harcourt Brace & Jovanovich, 1962.

⁶ Persson T., Roland G., Tabellini G. *The Theory of Fiscal Federalism: What does it mean for Europe?* IGIER Working Paper. 1996. No. 101.

⁷ Connolly S., Munro A. *Economics of the Public Sector*, Essex (England): Pearson Education Limited, 1999.

⁸ Stiglitz J. *Economics of the Public Sector*. New York: W. W. Norton & Co, 2000.

⁹ Carruba C. J. *Net Financial Transfers in the EU: Who Gets What and Why?* *Journal of Politics*. 1997. 59(2). P. 469–496.

¹ Mattila M. *Fiscal transfers and redistribution in the EU: do smaller member states get more than their share?* *Journal of European Public Policy*. 2006. 13 (1). P. 34–51.

Figueira¹, Danell and Östhol², Groot and Zonneveld³, Citi⁴, Zaporozhets et al.⁵, Begg⁶, Schratzenstaller⁷ and others). However, we have not discovered any works that give clear scientific guidelines for structuring international unions' budget expenditures and apply them to the EU budget. This is how our investigation is different from other available research.

A lot of empirical data on supranational budgeting was obtained from the legislative acts of international unions that are currently in force⁸.

Methodology. The structure of budget expenditures of any international union is formed under the influence of some factors. The driving among them are (Figure 1):

- the scientific validity (the conformity to the economic theory principles);
- the distribution of powers between supranational and national authorities;
- the relevance to the objectives and needs of the international union.

¹ Figueira F. How to Reform the EU Budget? A Multidisciplinary Approach. Utrecht School of Economics Discussion Paper Series. 2008. No 7.

² Danell T., Östhol A. The EU Long-Term Budget: Reform and New Priorities. Report to the Swedish Ministry of Finance. ITPS, Swedish Institute For Growth Policy Studies. Östersund, 2008.

³ Groot L., Zonneveld E. EU Budget Contributions and Expenditures: A Lorenz Curve Approach. *Journal of Common Market Studies*. 2013. 51 (4). P. 649–666.

⁴ Citi M. EU Budget Politics: Explaining Stability and Change in Spending Allocations. *European Union Politics*. 2015. 16(2). P. 260–280.

⁵ Zaporozhets V., García-Valiñas M., Kurz S. Key Drivers of EU Budget Allocation: Does Power Matter? *European Journal of Political Economy*. 2016. 43 (C). P. 57–70.

⁶ Begg I. The EU Budget and UK Contribution. *National Institute Economic Review*. 2016. 236 (1). P. 39–47.

⁷ Schratzenstaller, M. The Brexit as Opportunity for a Sustainability-Oriented Reform of the EU Budget, ÖGfE Policy Brief. 09a.'2017.

⁸ We analyzed budgetary mechanisms of 23 international unions and presented some results in our earlier works (see Boiar (2014a, 2014b)).

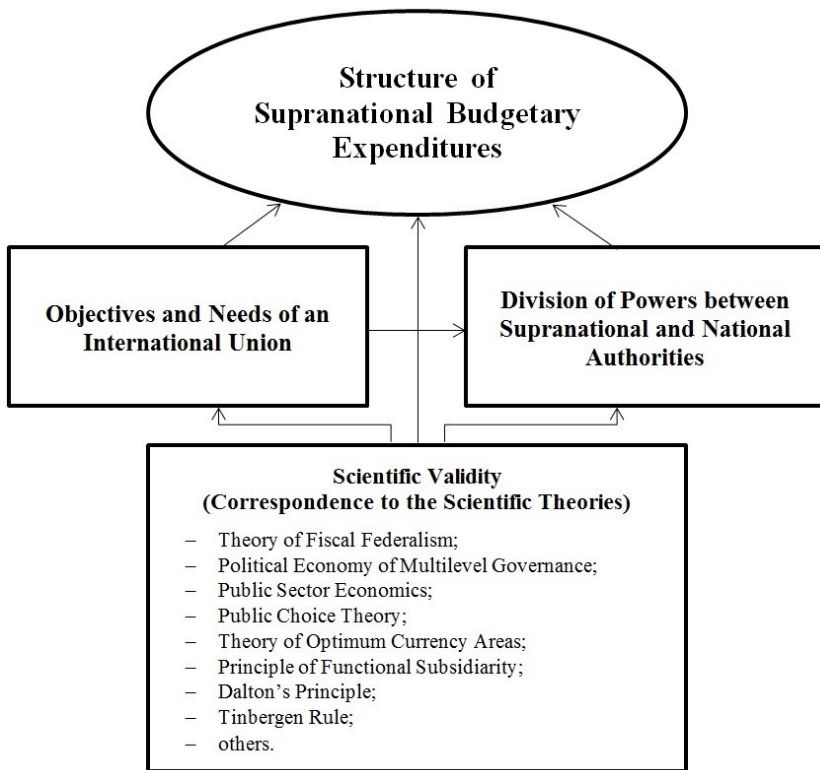


Fig. 1. *Factors Determining the Structure of International Union's Budget Expenditures*

The scientific validity factor is (or at least has to be) pivotal, as in fact, the two other factors and the effectiveness of supranational fiscal spending itself depend upon the validity of scientific theories that they are based on. The most relevant theories with respect to these issues are the theory of fiscal federalism, the political economy of multilevel governance, the public sector economics, the public choice theory, the theory of optimum currency area, the principle of functional subsidiarity and the Tinbergen's rule.

Some of these theories can serve to substantiate aims and objectives of an international union and the distribution of powers between

supranational and national governments whereas the others – directly to find out the reasonable (most efficient) directions of supranational budget expenditures. At the same time the objectives and needs of a union determine the division of powers among the union institutions and governments of its member-states.

One of the major theories proposing tools for validation of the objectives of an international union and for the division of fiscal powers between supranational and national authorities is the theory of fiscal federalism. It has been worked out by R. Musgrave¹ and developed by W. Oates².

There are a few assumptions that must be met in order for the theory of fiscal federalism to be effectively applied. Firstly, it can be applied to at least two-level hierarchic system of authorities with strictly divided powers. Secondly, the democratic governance in the political entity should be highly developed as the policy is considered the result of citizens' cooperation. The citizens themselves strive to maximize their utility function. Thirdly, free movement of goods, services, labor and capital should be secured within the regions of the political entity. Fourthly, the division of powers among the levels of authority should be institutionally secured in the long-term period.

The theory of fiscal federalism can be conditionally divided into two thematic parts – the validation of centralization and singling out the criteria for fiscal decentralization. The second part was named by W. Oates “decentralization theorem”. As sufficient arguments to transfer fiscal powers to the central level one can consider:

- 1) the better opportunity to internalize externalities (to adopt positive or negative consequences of societal activities of some public or private entities for third parties);
- 2) the economies of scale;
- 3) the necessity to maintain the minimum scale of financing.

¹ Musgrave R. *The Theory of Public Finance: a Study in Public Economy*. New York: McGraw Hill, 1959.

Musgrave R. A. *Theories of fiscal federalism*. *Public Finance*. 1969. 24 (4). P. 521–532.

² Oates W. E. *Fiscal Federalism*. New York: Harcourt Brace & Jovanovich, 1972.

For example, the externalities of such policies as ecological, environmental, professional training and re-training, redistribution of income can be better internalized if the policies are coordinated from the highest central level of authority.

The centralization of fiscal regulation in such areas as foreign affairs (policy, trade and security), defense and macroeconomic stabilization is justified because of the economies of scale reasons (it improves the effectiveness of supply of corresponding public goods (services) and lowers their production costs)¹.

The necessity to maintain the minimum scale of financing occurs when the permanent and significant budgetary resources are needed to achieve high-quality policy outcomes (e. g. security and defense policies). Usually the authorities of higher (national or supranational) level can concentrate sufficient resources for these purposes.

On the other hand fiscal decentralization can create better opportunity to avoid some unwanted internalities and the situation when the regional taxpayers (or the member-states in the case of an international union) finance the action that they are not interested in. In the areas where consumers' tastes significantly differ (are heterogeneous) the preference should be given to the decentralized distribution of public goods, not to their unified supply from the central level. It will give more Pareto-efficient outcome for the society on the whole².

Tiebout hypothesis offers another argument in favor of providing heterogeneous public services from the local (regional) level of authority³. The hypothesis assumes that consumers of public goods are completely mobile and can choose the local (regional) jurisdiction that offers them the best package of utilities, taxes and regulations. In this institutional structure inefficient provision of public services by any of the local administrations entails changes of the domicile by residents of this or that region (the so-called "voting with feet"). As a result, the

¹ Ter-Minassian T. et. al. Fiscal federalism in theory and practice. Teresa Ter-Minassian, editor. Washington: International Monetary Fund, 1997.

² Oates W. E. Toward A Second-Generation Theory of Fiscal Federalism, *International Tax and Public Finance*. 2005. 12 (4). P. 349–373.

³ Tiebout C. A Pure Theory of Local Expenditures. *Journal of Political Economy*. 1956. 64 (5). P. 416–424.

decentralization creates some competition among different jurisdictions, which “sorts” consumers of public goods into homogenous groups according to their preferences and that leads to the Pareto-efficient solution and overall welfare increase¹.

There are also some flaws in the theory of fiscal federalism. They are: the lessened responsibility of central and local governments to the voters (because of the division of powers), the lack of qualified personnel at local level, the increased stimulus for residents to change their region of residence, the weakened vertical of the administrative control and the low infrastructure capacities of the regional communities².

The public choice theory also touches upon the question of fiscal decentralization. From its position the decentralization is viewed as a tool limiting expansive intentions of the authority at different levels. In particular, the competition among local authorities can make the monopolistic central government weaken the control over the economic resources and offer partial or even full alternative to the means of limiting of its taxation powers³. In addition, local governments try to provide population with the required goods (services) at the lowest possible price paid by the citizens in the form of taxes.

As the main assumptions for the theory of fiscal federalism are met in the case of the EU, this is the primer theory applied with respect to this international union. As an example the works by A. Alesina et. al¹, M. Buti and M. Nava² can be considered. They argue that the EU budget should be used to create public goods with

¹ Majocchi A. Theories of Fiscal Federalism and the European Experience. Società italiana di economia pubblica working. 2008. P. 608.

² Musgrave R. The Theory of Public Finance: a Study in Public Economy. New York: McGraw Hill, 1959.

³ Buchanan J. M., Tullock G. The Calculus of Consent: Logical Foundations of Constitutional Democracy. Ann Arbor, MI: University of Michigan Press, 1962.

¹ Alesina A., Ignazio A., Federico E. International Unions. The American Economic Review. 2005. 95 (3). 602–615.

² Buti M., Nava M. Towards a European Budgetary System/European University Institute Working Paper No 2003/08, Florence.

large economies of scale (defense, security, aid for developing countries) or those that absorb positive externalities (e. g. research and innovation, development of transport infrastructure). On the other hand, the national or the regional authorities should get more powers in the areas where the heterogeneity of preferences dominates over the economies of scale.

The theory of fiscal federalism has experienced today significant transformations. The new modified theory is called a new theory of fiscal federalism or political economy of multilevel governance. Its developers¹ have discovered several additional criteria, consideration of which can justify the transfer of certain powers to the authority level that is not optimal from the standpoint of the classical theory of fiscal federalism. These are, in particular, the cost of adoption of the decision (the cost of decision-making is usually different for different levels of authority) and the cost that must be spent to eliminate disutility created by some policy action (the situation typical for large heterogeneous communities).

The proponents of this theory admit the possibility of some public goods to be provided not from the optimal level of authority if a compensation to the people who lose from this political decision is paid and if a cumulative positive effect is achieved.

Division of powers criteria stated in the theories of fiscal federalism gave an impetus to the development of the functional subsidiarity principle. Its application includes carrying out the test that allows determining the feasibility of centralization for a particular policy. The scientific validation for this test is provided in the works by S. Ederveen et. al.¹

It should be noted that the EU law also provides for the application of the subsidiarity principle, which, however, is quite limited in use, compared to the principle of functional subsidiarity. It is applied in the EU only in cases where its powers are not exclusive and only

¹ Persson T., Roland G., Tabellini G. The Theory of Fiscal Federalism: What does it mean for Europe? IGIER Working Paper 1996. No. 101.

¹ Ederveen S., Gelauf G., Pelkmans J. Assessing subsidiarity. CPB Document. 2006. No 133.

the final outcome of the action (not efficiency) is taken into account¹. Principles of conferral and proportionality enshrined in Article 5 of the *TEU* also limit the application of the subsidiarity principle².

The theory of public sector economics also offers some arguments for the transfer of certain powers to the supranational authority, despite the fact that this theory was developed to analyze the activities of national governments. From its perspective a sufficient reason for a regulator's intervention (including fiscal one) in a specific economic sector is the need to correct market failures or to ensure some social justice (equality). Such intervention gives an opportunity to create public goods that are beyond the interests of regular companies and to correct the disproportions that occur because of purely rational (selfish) behavior of companies in a competitive market. In this way the total social welfare is maximized.

An original approach to the division of fiscal competences among supranational and national authorities in the EU was proposed by F. Figueira³. The approach is multidisciplinary in its construction and is based on the test covering the basic provisions of the four theories: the public sector economics, the theory of fiscal federalism, the political science and the concept of subsidiarity. During this test the fiscal centralization of a particular policy area is considered appropriate if correspondence to each of the theories takes place.

The approach in which goals and objectives of an international union are the primer determinant of its budget expenditures is called the practical-pragmatic approach. Such goals and objectives are usually laid down in the corresponding founding treaty (treaties)¹ and

¹ Figueira F. How to Reform the EU Budget? A Multidisciplinary Approach. Utrecht School of Economics Discussion. Paper. Series. 2008. No 7.

² Institute for Economic Research. A Study on EU Spending. Final Report. ECORYS Nederland BV, Netherlands Bureau for Economic Policy Analysis (CPB). Rotterdam, 2008.

³ Figueira F. A Better Budget for Europe: Economically Efficient, Politically Realistic. Swedish Institute for European Policy Studies (European Policy Analysis). 2008. April. Issue 2.

¹ Begg I. The EU Budget and UK Contribution. National Institute Economic Review. 2016. 236 (1). P. 39–47.

the combination of the common policies directly defines the scope and the structure of central budget allocations. Hence, they stimulate the development of the adequate revenue side of the budget, principles and mechanisms of the use of budgetary resources and the division of powers among different levels of authority.

As a continuation of the practical-pragmatic approach one can consider the principle of “one tool for one goal”, also known as the “Tinbergen rule”. It states that at least one political instrument should be aimed at achieving one specific policy objective¹. According to this principle the budget of an international union should be directed towards one target or divided into parts, each of them pursues a specific objective. The structure of supranational budget expenditures can also be reasoned by the objectives of an international union from the perspectives of the theories generally referred to as the theories of institutionalism.

If international union achieves one of the highest forms of integration – the monetary union, one of its tasks should be the formation of a mechanism for the automatic fiscal transfers from supranational budget to the regions which have been adversely affected by their participation in the union (negative effects usually come from the free movement of capital and workers and from price equalization within the union). This statement is one of the postulates of the theory of optimum currency areas, developed by R. A. Mundell² and his followers. This theory was the basic one to give grounds for the establishment of the European Monetary Union which has left a clear imprint in the structure of the EU budget expenditures.

It should be noted that the current economic processes (including the economic integration and the budgeting) are highly socialized and politicized which leads to the inefficient general outcome from the economic theory point of view. Therefore, ideally any transformation in the budgetary system of any level must be validated by the econo-

¹ Tinbergen, J. *On the Theory of Economic Policy*. Amsterdam: North-Holland Pub. Co, 1952.

² Mundell R. A. *A Theory of Optimum Currency Areas*. *American Economic Review*. 1961. 51(4). P. 657–665.

mic theory. With this respect two of the above-mentioned theories are of a particular interest – the theory of fiscal federalism (in its classical and neoclassical interpretations) and the public sector economics. Their application to the modeling of supranational budget expenditures will maximize the economic efficiency of the financed policies and therefore will increase the economic welfare on the whole (that is it will yield the Pareto-efficient result).

However, one should admit that a scientific theory must be the basis not only for the structure of supranational budget expenditures itself but also for two other underlying factors of their structuring: objectives and needs of an international union and the division of powers between supranational and national authorities (see Figure 1). Regarding the first of them, answers to the key questions can be found in both of the just-mentioned theories; regarding the second factor, the theory of fiscal federalism is the most appropriate tool.

Therefore, the structure of supranational budget expenditures can be considered as the optimal one only in the case when it is formed in the optimal environment; that is, when objectives and needs of an international union and the division of powers in it are scientifically based. If it is not the case, we can talk only about the possibility of achieving a kind of sub-optimal or second best state on the structure of the budget expenditures. It means that to achieve a maximum effect of the budgetary system reform in an international union, which has been designed merely or primarily from political perspective, it should be performed together (in package) with amendments to the constitutional treaty of the union.

In our view, the principle of subsidiarity enshrined in the EU Treaties is designed to “sub-optimize” the structure of the EU’s budget expenditures. This principle should be interpreted as an instrument to correct along the way the discrepancies that occurred between the politically accepted and scientifically justified objectives and powers of the EU at the time when they were decided upon. The interdisciplinary approach suggested by F. Figueira (see above) can also be viewed as an attempt to find suboptimal decision as for the structure of the EU budget expenditures.

Application to the EU Budget. One of the major reasons for the critics of the EU budget today is its expenditures, which do not correspond to the needs and objectives of the Union. Thus, such areas as agriculture, regional (cohesion) policy and foreign relations account for 90 % of the EU budget expenditures but at the same time, they are not of key priorities of the European integration (see Article 3 of the TFEU).

This situation became the result of the process when historically the EU's budget served rather as a subject of negotiations and bargaining among the Member States than a tool of the integration itself. Therefore, programs established over the course of decades arise from some ad-hoc adjustments and not from comprehensive scientific analysis of the expedience to finance them from the supranational level.

As to the optimal structure of the EU's budget expenditures the researchers are divided in their visions. I. Begg argues that the cornerstone of the Union's budget should be formed by the activities (policies) that create economies of scale and improve the adoption of external effects (internalize the externalities)¹. The researcher singles out foreign policy, research, trans-European networks, large-scale environmental problems and security as the key areas of supranational regulation in the EU. By contrast, policies that do not allow satisfying heterogeneous social preferences and the policies aimed at the redistribution of resources including common agricultural policy and even the rural development policy should be excluded from the EU's budget.

The developers of the extended test for subsidiarity¹ based on their methodology conclude that the EU budget expenditures should be focused on the global warming, energy, innovation and common foreign and security policies².

¹ Begg I. Reshaping the EU Budget: Yet Another Missed Opportunity? *European Urban and Regional Studies*. 2000. 7 (1). P. 51–62.

¹ See Section II.

² Institute for Economic Research. *A Study on EU Spending*. Final Report. ECORYS Nederland BV, Netherlands Bureau for Economic Policy Analysis (CPB). Rotterdam, 2008.

Having applied interdisciplinary approach, F. Figueira¹ contends that the bulk of the common EU budget should be spent on the research and education and the convergence of regions (cohesion) policies. The remaining part of the budget should be used to finance internal market and transportation policies as well as the security policy.

Ph. Nicolaides and F. Talsma consider that cohesion, competitiveness and foreign policies should be further reinforced in the EU budget². They also are convinced that the financial capabilities and needs of the EU Member States should become the guiding determinants of the size of their financial liabilities and eligibilities.

Considering the EU ambitious goals of its economic growth T. Danell and A. Östhol offer to minimize the objectives covered by the EU budget³. In their opinion four kinds of financial commitments to stimulate economic growth should be present in the future EU budget: 1) institutional development (internal market, monitoring, border control and security, etc.); 2) integration and mobility (trans-European networks, information policies and audio-visual sector, etc.); 3) education and development (research including high-tech, lifelong learning, etc.); 4) commercialization (establishment of business centers, techno-parks, etc.).

According to the economic theory the economic efficiency¹ can be achieved if transfer of powers to the higher level of authority yields at least one of the effects: 1) the economies of scale; 2) the better internalization of externalities; 3) the minimum efficient scale of financing is achieved; 4) the market failures are better corrected;

¹ Figueira F. How to Reform the EU Budget? A Multidisciplinary Approach. Utrecht School of Economics Discussion Paper Series. 2008. No 7.

² Nicolaides Ph., Talsma F. Financing the EU: Options for Reform, EIPA Scope. 2005. 2. P. 27–34.

³ Danell T., Östhol A. The EU Long-Term Budget: Reform and New Priorities. Report to the Swedish Ministry of Finance. ITPS, Swedish Institute For Growth Policy Studies. Östersund. 2008.

¹ The concept of economic efficiency is viewed as the highest possible return with the lowest input of budget resources.

5) the quality of the public good is improved. If the effects occur, it is often referred to as the creation of the European added value¹.

To see if the EU policies comply with the centralization criteria mentioned above we list the policies as they are indicated in articles 2–6 of the TFEU. There are 29 of them (column 2, Table 1). We complement the list with the direct taxes and social protection policies where the EU has no direct powers.

Table 1

The Efficiency of Centralization of the EU Budget Expenditures by Categories²

No	The Effect of Centralization Areas of Policy and Budget expenditures	Economies of Scale	Better Internalization of Externalities	Minimum Efficient Scale	Correction of Market Failures	Public Good Quality Improvement	General Conclusion
1	2	3	4	5	6	7	8
1	Customs Union	+	+	=	=	=	+
2	Competition Rules	+	+	=	+	+	+
3	Monetary Policy	+	+	+	+	+	+
4	Conservation of Marine Biological Resources	+	+	=	+	+	+

¹ European Commission. Internal charter for the evaluation function in DG ECFIN. URL: http://ec.europa.eu/economy_finance/publications/pages/publication13113_en.pdf (access.: 21.09.2018).

² The data in the Table are consequent of the analysis provided by the author in this section. Arbitrary signs and symbols: (+) – conspicuous positive effect; (=) – minor or absent effect; [+]
– positive effect existing in the case when the principles of subsidiarity and/ or proportionality are followed.

Continuation of Table 1

1	2	3	4	5	6	7	8
5	Common Commercial Policy	+	+	=	=	=	+
6	Internal Market	+	+	=	+	+	+
7	Social Policy	=	[+]	=	[+]	[+]	[+]
8	Cohesion	=	[+]	[+]	[+]	[+]	[+]
9	Agriculture:						
	Direct Aid for Farmers	=	=	=	=	=	-
	Market Interventions	+	+	+	+	=	+
	Rural Development	=	[+]	=	[+]	[+]	[+]
10	Fisheries (excluding Conservation of Marine Biological Resources)	+	[+]	=	+	=	[+]
11	Environment	+	[+]	[+]	=	[+]	[+]
12	Consumer Protection	=	=	=	[+]	[+]	[+]
13	Transport	+	[+]	[+]	[+]	[+]	[+]
14	Trans-European Networks	+	[+]	[+]	[+]	[+]	[+]
15	Energy	+	[+]	[+]	[+]	[+]	[+]
16	Area of Freedom, Security and Justice	+	[+]	+	=	[+]	[+]
17	Public Health	+	[+]	[+]	[+]	[+]	[+]
18	Research, Technological Development and Space	+	+	[+]	[+]	[+]	[+]
19	Cooperation with Developing Countries, Humanitarian Aid	+	+	+	=	+	+

End of table 1

1	2	3	4	5	6	7	8
20	Economic Policy	+	[+]	[+]	+	+	[+]
21	Employment	+	+	=	+	+	+
22	Industry	+	[+]	=	=	[+]	[+]
23	Culture	+	[+]	=	[+]	[+]	[+]
24	Tourism	=	[+]	=	=	[+]	[+]
25	Education, Training, Youth and Sports	+	[+]	=	[+]	[+]	[+]
26	Civil Protection	+	[+]	[+]	+	[+]	[+]
27	Administrative Cooperation	+	=	=	=	+	+
28	Foreign and Security Policy (CFSP)	+	+	+	=	+	+
29	Defense	+	+	+	+	+	+
30	Direct Taxes	=	=	=	=	=	-
31	Social Protection	=	=	=	[+]	=	-

According to the *TFEU* the first five areas are in exclusive competence of the EU. It means that only the EU institutions are empowered to adopt legally binding acts in these spheres. The exclusive EU competences as for the customs policy, the monetary policy, the conservation of marine biological resources and the common commercial policy are justified by the theory of fiscal federalism as they provide the economies of scale, and ensure better internalization of the externalities, etc. The competition policy is aimed at the correction of the common market failures and hence falls within the exclusive EU competence according to the theory of public sector economics.

Other EU policies are carried out via the division of competences between supranational and national authorities or by the EU's support,

coordination or supplementation of the actions of the Member States¹. The scope of the EU's powers in these policy areas is determined according to the principles of subsidiarity and proportionality². From this perspective the supranational financing is primarily given to the trans-European initiatives (economic and social convergence, infrastructure projects, information networks, labor, capital, goods and services mobility, large-scale environmental projects, etc.) as they can be more efficiently realized from the EU level and, thus, their centralization is scientifically justified.

Economies of scale can occur in the areas where administrative and regulatory process is very time-consuming and labor-intensive and the most realized activities are of large-scale. The majority of policy areas mentioned in Table 1 satisfy these conditions. However the presence of this effect can be notable only if corresponding powers are exclusively transferred to the supranational level. If this is not the case and the policies are carried out jointly, the economies of scale can be decreased by the duplication of functions of the authorities at various levels, by the expansion of the administrative staff, etc.

In the EU the most visible effect of the economies of scale is typical for such areas as the internal market, transport, energy, trans-European networks, CFSP, defense, area of freedom, security and justice¹.

If the consequences of a particular policy have clear transnational effect, the supranational level of its coordination is the most appropriate one as the created positive or negative *externalities* can be better dealt with (*internalized*). For example, the consequences of social policy revealed in the improved working conditions, transformed views and values of people, higher inclusion of people into political and economic life and others create significant externalities for many countries thanks to high mobility of people in the EU. Thus, the

¹ See article 2 (2-5) of the TFEU.

² See article 5 of the TEU.

¹ Institute for Economic Research. A Study on EU Spending. Final Report. ECORYS Nederland BV, Netherlands Bureau for Economic Policy Analysis (CPB). Rotterdam, 2008.

organization of this policy from supranational level will be more effective than from national level of the EU Member States. The same can be said about policies in the areas of education, culture, the area of freedom, security and justice and some others. However, the situation cannot be generalized for all components of these policies because there is a significant heterogeneity of preferences in these areas and only the compliance of the principles of subsidiarity and proportionality can yield the highest effect on the whole.

The policy centralization in the area of freedom, security and justice (external borders, visas, free movement of people, security, migration, etc.) creates the opportunity both for getting the economies of scale and for the effective avoidance of negative externalities that would occur if the area were separately regulated by the EU Member States¹. The issue of some interstate heterogeneity of preferences in this area is resolved by the application of subsidiarity principle – the planning and coordination of the actions are made locally but the financing and the general regulation are provided from the EU level. Moreover, policies in this sector are complementary to the internal market policy and this is another important justification for their supranational status.

The same conclusion can be made towards the policy areas of agricultural market intervention, fisheries, cohesion, environment, transport, energy, trans-European networks, public health, industry, culture, tourism, civil protection, education and sport. Income support, consumer protection, administrative cooperation, direct taxes and social protection are the policy areas where the important externalities are not usually created (see Table 1). This is the reason why attribution of these policies to the supranational level will not increase their effectiveness by better adoption of externalities.

The minimum efficient scale of financing problem can appear when the high-quality public good cannot be provided from a certain level of authority because of the insufficient resources available. In the

¹ Institute for Economic Research. A Study on EU Spending. Final Report. ECORYS Nederland BV, Netherlands Bureau for Economic Policy Analysis (CPB). Rotterdam. 2008.

case of an international union the situation can appear with some costly policies that small countries alone cannot afford.

If such policies are aimed at the supply of standardized public good (macroeconomic regulation, market interventions, foreign policy, freedom, security and justice, and defense), their organization and financing should be done from the supranational level. If there are significant diversions in the expected outcomes of the public good (the cases of cohesion policy, environmental protection, large-scale transport and energy projects, etc.), financing should be centralized but the action should be undertaken according to the principle of subsidiarity.

Clearly, full or partial centralization aimed at achieving the minimum efficient scale of financing in the case of an international union brings more benefits to small members. However, general positive effect is also available. *Galileo*, *Marco Polo*, *ITER*, *Trans-European Energy* and *Transport Networks* are the examples of highly expensive EU projects, which would not be affordable by most of the EU Member States alone.

The public sector economics justifies the EU fiscal intervention only in the case of the EU common *market failures correction* actions (for example, promoting labor mobility or removing barriers to trade in goods or services) or the action directed at the achievement of equality objectives (for example, the cohesion policy aimed at the economic and social convergence of the EU regions)¹.

The scope of supranational powers as for the policies aimed at the correction of the common market failures should be decided upon according to the level of homogeneity of the public preferences. If they are homogeneous, full fiscal and administrative centralization is more appropriate. In the EU it is the case of competition and monetary policies, conservation of marine biological resources, common market in general, fisheries, employment, defense and civil protection. If the preferences are heterogeneous, the partial centralization (administra-

¹ Figueira F. How to Reform the EU Budget? A Multidisciplinary Approach. Utrecht School of Economics Discussion Paper Series No 7. 2008b.

tion and financing from the supranational level based on the principles of subsidiarity and proportionality, or simple coordination from the supranational level) generates larger effect. In the EU these are policies in the areas of cohesion, rural development, transport, energy, culture, etc.

The customs union, the foreign policy and the commercial policy, the direct aid for farmers, the environment, the area of freedom, security and justice are the policies that do not pursue the market failures correction objectives (see Table 1).

The transfer of fiscal powers from national to supranational level will *improve the quality of a public good* if an international union can secure wider opportunities, better guaranties and/or directly improve living and working conditions for its residents. In the EU it is proper for all policies directly related to the working and living conditions of the wide public but only if based upon the principles of subsidiarity and proportionality. The prerequisites for this are created by the concentration of minimum financial resources needed for the provision of high-quality public goods in many areas and for the expansion of social, economic and political opportunities of the EU citizens and companies with the creation of the “ever closer Union”.

According to the analysis we can divide the EU policy areas into three groups. The presence of some positive effects from fiscal centralization and absence of negative ones substantiates the centralization for the corresponding policy area (marking “+”). The marking “[+]” denotes the areas where there are clear restrictions as for the centralization and it can be undertaken only partially following the principles of subsidiarity and proportionality. The areas where the centralization is not efficient are marked with “-” (see the last column of Table 1).

Conclusion. From the perspective of fiscal federalism and public sector economics theories the list of five policies where the EU has exclusive competences (customs, monetary, competition, commercial and conservation of marine biological resources) has to be complemented by the policies in the areas of internal market (general issues), employment, agricultural market interventions, administrative cooperation, foreign relations, security and defense.

The most distinctive policies where fiscal centralization (even in compliance with the principles of subsidiarity and proportionality) is not efficient because of the significant heterogeneity of preferences and actual absence of the supranationally added value are the direct aid for farmers, direct taxes and social protection. However, the direct aid for farmers is an explicit article of the current EU budget expenditures and consumes considerable financial resources. We can explain it only by political reasons.

In other policy areas it would be appropriate to keep the situation where fiscal regulatory powers are shared between national and supra-national levels of authority according to the principles of subsidiarity and proportionality. Such distribution of fiscal powers among the EU institutions and its Member States as for the expenditure part of the EU budget will provide budgetary security of the Union and keep its policies efficient and sustainable.

6.3. National Enterprises Economic Security in the New Global Competitive Environment

Kytsyuk Iryna

Current conditions of Ukraine's economic development require thorough and comprehensive evaluation of possibilities of integration into the European space. The prospects of such integration are largely dependent on the country's place and its role in the global economic environment, that, in turn, are determined by the current competitive positions of the national economy and, more importantly, country's ability to provide the conditions for the long-term competitiveness of

© *Kytsyuk Iryna* – PhD in Economics, Associate Professor, Department of International Economic Relations and the Project Management, Lesya Ukrainka Eastern European National University.

the national enterprises and national economy in the whole¹. There is no doubt that dynamic development and growth of uncertainty in a global economic environment require the competitive advantages of a new level from the business entities.

For the latest years there has been a growing attention to sustainable development. Moreover, companies around the world are faced with the requirement to ensure the well-being and quality of life of both present and future generations. It requires a radically new approach to the operational and strategic activity of companies that are related to corporate social responsibility (CSR) as well as Sustainability disclosure. The *Global Competitiveness Report 2017–2018* claims that “The emerging consensus is that economic growth once again needs to focus more on human well-being. Such human-centric economic progress is multidimensional by nature – it is broad based by benefitting the vast majority of people, environmentally sustainable, and equitable in terms of creating opportunities for all and not disadvantaging future generations. In this new context, competitiveness remains an important contribution to the broader goal of human-centric economic progress by creating the resources needed for increased well-being, including better education, health, and security, and higher per capita income”¹. In this case the world community also is paying increasing attention to corporate social responsibility (CSR). Besides, CSR is determined as a reaction of enterprises on the emerging challenges to sustainable development. More and more companies are interested in following CSR rules and principles in their business operations, while demonstrating their economic, environmental and social impacts caused by everyday activities². A corporate

¹ Kytsyuk I. V. The problems and prospects of the Ukraine’s economy development in the context of European integration. Problems of social and economic development of business: Collection of scientific articles. Vol. 1. Montreal, 2014. P. 126–130.

¹ World Economic Forum. “The Global Competitiveness Report 2017–2018”. URL: <https://www.weforum.org/reports/the-global-competitiveness-report-2017-2018> (access.: June 7, 2018).

² Kytsyuk I. Corporate social responsibility and its role in marketing. International Scientific-Practical Conference Innovation Management in Marketing: Modern Trends and Strategic Imperatives. Poznan, 2018. P. 182–183.

responsibility reporting also reveals the organization's vision, mission, values and the governance model, and demonstrates the link between its strategy and its involvement into a sustainable global economy development.

We follow the idea that the rapidity of appropriate challenges perception by business entities, their innovativeness and accordingly their effective functioning under the new conditions could be long-term competitive advantage. Besides, today competitive advantage of companies in global markets depends largely on the ability to benefit from knowledge and innovation¹.

In addition, CSR could be determined as one of the ways to ensure enterprises economic security. N. Avanesova and Ye. Chuprin note that, "enterprise economic security determines the company's ability to develop, increase its competitiveness and the competitiveness of its products, sustain its position on competitive markets, and also characterizes the strength and economic potential of enterprises to counteract the negative impact of external and internal environment. At the same time, the company's economic security reflects the conditions of its security against any threats that are achieved due to the use of existing and potential resources of the company in order to ensure its safe operation in the long run"¹. Besides, J. Barry suggests that economic security is the most important aspect of whole sustainability².

Under the above-mentioned, our study highlights the strong linkage between the enterprises' activity concerning implementation

¹ Loikkanen T., Hyytinen K. Corporate Social Responsibility and Competitiveness – Empirical Results and Future Challenges. *Environmental Management Accounting and Supply Chain Management. Eco-Efficiency in Industry and Science*. 2011. Vol. 27. P. 151–170.

¹ Avanesova N., Chuprin Y. Enterprise economic security: essential characteristics of the concept. *Innovative technologies and scientific solutions for industries*. 2017. No. 1 (1). P. 98–102.

² Barry J. Towards a model of green political economy: from ecological modernization to economic security. *International Journal of Green Economics*. 1 (3). P. 446–464. 2007; Wysokinska-Senkus A., Raczkowski K. Economic Security in the Context of Sustainability. *Rural Development*. 2013. Vol. 6. Book 1. S. 454–462.

and realization of corporate social responsibility concept and the ensuring of enterprises' economic security in the new global competitive environment.

Sustainable development had become popular with the publication *Brundtland Report* named *Our Common Future* (1987). In accordance with the Report "sustainable development" is defined as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs". The report highlighted three fundamental components to sustainable development: environmental protection, economic growth and social equity. The concept of sustainable development focused attention on finding strategies to promote economic and social advancement in ways that avoid environmental degradation, over-exploitation or pollution, and sidelined less productive debates whether to prioritize development or the environment¹.

The concept of "sustainable development" when incorporated into corporate strategies became popular as "corporate sustainability"². Nowadays companies' activity with regard to implementation and realization of the corporate social responsibility concept is really important for their sustainable, competitive and innovative growth.

We fully adhere to the idea that CSR has become the most researched and debated management theme. Moreover corporate social responsibility is determined not only as a reaction of enterprises on the emergence of different serious problems and challenges related to social inequality, environmental degradation, or to the growth of the large corporations; but also it is a guiding rule for firm's activity, which can help to understand the needs and expectations of different groups of stakeholders more clearly. We also agree with the statement that the enterprises' activity with regard to implementation

¹ Sustainable Development 2015. Advocacy Toolkit Mini-Site. URL: <http://www.sustainabledevelopment2015.org/AdvocacyToolkit/index.php/advocacy-toolkit-home> (access.: May 19, 2018).

² Essays on Sustainability and Management. Sarkar R., Shaw A. (eds.). India Studies in Business and Economics. Springer Nature Singapore Pte Ltd. 2017. P. 155. Doi 10.1007/978-981-10-3123-6_8

and realization of the corporate social responsibility concept has the same positive impact on the company's image creation, development of organizational culture, and on the innovativeness of products and operational processes¹.

This is confirmed by the results of *Nielsen's* (leading global information and measurement company, which conducts market research, provides insights & data about what people watch, listen to and buy) *corporate social responsibility survey*¹: "more than half (55 %) of global respondents say they are willing to pay extra for products and services from companies that are committed to positive social and environmental impact – an increase from 50 percent in 2012 and 45 percent in 2011. Regionally, respondents in Asia-Pacific (64 %), Latin America (63 %) and Middle East/Africa (63 %) exceed the global average and have increased 9, 13 and 10 percentage points, respectively, since 2011". According to the research materials "many companies today are making a conscious effort to put sustainable practices into action. They are well aware that doing so not only helps the environment and society, it can also create goodwill for their reputations and contribute positively to their brands' health and performance. Green initiatives can also save money. Reducing packaging materials, minimizing transportation costs and installing energy-efficient lighting are just some of the ways environmentally savvy companies are cutting costs. But the bottom line is not just about profitability – it's also about a culture change"².

Besides, the results of an investigations show that firms with greater CSR activities exhibit higher innovativeness capability and

¹ Aluchna M. "Społeczna odpowiedzialność biznesu a innowacyjność". Czy społeczna odpowiedzialność firmy wspomaga jej innowacyjność? Eds. Warszawa, Polska: Oficyna Wydawnicza SGH, 2017. P. 35–61.

¹ Doing well by doing good. URL: <http://www.nielsen.com/us/en/insights/reports/2014/doing-well-by-doing-good.html> (access.: March 22, 2018).

² Doing well by doing good. URL: <http://www.nielsen.com/us/en/insights/reports/2014/doing-well-by-doing-good.html> (access.: March 22, 2018).

launch more new products; furthermore, the positive relations between CSR and firm innovation is stronger for firms with higher R&D investment and firms operating in more competitive markets¹. By addressing social responsibility, enterprises can build long-term employee and consumer trust as a basis for sustainable business models. This, in turn, helps to create an environment in which enterprises can innovate and grow¹.

CSR evolution occurs in accordance with new global challenges to sustainable development. That's why great attention is paid to following the principles of corporate social responsibility in the process of enterprise management and, above all, during the formulation of strategy, determination of motivational factors and development of motivation system, creation of communication and marketing policy, as well as personnel management. The enterprise's activity concerning corporate social responsibility covers almost all goals, functions and directions of its activities, including the production process, marketing, finance, or administration².

Companies today must shift their focus to the long-term prosperity of the organisation as well as the complex and interrelated ecosystems (environmental, social, economic and political) within which it functions. Without this holistic management perspective, businesses run the risk of basing important decisions on mere narrow and short-term economic gains – which will only lead to the further

¹ Luo X., Du S. Exploring the relationship between corporate social responsibility and firm innovation. *Marketing Letters*. 2015. Vol. 26 (4). P. 703–714.

¹ Zhao H., Kwon J., Zhang F. Corporate social responsibility research in international business journals: An author co-citation analysis. *International Business Review* 2017. URL: <http://dx.doi.org/10.1016/j.ibusrev.2017.09.006> (access.: March 23, 2018).

² Warhurst A. *Past, Present and Future Corporate Responsibility: Achievement and Aspirations. The responsible corporation in a global economy*. 2011. P. 55–83; M Aluchna. *Społeczna odpowiedzialność biznesu a innowacyjność. Czy społeczna odpowiedzialność firmy wspomaga jej innowacyjność?* Eds. Warszawa, Polska: Oficyna Wydawnicza SGH, 2017. P. 35–61.

collapse of the global economic system rather than the achievement of the *United Nations Sustainable Development Goals*. Still, after the decision is made to focus on CSR and sustainability at the core of business operations, managers must determine which steps will be most effective and efficient. It is about making it happen by combining entrepreneurial drive, innovation and the vision of a sustainable future¹.

The world community makes great effort for development and implementation an appropriate international guidelines and principles which should be respected by business, government and society all over the world. Since the start of the 2000s, the European Commission (EC) has actively supported the development of CSR. The EC believes that CSR is important for the sustainability, competitiveness, and innovation of European EU enterprises and the EU economy: CSR provides important benefits to companies in risk management, cost savings, access to capital, customer relations, human resource management, and their ability to innovate; in the interest of the EU economy it makes companies more sustainable and innovative, which contributes to a more sustainable economy; and in the interests of society CSR offers a set of values on which one can build a more cohesive society and base the transition to a sustainable economic system. Guidelines and Principles that the *Commission's CSR strategy* is built upon: *United Nations Global Compact* (table 1); *United Nations Guiding Principles on Business and Human Rights*; *ISO 26000 Guidance Standard on Social Responsibility*; *International Labour Organization Tripartite Declaration of Principles concerning Multinational Enterprises on Social Policy*; *OECD Guidelines for Multinational Enterprises*².

On January 1, 2016 the 17 *Sustainable Development Goals (SDGs) of the 2030 Agenda for Sustainable Development* (2030 Agenda)

¹ Stages of Corporate Social Responsibility. From Ideas to Impacts. Idowu S., Vertigans S. (Eds.). Springer International Publishing Switzerland. 2017. 247 p.

² Official website of the European Commission. Corporate Social Responsibility (CSR). URL: http://ec.europa.eu/growth/industry/corporate-social-responsibility_en (access.: February 19, 2018).

officially came into force, which also form the universal guidelines and principles for all countries towards achieving sustainable development.

Table 1

The Ten Principles of the UN Global Compact¹

Areas	Principles
Human Rights	<i>Principle 1:</i> Businesses should support and respect the protection of internationally proclaimed human rights
	<i>Principle 2:</i> Make sure that they are not complicit in human rights abuses
Labour	<i>Principle 3:</i> Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining
	<i>Principle 4:</i> The elimination of all forms of forced and compulsory labour
	<i>Principle 5:</i> The effective abolition of child labour
	<i>Principle 6:</i> The elimination of discrimination in respect of employment and occupation
Environment	<i>Principle 7:</i> Businesses should support a precautionary approach to environmental challenges
	<i>Principle 8:</i> Undertake initiatives to promote greater environmental responsibility
	<i>Principle 9:</i> Encourage the development and diffusion of environment friendly technologies
Anti-Corruption	<i>Principle 10:</i> Businesses should work against corruption in all its forms, including extortion and bribery

The other new and very important global trend in CSR development is concerning sustainability disclosure. The first and most widely adopted global standards for sustainability reporting were the *Global Reporting Initiative Sustainability Reporting Standards (GRI Standards)* which have transformed from a niche practice to one now adopted by a growing majority of organizations. In fact, 93 % of the

¹ United Nations Global Compact. The Ten Principles of the UN Global Compact. URL: <https://www.unglobalcompact.org/what-is-gc/mission/principles> (access.: May 22, 2018).

world's largest 250 corporations report on their sustainability performance.

Global Reporting Initiative (GRI) is an independent international organization that has pioneered sustainability reporting since 1997. GRI helps businesses and governments worldwide understand and communicate their impact on critical sustainability issues such as climate change, human rights, governance and social well-being. This enables real action to create social, environmental and economic benefits for everyone. The *GRI Sustainability Reporting Standards* are developed with true multi-stakeholder contributions and rooted in the public interest¹.

Besides, GRI argues, that sustainability disclosure provides a broader view of a company's performance than financial disclosure alone. When used in integrated reporting, it can reveal value creation across six capitals: financial, manufactured, intellectual, human, social and relationship and natural².

Powered by a unique collaboration between GRI and the *International Integrated Reporting Council (IIRC)*³, the 2017 *GRI Corporate Leadership Group* on integrated reporting (CLGir 2017) aims to clarify how the *GRI Sustainability Reporting Standards* and the *International <IR> Framework* can be used together to provide insights into value creation across the six capitals and drive transparency⁴.

¹ Global Reporting Initiative. About GRI. URL: <https://www.globalreporting.org/information/about-gri/Pages/default.aspx> (access.: November 23, 2017).

² Global Reporting Initiative. GRI works with IIRC and leading companies to eliminate reporting confusion. URL: <https://www.globalreporting.org/information/news-and-press-center/Pages/GRI-works-with-IIRC-and-leading-companies-to-eliminate-reporting-confusion.aspx> (access.: November 23, 2017).

³ International Integrated Reporting Council. Integrated Reporting. URL: <https://integratedreporting.org/> (access.: November 24, 2017).

⁴ Global Reporting Initiative. GRI works with IIRC and leading companies to eliminate reporting confusion. URL: <https://www.globalreporting.org/information/news-and-press-center/Pages/GRI-works-with-IIRC-and-leading-companies-to-eliminate-reporting-confusion.aspx> (access.: November 23, 2017).

The *IIRC* is a worldwide coalition with the mission to mainstream integrated thinking and reporting and to change the corporate reporting system so that Integrated Reporting (<IR>) becomes the global norm. It is a broad based framework for business and investment decisions that are long term, inclusive and with purpose¹.

Besides, the EU law also requires large companies to disclose certain information on the way they operate and manage social and environmental challenges. This helps investors, consumers, policy makers and other stakeholders to evaluate the non-financial performance of large companies and encourages these companies to develop a responsible approach to business².

*Directive 2014/95/EU*³ lays down the rules on disclosure of non-financial and diversity information by large companies. This directive amends the accounting directive 2013/34/EU. Companies are required to include non-financial statements in their annual reports from 2018 onwards.

The EU rules on non-financial reporting only apply to large public-interest companies with more than 500 employees. This covers approximately 6,000 large companies and groups across the EU, including listed companies, banks, insurance companies and other companies designated by national authorities as public-interest entities.

Under *Directive 2014/95/EU*, large companies have to publish reports on the policies they implement in relation to: environmental protection; social responsibility and treatment of employees; respect for human rights; anti-corruption and bribery; diversity on company boards (in terms of age, gender, educational and professional background).

¹ International Integrated Reporting Council. Integrated Reporting. URL: <https://integratedreporting.org> (access.: November 24, 2017).

² European Commission. Non-financial reporting. URL: https://ec.europa.eu/info/business-economy-euro/company-reporting-and-auditing/company-reporting/non-financial-reporting_en (access.: November 22, 2017).

³ Directive 2014/95/EU of the European Parliament and of the Council of 22 October 2014 amending Directive 2013/34/EU as regards disclosure of non-financial and diversity information by certain large undertakings and groups Text with EEA relevance, Official Journal of the European Union, L 330. 15.11.2014. P. 9.

Directive 2014/95/EU gives companies significant flexibility to disclose relevant information in the way they consider most useful. Companies may use international, European or national guidelines to produce their statements – for instance, they can rely on: the *UN Global Compact*; the *OECD Guidelines for Multinational Enterprises*; *ISO 26000*¹.

Besides, in June 2017 the European Commission published its *Guidelines (Commission guidelines on non-financial reporting) to Help Companies Disclose Environmental and Social Information*². These guidelines are not mandatory and companies may decide to use international, European or national guidelines according to their own characteristics or business environment³.

It is also necessary to admit that sustainability disclosure (*Sustainability reporting, CSR reporting, Integrated reporting, Non-financial reporting*) has become the next step in CSR development.

As *Global Reporting Initiative (GRI)* indicates “Sustainability reporting can be considered as synonymous with other terms for non-financial reporting; triple bottom line reporting, corporate social responsibility (CSR) reporting, and more. It is also an intrinsic element of integrated reporting; a more recent development that combines the analysis of financial and non-financial performance”⁴.

Reporting is the critical link between the big-picture ambitions and the data that shows what action has been taken to achieve those ambitions and what progress is being made. Without reporting we

¹ European Commission. Non-financial reporting. URL: https://ec.europa.eu/info/business-economy-euro/company-reporting-and-auditing/company-reporting/non-financial-reporting_en (access.: November 22, 2017).

² European Commission, Communication from the Commission – Guidelines on non-financial reporting (methodology for reporting non-financial information) (2017/C 215/01). Official Journal of the European Union. C 215. 5.7.2017. P. 20.

³ European Commission. Non-financial reporting. URL: https://ec.europa.eu/info/business-economy-euro/company-reporting-and-auditing/company-reporting/non-financial-reporting_en (access.: November 22, 2017).

⁴ Global Reporting Initiative. About Sustainability Reporting. URL: <https://www.globalreporting.org/information/sustainability-reporting/Pages/default.aspx> (access.: March 19, 2018).

cannot know what is being done or how close, or how far, we are from where the world needs to be. Indeed, *the Sustainable Development Goals (SDGs) of the 2030 Agenda for Sustainable Development (2030 Agenda)* include a specific goal (Goal 12.6) to encourage companies to integrate sustainability information into their reporting cycles¹. The 17th SDGs officially came into force on January 1, 2016, and also form the universal guidelines and principles for all countries towards achieving sustainable development.

Under the GRI “sustainability reporting can help organizations to measure, understand and communicate their economic, environmental, social and governance performance, and then set goals, and manage change more effectively. A sustainability report is the key platform for communicating sustainability performance and impacts – whether positive or negative”².

Ukraine’s transition to sustainable economic development and its integration into European and world community require the introduction of modern practice of interaction between the state and business, as well as between the business and society, which would help strengthen the mutual responsibility of all participants of public life, to create the conditions for further sustainable development of society and to improve the country’s position in the global competitiveness ranking in the whole.

In the *Global Competitiveness Index 2017–2018* rankings Ukraine is on the 81 position (in 2016–2017 – 85).³

¹ The SDG Target 12.6 Live Tracker developed by GRI is an online platform that allows governments and interested parties to monitor and visualize the uptake of sustainability reporting worldwide, corresponding to UN SDG Target 12.6 <http://database.globalreporting.org/SDG-12-6/Global-Tracker>; Carrots & Sticks: Global trends in sustainability reporting regulation and policy. 2016 edition. URL: <https://assets.kpmg.com/content/dam/kpmg/pdf/2016/05/carrots-and-sticks-may-2016.pdf> (access.: March 20, 2018).

² Global Reporting Initiative. About Sustainability Reporting. URL: <https://www.globalreporting.org/information/sustainability-reporting/Pages/default.aspx> (access.: March 19, 2018).

³ World Economic Forum. The Global Competitiveness Report 2017–2018. URL: <https://www.weforum.org/reports/the-global-competitiveness-report-2017-2018> (access.: June 7, 2018).

Moreover, in accordance with the *Global Competitiveness Report 2017–2018* the most problematic factors for doing business in Ukraine are the following: inflation, corruption, policy instability, tax rates, tax regulations, government instability/coups, access to financing, inefficient government bureaucracy, foreign currency regulations, inadequately educated workforce, poor work ethic in national labor force, insufficient capacity to innovate, restrictive labor regulations, inadequate supply of infrastructure, crime and theft, poor public health (figure 1).

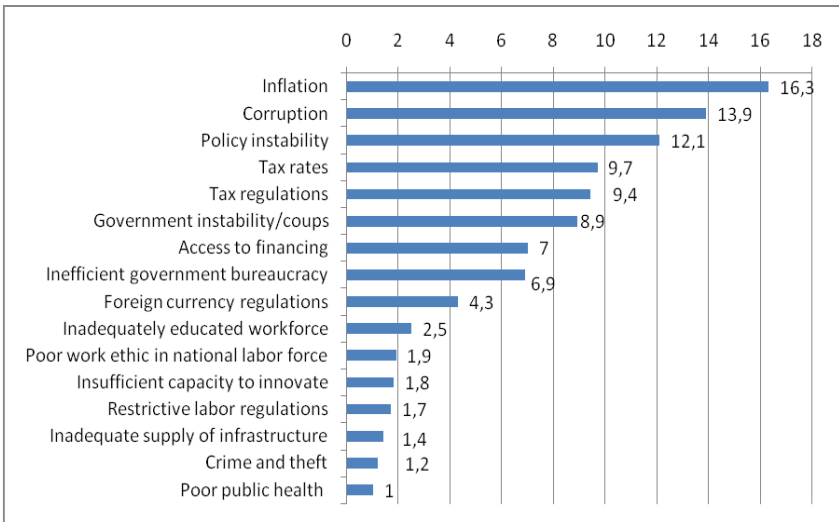


Fig. 1. Most problematic factors for doing business

Source: World Economic Forum, Executive Opinion Survey 2017.

In accordance with the *Doing Business 2018 Reforming to Create Jobs* Ukraine occupied the 76th position¹.

It is necessary to admit, that CSR in Ukraine is at the beginning stage. Social responsibility of Ukrainian companies and organizations

¹ World Bank Group. *Doing Business 2018 Reforming to Create Jobs*. URL: http://russian.doingbusiness.org/~/_/media/WBG/DoingBusiness/Documents/Annual-Reports/English/DB2018-Full-Report.pdf (access.: June 14, 2018).

is aimed primarily at labor relations and measures to protect the health and safety of consumers. The measures to protect natural resources and interaction with the community are less commonly used in the companies: only one third of companies make social investments into the community, and half of the companies do not take measures to protect the environment.

The representatives of foreign entities and also large and medium domestic enterprises primarily are the most active in this sphere. The representatives of foreign entities transfer modern world practices into the Ukrainian basis. Domestic enterprises improve their activities based on the concepts of *Total Quality Management (TQM)*.

The above-mentioned information shows, that CSR development in Ukraine is really important for the sustainable, competitive and innovative growth of domestic enterprises, as well as ensuring enterprises economic security according to the current trends in global economy. But, the effective adoption of CSR requires developing a strategy for its implementation. Furthermore, it requires assistance from the state, which should recognize CSR as a desired behavior for domestic entrepreneurship and develop a complex of incentives and measures for CSR dissemination and popularization in society¹.

Under the above mentioned we observed strong linkage between the enterprises' activity concerning implementation and realization of corporate social responsibility concept and the ensuring of enterprises' economic security in the new global competitive environment. Besides, we suggest that the economic security of an enterprise depends on effective parameters of its functioning, preservation the production and personnel potential, as well as increasing the financial potential of the enterprise, creating prerequisites for innovation and investment development, ensuring stable competitive positions of the enterprise and creating conditions for its further sustainable development. CSR

¹ Kytsyuk I. Main global trends in corporate social responsibility development and Ukrainian reality. Mechanisms of interaction between competitiveness and innovation in modern international economic relations: collective monograph. in M. Bezpartochnyi Eds. in 4 Vol./ISMA University. Riga: Landmark SIA, 2017. Vol. 2. P. 41–49.

evolution occurs in accordance with new global challenges to sustainable development. There are many drivers of corporate social responsibility now. Moreover, sustainability reporting, as an important step in CSR development, can help companies to make stronger relations with their investors and clients taking into consideration stakeholders' demand for transparency and accountability. And as result, it can have the positive impact on the companies's image formation.

6.4. Economic Security of the State and its Priorities in the Foreign Economic Policy of Ukraine

Syshchuk Artem

In a modern open economy, the problems of economic security for the newly independent states are particular important. The degree of economic security determines largely the prospects for strengthening their state sovereignty, the implementation of a wide range of economic policy objectives. The current position of Ukraine's economic security requires a theoretical justification of measures and directions for its strengthening. The active foreign economic policy of the state should be carried out with taking into account its influence on the economic security of the country, to keep it within acceptable limits. Such circumstances necessitate studying factors and essence of economic security, its state and prospects for strengthening position of Ukraine in the world.

Many Ukrainian and foreign researchers focus on a problem of economic security, which is a concern in foreign economic policy. In particular, A. Sukhorukov treats economic security as an aggregation of conditions under which the country's ability to maintain the

¹© *Syshchuk Artem* – PhD, Associate Professor of the Department of International Economic Relations and Project Management of Lesya Ukrainka Eastern European National University.

competitiveness of the economy remains, effectively protecting national economic interests and confronting external economic threats, and fully utilizing competitive advantages in the international division of labor¹. V. Novitsky gives an extended definition of economic security as one of the qualitative characteristics of the socio-economic system, which determines its ability to self-redevelopment, sustainable development, effective international competition, support of acceptable living conditions of the population, long-term self-provision of resources, as well as consistent implementation of national geopolitical, national interests². Our understanding is that economic security means that the state has sufficient opportunities to ensure stable conditions for an expanded reproduction of the economic potential of a society, guaranteeing the realization of its socio-economic, social, political and other purposes by economic means.

Contemporary economic security takes particularly into account the new risks occurring from the combination of the globalised competition and the increasing new role of information, threats on data, attacks on public research centres, attacks from financial predators against state currencies, stock market manipulations etc³. That is way, for example, D. Trump's political strategy is called *Economic security is national security*⁴. An inseparable element of the state's economic policy is its external direction, which is realized in the foreign economic policy of the state. The content of the foreign economic policy of the state is based on direct and reciprocal relations with the foreign economic activity of the country, the participants of which include a wide range of economic entities (TNCs, firms, private individuals, etc.) and managed by governments.

¹ Sukhorukov A. Methodology for assessing the level of economic security. URL: <http://www.niisp.gov.ua/articles/61> (access.: 21.09.2018).

² Новицький В. С. Міжнародна економічна діяльність України: підручник. Київ: КНЕУ, 2003. С. 279.

³ Definition of economic security. URL: <http://lexicon.ft.com/Term?term=economic-security> (access.: 21.09.2018).

⁴ URL: <http://www.foxnews.com/us/2017/12/18/trump-to-unveil-america-first-national-security-strategy.html> (access.: 21.09.2018).

Each foreign economic entity is responsible for its own economic security. However, the set of relations entered into by subjects of foreign economic activity forms the macroeconomic parameters of the national economy, which become the subject of regulation within the framework of a certain foreign economic policy of the state.

In all countries, though at different levels, the state takes an active part in the development of foreign economic relations by implementing appropriate regulatory measures, taking into account their impact on the state of economic security of the country, keeping it within acceptable limits. It stimulates or restricts their expansion in general, with certain countries or in relation to certain spheres of economy, types of products and services.

The objects of regulation of foreign economic activity are foreign trade, international capital movement, foreign exchange and credit relations, scientific and technical exchange, international labor migration, external debt of the country, etc. For example, low efficiency of using economic, scientific and technical and intellectual potential leads to an imperfect structure of foreign trade, limits the possibilities of effective foreign economic specialization, reduces the influx of foreign exchange earnings and worsens the result of the state's economic security.

Each of the above mentioned areas of foreign economic activity, in the absence of its proper regulation, can be a threat to the country's economic security. So, for example, the US now calls for firm action of its own foreign economic policy against unfair trading practices and intellectual property theft¹.

The main directions of the state policy on issues of national security in the economic sphere are defined in *Article 8 of the Law of Ukraine On the Fundamentals of National Security of Ukraine (June 19, 2003, No. 964-IV)*. Although in the conditions of economic globalization and open economy the boundary between the internal and external aspects of security in the economic sphere is becoming less noticeable (internal security is indirectly realized, for instance,

¹ URL: <http://www.foxnews.com/us/2017/12/18/trump-to-unveil-america-first-national-security-strategy.html> (access.: 21.09.2018).

through foreign economic activity, and vice versa); we will pay attention to those aspects that directly manifest themselves in concrete forms of foreign trade. They are the following:

- provision of conditions for sustainable economic growth and increase of the international competitiveness of the national economy;
- improving the financial and credit sphere and stopping outflows of capital abroad;
- ensuring the internal and external protection of the national currency, its stability, defending the interests of investors, the financial market;
- implementation of a well-considered policy of internal and external borrowing;
- provision of energy security on the basis of diversification of external power supply sources;
- protection of the domestic market from ill-fated imports – supply of products that could harm national producers, people’s health and the environment;
- strengthening of Ukraine’s participation in the international division of labor, development of export potential of high-tech products¹.

It is obvious that the peculiarities of external economic aspects of security (as opposed to internal ones) make it possible to consider them as a separate group of factors of economic and foreign economic policy of the state. One can select a group of indicators that are commonly used to characterize the external factor of the country’s economic security, namely:

- balance of visible trade;
- terms of trade;
- coverage of imports by export;
- export dependence;
- import dependence;
- external, including state, debt;
- share of innovative goods in the total volume of exports, etc.

¹ Law of Ukraine. On the Fundamentals of National Security of Ukraine. URL: <http://zakon.nau.ua/doc/?uid=1088.279.3&nobreak=1> (access.: 21.09.2018).

Let us consider some of these indicators. The resulting indicators, which include trade balance, balance of current operations balance, indices of the balance of payments, “terms of trade”, the coefficient of import dependence of the country and others characterize the conditions of foreign trade by the criterion of the balance of exports and imports, the efficiency and place of the country in the world trade. Thus, the “terms of trade” index is the relation of export prices of the country to its import prices. i.e. if a country exports and imports one commodity, the terms of trade indicate the quantity of goods A receives for each unit of the goods sold B (Table 1). The value of this indicator should not be less than one, but in 2014 it overcame the critical limit, as evidenced by the data in table 1.

Table 1

Indices of physical volume, average prices and conditions of trade in foreign trade of goods by Ukraine* (up to the previous year)**

Years	Indices of physical volume		Price indices		Conditions of trade indices	
	export	import	export	import	quantitative	price tag
2018**	100,6	96,6	112,0	114,9	104,1	97,5
2014	92,1	97,4	94,8	98,3	123,8	96,4
2011	106,0	112,8	125,6	120,6	94,0	104,1
2008	110,5	114,9	123,0	122,8	96,2	100,1

* *Source*: Indices of physical volume, average prices and conditions of trade in foreign trade of goods by Ukraine** (up to the previous year). – <http://ukrstat.gov.ua>

** February 2018 to February 2017.

*** From 2014 – without taking into account the temporarily occupied territory of the Autonomous Republic of Crimea, the city of Sevastopol and temporarily occupied territories in the Donetsk and Luhansk oblasts.

In 2017, exports of goods amounted to \$ 43,266.6 million, imports – \$ 49,598.5 million. Compared to 2016, exports grew by 19,0 % (by \$ 6,904.9 million), imports – by 26,4 % (by \$ 10,348.7

million). The negative balance was \$ 6,331.9 million (in 2016 it was also negative - \$ 2,888.1 million).

The ratio of import coverage to exports is the ratio of exports to total imports (Table 2). The threshold value of the indicator should not be less than one. In 2017 this indicator was 0.87 (in 2016 – 0,93)¹. In the first quarter of 2018, the situation remained virtually unchanged: the export-import coverage ratio was 0,90 (in the first quarter of 2017 – 0,93)².

Table 2

**Foreign trade of Ukraine and the coefficient of coverage of imports
by exports, billion US dollars³**

Indices	2001	2011	2017
Foreign trade value	36,73	151,00	93,30
Export	19,61	68,40	43,30
Import	16,92	82,60	50,00
Coverage ratio	1,17	0,82	0,87

Indicators of export and import dependence are within acceptable limits, although the import dependence is close to the critical one. The export dependence ratio is calculated as the ratio of exports to GDP (2.98 trillion hryvnias or \$ 114,6 billion in 2017 at the exchange rate of 26 USD / UAH). According to expert estimates, its threshold should not exceed 50 % (in Ukraine at the end of 2017 it was 37,8 %). The import dependence is calculated as the ratio of imports to GDP, threshold value is 50 % (the actual value in Ukraine at the end of 2017 is 43,6 %)⁴.

With the integration of the financial system of Ukraine into the international financial environment, financial security becomes

¹ Foreign trade of Ukraine goods in 2017 / 02.02.2018 № 60/0 / 08.2vn-18 / URL: www.ukrstat.gov.ua (access.: 21.09.2018).

² Foreign trade of Ukraine goods in the first quarter of 2018. May 15, 2018 168/0 / 08.2nv-18 URL: www.ukrstat.gov.ua (access.: 21.09.2018).

³ Foreign trade of goods by Ukraine in 2011 / 02/04/2018, No. 60/0 / 08.2nv-18. URL: www.ukrstat.gov.ua (access.: 21.09.2018).

⁴ Calculated by the author.

increasingly important. It means such state of financial, monetary, fiscal, currency, banking and tax systems, and the level of external debt that can ensure the effective functioning of the state, supporting its stability in the global economic environment.

Indicators of the state external debt reflect the amounts outstanding on a specific date of borrowings made by it on foreign markets. The level of “security” of debts for the state is determined by comparing their volumes with the amounts of annual GDP (according to Maastricht criteria – no more than 60 %).

According to the National Bank of Ukraine, the Maastricht criterion is significantly exceeded: Ukraine’s gross external debt as of October 1, 2017 amounted to \$ 117,350 billion, which is \$ 2,365 billion higher than the figure of July 1 of the same year (\$ 114,985 billion), i. e. increased by 3,26 %. In relation to GDP, the volume of debt for 9 months declined to 111,4 % of GDP from 121,9 % at the beginning of the year. External liabilities of the public sector grew by \$ 3,8 billion to \$ 46,5 billion in January – September, while the private sector debt declined by \$ 0,1 billion to \$ 70,8 billion from the beginning of the year¹.

In Ukraine, the use of external sources of lending and the growth of their efficiency require comprehensive efforts of all state institutions. At the same time, it primarily concerns the protection of property rights, domestic technological priorities, tax incentives, structural policies, investment objectives and their financial support.

Another important aspect of economic security is the scale and structure of Ukraine’s foreign trade relations. Export-oriented industries of Ukraine, in terms of gross indicators, are significantly lagging behind other European countries. With a substantive scientific potential, there is a low share of high-tech exports, products of high-tech industries (Table 3). Therefore, in order to strengthen economic security, it is necessary to identify the most promising sectors of exports and to provide state support for their development.

¹ Ukraine’s gross external debt exceeded \$ 117 billion. 07/19/2017 URL: <https://news.finance.ua/ru/news/-/417136/valovyj-zovnishnij-borg-ukrayiny-perevyshhyv-117-mlrd> (access.: 21.09.2018).

Table 3

**High-tech products in general industrial exports in 2004–2015
(cost and relative indicators) (\$ billion, %)***

	2004	2008	2012	2013	2014	2015
United Kingdom	66,0 (24,5 %)	60,4 (18,4 %)	67,8 (21,7 %)	69,2 (21,9 %)	70,5 (20,6 %)	69,4 (20,8 %)
Poland	2,0 (2,9 %)	5,9 (3,3 %)	9,6 (6,9 %)	12,2 (7,8 %)	14,5 (8,7 %)	13,5 (8,8 %)
Ukraine	1,5 (6,3 %)	1,6 (3,4 %)	2,6 (6,3 %)	2,1 (5,9 %)	2,0 (6,5 %)	1,3 (7,3 %)

* Composed by: <http://data.worldbank.org/indicator/TX.VAL.TECH.CD?locations=UA>

In the traditional industries for Ukraine, which provide the largest share of export revenues, due to the low technological level, in the world markets their share is decreasing. Thus, at enterprises of the metallurgical industry, 52,8 man-hours are spent on the manufacture of one ton of steel in Ukraine, while in Germany it is 16,8 man-hours. At full load of metallurgical combines in Ukraine with a full metallurgical cycle, labor productivity is about 200–250 tons of steel per employee per year. At the same time, in modern electrometallurgical mini-factories with production volumes of 1,5–2,0 million tons of steel per year this figure is 3000–4000 tons¹. Activation of state support and stimulation of exports with a high degree of processing will correspond to the global trend of increasing in the system of foreign trade relations the share of high-tech products and finished products. Some experts believe that the share of primary recycling in the world market is 20 %; finished products – 80 % of the total volume. The structure of Ukraine's exports to its main foreign economic partners until recently is not in line with this trend.

The urgent task for improving the economic security of Ukraine is to participate in the formation of a single European market with free

¹ Mazur V. Metallurgy of Ukraine: Status, Competitiveness, Prospects. URL: http://dt.ua/ECONOMICS/metallurgiya_ukrayini (access.: 21.09.2018).

movement of goods, services, capital and labor. An important step in this direction was the *Association Agreement between Ukraine and the EU* signing and the establishment of an enlarged free trade zone (it began to operate in full from September 1, 2017). In 2017, the export of goods to the EU countries amounted to \$ 17,534.5 million and increased compared to 2016 by 29,9 % (by 4,038.2 million dollars), import – \$ 20,795.8 million and increased by 21,3 % (by UAH 3,655.0 million). The negative balance was \$ 3,261.3 million (in 2016 also negative – \$ 3,644.5 million).

In the total volume of foreign trade operations in 2017, the share of EU countries increased and made up 40,5 % in exports, 41,9 % in imports (in 2016, respectively, 37,1 % and 43,7 %). However, with the growth of total trade with the EU, the largest volumes of exports fell on products with a low value added: agro-food and food industry – 32,2 % of total exports; non-precious metals and articles – 21,4 %; mechanical and electric machines – 14,2 %.

Ukraine is trying to turn the import into a factor of technological reconstruction of the Ukrainian industry. This is evidenced by the structure of commodity imports from the EU countries, where mechanical and electrical machines predominate – 21,8 % of total imports, chemical products and related industries – 17,2 %, land transport vehicles, aircraft, floating funds – 10,8 %¹.

Statistics show that the expectation of a significant imbalance between exports and imports of Ukraine into trade with the EU after the entry into force of the provisions on the free trade area within the framework of the Association Agreement were not met. Despite a relatively small gap in these indicators, Ukraine has increased exports in the European direction. At the same time, the dominance of raw materials and goods with low value added is one of the reasons that in the EU Ukraine has not yet found full compensation for losses it suffered in the CIS markets.

¹ EXPRESS-RELEASE State Statistics Service of Ukraine, State of Foreign Economic Relations with the countries of the European Union in 2017 – February 28, 2018, No. 86/0 / 08.2, 18-Feb-08. URL: www.ukrstat.gov.ua (access.: 21.09.2018).

In this context, the factor of reducing dependence of Ukraine on the dominant suppliers of some strategic resources and consumers-monopsonists of domestic products, which occurred before 2014, was of utmost importance. In particular, Ukraine's dependence on the Russian Federation, which has a share in foreign trade turnover in 2011, was excessive and amounted to 33,0 % of its national volumes (exports – 29,4 %, imports – 36,1 %, respectively). To compare: the volume of trade with other strategically important for Ukraine countries during the same period were much smaller: the USA – 2,4 %; Germany – 5,78 %; China – 5,4 %¹.

Energy-deficit countries believe that the share of imports of energy from one country should not exceed 30 % of their total needs. Since 2014, Ukraine has been able to significantly reduce the severity of the problem of energy security, refusing, in particular, from the supply of gas from Russia. However, there is a danger of Ukraine losing the role of the transit corridor for gas supply to Europe, and accordingly, the share of foreign exchange earnings that is already intercepted by other countries (*North Stream – 1 participants, North Stream – 2, South Stream, Nabucco* and etc.).

This problem is complicated by the too high energy intensity of production compared to developed countries due to technological backwardness. The development of the new technological basis of the fuel and energy complex, diversification of energy imports, energy saving, development of the extraction of own reserves of energy resources (including shale gas), search and use of alternative energy sources should change the situation.

Measures against cybercrime are a new important direction of the state economic security policy. Cybercrime costs world businesses close to \$ 600 billion, or 0,8 % of global GDP, which is up from a 2014 study that put global losses at about \$ 445 billion. Banks remain the favorite target of cybercriminals and nation states are the most dangerous source of cybercrime. Russia, North Korea and Iran are the

¹ Geographic structure of foreign trade of Ukraine goods. URL: http://ukrexport.gov.ua/ukr/vnishno_t_balans/6006 (access.: 21.09.2018).

most active in hacking financial institutions, while China is the most active in cyber espionage¹.

In December 2015, there was a successful hacker attack on energy objects in Ukraine. Then cybercriminals blew out three power supply organizations. In general, about 30 substations were affected and almost 230,000 homes and enterprises remained off-the-line during six hours. In 2016 a smaller scale attack was repeated in Kyiv and the sites of the Ministry of Finance, State Treasury and the Pension Fund of Ukraine were “broken”.

Estonians, where the departments of cyber security agencies and state cyber troops were created after the attack of the Kremlin hackers in 2007, advised Ukrainians to invest 10 % of the budget in the digital future and its protection (only 2016 hackers attacked Estonia more than 9 thousand times – this is an average of about 10 attempts per day)¹.

In the “hybrid war” conditions against Ukraine, the number and strength of cyberattacks have increased significantly through unauthorized interference with the work of state information resources and objects of critical information infrastructure, which endangers national security. So Ukraine’s government prepared the bill that increased penalties for violation of the rules of operation of computers and computer systems, telecommunication networks, as well as the rules of protection of the processed information, crimes committed against the objects of critical information infrastructure².

Consequently, in today’s globalized economy, problems of economic security are of particular importance. The degree of economic security largely determines the prospects for strengthening state’s

¹ Sukhorukov A. Methodology for assessing the level of economic security. URL: <http://www.niisp.gov.ua/articles/61> (access.: 21.09.2018).

¹ URL: <https://tsn.ua/svit/estonci-poradili-ukrayincyam-investuvati-10-byudzhetu-v-cifrove-maybutnye-i-yogo-zahist-1046430.html> (access.: 21.09.2018).

² U Kabmini proponuiut sadzhaty na 8 rokiv za kiberzlochyny. 23 kvitnia 2018. URL: <https://www.epravda.com.ua/news/2018/04/23/636259> (access.: 21.09.2018).

overeignty, realization of a wide range of tasks of the current and strategic economic policy of the Ukrainian state.

4.5. Development of Rural Territories in the System of Ukraine's Economic Security

Pavlikha Nataliia
Khomiuk Nataliia

Due to the introduction of decentralization process in Ukraine in 2014, which stipulates the transfer of powers to the local authorities, essential significance is acquired by regions, regional development, including that of rural areas, and ensuring regional economic security. Therefore, rural territories are given one of the leading parts in the formation of the national economy as a whole, which causes the necessity of investigation of rural territories development in the system of Ukraine's economic security.

A significant contribution to the study of rural territories development was made by such domestic specialists as V. Borshchevskyi, S. Hazuda, T. Hohol, O. Hutorova, Y. Hubeni, V. Diiesperov, M. Zhybak, I. Zalutskyi, S. Korobka, I. Kulchii, A. Kliuchnyk, M. Lesiv, A. Lisovyi, Y. Lupenko, M. Malik, L. Marmul, V. Onehina, O. Pavlov, O. Panasiuk, T. Pentsak, N. Ridei, N. Stoianets, O. Talavyria, I. Chukhno, O. Tsikhanovska, V. Yurchyshyn and others. Theoretical problems of economic security study are considered in the works of such scholars as V. Boiko, O. Vlasiuk, V. Heiets, V. Zalizko, S. Liekar, Kh. Mandzinovska, I. Mishchyna, H. Pasternak-Taranushenko,

© *Pavlikha Nataliia* – Doctor of Economics, Professor, Head of the International Economic Relations and Project Management Department of Lesia Ukrainka Eastern European National University.

© *Khomiuk Nataliia* – PhD in Economics, doctoral student of the International Economic Relations and Project Management Department of Lesia Ukrainka Eastern European National University.

V. Predborskyi, T. Sak, L. Shevchenko and others. However, despite a significant amount of publications on the issue under consideration there is no single approach to defining the process of interaction between rural territories development and ensuring economic security.

Taking into account the global experience, a high level of economic security of the regions and the country as a whole is one of the preconditions for the harmonious economic development of any state including its rural territories and society.

The issue of rural areas development is not sufficiently investigated not only in Ukraine but also in the world. Very often the development of rural areas is identified with rural or agrarian development, and, as a result, in the socio-economic development of rural territories the stress is made on agriculture. The developed countries of the world direct their resources and efforts to the integrated development of rural territories.

Table 1 shows systematized approaches to defining the essence of the concept of “rural territories development”.

Table 1

Approaches to the definition of the essence of the “rural territories development” concept

1	2
M. Malik, V. Pulim ¹	not only the development of material base, housing, social infrastructure in the countryside, but also the improvement of the quality of life in villages which is connected with the spiritual and social needs of a person
S. Korobka, T. Pentsak ²	set of actions (socio-economic, political and legal) aimed at ensuring stable irreversible changes in the industrial, social and environmental spheres

¹ Malik M. I., Pulim V. A. Kontseptualni zasady rozvytku silskykh terytorii. in Mizhnar. Sympoziumi Rol sotsialnoho kapitalu ta lokalnykh initsiatyv u zabezpechenni silskoho rozvytku. Zhytomyr, 2007. P. 156–163.

² Korobka S. V., Pentsak T. H. Problemy sotsialno-ekonomichnoho rozvytku silskykh terytorii v Ukraini. Naukovi visnyk LNUVMBT imeni S. Z. Hzhyskoho. 2017. T. 19, № 76. P. 67–71.

1	2
O. Hutorova ¹	stable development of a rural community that ensures: the increase in rural economy efficiency; stable reproduction of rural population; regulation of engineering and technical, sanitary and hygienic norms of the territory; providing the rural population employment and average income rate; raising the living standards of rural population; preserving culture and traditions; development of social infrastructure; rational and ecologically safe use of resources
V. Onehina, L. Batiuk ²	such an increase in agrarian production, in which its benefits are more or less evenly distributed among all participants in the process, and the reduction of employment in agriculture is accompanied by the creation of new jobs outside the agrarian sector in the countryside

Source: generalized by the authors.

Consequently, the development of rural territories should be considered as the process of expanded reproduction of rural areas, which ensures the harmonious growth of the economic, social, demographic, ethnic and environmental spheres³.

Synthesis of the concepts of “development” and “economic security” requires the substantiation of their interaction. Yu. Pogorelov notes that development as a general scientific category is considered in the three inseparably connected aspects, namele, as a law, as a

¹ Hutorova O. O. Problemy ta perspektyvy rozvytku silskykh terytorii v Ukraini. Aktualni problemy innovatsiinoi ekonomiky. 2016. № 4. P. 68–73.

² Onehina V. M., L. A. Batiuk. Suchasni tendentsii rozvytku silskykh terytorii yak zahroza ekonomichnii bezpetsi Ukrainy. Aktualni problemy innovatsiinoi ekonomiky. 2016. № 1. P. 33–36.

³ Khomiuk N. L. Teoretychni osnovy rozvytku silskykh terytorii v Ukraini. in I Mizhn. nauk.-prakt. internet-konferentsii Aktualni problemy rehionalnykh doslidzhen. Lutsk, 2017. P. 34–35.

principle and as a phenomenon, through the prism of quantitative and qualitative changes, the accumulation of which causes the transition of the system from a certain state to a qualitatively different one¹.

V. Predborskyi regards development as one of the components of economic security. If the economy does not develop, its possibilities of survival, resistance power, and the ability to adapt to internal and external threats sharply decrease. The violation of proportions and links among various components of the system leads to its destabilization, and is a signal of the transition of the economy from the state of safety to that of unsafety².

Although the concept of “economic security” has been used in scientific literature for a long time, there is still no single approach to the definition of this category.

International Committee of the Red Cross (ICRC) defines economic security as the ability of individuals as well as households and communities to satisfy their basic needs in a stable and dignified manner³. Another definition can also be found in scientific literature: economic security means access to resources, finances and markets necessary for maintaining the acceptable level of well-being and state power⁴.

Table 2 shows systematized approaches to the definition of the essence of the concept of “economic security”.

Therefore, economic security is a complex socio-economic concept which determines the ability of an economic system to

¹ Pohorielov Yu. S. Katehoriia rozvytku ta yii ekspleinarnyi bazys. Teoretychni ta prykladni pytannia ekonomiky. 2012. T. 1. Vyp. 27. P. 30–34.

² Predborskyi V. A. Ekonomichna bezpeka derzhavy. Kyiv, Ukraina: Kondor, 2005. P. 16.

³ International committee of the red cross. What is Economic Security? URL: <https://www.icrc.org/en/document/introduction-economic-security> (access.: May 19, 2018).

⁴ Buzan B. New Patterns of Global Security in the Twenty-First Century. in *International Affairs* (Royal Institute of International Affairs 1944). 1991. Vol. 67. Iss. 3. P. 431–451. URL: <http://www.jstor.org/stable/2621945> (access.: May 10, 2018).

maintain effective satisfaction of the needs of all economic entities, even under unfavorable conditions of the internal and external environment.

Table 2

Approaches to the definition of the essence of the “economic security” concept

Author(s)	Definition of the concept
S. Liekar ¹	a complex socio-economic concept which includes a wide range of constantly changing conditions of material production, external and internal threats to the economy
O. Vlasiuk ²	a complex polystructural science which, by analogy with the security of ecological, biological, technical systems etc., studies security of socio-economic systems of different levels of hierarchy (an individual, a household, a branch of industry, a region, economy sector, national economy, the world economy)
L. Shevchenko and others ³	the most important qualitative characteristic of the economic system that determines its ability of maintaining consistent implementation of national state interests, sustainable capacity of economic entities, normal living conditions of the population
I. Mishchyna ⁴	economic relations aimed at achieving such a level of economic development which provides effective satisfaction of needs and guaranteed protection of the interests of all economic entities even under the unfavorable internal and external conditions

Source: generalized by the authors.

¹ Lekar S. I. Poniattia ta zmist ekonomichnoi bezpeky. Forum prava. 2012. № 2. P. 399–402.

² Vlasiuk O. S. Teoriia i praktyka ekonomichnoi bezpeky v systemi nauky pro ekonomiku. Kyiv, Ukraina, 2008. P. 45.

³ Shevchenko L. S. et al. Ekonomichna bezpeka derzhavy: sutnist ta napriamy formuvannia. Kharkiv, Ukraina: Pravo, 2009. P. 11.

⁴ Mishyna I. H. Ekonomichna bezpeka v umovakh rynkovykh transformatsii: avtoref. ... kand. ek. Nauk/Donets. nats. un-t. Donetsk, 2007. P. 5.

V. Kuzmenko systematized the views of scholars on the definition of economic security at different levels and identified macrolevel (international and national security), mesolevel (regional security), microlevel (enterprise security) and nanolevel (safety of an individual)¹.

Table 3 shows systematized approaches to defining the essence of the concept of economic security of a state”.

Table 3

Approaches to the definition of the essence of the “economic security of a state” concept

1	2
T. Sak ²	the state of being protected against possible threats that forms economic independence, stability and long-term development
L. Shevchenko and others ³	protection of all levels of a country’s economy against dangerous actions caused either by the deliberate influence of any factor, or by the spontaneous impact of market forces
V. Predborskyi ⁴	it is not only the protection of national interests, but also the readiness and capacity of the institutions of power to create the mechanisms of implementation and protection of national interests in the domestic economy development, maintenance of the society’s socio-political stability
Kh. Mandzinovska ⁵	the basis of ensuring its sovereignty, competitiveness, defense capacity, maintaining social harmony in society, the country’s organic entry into the world economy

¹ Kuzmenko V. V. Ekonomichna bezpeka ta stalyyi rozvytok: vzaiemodii na rehionalnomu rivni: avtoref. kand. ... ek. nauk/Donets. nats. un-t. Donetsk, 2007. P. 5.

² Sak T. V. Ekonomichna bezpeka Ukrainy: poniattia, struktura, osnovni tendentsii. Innovatsiina ekonomika. 2013. № 6 (44). P. 336–340.

³ Shevchenko L. S. et al. Ekonomichna bezpeka derzhavy: sutnist ta napriamy formuvannia. Kharkiv, Ukraina: Pravo, 2009. P. 11.

⁴ Predborskyi V. A. Ekonomichna bezpeka derzhavy. Kyiv, Ukraina: Kondor, 2005. P. 16.

⁵ Mandzinovska Kh. O. Ekonomichna bezpeka derzhavy: sutnist, skladovi elementy ta problemy zabezpechennia. Naukovi zapysky. 2016. № 2 (53). P. 159–166.

1	2
O. Konarivska, T. Paniuk ¹	the state of protection of the vital interests of a state as a whole, from the risk of the effects of internal and external factors to ensure the stability of the national economy, which will lead to the effective functioning of enterprises
V. Heiets ²	capacity of the national economy to ensure its free independent development and to maintain the stability of civil society and its institutions, as well as the sufficient defense potential of the country under all kinds of adverse conditions and scenarios, and the ability of a state to protect national economic interests from internal and external threats
H. Pasternak-Taranushenko ³	the condition of a state that ensures the possibility of creating and developing conditions for productive life of its population, prosperous development of its economy in the future and the growth of its residents' welfare

Source: generalized by the authors.

Consequently, economic security of a country is the state of security at all levels of the country's economy against unfavorable conditions of internal or external environment. Based on the results of the conducted research, V. Kuzmenko notes that economic security of a region means a sustainable development of the region which promotes further improvement of its socio-economic and ecological spheres that are consistent with national interests, and possesses an

¹ Konarivska O. B. et al. T. P. Paniuk. Pidkhody do vyvchennia sutnosti poniattia "ekonomichna bezpeka pidprijemstv". Visnyk Volynskoho instytutu ekonomiky ta menedzhmentu. 2017. Vyp. 19. P. 95–102,

² Heiets V. M. Kontsepsiia ekonomichnoi bezpeky Ukrainy. Kyiv, Ukraina: Lohos, 1999. P. 5.

³ Pasternak-Taranushenko H. A. Ekonomichna bezpeka derzhavy. Metodolohiia zabezpechennia. Kyiv, Ukraina: Kyivskyi ekonomichniy instytut menedzhmentu, 2003. P. 29.

active effective mechanism for identifying and confronting internal and external threats¹.

The legal basis for the definition of “security” in Ukraine is the *Constitution, the Law of Ukraine On the Fundamentals of National Security of Ukraine* and other Ukraine’s laws, international treaties, the consent of which is binding on the Verkhovna Rada of Ukraine, as well as other normative legal acts issued in compliance with the laws².

In accordance with *Methods of Calculation of the Economic Security Level of Ukraine* approved by the Ministry of Economic Development and Trade of Ukraine the components of economic security are as follows: industrial, demographic, power engineering, foreign economic, investment and innovation, macroeconomic, food, social, financial (banking; that of non-bank financial market; debt; budgetary; currency; monetary) security³.

At present, most rural areas are characterized by a low socio-economic development as the main sphere of the rural population employment is agriculture, which specific feature is seasonal nature of production. Therefore, rural territories feature high unemployment rate, unfavorable demographic situation, high rate of rural population migration, low access to medical care and educational facilities. Unlike other countries, where the policy of rural areas development is being actively improved, in Ukraine it is still at the stage of the creation⁴.

¹ Kuzmenko V. V. *Ekonomichna bezpeka ta stalnyi rozvytok: vzaiemodiia na rehionalnomu rivni: avtoref. kand. ek. nauk/Donets. nats. un-t. Donetsk, 2007. P. 3.*

² Verkhovna Rada Ukrainy. (2018, Jan. 22): Zakon № 964-IV. “Pro osnovy natsionalnoi bezpeky Ukrainy”. URL: <http://zakon0.rada.gov.ua/laws/show/964-15> (access.: May 10, 2018).

³ Ministerstvo ekonomichnoho rozvytku i torhivli Ukrainy (2018, Febr. 21). Nakaz № 1277. “Pro zatverdzhennia Metodichnykh rekomendatsii shchodo rozrakhunku rivnia ekonomichnoi bezpeky Ukrainy”. URL: http://cet.com.ua/2013/29.10.2013_1277.htm (access.: May 10, 2018).

⁴ Khomiuk N. L. *Osoblyvosti formuvannia katehorii “silski terytorii”*. Naukovyi visnyk Uzhhorodskoho natsionalnoho universytetu. Serii: Mizhnarodni ekonomichni vidnosyny ta svitove hospodarstvo. 2018. № 17. P. 117–120.

The main problem of rural residents is that their financial situation is more complicated than that of the urban population. The low standard of life of the rural residents of Ukraine is evidenced by such index-number as the share of the population with per capita monthly equivalent cash income is lower than statutory minimum subsistence level: in 2016 it was 10,2 % in total in Ukraine, and in rural areas – 13,8 %. In 2016, the total share of the Ukrainian population with per capita monthly equivalent cash income was lower than the actual minimum subsistence level was 65,0 % nationwide, and in rural areas it was 73,6 %¹.

Significant aggravation of the economic crisis can be seen in the field of agriculture which is the main production sphere in rural areas. Large agricultural holdings are mainly engaged in growing cereals and industrial crops using advanced technologies, so arable farming has been practically monopolized. The largest area of farmland (3,515.1 thousand hectares) is concentrated in enterprises that owned and used more than 10,000 hectares. The distribution of agricultural enterprises in terms of the size of their farming land in 2016 is shown in Fig. 1.

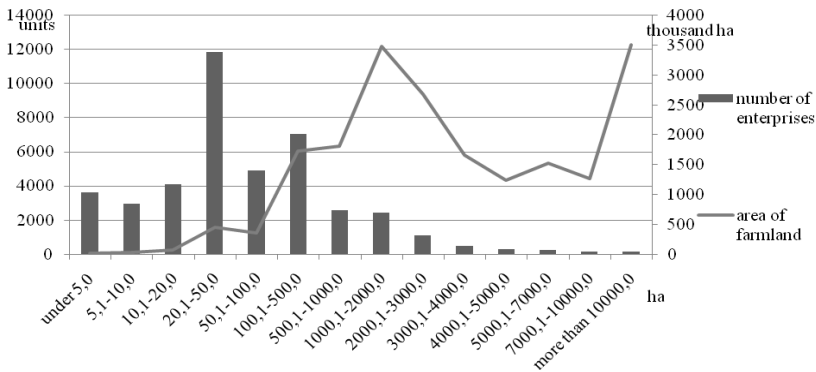


Fig. 1. Distribution of agricultural enterprises by the size of farming land in 2016

Source: composed by the author on the basis of Statistical Yearbook of Ukraine in 2016¹.

¹ Verner I. Ye. Statystychnyi shchorichnyk Ukrainy za 2016 rik. Kyiv, Ukraina: Derzhavnyi komitet statystyky Ukrainy, 2017. P. 83.

¹ Ibid. P. 295.

As a result, processing agricultural raw materials and the sale of commodity products have been actually monopolized by the enterprises. Monopolization of commercial lands leads to the decline of farming, small and medium-sized businesses in the rural areas¹.

According to statistics agricultural products grown in Ukraine in 2016 are estimated at 254,640.5 million UAH. Agricultural enterprises produced 57 % (crop products – 44,5 % and livestock products – 12,5 %) of the total volume. In the households, the volume of production is 43 % of the total: plant products – 28,1 % (mainly potatoes, vegetable and fruit crops) and livestock products (wool, milk) – 14,9 %².

The use of land in Ukraine is determined by the trends prevailing in Soviet times, that is the desire to increase production by increasing the share of arable land. This led, as N. Burlaka notes, to a high degree of plowed land³. The level of land plots in Ukraine is perhaps the highest in the world and is 53,9 %, which according to the current norms is considered unfavorable. High plowing of land is undesirable, because it dramatically reduces the natural potential of the territory. The agricultural development of Ukraine in 2017 amounted to 71,7 %, and the share of arable land in the total area of agricultural lands was 78,4 % (Table 4). In the EU, agricultural land cultivation is 25,6 %, and in developed countries 11,8 %⁴.

Taking into account the EU experience, a positive fact for Ukraine is the adoption in 2015 the *Concept of Rural Development*¹,

¹ Pavliukha N. V., Khomiuk N. L. Kontseptualni zasady transformatsii systemy platezhiv za korystuvannya zemliamy silskohospodarskoho pryznachennia. Innovatsiina ekonomika. 2016. № 9–10 (65). P. 114–119.

² Verner I. Ye. Statystychnyi shchorichnyk Ukrainy za 2016 rik. Kyiv, Ukraina: Derzhavnyi komitet statystyky Ukrainy, 2017. P. 290.

³ Burlaka N. I. Svitovyi dosvid vykorystannia zemelnykh resursiv silskohospodarskoho pryznachennia. Ekonomichni nauky. Seriya "Oblik i finansy". 2012. Vyp. 9 (33). Ch. 1. P. 142–149.

⁴ Pavliukha N. V., Khomiuk N. L. Transformatsiia systemy platezhiv za korystuvannya zemliamy silskohospodarskoho pryznachennia. Lutsk, Ukraina: Volynianyn, 2017. P. 82.

¹ Kabinet Ministriv Ukrainy (2018, Febr. 28). Rozporiadzhennia № 995-r, Pro skhvalennia Kontseptsii rozvytku silskykh terytorii. URL: <http://zakon2.rada.gov.ua/laws/show/995-2015-%D1%80> (access.: May 10, 2018).

which is aimed at creating necessary organizational, legal and financial prerequisites for rural development through: diversification of economic activity; increasing the level of real incomes from agricultural and non-agricultural activities in the rural areas; achievement of guaranteed social standards and improvement of living conditions of rural population; environmental protection, conservation and restoration of natural resources in rural areas; preserving rural population as the bearer of Ukrainian identity, culture and spiritual values; creating conditions for the expansion of the opportunities of territorial communities of villages and settlements to help them solve the existing problems; bringing the legislation regulating rural development in conformity with the EU standards. The implementation of this Concept will make it possible to shift the focus of the state's agrarian policy from the support of the agrarian sector of economy to the support of rural territories, improvement of the quality of life and economic welfare of the rural population¹.

Table 4

The agricultural development and the plowing of land in Ukraine

Indicator	Years (at the beginning of the year)										
	01.11.1990	2006	2010	2011	2012	2013	2014	2015	2016	2017	2018
The agricultural development, %	72,6	72,0	71,8	71,8	71,7	71,7	71,7	71,7	71,7	71,7	71,7
Plowing farmland, %	79,9	77,8	78,1	78,1	78,2	78,3	78,3	78,4	78,4	78,4	78,4

Source: calculated by the authors on the basis of data of The State Service of Ukraine for Geodesy, Cartography and Cadastre¹.

As scientists admit, the development of rural areas is important for Ukraine not only in view of the need to solve their socio-economic

¹ Pavlikha N. V., Khomiuk N. L. Dosvid yevropeiskoho soiuzu shchodo rozvytku silskykh terytorii. *Biznes-Navihator*. 2018. Vyp. 1 (44). P. 53–57.

¹ Derzhavna sluzhba Ukrainy z pytan heodezii, kartohrafii ta kadastru. *Zemelnyi fond Ukrainy*. URL: <http://land.gov.ua>. (access.: access.: May 10, 2018).

problems, but also for the sake of preserving the customs of the Ukrainian people, their historical and ethnic peculiarities. After all, it is a village community that is the key bearer and the centre of the development of cultural traditions¹. Therefore, the united territorial communities (UTCs) play a significant role in the system of economic security of a region and the country as a whole, being its most important elements.

According to *Article 1 of the Law of Ukraine On the Local Government in Ukraine* a territorial community is defined as residents, united by permanent residence within the limits of a village, a town or a city, which are independent administrative and territorial units, or a voluntary association of inhabitants of several villages having a single administrative center².

In the framework of this study, attention should be paid specifically to village and township territorial communities.

One of the results of reforming local self-government and the territorial organization of power is the establishment of united territorial communities, the number of which as of May, 10 2018 totaled to 731³. Zhytomyr, Khmelnytsky, Dnipropetrovsk, Zaporizhzhya and Volyn oblasts showed the best results in the overall rating of regions concerning the formation of UTCs, while the lowest ones were shown by Luhansk, Cherkasy, Kyiv, Vinnytsya and Zakarpattia oblasts.

As A. Tkachuk notes, the reform has reached the point of irreversibility, but this does not mean that there are no risks for its further course, the main of which are as follows¹:

¹ Vasylytsiv T. H., Boiko V. V. *Napriamy ta zasoby rozvytku silskykh terytorii v konteksti zmitsnennia sotsialno-ekonomichnoi bezpeky Ukrainy*. Lviv. Ukraina: Liha-Pres, 2016. P. 10–11.

² Verkhovna Rada Ukrainy (2018, Jan. 20): *Zakon № 280/97-VR*. “Pro mistseve samovriaduvannia v Ukraini”. URL: <http://zakon3.rada.gov.ua/laws/show/280/97-%D0%B2%D1%80> (access.: May 10, 2018).

³ *Monitorynh protsesu detsentralizatsii vlady ta reformuvannia mistsevoho samovriaduvannia stanom na 10 kvitnia 2018 roku*. URL: <http://decentralization.gov.ua/mainmonitoring> (access.: Apr. 12, 2018).

¹ Tkachuk A. *Reforma mistsevoho samovriaduvannia (detsentralizatsiia)*. URL: <http://reformsguide.org.ua/ua/analytics> (access.: Apr. 05, 2018).

1. The formation of UTCs in the regions leads to the weakening of the economic and managerial capacity of the district (rayon), and therefore to conflicts between the district-level management and the heads of UTCs.

2. The lack of jurisdiction of local self-government bodies on the territories outside settlements, particularly in such spheres as planning and improving the area, preserving the environment, leads to squandering and pollution of these territories.

3. The local bodies of self-government have sufficient powers and necessary resources, but the supervision over the decisions of local self-government bodies as to their compliance with the Constitution and laws has not yet been imposed.

4. Budgetary income alignment can lead to faster growth of the asymmetry of development among different communities, which is unacceptable for the unity of the state.

Association of communities allowed increasing the general fund revenues of local budgets per 1 resident for January – March 2016 – 2018 from 783,5 UAH to 1,330.9 UAH (+547,4 UAH)¹.

Due to the increased level of UTC financial autonomy the bodies of regional and local self-government have the possibility to develop and implement the territories development programmers, which will bring real economic results in the future. In addition, at the national level decentralization creates conditions for the competition among territorial communities for resources¹. In 2018 the state support for regional and local development increased by a factor of 39, as compared to 2014.

According to V. Zalizko, due to the fact that economic security of rural areas depends on the availability of a qualitative set of conditions and factors, both material and intangible, in which a sustainable socio-

¹ Monitorynh protsesu detsentralizatsii vldy ta reformuvannia mistsevoho samovriaduvannia stanom na 10 kvitnia 2018 roku. URL: <http://decentralization.gov.ua/mainmonitoring> (access.: Apr. 12, 2018).

¹ Onyshchenko V. O., Bondarevska O. M. Zabezpechennia ekonomichnoi bezpeky terytorialnykh hromad yak osnovnoho elementa rehionalnoi bezpeky. IV Vseukr. nauk.-prakt. Internet-konf. Ekonomichna bezpeka: derzhava, rehion, pidprijemstvo. Poltava, 2018. P. 8–10.

economic development of these territories is possible, while the economic system will be able either to effectively avoid conflicts or to settle them, as well as to withstand internal and external threats, it can be structured by subtypes. Thus, in the structure of economic security of rural territories, the scientist identified the following components: food; financial; ethno-cultural; informational; scientific-intellectual; transport; ecological; social; administrative; business, etc¹.

However, the definition of the concept of “economic security of rural territories”, according to V. Boiko, is a little debatable, in particular: 1) a specific territory is only a spatial basis for which the qualitative processes associated with the formation of economic security are a priori irrelevant, while the latter are characteristic of relations that arise between entities directly located on this territory; 2) rural territory cannot be the subject of legal relations, and the advocacy and protection of the interests of the rural population is ensured through representation in local self-government bodies, state administrations, public organizations, non-governmental institutions, etc.; 3) the parameters of economic security are determined not by the internal characteristics of a particular rural territory, but by the direct combination of the conditions of development of business entities operating on it. Therefore, it is more expedient in the process of the development of methodological apparatus for the research to use the notion “economic security of rural territories”, which priority is to assess the level of safety of conditions and the interdetermination between the development of rural areas and the level of economic security of the state. The peculiarity of the economic security of the rural territories development is its two-dimensional interdependence (regional and sectoral) with the economic security of the state through the intermediate hierarchical levels of its provision system¹.

¹ Zalizko V. D. Ekonomichna bezpeka silskykh terytorii: sutnist poniattia, struktura, funktsii. Naukovyi visnyk Lvivskoho derzhavnogo universytetu vnurishnykh sprav. 2013. № 1. P. 49–56.

¹ Boiko V. V. Formuvannia metodolohii doslidzhennia hospodarskoho mekhanizmu rozvytku silskykh terytorii u systemi ekonomichnoi bezpeky derzhavy. Ekonomika i suspilstvo. 2016. Vyp. 3. P. 44–51.

Ensuring the harmonious development of rural areas in the system of economic security should be based on the principles of unity and integrity, taking into account the process of decentralization, which is carried out through the formation of communities, with due consideration of geographical, economic, ecological, ethnic and demographic characteristics of each rural territorial entity.

Therefore, ensuring economic security at the level of village and settlement communities as a key element of regional economic security will allow not only improving the system of regional development management, but also increasing the level of protection of economic interests of rural residents and the state as a whole. It should be noted that the lack of a unified understanding of the essence of the rural territories development in the system of economic security, both in the scientific literature and in the legal and regulatory framework, gives rise to a number of contradictions and determines the relevance of further scientific developments in this field.

Scientific publication

**International and National Security:
Politics, Information, Ecology, Economy**

Collective monograph

Scientific editor: *Doctor of Political Sciences, Professor
A. Mytko*

*Editor: Doctor of Political Sciences, Professor
N. Karpchuk*

Technical editor *M. B. Filipovich*

Format 60×84^{1/16}. 18,6 um. druk. ark., 18,4 obl.-vyd. ark. Naklad 300 pr.
Zam. 5136/18.

Drukarnya MPBP “Hordon” (03179, m. Kyiv, vul. Kotelnykova, 95).
Tel./fax: (044) 501-35-69. Svidotstvo Derzh. komitetu telebachennya ta
radiomovlennya Ukrayiny DK № 1422 vid 08.07.2003 r.