



The General Jonas Žemaitis Military Academy of Lithuania, Vilnius

International Conference

Regional Risks and Risks to the Regions

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Conference Proceedings

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REGIONAL RISKS AND RISKS TO THE REGIONS: CONFERENCE DESCRIPTION

Stepping into the year 2018, the conference RISK-NET community is calling to open a new era of opportunities in managing risks in the regions. Regional risks are mainly created by dramatic changes associated with rapid urbanization, environmental destruction, regional conflicts, displacement, and new technology developments. By drawing a historical parallel between the years 1917 and 2017, researchers call them the “years of crisis”. The conference invites researchers and practitioners to present new ideas on risk assessment, management, communication and other relevant topics related to specific risks to the regions. The focus of the conference is to stimulate a discussion and share the ideas on the diversity and complexity of contemporary risks and their impact on the development and prosperity of the regions. The invitation to this conference is also an invitation to celebrate the *100th Anniversary of the Independence of the Republic of Lithuania* and to draw a sustainable way for the country’s development in the new arena of risks. Therefore, the conference challenges practitioners and researchers from different fields to question and test the knowledge of regional risk assessment and mitigation, to evaluate the sustainability of today’s countries and regions and to identify new approaches toward risk management.

The conference is organized in the framework of the Erasmus+ programme *Risk and Security Governance Studies within the Baltic–Nordic Academic Community of Practice*. Six universities from the Baltic–Nordic region created RISK-NET community and decided to enhance the risk and security governance capacities in the Baltic–Nordic region. This purpose has been rising gradually as the Baltic–Nordic countries have become a northern frontier that faces various common risk and security governance challenges requiring regional development through transnational cooperation. Constant presence of risks and uncertainties define contemporary societies. Europe 2020 names security as one of the main societal challenges for the next decade (together with energy, resource efficiency, climate change, social cohesion, aging and health). The Baltic–Nordic region is in the historical omnipresence of threats to national security. The strategies of risk governance have been developed deriving mainly from the public health, environmental and engineering studies and often fail to consider risk in its full complexity. In the face of the changing nature of risk sources – from energy to cyber security, from social to national security – and pace of international geopolitical developments, the risk governance

skills have to be constantly developed. These threats have changed in such a way that the boundaries between internal (national) and external security are increasingly blurred. To anticipate and address the risks in a timely manner and to achieve smart growth, the Europe 2020 calls for strong governance and RISK-NET community contributes in this field. The ongoing complexification of risks, due to global threats and new technogenic risks, dictates the need for new risk governance skills and methodologies capable of addressing risk in its full modern complexity.

At the conference and during the year, the RISK-NET community have been promoting exchange, co-creation of insights on learning issues, knowledge and best practices of different risk and security governance capacities. To expand the RISK-NET community, the international conference is organized presenting 35 new insights from different countries. The RISK-NET wants to encourage further connections between research and practice via the conference proceedings.

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1. Risk and Security Policies in the Baltic-Nordic Context

REGIONAL RISKS AND RISKS TO THE REGIONS

A SPIRITUAL MINISTRY: THE RUSSIAN ORTHODOX CHURCH AS A TOOL OF RUSSIA'S FOREIGN POLICY

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The recent events in Ukraine as well as institutionalization and expansion of the Russo-centric inclusive narratives applicable towards the whole post-Soviet space raises the questions on the potential threats and the need not only to identify it, but to prevent any potential attempts to widen Russian presence embodied in information flows and media wars. Moreover, these developments showed a number of consequence linked to the Soviet past of these countries.

Introduced in 2007, the concept of the “Russian world” became as an active tool to justify the Crimea annexation and military activities in the Eastern Ukraine. It became a main policy in the Russian rhetorics towards the post-Soviet countries. Initially presented in a form of patriotism and love to Russia, aimed as the main “spiritual tie” of the Russian society, patriotism merged into the concept of the “Russian world” and has been actively applied not only for domestic, but also for the external policies. The notion of the “Russian world” has also been incorporated into the compatriots policy which was introduced in the early 1990s, but actively redesigned in the mid-2000s.

Considering a combined approaches to the adherents of the “Russian world” and subjects of the Russia’s compatriot policies, the countries with significant Orthodox populations constitute key targets of these policies.

The approach of the Russian Orthodox Church largely resembles that of the Kremlin. As its Patriarch Kirill (Gundiaev, 2009) emphasized, “the Russian Orthodox Church conducts its pastoral mission among the peoples which embrace Russian spiritual and cultural tradition as the core of their national identity, or, at least, its substantial part”. Gundiaev further repeats Putin’s vision while speaking of “the entire East Slavic civilization, which we conventionally call the Russian world.” Moreover, while projecting his thoughts to the events in Ukraine during the last two years, Gundiaev underlines that “perhaps, the most terrible threat to the entire Russian world is the extreme nationalism and rejection of a representative of a different nationality, a different culture”.

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Thus, the vision of the “Russian world”, by the Russian Orthodox Church largely resembles that of the Kremlin. The activities of these two political heavyweights are complementary, as they act in parallel with the secular and religious directions. In addition, their interpretation of history, its key dates and events is quite unambiguous, categorically Russo-centric, and hierarchic with the primacy of Russian culture and language over their former soviet countries. At the same time, possible alternative interpretations of history are attributed to local “nationalism” and presented as “a treat”, or even a manifestation of “Russophobia.”

The text analyzes the vision of national statehoods’ development through the prism of the contemporary leadership of the Russian Orthodox Church, acting within the framework of the Russian official discourse towards cultural and historical development of Russia’s neighbors, as a form of retrieving justifications for dominance on the territories west of Russia.

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REGIONAL RISKS AND RISKS TO THE REGIONS

A STUDY OF MENTAL HEALTH PREPAREDNESS IN THE DISASTER MANAGEMENT PLANNING PROCESS OF THE MUNICIPALITIES IN LITHUANIA

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Introduction. Potentially traumatic events, such as wars, natural and technological disasters and economic crises have not only negative physical but also psychological consequences. After a disaster, the number of people with psychological trauma far exceeds the number of people with physical injury, but there is much more research and emergency response focus on the physical effects. Psychosocial resilience is the ability of a community to return to its pre-event level of functioning. Thus, a desirable objective is to create a resilient social systems which are able to neutralize any disaster impact. The responsibility of disaster management rests with the three spheres of government, namely, national, regional and local government (municipalities). Each municipality in Lithuania is responsible for the development of the inclusive disaster management plan that guides all municipal activities, responsibilities in the event of a progressive or sudden, widespread or localised, natural or human-caused occurrence. Mental health preparedness is an essential and integral part of the disaster management plan.

Methods. We aimed to investigate the mental health preparedness in the disaster management plans in 60 municipalities in Lithuania in 2016. We gathered the information by Web search of each municipality's official website.

Results. Official disaster management plans were available freely online in 51 municipality. Mental health preparedness was pointed as a responsibility of the municipality itself in 22 disaster management plans. Other institutions were marked as responsible for the organizing mental health support in 12 plans. Psychologists' contacts only were provided in 10 plans. Just brief note without further details were detected in 6 plans. The information on mental health preparedness was omitted in 1 municipality's disaster management plan.

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Conclusions. We therefore conclude that there is a general lack of incorporation of the information on the mental health preparedness in disaster management plans in the municipalities in Lithuania. These plans should provide more detailed information on mental health preparedness, which is of crucial importance in the successful management of the disaster. These omitted dimensions to preparedness provide the basis for further and important research.

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REGIONAL RISKS AND RISKS TO THE REGIONS

GOVERNING POWER SHORTAGE PREPAREDNESS THROUGH NETWORKS: FORMAL AND INFORMAL RELATIONS IN REGIONAL NETWORK GOVERNANCE

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In crisis management as well as in other policy sectors, cooperation between different actors are getting increasingly common. The actors represent stakeholders in public and private sectors as well as organizations in the civil society. In the event of a crisis, including floods, fires, substantial electrical failures etc., the County administrative board (CAB) should coordinate actions from authorities, municipalities, private actors and the national level (Wimelius Engberg, 2015). According to the Ordinance of Crisis Preparedness (SFS 2006:948), the CAB should analyze risks and vulnerabilities and maintain a capacity for crisis management, ensure that cooperation takes place between actors, and coordinate information to the mass media and the public during a crisis. In the event of power shortage, Sweden has implemented a multi-level planning system called Styrel. Styrel is a part of the Swedish crisis management system and the regional level, i.e. the CAB, plays an important role as coordinator in the planning system. A crucial element in Styrel is the identifying and ranking of societal important objects to ensure the supply of electricity in the event of a power shortage (EM 2012, EM 2014, Große 2017, Große et.al., forthcoming). To some extent, Styrel constitutes a process to create a resilient society (see Olausson, 2017). This paper focuses on the cooperation and coordination at the regional level in Styrel. The aim is to study the formal and informal relations used during the planning process in three counties at the regional level and at the municipal level. The study departs from theories on governance and policy networks. Rhodes (1996), Kooiman (2003) emphasizes the informal structure of networks as a central aspect in their way of functioning. The critique against networks, both formal and informal, has focused on the problems to demand accountability. Furthermore, the formality of the networks affects the efficiency in decision-making. Studies of the CAB in other parts of the Swedish crisis management system shows that the grade of formality within

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networks affect the internal work in the networks (see i.e. Enander et.al., 2015, Wimelius & Engberg, 2015, Olausson & Nyhlén, 2017). The study shows that in Styrel, already existing networks within crisis management are used. As such, the networks are formal to their character. However, In the Styrel process, the networks seem to be more informal to their character. The design of the planning process is one of the major explanations for this.

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REGIONAL RISKS AND RISKS TO THE REGIONS PUBLIC FINANCE CONTINUITY AND SUSTAINABILITY RISKS - THE CASE OF LITHUANIA

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The continuity and sustainability of public finances is presently a sensual topic in economic policy discussion. This is because of the remainder on former debt crises in Europe and the long-term public spending pressures caused by the obstructive demographic change in more developed countries. This paper analyses some of the conceptualizations that have been used to evaluate the public finance continuity in the case of Lithuania. Also, hypothetical criteria for sustainability are examined. The article is partly conducted by a mode of literature compartmentalization. There is no consensus among economic experts about the accurate theoretical standard for public finance continuity and in particular sustainability. Preferably each conceptualization to evaluate continuity and sustainability introduces its personal, sometimes differing, definitions. In this study are examined the strengths and weaknesses of each of the approaches and conditionally equate them with each other. It was found that each formulation has its functions. Approaches should be viewed as additive. Accessibility of data and modeling resources, destinations of the analysis and other case-specific restrictions impact relative quality of the approaches in various situations. Nowadays continuity and sustainability of public finances is a well-timed theme in many modern countries. Uncertainty have been raised by several reviewers and analysts whether public finances in the Western, Central and Northern European countries and in the North Americas are on a sustainable course. After the financial crisis of the first decade of the twenty first century the public debt of many countries has been on a sharp ascending route due to enforcement of diverse input and assistance collections directed to financial sphere and the wholly state economy. A rising liabilities integrated with long-term subjects similar to the bad sociological stratum modification of which impacts the proportion between number of people in the labor force and number of retired persons, have warned financial regimes to study the difficulty seriously. Unfortunately there are very few signs in the continuity of Lithuania's fiscal policy.

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REGIONAL RISKS AND RISKS TO THE REGIONS

THE DECLINE OF VALUES AS THE RISK FOR NATIONAL SECURITY

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The *National security strategy* of the Republic of Lithuania (2017) identifies 14 dangers, threats and risks. The crisis of values was mentioned as one of them. This crisis is outlined as disrespect to natural human values, devaluation of Christian values, the family institute, liberal democracy and pluralist society and promotion of anti-human values. The values play a vital role in society and in human life as essential guides for all activities. Thus, values can be a factor for consolidation and mobilization of the society against threats as well as a deconstructive factor of security and defense system of the country.

The aim of presentation is to analyze the reasons for the decline of values in contemporary society and the role of values for the ensuring security and defense system of the country. The analysis of values is based on the utilitarianism as the theory and the concept of consumerism as methodological background of the research.

Utilitarianism as the main ethical theory of contemporary society states that the essential indicator of human performance is the principle of utility. Utility means the happiness as the sum of pleasure for human beings. Consumerism as the main economic idea of contemporary society treats the utility as economic benefit or profit which is expressed in cash equivalents - dollars, euros, yuan, etc. Simplified principle of utility became the basic index of any human action and a standard of economic, political, social and cultural activities of state institutions, private enterprises, education institutions and other organizations. This approach denies the essential idea of utilitarianism as well as it transforms the basic ethical category - the concept of goodness. When the money became the core value and the same main goodness, other values such as morality, humanity, state, family and other universal or civic values have started to take less and less important part in human's life. Then it is easy to approve any amoral decisions or disgrace actions by the needs to get more profit/money. Such situation is dangerous for human beings, for the society and for the state as well because the decline of values is a collapse of the personality - the individuals become without morality

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and without identity as the consequence of it. When the individuals are loyal only to money and for money, they can easily change the place of living, the job, the country, etc. The flexibility of contemporary human beings is explained by the process of globalization or technological progress. Other way it can also be the consequence of a consumerism as the worldview. The consumerism makes a huge positive economic effect on the development of the society. Other way it is evident the destructive effect of consumerism on the consciousness of the society and its system of values as well.

Contemporary threats for national security are becoming more complex and have more hybrid character. As the rule they are targeting the consciousness of individuals and of the societies because of their moral weakness. The human factor is the main risk and main threat for the national security conditioned by moral decline of consumer society. It is the biggest challenge for national states and their governments because of complexity and diversity of postmodern world.

The results of scientific researches by Lithuanian sociologists, specialists of management and pedagogy (Bakanauskienė I., Bendaravičienė R., Krikštolaitis R. Jovarauskaitė, A., Tolutienė, G., etc.) confirmed the decline of values in Lithuanian society. There is no any fundamental research based on theoretical background of the topic. It is impossible to find the solution without theoretical/philosophical survey of such serious and actual problem of state security and defense. The future scientific researches must be interdisciplinary and complex, combining the results of practical research with theoretical sources.

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Jovarauskaitė, A.; Tolutienė, G. Dėstytojų pasitenkinimui darbu įtakos turintys veiksniai. Socialiniai mokslai. Ekonomika ir vadyba. Jaunųjų mokslininkų darbai. Nr.1 (26). 2010. p. 95-102.

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2. Everyday Risks and Threats

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COLLABORATIVE ARRANGEMENTS IN ROUTINE EMERGENCY MANAGEMENT: A NETWORK PERSPECTIVE

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The increased complexity of societal problems which have for some time been characterized as “wicked” in conjunction with flatter governance arrangements have resulted in a growing number of collaborations aimed at addressing these problems often by delivering a public good. The collaborative structuring of otherwise distinct public sector organizations is conceptually a normative concept as ideally it leads to efficiency, effectiveness, and the production and delivery of a better public good. In this study, the public good was routine emergency management in the greater Stockholm region and the object of study was the collaborative arrangement of emergency management operations in that region at the operative level, called the Collaboration Cluster. We viewed this arrangement as a network and conducted formal social network analysis (SNA) in order to map the relations among the participants and answer the following questions: who were the central actors in this collaborative arrangement? What was the nature (such as information, trust, expertise or other resources) of that which flowed among the network actors? Which actors were essential for the sustainability of the network? We triangulated the SNA data with in-depth interviews at the operative, supervisory and upper management levels at each organization comprising the collaboration cluster. Our findings suggest that the transaction costs of being part of the network are high and each organization contributing with an operation in this collaboration has to feel that the gains they receive offsets the costs. Actors with central positions possess resources such as information and expertise that other actors can use in the process of handling a call.

REGIONAL RISKS AND RISKS TO THE REGIONS POLITICAL DISCOURSES ON THE RISKS ASSOCIATED WITH THE ASTRAVETS NUCLEAR POWER PLANT IN BELARUS AND LITHUANIA

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Nuclear energy is seen as a risk in modern era with the disasters in Chernobyl and Fukushima influencing this approach. Nuclear risk acceptance varies significantly among countries. For example, France gets the majority of its energy from nuclear power plants, while other countries, like Hungary, UK and Belarus, plan to build new reactors. Germany started closing its nuclear reactors after the Fukushima disaster. It could be seen that the policy implementation and decision making, also related to risk factors, significantly depend on the government's approach, which is discursively constructed.

The Astravets Nuclear Power Plant (ANPP) is an important topic both in Belarus and Lithuania. The ANPP can have an impact on different areas, like economy, security and politics that plays a crucial role in this matter. In order to have a better understanding of how Belarusian and Lithuanian political actors speak of the ANPP risks, the analysis of political discourse and communication was performed. The research problem is that political discourses on the ANPP in Belarus and Lithuania might have a different framing of risk, but this issue is little researched. The presentation will discuss the specifics and differences between the communication.

For the theoretical part of the research, several theories were used: discursive institutionalism, agenda-setting and issue-framing. They allow to explain political discourse construction process. This part reviews the pre-history and current situation of the ANPP and examines the Belarusian and Lithuanian energy policies. The topic is important and controversial leading to protests staged by the environmentalists and politicians in both countries. In contrast to a number of accidents raising doubt about the safety and security of the ANPP, some experts make no criticism towards Belarus and the ANPP project.

To collect data for the research, the official sources for news of both countries' Parliaments and Governments were used: *belarus.by* for Belarus and *lrs.lt* and

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lv.lt for Lithuania. Also, the news communicated by political actors representing the Parliament and Government of Belarus or Lithuania were sampled as well. In order to find relevant news on the ANPP on *belarus.by*, a search option was used by entering the words ‘Ostrovets nuclear power plant’, which represent relevant keywords for the topic. For the search of the Lithuanian news on the topic on *lv.lt* and *lrs.lt*, the equivalent phrase in Lithuanian ‘Astravo atominė elektrinė’ was used. As a number of news and press releases found was not sufficient for the research, the keyword ‘Ostrovets’ was changed to ‘Astrav*’ notably increasing the number of news found that fitted the research.

Sampled news and press releases were coded using open coding technique and following the principles of abduction (deductive and inductive coding combined). The main codes cover discourse actors, main discourse themes, timeline, etc. NVivo software for qualitative and mixed methods of research was also used for the analysis.

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**COLLABORATIVE ARRANGEMENTS IN ROUTINE
EMERGENCY MANAGEMENT:
AN ORGANIZATIONAL PERSPECTIVE**

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The increased complexity of societal problems which have for some time been characterized as “wicked” in conjunction with flatter governance arrangements have resulted in a growing number of collaborations aimed at addressing these problems often by delivering a public good. The collaborative structuring of otherwise distinct public sector organizations is conceptually a normative concept as ideally it leads to efficiency, effectiveness, and the production and delivery of a better public good. In this study, the public good was routine emergency management in the greater Stockholm region and the object of study was the collaborative arrangement of emergency management operations in that region at the operative level, called the Collaboration Cluster. The cluster was established initially as a project partially funded by the Swedish Civil Contingencies Agency. In this study, we examine the consequences the creation of the new collaborative organization has on the constituent member organizations of that collaboration. We conducted observations and in-depth interviews with all seven constituent members of the collaboration at the operative level as well as the middle and upper management levels. We analyzed thematically with the help of Atlas.ti. Results indicate that the Collaboration Cluster is a fruitful initiative that is viewed favorably by some – but not all – stakeholders. Having said this, there does not seem to be an integrated way of working in the cluster; the latter consists of organizations attempting to collaborate in routine emergency management, but they do this without a joint protocols and operating procedures. They are a number of operators working in the same room, collaborating despite the home organizations and not because of them.

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RISKS OF ILLEGAL MIGRATION TO EUROPEAN ROAD FREIGHT OPERATORS

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There are a lot of environmental risks surrounding us, but the human factor might be the core problem to cause external risks. Since humans are capable of thinking and not just relying on their instincts, they are unpredictable. The unpredictability means the inability to control the future actions or ongoing processes.

Most of us go through our everyday lives never coming face to face with things like fighting for life because of poverty, discrimination or war. The above-mentioned adversities push people from Africa, Middle East, Asia to move to the Europe. This cause in 2015 brought to Europe one of the biggest social-economic problem, called European Migrant crisis, or European refugee crisis.

80% of illegal immigrants, who left their own homeland because of wars and poverty, do not have the basics of a stable life. The decisions which country will be the final destination depends on the language they speak and social guarantees about which they have heard. Many of migrants came from colonized lands, they easily speaks English, French, German. A lot of European countries have favourable laws and social guarantees. Without official asylum, the migrants became illegal, and the measures to reach desired countries lose all boundaries.

Illegal migration is an offence, it can't be discussed as legitimate passenger transportation. It might be evaluated only as people smuggling, or illegal incursion to transportation unit. These illegal intrusions are noticed all over the world in all transport types, such as air, land (rail, road), and water. Meanwhile European migrant crisis, evaluating the migrants who have already arrived to the EU, mainly touch illegal land transportations by road and rail freight transport. In 2015 European countries recognized the illegal migration problem and improved the border control. During 2015, 1.82 million people were detained and arrested while

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attempting to cross the borders of the EU states illegally. After arriving to Europe's periphery, migrants apply for the asylum, or move to the predetermined countries. As Europe is mainly covered by land, the illegal immigrants use land transport. From the land transport types, 27% illegal immigrants use road freight transport.

The interruptions to road freight transport unit might disrupt the work of global supply chain and cause chain reaction malfunction to all supply chain participants, therefore illegal actions made by human factor must be evaluated as source of risk.

The present paper provides an overview of the risks which might come up from transportation as a supply chain activity and the unpredictable human factor in transportation, which arise because of the European Migrant Crisis. Article highlights danger and risks that the illegal immigrants cause to the road freight transport units, loads being carried, drivers of these units and road freight transport operators.

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RISKS OF MEDICAL PRODUCTS E-SUPPLY: CONSUMER PERSPECTIVE

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Despite advantages, Information and Communication technologies (ICT) development causes certain challenges for business entities, public organizations, and society. E-supply chain, as a phenomenon is not an exception. The needs and requirements of e-commerce logistics become one of most important drivers for logistics and physical distribution networks change. Over last decades this area changed dramatically. At the moment, with the growth of e-commerce, most of the shippers, especially multi-channel shippers, are just starting to develop their own distribution network infrastructure. Since year 2000 e-commerce started to expand rapidly with the „pure-play“ (online only) retailers, which enabled establishing of e-fulfillment distribution networks, the medical products e-commerce lack behind in terms of traditional e-commerce. Reason for this – specifics of product itself. First – huge part of medical products need recipes, and health care system (e-health) in country should be ready (like e-recipe). Such decisions in EU countries are quite new. For example, creation of e-health system for citizens in Lithuania started in 2005. First, it was such services as informational websites, and portals. Second stage of e-health system maturity involved e-services such as registration to doctor, e-patient card, data exchange between institutions. Last one – e-recipe implementation stage together with telemedicine possibilities, and these solutions lead to medicine products supply via electronic means (LR Valstybės kontrolė 2017). However, e-commerce of medical products brings new type of risks for producers, suppliers, medics and citizens. One of the biggest risks regarding fast information technologies development and possibilities to sell drugs worldwide is marketplace in dark net. Often this kind of risks are related more to cybercrime selling illicit drugs (Bachhuber and Cunningham 2013; Hodson 2013) than customer behavior prospective related issues. However, scientists also investigate aspects of medical products supply in darknet (Bancroft, Scott, and Reid 2016;

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Rhumorbarbe et al. 2016) - vendors focuses communication on quality aspects of the product, in order to remove the main doubts of the consumers. E-commerce itself, as complex phenomena, which consists of many different research areas, is analyzed widely. Such aspects as website quality (Davidavičienė 2011; Wang et al. 2016), website security (Manuputty, Noor, and Sumardi 2013; Saridakis et al. 2015; Xu, Wang, and Jia 2016), e-commerce customer behavior (Banytė, Tarutė, and Taujanskytė 2014; Dhir, Chen, and Nieminen 2015; Jackson, L.A.; Wang 2013; Moreira, Fortes, and Santiago 2017). Specifics of Lithuanian consumers were presented by (Davidaviciene, Pabedinskaite, and Davidavicius 2017; Davidavičienė 2011; Davidavičienė, Sabaitytė, and Davidavicius 2017; Sabaitytė and Davidavicius 2017).

This research aims to identify specific risks in medical e-supply chain from citizen perspective.

Comparative literature analysis and synthesis used for presenting scientific statements and newest ideas presented by researchers, as well as statistical data analysis for determining trends in the area.

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DOES ORGANIZATIONAL COMMITMENT EXPOSE A RISK FOR MILITARY LEADERS? INVESTIGATIONS OF ORGANIZATIONAL COMMITMENT AND ORGANIZATIONAL CLIMATE DIMENSIONS

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The changes of external security environment demonstrate that a number of security challenges and threats remain the urgent issues of NATO's countries. The Baltic-Sea region emphasize the continued need for the EU countries to be actively engaged in "NATO's collective security measures, international operations and stabilisation efforts" (Fredriksen 2017). Though the idea of small forces was criticized by some scholars (Zdanavičius 2017), a different approach towards Lithuania's defence policy was adopted by Lithuanian decision makers after the Ukrainian crisis. The shift of defence policy revealed the issues related to the attraction and retention of qualified personnel. Defined as the "greedy organizations", military organizations raise higher demands, seek exclusive loyalty and commitment of personnel (Alvinus et al. 2017). Though organizational commitment attracted a number of researchers in recent years, the studies focused on military organizations' context are scant (Allen, 2003; Alvinus et al. 2017). We hypothesize that organizational climate is interrelated to organizational commitment. Thus, the purpose of the paper is to gain a deeper understanding of organizational commitment and organizational climate in military organizations' context. Theoretical discussion, related to organizational commitment and organizational climate has led to the development of the research instrument. The research design integrates the dimensions of ethical climate suggested by Victor and Cullen (1988) and the Meyer and Allen model (1991). Though the model of Meyer and Allen (1991) includes affective commitment, continuance commitment and an obligation commitment, the decision to consider affective commitment was made. The decision was grounded on the assumptions of contagion theory and the idea that "positive emotional contagion positively contribute to the attraction and retention of soldiers" (Alvinus et al. 2017). The analysis is based on a quantitative approach: the survey focuses on Lithuanian armed

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forces. Notably, 90 respondents, having different ranks and work experience, were questioned. The results revealed that there is variance within investigated unit by age. Meanwhile, the results of regression analysis revealed that caring climate is positively related to affective commitment of personnel. Finally, the recommendations for military leaders concerned with balanced organizational commitment and directions for further studies are presented.

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2. Everyday Risks and Threats

ETHNIC CLEANSING OF ROHINGYA MUSLIMS IN MYANMAR AND THE RISK OF MIGRATION

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Migration can be seen as a significant human phenomenon which the human community has practiced and continued from ancient to modern times. The concept of migration assumes a great significance in modern times mainly due to current migration crisis and the influx of migrants to Europe, America and various parts of the world because of the war and crisis in Middle East, Africa and Asia. It can be seen that the United States' attacks on Afghanistan and Iraq to combat and destroy global terror networks led to the displacement of the existing dictatorial regimes in these countries which consequently caused the instability and anarchy in the Middle East and South East Asia. Also, recent democratic uprisings in the Sub Saharan and African regions with the Arab Spring triggered the fall of dictatorial regimes in Syria, Morocco, Libya and other non-democratic countries fostering social, political and economic instability.

In the last two decades, many people have been displaced forcefully from their native places on the global level due to civil wars, ethnic cleansing, internal crises, etc. In 1997, 33.9 million people were displaced, whereas in 2016 about 65.6 million people were forced to move all around the world. The United Nations Refugee Agency (UNHCR) defines refugees as people fleeing from conflict and persecution. They are defined and protected by the international law and must not be expelled or turned down to the situation where their lives and freedom are at risk. In 2016, 189,000 refugees were settled in various parts of the world: 30% resettled in Africa, 26% in Middle East and North Africa, 17% in Europe, 16% in America and 11% in Asia-Pacific region.

However, ethnic cleansing can be seen as a process of deliberately removing a particular ethnic or religious community from a given region for a particular vested interest. According to Mulaj (2003, cited by Mulaj, 2007, p. 337), ethnic cleansing is a deliberate policy designed and pursued under the leadership of a nation or ethnic community or with its consent with a view of removing an undesirable population from a given territory on an apparent basis of its ethnic,

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national or religious origin or a combination of these through the systematic use of force and intimidation. According to Ragland (1994, cited by Ullah, 2016, p. 285), Asia follows Africa and the Middle East in the number of refugees. South East Asia is one of the refugee generating areas in Asia, while Myanmar is the largest contributor in the region. According to Pugh (2013, cited by Ullah, 2016), the “Rohingyas are one of the most vulnerable population in the world by any reckoning”. In the opinion of Lowenstein (2015, cited by Ullah, 2016), an estimated 1 to 1.5 million Rohingyas in Rakhine State in Myanmar are concentrated in the three townships of North Rakhine state – Maungdaw, Buthidaung and Ratedeung. Discrimination and unequal treatment are central to human rights violation suffered by this population group. In this regard, the issue of Rohingyas Muslims gets significance due to the oppression and unequal treatment they face from the Buddhist people and the government which was responsible for wide spread killing and ethnic cleansing. Such situation forces them to migrate to the neighboring countries, like Bangladesh and India, where they also face danger and prosecution from the government and local population.

It is to be noted that there is a systematic approach from the government and local authorities in Myanmar to subjugate and exclude the Rohingya population by considering them illegal immigrants who need to be moved away. This approach forced the refugees to isolation, deprivation of basic human rights and development of Rohingyas in the state of Myanmar which caused large scale violence and killing. In this context, the issue got international dimension and the international community is urging the Myanmar government to formulate policies for their protection and integration into social framework. In this situation, the aim of the article is to explore various governmental policies developed by the respective governments to support the Rohingyas during and after the migration process.

The main research methods include qualitative content analysis of various governmental policies for migrants by observing the data from governmental agencies like External Affairs Department, Department of Home Affairs, Human Rights Department, etc. Also, it observes political debates in Myanmar and the neighboring countries where they were given shelter. The finding could be useful for the international community and the governmental authorities on how to change and modify the existing policies for better assimilation and integration of Rohingya Muslims into social fabric.

Keywords: *risk, migration, policy, Rohingya Muslims, ethnic cleansing, Myanmar*

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**SHROUDING THE ROOTS OF RESILIENCE?
HUMAN DEVELOPMENT REPORT REPRESENTATIONS
OF ESTONIA IN THE WAKE OF THE GLOBAL
FINANCIAL CRISIS OF 2008-2009**

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Figures from the annual Human Development Index (HDI), compiled by United Nations Development Programme (UNDP), often serve as indicators for a nation's resilience and vulnerabilities. This has also been the case with the Baltic and Nordic states over the past couple of decades (UNDP, 1996; UNDP, 2014; UNDP, 2016). Other factors, however, may also prove important in such assessments, and could even offer alternative representations of how the population in a given country deals with issues of risk and safety. The European Model of Society (EMS), championed by the former president of the European Commission, Jack Delors, may prove an interesting example in such a discussion (Faludi, 2007). The approach is founded on theories of territorial cohesion and argues that territorial inequalities within a country, district or region, are fundamental prerequisites to social and economic development and ultimately contribute to people's societal safety (Roberts, 2007).

With a special focus on Estonia in the wake of the financial crisis of 2008-2009, this paper seeks to explore examples of societal safety in relation to representations in the HDI and the EMS. The paper's methodology is rooted in a qualitative analysis of relevant HDI reports, coupled with a theoretical discussion of resilience and territorial cohesion. While arguing that that HDI data can be useful when analysing national resilience, we ask whether studies of national resilience through the lens of HDI figures may yield uncertain results in some areas, including labour market-related vulnerabilities and resilience. For instance, while the financial crisis severely affected Estonians' job opportunities, the country's wage gap between genders decreased during the same time period. Estonia also managed to keep its public debt at low levels, and the country's GDP had among the highest growth rates in the EU in 2010 (Masso & Krillo, 2011). Taken into account that the financial crisis hit the Baltic states earlier and more severely than other countries (*ibid.*), resilience stands out as a com-

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plex phenomenon that should be studied in depth through all its intricacies and complications. The purpose of our discussion is to highlight ways in which the HDI indicates but may also shroud important factors in assessments of resilience. Are there blind spots within this very comprehensive framework where the EMS approach offers alternative and perhaps more nuanced information? Our paper is intended as a contribution to how we understand vulnerability and resilience in the Baltic-Nordic region.

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3. Technological Development and Emerging Risks

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FRAME SHIFTS AND REGIME CONFLICTS IN GLOBAL GEOENGINEERING GOVERNANCE

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Proposals for the large-scale manipulation of the climate system for counteracting global warming or its effects are presently moving from the margins of the scientific debate into the mainstream of climate policy. Decision-makers increasingly recognize that efforts at mitigating greenhouse gas emissions will be insufficient for bringing the world onto a pathway that is consistent with the 1.5 to 2°C temperature target set out in the 2015 Paris Climate Agreement. Proposals for the large-scale removal of atmospheric carbon dioxide present a risk-risk trade-off. While slowing global warming, so-called Negative Emissions Technologies (NETs) are likely to have adverse impacts on terrestrial or marine biodiversity. First, we show how the framing of NETs as a complementary instrument of climate policy generates conflicts between the international climate- and biodiversity regimes. Second, we attempt to explain this frame shift through a) the role of epistemic communities, b) differences in scientific knowledge regarding the causes, consequences and extent of climate change and biodiversity loss, respectively, and c) differences in the public good characteristics of climate change and biodiversity. We conclude by discussing the potential role of environmental safeguards in ameliorating the regime conflict.

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**INNOVATION AND ENTREPRENEURSHIP
IN EXPEDITIONARY ENERGY ECONOMICS (E3):
THE SECURITIZATION OF ENERGY SYSTEMS
DURING MEGACITY COUNTERINSURGENCIES**

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The rapid urbanization around the world has generated a tremendous interest in the risk of megacity insurgencies. The purpose of this paper is to introduce a new field of study—of expeditionary energy economics (e3)—that addresses energy management in the military expeditionary environment (EMMEE) in the wider context of glocal (global/local) energy transitions to 2050. This study argues that successful megacity counterinsurgency (COIN) campaigns of the 21ST century will depend on fast solutions to critical energy infrastructure (CEI) vulnerabilities within individual communities. The implementation of e3 requires that COIN practitioners have a basic understanding of community-based entrepreneurship (CBE), high-risk/high-impact innovation (HRH2I), and the CEI that these individual communities rely upon. Empirical evidence is also discussed to support a proposed e3 definition.

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ONLINE PIRACY PRACTICE AS A RISK FACTOR

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According to M. Castells, technological changes appeared in the second half of the 20th century. They linked different areas of activities to a common digital language that created, stored, received, processed and transmitted information [1]. The Information and Communication Revolution created conditions for the spread of cybercrime.

The prevention of cybercrime is carried out by creating preventive control measures, such as signing international directives and enacting laws regulating security options. In its legal practice, Lithuania has established a number of safeguards to ensure the security of electronic data and information systems, [2] the integrity of copyright law, etc. [3] Unfortunately, the existing judicial practice shows that the established legal norms are not always implemented in practice. According to various studies, Lithuania is named as one of the leading countries in software piracy in the European Union.

The aim of this report is to reveal how young people (16-29 years of age) understand and assess online piracy. The report discusses the attitudes of the Lithuanian society and a group of young people to the phenomenon of online piracy, risks and control. [4]

Conclusions:

- It can be argued that the phenomenon of online piracy of the organizations concerned with the protection of copyright and related rights is formally condemned. No account is taken of the 'pirates' attitudes, financial situation and the ability to use the Internet and computer.
- Among the young people involved in the study, there is a well-established premise that pirates are not 'captured' and their actions are not controlled. The participants do not believe in effective legal control.
- The so-called pirates recognize direct damage to the authors, but responsibility and guilty are neutralized by denying victim, damage, responsibility, appeal to higher goals and accusation of the accused.

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- The network development and not always clear rules are institutional elements allowing users to learn how to use piracy on the Internet first and only then learn how to use information technology responsibly and safely. Therefore, there is a lack of understanding of what can cause a danger to the author and users themselves by irresponsibly browsing the Internet and downloading data from untrusted sources.
- The main reasons why young people choose to download data illegally are as follows: 1. Economic situation. The data is either too expensive or the salaries are too small. 2. The lack of understanding about what is legal and illegal on the web. 3. The change of technological innovation. 4. Accessibility of information when illegal access is easy to find.
- There is an uncertainty in the concept of online piracy, which is distorting the young people's perception of online piracy. Because of this misunderstanding, different associations about crimes in cyberspace exist among young people. There is an individually created field of information for each youth and this understanding field is poorly related to the provisions of legal documents. Therefore, in order to avoid ambiguities and stigmatization, the concept of software piracy should be consolidated not only in the normative language, but in the social context as well.
- The Internet in Lithuania is widely spread, but there is a lack of information about the possibility of protecting personal data and legal and illegal access to the web. It can be assumed that the lack of knowledge affects the extent of online piracy.

Current situation and the attitude to online piracy in Lithuania are not developed; there is no unanimous opinion about piracy as a criminal act and targeted application of control measures by law enforcement agents.

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UNDERSTANDING BIG DATA: BARRIERS OF ADOPTION

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The term of big data represents datasets that is difficult to collect, manage and analyze using traditional information technologies (IT), software and hardware tools within a tolerable time (Chen *et al.* 2014). It encodes information about the client's behavior, interests and needs. Although big data collection is becoming more and more accessible, 60 percent of big data projects fail (Gartner 2015). This is because the barriers to the adoption of big data. It is important to identify and understand them, because it makes it easier to eliminate the potential risks and succeed in big data analysis.

Researching the barriers and risks of big data adoption, three groups: the data, process and management challenges are distinguished (Akerkar 2014; Zicari 2014). Data challenges relate to 3V, 5V and 7V models which are based on big data dimensions that characterize the data itself (e.g. volume, variety, velocity) (Krasnow Waterman, Bruening 2014; Akerkar 2014; Zicari 2014; Sivarajah *et al.* 2017; Ward, Barker 2013). Process challenges are related to big data processing phases: capturing, integrating and transforming data, selecting the right model for analysis and providing the results (Akerkar 2014; Zicari 2014; Sivarajah *et al.* 2017). And management challenges – cover privacy, security aspects (Akerkar 2014; Zicari 2014; Sivarajah *et al.* 2017). To overcome these challenges, new skills and IT infrastructure need to be developed, new management practices or new organizational culture across the organization introduced (Manyika *et al.* 2011). According to that, detailing the barriers and the risks of big data adoption, the technological, human and organizational barriers are identified (Alharthi *et al.* 2017; Delgado 2016). Technological barriers are defined as IT infrastructure (Alharthi *et al.* 2017), which do not help manage substantial amounts of data efficiently (Sivarajah *et al.* 2017). To eliminate this barrier, to insure the usage of commodity hardware is necessary (Alharthi *et al.* 2017). Human barriers are related to the person's activity, which influenc-

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es the use of big data. In this aspect, much of the focus on big data has been on the protection and personal privacy issues (Ward, Barker 2013; Agrawal *et al.* 2012). In order to solve this issue, legal regulation is the base. Laws and standards define the conditions for processing data and prevent human rights violations. From the perspective of big data protection, malware is named as an ever-growing threat to data security (Abawajy *et al.* 2014). For protection of accumulated data, applying of security controls are needed. It helps to ensure malware prevention. Also, it is important to have qualified employees. Demand for data scientists is already high and only on the rise, yet the number of qualified data scientists available is low (Delgado 2016). Because of that, organizations and academic institutions should collaborate on providing practical training to address missing skills in the field of data analytics and big data (Miller 2014). Organizational barriers are an organizational culture that manifests itself through the values, norms and symbols of the organization. The achievement of successful cultural change requires a clear organizational vision and strategy, which is closely related to the big data.

Big data presents new opportunities for organizations. Having these barriers in mind, organization will be in an advantageous position to ensure the right technology is available, that their culture will foster big data, that the skilled employees are working (Delgado 2016). Those businesses who are able to identify big data risks will remain competitive in the increasing data-driven economy.

Keywords: *Big data, data analysis, data management, technologies management risks*

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REGIONAL RISKS AND RISKS TO THE REGIONS
**APPLICATION OF FUZZY AHP WITH INTERVAL
TYPE-2 FUZZY SETS IN THE ASSESSMENT
OF IMPORTANCE OF RISK FACTORS
OF INVASIVE SPECIES IN LATVIA**

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Keywords: *Fuzzy AHP, type-2 fuzzy sets, ranks of risk factors.*

Abstract. Assessment of risks is an important task of various spheres of human activity: economy, technology, ecology, etc. Due to the available facts on the spread of invasive species in the territory of Latvia, it is necessary to identify and evaluate the connected with it risk factors. Analysis of ecological risks is often connected with the assessment of consequences of totality of competitive and contradictory factors; however the existing statistical data in this sphere is pretty poor. The solution of this problem could be the application of the multiple criteria methods of analysis and the decision making. Analytic Hierarchy Process is one of the widely known methods of using the experts' assessments.

Originally Analytic Hierarchy Process (AHP) had been offered by T.Saaty [1] as the specific optimal decision making approach in the conditions of determination and risk. Primary task of the decision making (level or risk) is expressed in a form of hierarchical structure with several levels. The upper level represents aims, which should be reached while making a decision. Next levels contain criteria and subcriteria. At the lower level the assessment factors characterizing the levels of risks in details are represented.

The significant AHP feature is that at the primary step an expert (experts) fulfils pairwise comparisons in accordance with priority of all risk levels of each of assessed factors. Results of the assessment are illustrated by T.Saaty's scale figures and are designed in the form of matrix of pairwise comparisons. Further, primary results are processed and translated into the next level of hierarchy, where their aggregation is done. The process of aggregation is continued until the higher level of hierarchy is reached, where the meaning of priority is calculated for each risk level. On the basis of these meanings an optimal level

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or levels of risks may be ranged by their priority.

Often in practice experts may not feel confident for their assessment of results of pairwise comparisons. It can be caused by the absence of sufficient amount of knowledge and experience in the appropriate subject sphere, by the uniqueness of task or by insufficient substantiation to make a comparison. In order to manage with such kind of uncertainties, the method of Fuzzy AHP is used. Instead of the determined results of pairwise comparisons their fuzzy analogues are used. There exist different approached of fuzzification of relevant assessments in AHP and processing of results.

Historically, the approach described in [2] has been regarded as the first one used for the extension of AHP to the fuzzy environment. Results of pairwise comparisons are expressed in the form of the trapezoidal interval fuzzy figures of type 1. For calculation of priorities of the meanings of vectors the logarithmic least squares method is applied.

The mostly used method is the method of synthetic extension offered in [3]. In frames of this method uncertainties of the results of pairwise comparisons are modelled with help of trapezoidal interval fuzzy type-1 fuzzy sets. Meanings of the vector priorities are determined on the basis of special calculation procedures.

In case if expert's are quite unconfident in the results of their pairwise comparisons and the results cannot be covered by standard fuzzy approaches, the only solution is to modulate such serious uncertainties with help of the type-2 fuzzy sets. The most appropriate way is to express the results of pairwise comparisons in the form of the trapezoidal type-2 fuzzy sets. The choice is dictated by the fact that operations with such figures are much easier than with the common type-2 fuzzy sets.

Results represented in [4] should be mentioned as the examples of application of such figures in the optimal decision making process on the basis of fuzzy AHP versions. Beside the solution of main tasks - optimal decision making - AHP and its fuzzy versions are widely used for the assessment of relevant importance of factors of different types of risks, as e.g. in works [5] and [6].

Efficiency of using Fuzzy AHP on the basis of the type-2 fuzzy sets for the assessment of relevant importance of risk factors of spread of invasive species in Latvia may be proved quite easily. There is no enough statistical data on the processes of this spread. Due to a poor investigation of these processes, experts do not have enough experience and knowledge. This is the reason why the results of pairwise comparisons are pretty uncertain. The application of AHP on the basis of the type-2 sets is the only appropriate method to solve the

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determined problem.

In this article the AHP methodology on the basis of the type-2 fuzzy sets is used for the assessment of ecological risk in case of spread of invasive species, by ranging risk factors in accordance with their influence on the overall ecological risk.

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PERCEPTIONS OF JUSTICE INFLUENCING COMMUNITY ACCEPTANCE OF SPENT NUCLEAR FUEL DISPOSAL: A CASE STUDY IN TWO FINNISH NUCLEAR COMMUNITIES

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Abstract: Final disposal of spent nuclear fuel (SNF) from nuclear power plants is an ethical issue with implications within and across generations. We address this issue from the perspective of nuclear communities, the places that face injustice due to the potential technological risks from inherent in nuclear energy production. Perceived justice can further influence local acceptance of nuclear waste repositories. A resident survey (n=454) was conducted in two Finnish nuclear communities which are alternative sites for a planned second repository for SNF. We investigated the residents' conceptions of justice and trust regarding the repository, and how these aspects were related to acceptance of the repository, and whether these communities, in different stages of their lifecycles as nuclear communities, differed in terms of the perceived justice and community acceptance of the repository. The main findings show that residents of both communities were aware of intragenerational and intergenerational injustices in the procedures and distribution of risks of the proposed repository. The repository was not accepted in either of the communities, and the claims regarding justice and trust were related to the acceptance of the repository. The findings also suggest that the more experienced community, i.e. the nuclear oasis, expressed greater mistrust and perceived greater injustice than the "less experienced", i.e. the greenfield community, which expressed more concern over intragenerational distributive justice than the nuclear oasis. It was also found that the communities experienced similar concern over the intergenerational justice of the geological disposal of SNF. Therefore we argue that previous experience in local communities of SNF disposal does not enhance community acceptance or the sense of procedural and intergenerational justice in repository siting.

Keywords: *justice, community acceptance, spent nuclear fuel, Finland*

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DEALING WITH MODERN RISKS: CHANGES IN WARFIGHTING FUNCTIONS

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Abstract. Information technology (IT) and Web-Enabled Collaborative Technologies 2.0 (WEB 2.0) accelerates the process of globalization. In modern globalization process, WEB 2.0 changes how information is designed and how information flow is used in global communication system. In such interactive global environment has emerged Fourth Generation Warfare (4GW) where people's identities and beliefs is the primary source of conflict. Primary fight not between countries, but between cultures also known as The Clash of Civilizations generates modern risks and new approaches in warfighting logic. It is obvious - The Nature of war has changed drastically. It almost eliminates the boundaries between the war and peace. Nevertheless, efforts of actors at peacetime drastically can be called as shaping operations of warfighting. Such shaping operations implemented through politics, economy, business, culture, sport and especially the media raises the importance of unarmed warfare. From modern warfare prospective, it is said that unarmed means in comparison with armed means must be used in the ratio 4 to 1. Such logical change generates the new understanding about modern centers of gravity and their importance of modern warfighting. The focus of modern centers of gravity is directed to enemy's local population (people) rather to direct military power. Such focus is aimed to end state – win wars by attacking the enemy's centers of gravity with limited use of military power. It supports Sun Tzu's and Clausewitz's main ideas - win wars without massive destruction by breaking down the enemy's will and determination to fight.

Such understanding generates different view of modern risks to states and international organizations. From modern perspective main risks are directed to state's or international organization's internal identity through people's 'hearts and minds' and society's moods. People's loyalty to attractive ideas not to organizations is a major shift. It is needed to reconsider not only list and definitions of modern risks to states and international organizations but also reconsider concept of warfighting function. It obvious the role of the military

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in peacetime activity must change significantly. Nevertheless, the new warfare, warfighting and warfighting functions paradigms' rises the necessity integrate whole society and entities' of state in dealing with threats. The holosystemic state's defense approach is the new way dealing with modern risks and it must be clearly determinated.

Purpose – The purpose of this study is to understand the meaning of Fourth Generation Warfare and its impact to warfighting logic by conceptualizing perspective theoretical concept of modern warfighting functions.

Methodology/approach – Analysis of scientific and the relevant literature, modeling, systematic, deductive cognitive methods. The symbiosis of science, art and personalized practice.

Findings – The nature of war has changed drastically but existing warfare and warfighting logic does not fit with modern risks and challenges. It is needed to reconsider not only military's but also whole society and entities' of state roles in states' defense. For such approach is needed modern concept of warfighting functions adapted to Fourth Generation Warfare.

Research limitations/implications – The proposed concepts and generated findings of this theoretical study must be empirically checked before full-scale implementation. However, the practical five years case study in Klaipėda district has shown the proposed concept of modern warfighting functions overwhelming advantage compered to old ones. The implications are to be seen with regard to education in the military.

Originality/value of paper – The application of the concept of 'modern warfighting functions' is original.

4. Social Response to Environmental Risks

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MISINTERPRETATION RISKS OF CLIMATE CHANGE INFORMATION ON INTERNET BY BALTIC SEA REGION LANGUAGES

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According to the latest Eurobarometer (2017) Climate Change report, climate change (CC) is now seen as the third most serious global problem, after poverty, hunger and lack of drinking water (28%) and international terrorism (24%). Around one in ten EU citizens (12%) consider climate change to be the single most serious problem facing the world as a whole and more than four in ten (43%) see climate change as one of the most serious global problems. Moreover, CC is one of the major topics discussed all over the world and the internet is one of the best communication platforms and sources of initial and basic information in specific climate change fields (Anderson 2009). However, the internet is an open space of fake news and spread misinterpretation to thrive online (Gu et al. 2017). Some analysis on communication about climate change in the internet media sources already present (Greer & Mensing 2006, Jančevskaitė & Telešienė 2013). Clearly, communication on climate change is only part of the picture. Raising awareness and discussing an issue does not directly result in behaviour change or policy action. Other factors, especially policy options, windows, and barriers, come into play (Moser & Dilling 2012). The most of climate change information on internet is posted in English. Therefore, other languages is even more vulnerable to the risk of fake news and spread misinterpretation online. Previous research showed that that public discourses on climate change in Lithuania are prevailed by reproducing of knowledge and opinions of foreign sources (Balžekienė et al. 2008). The main goal of the research is to analyse the information about climate change presented on the internet sites by local Baltic Sea Region (BSR) languages. The usage of term climate change was translated into 11 BSR languages (Kažys 2016): Belorussian, Danish, Estonian, Finnish, German, Latvian, Lithuanian, Norwegian, Polish, Russian and Swedish, and additionally, into French and Ukrainian. The analysis of the Top10 and Top3 Google (and Yandex in Russian) search engine positions of climate change term were performed 4 times: June 4, 2015;

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October 27, 2015; January 14, 2016; and May 17, 2016. The analysis tried to summarise the information on climate change presented in the internet by local language, and answer the questions: Who, Where, When, Why, How, and How much? The assessment made by every country and by 6 country groups (BSR, Nordic, EU west, EU east, Not EU east, and the UK).

Detailed analysis of internet sites, in Top3 positions of Google search results, revealed that social websites (especially, Wikipedia) were the main source of information for climate change term. Wikipedia as information source on climate change appears in Top3 positions at least once in 4 browsing sessions in all languages. Moreover, in 11 countries at least half of browsing sessions Wikipedia is on no. 1 position. For example, The fluctuation of the number of views in Wikipedia depended on political activity – it was increasing before the UN Climate Change Conference COP15 meeting in Copenhagen (Kažys 2016). Governmental sites appears in ¼ of the browsing results. The internet sites usually administrated by local government institutions (especially in Nordic countries). NGOs is presented in majority of the countries, except southwestern part of the BSR. Media internet sites plays more important role in large countries.

It is hard to define “the perfect match” of Top10 positions for internet search results on climate change request in BSR countries, because various cultural, social, economic and knowledge effects are existing between them. However, the information content holds higher quality in EU west, Nordic country groups, and The UK than presented in EU east and Not EU east groups.

The information on climate change presented in the top 10 positions of internet search results: should be well dividend between actors; should include local to global scale; should be constantly refreshed and no older than 2 years; proportion of education should prevail information; should be original and multifold, but not solitary.

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**PUBLIC PERCEPTIONS OF INSTITUTIONAL
RESPONSIBILITY AND CLIMATE CHANGE RISK
IN BALTIC NORDIC COUNTRIES**

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Tackling the climate change requires collective, cross-borders actions and local solutions for mitigation measures. Variety of actors are involved in climate change adaptation and mitigation, ranging from local communities to the global supranational institutions. People tend to perceive individual action as failing to cope with climate change (e.g. outlined in Lorenzoni and Pidgeon, 2006) and therefore ascribe high responsibility to the institutional level.

This presentation will analyze how public in Baltic – Nordic countries perceive the institutional responsibilities in climate change adaptation and mitigation. The local, national and global institutions are perceived as having different responsibility and impact in tackling with climate change. Also the perceptions of institutional vs. individual responsibility varies across the countries. This presentation is based on data of Special Eurobarometer (459), conducted in 2017 and the questions analyzed in this presentation are related to concern with climate change and the perception of institutional responsibilities in tackling climate change (institutions: national governments, European Union, business and industry, regional and local authorities; and environmental groups)

Results indicate that climate change is perceived as one of the top 3 most serious global issues and in Baltic – Nordic countries the concern about climate change is increasing. Regarding public perceptions of institutional responsibility related to climate change risks, most people in EU member states indicate National governments. However, there are significant differences comparing Nordic and Baltic States. People in Sweden (69) and Denmark (53) indicate National Governments as the most responsible for solving the problem while public in Finland (59), Lithuania (44) and Latvia (40) believe that the responsibility and main action needs to be taken by businesses and industry. Estonia's results combine two main actors – National Government (34) and business and

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industry (34). In this presentation we will also look into the relation between climate change risk perception and the attribution of the institutional responsibilities across Baltic and Nordic countries.

This presentation is based on research project 'Public Perceptions of Climate Change: Lithuanian case in a European Comparative Perspective', funded by a grant (No. S-MIP 17-126) from the Research Council of Lithuania.

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ANALYZING CLIMATE CHANGE RISK COMMUNICATION IN LITHUANIAN MEDIA: A HISTORICAL OVERVIEW OF CHANGING DISCOURSE ORDER AND GUIDELINES FOR FURTHER RESEARCH

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This presentation aims at discussing new frontiers for climate change risk communication research in Lithuania. The presentation will make an overview of existing research body on climate change risk discourses in Lithuanian media. The author has been member of several projects addressing the climate change communication topic, thus the secondary qualitative data analysis will be conducted for this purpose. Then the new international developments in the field will be discussed, focusing on the methodologies applied and the typical (as well as novel) research questions answered (or yet in need to be further investigated). An extended literature analysis will be conducted for that purpose. Finally, the presenter will contrast the existing research body in Lithuania and the new research developments internationally, to draw the frontiers for future research in Lithuanian context. The qualitative data from several research projects as conducted by the author herself will be employed and critically reflected.

The presentation is part of an undergoing project that has an ultimate goal of analyzing climate change perceptions in Lithuania. Project aims to conduct a theoretically justified, methodologically grounded and internationally comparative inquiry targeted to explain public perceptions of climate change in Lithuania. To ensure international comparability, project is planned in close cooperation with ESRC funded project “European Perceptions of Climate Change (EPCC): A comparison between four European Countries” (coord. Cardiff University). Project team will conduct a representative Lithuanian public opinion survey on climate change perceptions, carry in depth socio political context analysis, conduct media coverage analysis and focus groups, make international comparisons, and develop/validate climate change perceptions explanatory model.

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This presentation is part of the conceptualization and operational definition process needed for further media coverage analysis of climate change related topics in Lithuania.

The research project ‘Public Perceptions of Climate Change: Lithuanian case in a European Comparative Perspective (KliKS)’ is funded by a grant (No. S-MIP 17-126/SV3-0511) from the Research Council of Lithuania.

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RISK COMMUNICATION IN THE SPHERE OF ENVIRONMENTAL RISKS: POWER STRUCTURES AND CITIZENS

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At this stage of development, modern society is seen as a „risk society“, where there are constant dangers that affect both the development processes and the life activity of individuals as a whole [1]. The risks that we face today are unique in two respects: they are largely produced by man and affect not only the individual, but also the groups. The topicality of the research topic determines the risky nature of society, the formation of new types of risks, including environmental risks, which to some extent threaten human health. Within the framework of modern social sciences the risk study is presented in the works of U. Beck [2] and A. Giddens („Risk society“) [5], N. Luhmann (critical approach to the study of risk) [9], M. Douglas and A. Wildavsky (risk and culture) [4], the perception of risks (theory of frames)-D. Kahneman and A. Tversky [6], the concept of social amplification of risk (risk study from the point of view of technogenic danger) - J. Kasperson, V. Covello [3], R. Kates [11], P. Lagadec. Theory of everyday risks - J. Tulloch and D. Lupton [14], the model of risk perception P. Slovic, B. Fischhoff [13]. Risk communication was studied in the works of R. Kasperson [7] and H. Morgan [10], the studies of risk images in the mass media are disclosed in the work of P. Sandman [12].

The methodology of the research includes the study of risk communication, which involves the process of information exchange on environmental risks between actors in different poles of social space [8]. By the power structures here we mean actors who belong to the „dominant“ class and are at the top pole of social space - enterprise managers, federal, regional and municipal authorities, experts. The research objective is to build a structural model of risk communication between power structures and the population. The research of the structure of communication on a socially significant problem requires the study of risk communication within the local community by the example of the village of Nivenskoe in the Kaliningrad region (the risks are linked to the development of potassium-magnesium salts). One of the research tasks is the consideration

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of crisis management issues and types of communication between field participants. The object of the research: risk-communication, as a form of social communication. The subject of the research is risk communication between representatives of actors possessing a specific kind of power (possession of administrative or financial resources, symbolic capital, and in the case of experts - the power to express an opinion).

The positions of the research.

Risk communication in the sphere of environmental risks implies the interaction of agents of social space, which forms a dialogue between actors who make decisions and public groups. Nevertheless, in the case of the village of Nivenenskoye, ordinary citizens on the opposite side of the social poles are isolated from the decision-making process regarding actual risks, which led to a disruption in communication. The creation of groups of activists opposing the construction of a potassium-magnesium mine, mass appeals to the authorities, both regional and federal, protest actions are the evidences of a disruption in communication. A similar situation is observed in other regions of Russia (protest actions against the development of copper-nickel deposits near Voronezh, protest actions against the plant's activities in Vladikavkaz, Krasnoyarsk, the silicon plant in Abakan, etc.). As research techniques of the problem we will use: a focused group interview with residents of the village of Nivenenskoye, an apartment survey, secondary data analysis, analysis of publications in social networks. The results of the investigation will determine the structural model of risk-communication between the power structures and the population, identify factors of formation of risk perception and its nature, propose possible strategies for managing public reaction to risks.

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**THE COVERAGE OF ANNEXATION OF CRIMEA
IN LOCAL RUSSIAN-LANGUAGE WEEKLIES
IN LITHUANIA: INFORMATION, DISINFORMATION,
PROPAGANDA?**

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The Revolution of Dignity in Kiev and Russia's reaction to it (annexation of Crimea, support of separatists in the Donbas region) changed geopolitical situation in Eastern Europe. The events of 2013-14 marked critical changes in the post-Soviet area. Russia shows that it is ready to fight for the zone of influence not only literally, but also really.

The 2014 events in Ukraine became a geopolitical signal. The territories of the former Soviet republics are the most important area for the Russian Federation, as Moscow still tends to feel like a master in the post-Soviet space. However, today's Lithuania and the Russian Federation belong to different geopolitical areas. Moscow lives in its neoimperial illusions. Lithuania got its place in the European Union and the NATO, which empowered its position as a part of the Western World.

On the other hand, the strategy of the Kremlin's soft power means that Russia tries to keep its influence in the humanitarian dimension. For it, Moscow used historically formed ties: "Russia has a competitive advantage for its humanitarian policies in the post-Soviet sphere due to objective reasons: Russian compatriots living in this region, the popularity of Russian mass culture, and the spread of Russian Orthodox Christianity" (Pelens 2009: 203).

For soft power needs Kremlin has created a concept of "Russian World". In fact, it is an exterritorial concept which united all Russian-speaking people (compatriots) abroad Russian Federation. Moreover, as Lithuanian researcher Nerijus Maliukevičius noticed, "the Russian World as an ideology for Russian soft power has a huge potential because of its positive integrating capacity as opposed to the traditional anti-Western rhetoric" (Maliukevičius 2013: 80).

Russia uses the concept of "Russian World" globally. In fact, after 2014, Russia

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switched application of its soft power, in the area of influence towards more intensive information warfare. Lithuania (and the Baltic States in general) was among the first its targets in Western World. The growing threat of Russia's actions in 2014 were mentioned by the State Security Department of Lithuania (The evaluation of threats for national security 2014: 9-10).

In Crimea, Moscow showed a new strategy which quite soon was named as a "hybrid warfare". In fact, this strategy could be described as the combination of information and disinformation applied together with (camouflaged) military actions. In other words, to justify the annexation of Crimea, Russia used absurd propaganda narratives as "Banderivtsy could storm into Crimea", "the Black Sea Fleet bases could be taken over by the NATO", or "Ukrainian citizens could be de-Russified", etc (Darczevska 2014: 5).

The significant role of information warfare against Ukraine in 2014 and later also belongs to the Russian media. It was the main channel to influence the local Russian-speaking population in Crimea. Some commentators argue that "in Russia's hybrid war against Ukraine, media play the principal role" (Kudors, 2015: 164).

The main lesson from the Crimean events is that Moscow does not hesitate to cross the "red line" in the domains of foreign affairs and geopolitics. It means that nobody could feel safe in the neighborhood of the modern Russian Federation. It is the actual challenge for Lithuania and the Baltic States in general, because "similar Russian media and compatriots' policy methods used in Ukraine before and after the annexation of Crimea, are also used in the Baltic States" (Kudors 2015: 168).

Quite many commentators emphasize that success of the Crimean annexation could inspire Moscow to new geopolitical adventures. Lithuania and the other Baltic States are in risk zone because "it might tempt President Putin to use his doctrine of protecting ethnic Russians and Russian speakers in seeking territorial changes elsewhere in the neighborhood, including in the Baltic States, provoking a direct challenge to NATO" (Daadler 2015: 5).

It means, that the all forms of Russian information activities in Lithuania should be explored. The presentation will provide an analysis of coverage of the Crimean annexation in the three main weekly Russian-language newspapers ("Obzor", "Litovskji kurjer", "Ekspress-nedelia") in Lithuania. The aim of the analysis is to explore what kind of narratives have been present in the printed media and to answer the question whether local Russian-language newspapers in Lithuania used narratives of the Kremlin propaganda in the publications about Ukraine's events and the annexation of Crimea.

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VICTIMIZATION OF WOMEN IN SOCIAL MEDIA; RISK AND RELIGION IN KERALA

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Kerala, a state in Southern India have made notable achievements in the realm of development by having one of the highest literacy rates in the developing world and having the characteristic of granting women a high status in the society (George, 2011). This feature of the Kerala society promotes the academic world to carry out detailed analysis of socio economic features of Kerala in a wider perspective. As per 2016 and 2017 Indian Public Affairs Index (PAI), Kerala holds first rank in overall Human Development Index (HDI). These HDI index including the indicators of health, education and income. As per 2017 PAI report, Kerala still hold their first position in human development, social protection, women and children development and inequality. It is the safest, healthiest, most environment-friendly and only second-best in education and agriculture. Even though as Ross (2006) finds these macro realities mask many unpleasant micro realities, such as subjugating cultural practices and violence against women'. In the present scenario such violence's are being carry out via social media communications as well. One of the main challenge faced by Keralite women in social media is the abusive comments and spreading of personal information and images by other anonymous social media users. This shows the high level of risk of women and girls to be a user of such social media platform. The recent incident of victimization of Muslim girls in Facebook and other media who were participating in a 'flash mob' (The Indian Express) for volunteering in a health promotion by AIDS control authority gathered so much attention and made social and religious clash within Kerala society. Religious, communal and political debates has been carried out in media and social media on this issue and even raised voices to announce ,fatwa', a way of banning the girls in the Muslim community. So that in this situation my attempt is to explore the aspects of victimization of women and girls in social media platform becomes an important aspect in the present scenario. It also tries to find out how social and religious invisible interference increases the risk of victimization for the women in such a highly literate society like Kerala.

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The main research methods include qualitative content analysis of social media communication and comments especially in Facebook with regard to various victimization news which were reported in 2 main online news portals such as Asianet news and Manorama online news during the period from June 2017 till December 2017. This article will also observe the political debates that were taken place in the state and the governmental policies with regard to the same. The finding could be useful for the state government authorities on how to change and modify existing policies for preventing victimization of women and girls in social media.

Keywords: *victimization, social media, risk, women, violence, religion*

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EFFECTIVE RISK COMMUNICATION FOR DANGEROUS WORKPLACE CHEMICALS IN 4 BALTIC-NORDIC COUNTRIES

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The current paper investigates effectiveness of risk communication about dangerous workplace chemicals provided by international and European organizations in order to enhance safety knowledge among employees who are exposed to dangerous chemicals.

It is crucial that hazard information for dangerous substances is clearly presented and easily accessible in order to be effective in alerting users of potential hazards and how to act safely at workplaces. Comprehension of chemical information, as with health literacy in general, is dependent on the individual's ability to obtain and understand health/hazard information in order to make appropriate risk reduction and health-related decisions (Sathar et al., 2016). Therefore, the information about dangerous substances online from trustworthy sources (such as EU-OSHA, SLIC, ECHA, EEA, ILO) should provide consistent and reliable information with the view to promoting better recall of chemical hazard information. Publications should address the emerging issues such as exposure to carcinogens at work and addressing specific group of workers (European Agency for Safety and Health at Work, 2013). Additionally, a constant reminder of risk assessment, the hierarchy of prevention measures and awareness of occupational health and safety (OSH) legislation, REACH and CLP should be emphasized.

Method: Multi-method research has been applied: 1) Mapping of the landscape of data on dangerous substances in EU and international organizations, 2) Systematic research of material (online, print, Web resources) consisting of data on dangerous substances, 3) Comparison of qualitative information in various relevant resources, 4) Evaluation of relevance, user-friendliness and simplicity of the relevant information. Additionally, four case studies were conducted in order to explore in detail how the methods of risk communication concerning chemicals are applied at workplaces in Estonian, Latvian, Swedish

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and Finnish companies.

Results: Based on the current study, it is possible to state that the most relevant and reliable materials and publications about dangerous substances and workplace hazards can be found in EU-OSHA webpage, which is targeted directly to employers and employees. Among international bodies, the most useful webpage of dangerous chemicals is ECHA webpage, especially regarding to labelling and information about toxicity; and the main information is available in all languages of EU member countries. However, sometimes, to fully navigate and understand the extensive information available in this webpage may be too time-consuming and therefore, for a worker, unlikely to be the first choice of access and search for the information. Qualitative interviews showed that expectations and needs for chemical safety information are sometimes different: e.g some companies expect problem-solved approach, the other wait for good practices to implement in their own company, some wait sector-specific approach with clear focus on target groups etc.

Acknowledgement: This research was partly funded by project No EUOSHA/2016/0013/1 ‘Mapping of EU information material linked to exposure to dangerous substances at work places – provision of a structured overview, gap analysis and updating’

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RISK COMMUNICATION IN THE LOCAL SOCIAL SPACE: HOW SOCIAL AND POWER RELATIONS SHAPE RESPONSE TO THE ENVIRONMENTAL RISKS

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Research streams: *Social Response to Environmental Risks, Risk Communication*

The studies on the risk communication, on the construction and perception of the risk images, on the shaping of the evaluations and attitudes towards the components of the risk-related situations has become topical for the contemporary social sciences, formed over the past few decades a separate research subject studied by the researchers from the different background. The cognitive, psychometrical and socio-psychological paradigms examining the role of the neurophysiological, psychological, semantic, linguistic and other aspects of the risk communication in a very detailed way, focusing on the individual qualities of the communication agents (frame theory) or the characteristic features of the information transmission medias (social amplification of risk framework) and the components of the images constructed (encoding/decoding model). The proponents of the recently developed RISP (Risk Information Seeking and Processing) model made an attempt to single out and count in the risk communication its social, psychological and communicative components constituting the active process of the information seeking until the state of the sufficiency with the volume and the quality of the information reached by the person. Again the central role is given to the individual cognitive processes, although the attempt to include in the model the social and demographic parameters of the person, one's past experience, political views and other social and cultural factors is made.

Nevertheless, the main weakness of the models proposed in our view is the insufficient role given to the structural parameters and the way they operate in the process of interpretation of the risks and the shaping of the attitudes towards them. These approaches explain the role of the personal characteristics

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and the medias, also attempting to account for the spatial and cultural aspects in the models proposed, however in practice social and cultural characteristics being reduced to the national and ethnic features, ignoring the structural aspect of the risk communication and the distribution of its participants over the social space.

Our recent studies show that even on the level of the mass media the specific features of the risk images constructed was heavily depending on the position the media take in the journalism field and the extent of its integration into fields of power and market and conformity to their logic (or, vice versa, the extent of the autonomy). There's no reason to think that the position of the communicative agents (as authors and mediators, but also recipients) is being neglected or has no significant effect on the risk images constructed while perceiving or decoding information by social actors during their interpersonal communication or via media within the social space.

The purpose of this research was to show how structural, social and cultural features of the communication agents and the local community shape the way they communicate about the risks (on the example of the risks related to the potassium salt mine development in the settlement of Nivenskoye of the Kaliningrad region). In order to do this the following steps were taken:

1. We discovered the risk images existent in the public imagination, the opinions about the nature, causes and consequences of these risks;
2. We determined the positions of the risk communication agents within the social space;
3. We revealed the key factors (social, political, economic, spatial, demographic) shaping the perception of risks and the extent and the nature of their effect.

The empirical part of this research based on the multiple correspondence analysis (with subsequent hierarchical cluster analysis) of the data collected in the Nivenskoye settlement in December 2017 (N = 400). As a result of the empirical research the structural model of the local community were constructed with regard to its attitude towards risks, comprising of:

- class-like subgroups characterized by various social, political and cultural attitudes and different positions within the local social space;
- structure of the information sources employed by the members of the local community with an indication of the extent of trust to these sources and their influence on the opinion of the different subgroups within the local community;

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- people's attitudes towards risks, perception of their nature, causes and those who's in charge for them, according to the social, political and cultural attitudes and demographic characteristics.

We present these results as a visualized model of the social space where every subgroup is precisely located due to their social and power relation to each other, and also with a detailed description of their social features and communicative patterns.

REGIONAL RISKS AND RISKS TO THE REGIONS
**„HAVE NOTHING TO WORRY ABOUT? THE NEWS
WILL HELP YOU“: SOCIAL CONSTRUCTION
OF RISK IN ONLINE NEWS MEDIA**

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Different studies show that media (traditional and new) is one of the key sources of information about the world, risk is not an exception as well. According to Mythen (2010), risk events are becoming an inseparable part of the news agenda. In nowadays global societies, the intensely functioning online media is becoming one more field in which intensive flow of risk communication is maintained. When creating awareness of risks, the role of the media is essential. News organisations are one of the most significant actors involved in the social construction of risk. Using a variety of procedures news media gain ability to frame the perception of risk, amplifying or attenuating it. As Beck states, without techniques of visualization, without symbolic forms, without mass media, risks are socially non-existent (2006).

Thus, this paper focuses on the social construction of risk and introduces the part of the study investigating the risk discourse ongoing in Lithuanian online news media in 2006 – 2014. The study is grounded on the mixed methods approach, integrating the elements of quantitative and qualitative studies. The critical discourse analysis is employed as a strategy of the research. All the empirical data were obtained from the archives of the most popular Lithuanian online news websites: DELFI and lrytas.lt using a multistage sample. The empirical base of the research was selected from the general set of the texts published on DELFI and lrytas.lt in 2006 – 2014. The quantitative study sample consists of 1292 risk messages, and the qualitative of 361 texts of the online news media selected from the same sample. The software of ATLAS.ti and IBM SPSS Statistics 22 were used for the data analysis.

It might be assumed, that news organizations gain an ability to socially construct perception of risk while framing and interpreting it. In the case of this research, risk was most often communicated as a part of topical issues, daily events, health and economic rubrics. As the research data show, three met-

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anarratives of risk communication covering more detailed typical narratives of news presentation were used in the analyzed risk discourse. A metanarrative of risk problem formulation includes articles which are limited to identifying danger, reminding us about the risk we already know or presenting new risks. They also warn about the possible crisis, present long-term / short-term forecasting and finally, express worries of the potential risk victims. The second metanarrative based on the description of risk covers articles which describe the profile of risk, highlights its level assessment, questioning the risk-benefit ratio and the existence of risk. This metanarrative includes news about individuals' response to risk as well. The final risk communication metanarrative articulates risk management questions. Articles which call for action due to risk, make recommendations and give advice on risk mitigation, also highlight barriers to risk management or discuss assumptions of risk control are assigned to it.

Also, the findings of the study revealed that verbal and visual language used in the discourse of risk enables social amplification of risk. As the research data show, amplification of communicated risk is reached emphasizing risk invisibility, inevitability, uncontrollability, hierarchy, magnitude of possible consequences and geographical proximity. Meanwhile, attenuation of risks is noticeable through the emphasis of their low probability, familiarity, repetition, remoteness in time and space, risk controllability, inevitability, and the differences that make it possible to prioritize threats. Visual elements of the risk communication further amplify or attenuate verbal rhetoric used in risk messages. Several visual themes were prevailing in the analyzed media texts such as imprisoned and suffering individuals, invisible risks, all devastating risks, fight against risks and speakers of the risk discourse. Visual language of risk messages usually supports dominating verbal negativity, emphasizing difficulties, suffering and damage experienced by individuals, etc.

The results of the research highlight the issues of sustainable risk communication. In the course of risk stories production and presentation news media are able to stimulate the sense of living in the unsafe world, in which many risks are hidden just in the place we live, food we eat, air we breathe, etc. In this respect, the encouragement of rational behavior concerning risks steps aside for terrifying information leading to the culture of fear.

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ECONOMIC GROWTH, POVERTY AND INEQUALITY IN THE EUROPEAN UNION COUNTRIES

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Abstract. Combating poverty is the central goal of development of economies all over the world. Economic growth is the most powerful instrument for reducing poverty. The primary lesson from the past 50 years of development research is that economic growth is the most effective way to pull people out of poverty (DFID, 2008). Much of the economic development studies (Fukuda, 2008; Odhiambo, 2009; Akanbi & Toit, 2011; Strulik, 2012; Uddin et al., 2014; Imai et al., 2014; Jencova et al., 2015; Kiaušienė, 2015; Limanli, 2015; Devarajan et al., 2015; Hassan et al., 2015; Bagchi & Svejnar, 2015; Moore et al., 2016; Fosu, 2017; Rakotondramaro & Andriamasy, 2016; Traverso, 2016; Škare & Pržiklas Družeta, 2016; Ozturk, 2016; Thorat et al., 2017; Iceland & Hernandez, 2017; Maksimov et al., 2017; Mikucka et al., 2017) deal with how do poverty, on the one hand, and relative inequality, on the other hand, change with economic growth and how are these variables impacted by the characteristics of growth. A wide range of empirical studies on the relationships between economic growth and poverty have revealed that the growth is associated with poverty reduction. Improving the quality of life, growth promotes to transform society, create jobs, drive human development, and generates virtuous circles of prosperity and opportunity (DFID, 2008). However, there is much less consensus supporting the empirical evidence for poverty having a causal impact on economic growth. Despite this, there are several theoretical arguments that link poverty to growth. On the one hand, citizens living below the poverty line have less money to spend, and this impacts on aggregate demand. On the other hand, that has negative effects on supply, which means less money for production, distribution and selling. Moreover, Rehorn (2014) has indicated five effects of poverty to growth. They are education, child development, crime, low social mobility and extra social spending. Through such channels poverty reduction may support economic growth. In turn, economic growth may effect on poverty reduction. So, the causality between growth and poverty can run in both directions. This means that efforts to reduce poverty can create virtuous cycles

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that raise economic growth, in turn reinforcing poverty reduction (Lustig et al., 2002). While economic growth has been cited as one of the main drivers behind the reduction of poverty, the increasing poverty in many countries has raised doubts about the efficiency of economic growth in its reduction (Perera & Lee, 2013).

Economic research on the relationships among growth, poverty and inequality has held an important place. Some studies suggest that unequal distribution of income promotes economic growth. While others reveal that inequality hinders economic growth and contributes to increase poverty (Jihene & Ghazi, 2013). According to Barro (2000), income inequality in rich countries promotes economic growth, while in poor countries retards growth. High income inequality can slow the rate of poverty reduction and create social problems. Various studies have revealed different elasticities of poverty with respect to economic growth (Perera & Lee, 2013).

Analyzing the relationships among economic growth, poverty and inequality, majority of the studies have been focused on poor and less developed countries. This study has attempted to fill this gap by studying the relationships among these variables in the European Union countries. The European 2020 strategy promotes social inclusion, in particular through the reduction of poverty (Eurostat, 2017). In this strategy for smart, sustainable and inclusive growth, the fight against poverty has been one of the five measurable targets for 2020 (European Commission, 2010). The number of the European Union citizens living below the national poverty lines should be reduced by 25%, by aiming to lift at least 20 million people out of the risk of poverty and social exclusion (European Commission, 2010).

This paper has aimed to explore the relationships among economic growth, poverty and inequality in the context of the European Union (EU) countries during the period of 2005 – 2016. Descriptive statistics analysis and econometric methods have been applied for this purpose. Research results have revealed statistically significant interrelationships between growth and poverty in half of the European Union countries. Moreover, in majority of these countries poverty has been elastic of economic growth. It should be noted, that the countries with higher level of economic development have relatively smaller share of population living below the national poverty lines. However, we cannot say the same about the growth – inequality relationships, which have varied across the EU countries. There are economically strong countries with relatively high income inequality and economically weaker countries with lower income distribution coefficient. However, in many cases poverty and income inequality

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tend to move in the same direction, i.e. as one increases, the other as well and vice versa. Finally, the insights of the research could be useful in developing a common strategy for smart, sustainable and inclusive growth and achieving the goals for Europe 2020.

Keywords: *economic growth, poverty, income inequality, European Union.*

JEL Classification: I30, I32, O40.

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REGIONAL RISKS AND RISKS TO THE REGIONS
**REGIONAL RISKS AND CHALLENGES IN SMART
GROWTH IN LATGALE REGION (LATVIA):
OPINIONS OF STAKEHOLDERS**

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Rural areas are the particular important for the ensuring sustainability and smart development of a state as a whole. The present study reflects the quantitative and qualitative assessment of smart growth challenges in the region of Latgale (Latvia) on the level of 19 counties. Within the framework of the Latvian National Research Programme EKOSOC-LV present study focuses on the smart growth as a tool for risk prevention and use of opportunities in regional development within the framework of the concept of smart specialization.

The authors of the research, based on the experience of the scientific literature, emphasize the need to use the potential of any territory (eg Vanthillo, Verhetsel 2012) and the possibilities for ensuring smart development in distinctly rural areas (Naldi et al. 2015), which also enlarges the opportunities for small rural areas to engage in the process of smart specialization, reducing the risks of sustainable development of these territories. Thus, the potential solution to the introduction of smart specialization in small rural areas can be found using place-based regional approach, which envisages realizing the potential of each territory (e.g., McCann, Rodriguez-Pose 2011). Study authors apply several scientific methods for detecting key risks and factors driving regional growth in small counties in Latgale in framework of place-based approach

By analysing the theoretical principles, regional actor's recommendations, taking into account research group participant's and regional expert's opinions, authors succeed to characterize the process and risks of smart growth, as well as to make assumptions about the development of the desired situation. Taking into account the fact that 84% of the counties in the Latgale region have a low population and a low development rate, ensuring sustainable development is both a necessity and a challenge at the same time. The significant risk on the development of the Latgale region is the decline in the population. At the same

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time, the results of the research shows that the population are the most important cornerstones of smart growth of the rural territories in Latgale region. Both the objective data processing (statistical analysis) and the subjective point of view (the results of the expert survey) highlight a number of significant risk factors that hinder smart growth: the insufficient development of the economic activity of population, in particular in the knowledge-based segment, the low population, as well as county governance issues. Assessment of various challenges and risks in regional development of Latvia as well as integrated application of quantitative and qualitative approaches allows an elaboration of comprehensive vision of the smart growth process in the Latgale region of Latvia. The quantitative assessment is based on integrated index (Smart Development Index) establishment and testing. The qualitative assessment is based on the regional expert opinions summarized by the Analytic Hierarchy Process methodology. As a result of both the quantitative and qualitative evaluation the local people has been recognised to be the main driving force of the development of rural territories in Latgale region. There are also a number of risks that impede the positive effects of smart growth at the regional level, such as the unequal distribution of identified trends among the counties, weak growth in the reflection of economic processes, low population density, weak links between smart development and entrepreneurial activities in high and medium technology sectors and knowledge intensive service sectors.

The research results have both scientific and practical applicability in promoting the development of smart development in rural areas. First of all, the results of the study offer a possible methodological solution for the assessment of smart growth. Secondly, the obtained scientific experience can be used for solving practical problems at the level of the counties of Latgale region.

The study has been created in the framework of the project „Economic transformation, smart growth, governance and legal framework for sustainable development of the state and society – a new approach to the creation of a sustainable learning community” (EKOSOC-LV)

Keywords: *place-based approach, Latgale region (Latvia), smart specialization, smart growth, development risks*

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OPERATIONALIZING THE EUROPEAN ADMINISTRATIVE SPACE AS A BOTTOM-UP CONCEPT

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Keywords: *European Administrative Space, Convergence of Administrative Practice, Interoperability*

The hierarchical organizational concepts of top-down, and bottom-up may serve to inform how administrative practices ought to be evaluated against policy goals. In the 2000s leaders of EU began to see European integration no longer as a peace project, but as a promising adaptation strategy to globalization. United States and China were perceived to be regions with more dynamic economies, while EU was starting to lag behind. EU's fragmented and complex governance was and is blamed. However, despite a broad consensus that it is a major policy issue, agreement between EU members is nowhere to be found. On the contrary, challenges to the existing level of integration are mounting. This leads us to a conclusion that further top-down common values and consensus based integration is unlikely. This article aims to explore the possibilities of operationalizing a bottom-up concept of European Administrative Space, whereby it would become possible to measure national public management principles and practices not only against their effectiveness in achieving stated policy goals, but in terms of their compatibility with similar process across Europe. Such evaluation may yield better data on the benefits and costs of EU integration not only at the macro-economic level of analysis, but at the organizational level of public agencies. The analysis in this study utilizes two key concepts: convergence and isomorphism. Convergence is a concept we relate to the top-down type of Europeanization, while isomorphism as its name implies should occur without hierarchical co-ordination. The key research question for this paper therefore is what elements of international administrative integration isomorphism achieve in place of convergence?

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The concept of European administrative space (EAS) was gaining academic attention in 2000s, as some predicted further and deeper EU integration in the wake of its flagship policies of Eastern Enlargement, Schengen and Euro zones. Despite the failure of some political documents, most notably the Constitution for Europe in mid-2000s, there was a belief that EU law is sufficiently harmonized in a sufficiently large number of policy areas for best practices in public administration to begin spreading (Hoffman, 2008). This, it was assumed, could lead to administrative isomorphism, which would allow claiming that EU will become a globally-relevant polity (Olsen, 2003). But more recent research suggests that European administrative space for all of its achievements is still a long way off to allowing EU achieve a status of an integrated polity (Trondal & Peters, 2013).

One of the reasons for this maybe that some forms of isomorphism may not apply to member states due to internal institutional fragmentation. That is, if Europeanization occurs in one policy area, it may be far from certain that others will follow within that member-state. This is evidenced by some studies suggesting that public administration reforms based on the New Public Management model in the 1990s did not create convergence of administrative practices, rather – fragmentation occurred (Pollitt, 2001 & 2007). Agencification and policy inertia in the largest member states, where national governance traditions remain strong means that the “deep Europeanizers” are often the new and smaller member-states (Versluis, 2004).

However, institutionalist literature suggests that isomorphism can be achieved by means other than top-down policy of a nation state (DiMaggio and Powell, 1992). Research into institutions over the past two decades suggests that a carefully managed process may lead to the adoption of best administrative practices across policy areas and national boundaries, and through that, a commonality of governance may be built. In this case, the focus needs to be shifted away from policy issues and towards the process of public administration.

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ANALYSIS OF THE ELECTRONIC AND MOBILE BUSINESS CONCEPTS

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Emerging technologies and rapid developments in mobile networks and wireless information systems nowadays are researched and adopted worldwide. Innovative and new business models are continually performing and could become a major benchmark in the electronic organization field. Technological development is becoming increasingly faster and the time interval between revolutionary discoveries becomes shorter (Davidavičienė, 2012). Understanding and attempting to design them are everyday more important issues. The differentiation of mobile business aspects from electronic business dimensions are a set of the parameters that did set mobile business services to leading positions. One of the biggest partitive attribute between electronic mobile business applications is the working options of the user. But what should be the future approaches. After the analysis of scientific literature (Brown, Green 2012; Preece, 2015; Sabaityte 2017) we identified the main reasons that encourage companies to implement electronic and mobile business models were distinguished: globalization (geographical boundaries between markets disappear, number of competitors grows and diversity increases); time-based competition (the ability to monitor the competition and quickly respond to the ever changing situation); mobility based user needs (even though consumer demand is constantly changing, there is a possibility to quickly react to the changes and propose new solutions). Electronic business environment did constrain the user work at the stationary position. While mobile business applications allows the user work in total mobility conditions. Also new network based applications can handle many of the services features, which can add value to mobile business services. As stated GubbiT *et al.* (2013), the evolution of the next generation mobile system will depend on the creativity of the users in designing new applications and Internet of Things (IoT) is an ideal emerging technology to influence

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this domain by providing new evolving data and the required computational resources for creating revolutionary apps, based on the customer orientated mobile services and providing new possibilities for mobile business development directions. Mobile business is the result of the electronic business and information technologies evolution. It should be emphasized that virtually all e-business functions were transferred to the mobile environment, while only a small number of emerging m-business functions had been transferred to a stationary electronic media. M-business characteristics can be specified by detailing some of the functions based on MICT possibilities and aspects of the m-business environment: user's aspect, equipment differences, multifunctional services, geographical position, flexible settings in real time, third-party applications, flexible services, flexible user's location (Chlivickas *et al.*, 2009; Gao *et al.*, 2014; Wang *et al.*, 2014). One of the m-business's advantages is the potential to provide more new functions and possibilities in the business aspect. For the value adding, mobile business services should take real advantage of electronic business services, with the opportunities creating, configuring, integrating, upgrading, troubleshooting, and maintaining new business models. A variety of mobile business service offerings that could take advantage of electronic business are presented. A treatment is suggested to add value and differentiate mobile business services, so that they continue to remain profitable. One of the main m-business advantages is that m-business solutions enable to provide new, in the aspect of business, functions. By detailing some of the functions based on the capabilities of mobile information and communications technology it is possible to specify the m-business's and its medium's difference from the e-business. While most business users are satisfied with existing e-business solutions, it will become impossible to compete in business if capabilities of the new m-business solutions will not be taken into account. In the course of technological progress more and more new technologies are applied in the m-business while the e-business technologies remain the same.

Keywords: *Electronic business, mobile business, mobile business application*

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**REGIONAL ECONOMIC THREATS IN THE CONTEXT
OF SUSTAINABLE ECONOMIC DEVELOPMENT**

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Abstract. Purpose of the article. Present scientific researches and current debates focus on the direction of countries' economic growth, including regional, and its main factors. The article argues that the development of each country's economy is associated with a multidisciplinary phenomenon of security, which creates preconditions for sustainable economic development. The economic security hierarchy in the XXI century includes many subjects, such as: global and regional institutions, the state, the region, the community, the firm, the family and the individual. Practice shows that all entities in the hierarchical level face a variety of threats. In the article, threats are classified according to various criteria (nature, origin, source / cause, location of manifestation, type of manifestation, direction of action, duration, etc.). Threats of social origin, which decisions require solutions; human, material and financial resources and time are being analyzed. Subjects of different hierarchical levels make appropriate decisions in order to eliminate or reduce threats of various levels (economic, political, social, ecological, etc.).

Objective or subjective decision errors occur due to lack of information or uncertainty. The economic, social, ecological threats that arise in the regions of Lithuania are investigated in several aspects: macroeconomic and mezo-economic levels. The macroeconomic level analyzes the state budget deficit, the share of imports in domestic consumption, the poverty index in the country, shadow economy, migration, the Gini coefficient, etc. The poverty index is characterized on the mezo-economic level in the regions of Lithuania; unemployment rate, including long-term unemployment.

This study aims to investigate the problem of income inequality and poverty reduction in Lithuanian regions. The research identifies the changes in poverty

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in Lithuania and compares this situation with the European Union (EU) Member States level and characterizes opportunities to seek sustainable economic development in the regions.

Scientific aim. This theme aims to examine the economic, social and ecological threats in the Lithuanian regions, the reduction which could help to reduce the population income inequality in the Lithuanian regions.

The objectives of the scientific research: the identification of multi-dimensional threats of hierarchical level entities, including regions; investigation of income inequality, unemployment, migration in Lithuania and the EU; assessment of the opportunities of income inequality and social exclusion problems in the country's economy, including Lithuanian regions, using threat reduction.

Methodology / Methods. The analysis of income inequality, unemployment level, poverty / discomfort level, the level of shadow economy, migration, the state budget deficit, the share of imports in domestic consumption, etc. are characterized and based on data provided by the World Bank and EUROSTAT. For the assessment of these indicators during the analyzed period of 2005-2016, 2005 was selected as the base year. The paper compares Lithuania with the EU and examines Lithuanian regions.

Findings. The reduction of regional threats (economic, social, ecological, etc.) can lead to new opportunities for sustainable economic development and can help to solve problems of income disparity and social exclusion in Lithuanian regions.

Key Words: *income inequality; sustainable economic development; regional economic threats; unemployment; criteria of threats*

REGIONAL RISKS AND RISKS TO THE REGIONS
**ASSESSMENT OF INVESTMENT SECURITY
IN THE REGIONS: THE CASE OF LATVIA
AND LITHUANIA**

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Issues of security are becoming increasingly urgent in the modern society. In recent decades the interest in the study of security issues has risen dramatically. Economists, sociologists, ecologists as well as representatives of other sciences study various aspects of security. According to the Scopus database, the number of articles in social sciences that contain the word “security” has increased significantly over the last 15 years (“safety”, “security”) (Mensikovs, Volkova 2017).

This issue also attracts the attention of researchers from Latvia and Lithuania. The research, carried out by the 2002 UN Programme on Human Security in Latvia, contained a lot of interesting facts and innovative approaches (UNDP Latvia 2003). Latvian scientists carried out research into the sociological (Meņšikovs 2004, Meņšikovs 2005), political (Ozoliņa 2012), linguistic (Ozoliņa 2016), economic and financial (Ohotina 2017; Smirnovs, Lavrinenko, Jefimovs 2017) aspects of security. Lithuanian researchers paid a lot of attention to the energy and ecological aspects of security (Raudeliūnienė, Tvaronavičienė, Dzemyda 2014, Lankauskienė, Tvaronavičienė 2012), as well as the sphere of military security and the legal aspects that regulate societal security (Tumalavičius et.al. 2017). In addition, within the framework of the doctoral research, the Lithuanian scientist carried out an integrated analysis of the administrative and legal mechanism for regulating societal security in Lithuania state in order to improve and modernize this mechanism (Tumalavičius 2017).

In this article, the authors combined their efforts and turned their attention to the study of economic aspects of security, specifically to the assessment of investment security in the regions as a factor of investment environment. When assessing an investment environment for a strategic investor, it is important to assess not only the investment potential in the region, but also the investment

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security. Poor security can result in financial losses under the uncertain conditions of investment activity, as well as the complete or partial bankruptcy of investment project. The assessment of investment security in Latvian regions (Riga, Pieriga, Vidzeme, Kurzeme, Zemgale, and Latgale) and Lithuanian regions (Vilnius, Alytus, Utena, Panevezys, Kaunas, Klaipeda, Marijampole, Taurage, Telsiai, and Siauliai counties) as a complex phenomenon has been carried out according to the methodology developed by the authors on the basis of statistical indicators. The overall assessment of investment security has been done in the following types of security: social, economic, ecological, criminal, financial and legislative. Social security includes statistical indicators of pre-working age population, divorce rate, potential and pension dependency ratio, and death rate; economic security includes a level of general and youth unemployment, population with the lack of financial resources; ecological security includes the amount of various types of emissions into the atmosphere; criminal security includes a number of registered crimes and road accidents; financial and legislative security includes inflation, number of closed down enterprises. The authors have unified and arranged the statistical data on a scale with a range of possible values from 0 to 10; the computation of the integral index of investment security has been done on the basis of the sum method of unified statistical indicators. Then, according to the calculated indicator of investment security, the authors classified the regions under study on the basis of quintiles and divided regions into 5 groups (where 1 – a very low investment security, 5 – a very high investment security).

This research proves the urgent nature of the security issue. Latvian and Lithuanian regions have similar problems with economic, criminal, financial and legislative security. In Latvian regions, unlike in Lithuanian regions, social security is very high, although in Lithuanian regions ecological security is very high.

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