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Climate Change in Strategic Defense Reviews of Poland, the United States and the United Kingdom in the 21st Century

Summary: Climate change is recognised as one of the most significant challenges facing the international community. For this reason, it has begun to be introduced in defence planning processes. To trace this process, this paper applies the comparative method to analyse how the issue has been implemented in strategic planning documents of Poland, the US and the UK.

Keywords: climate change; national security; defence planning

Zmiany klimatu w strategicznych przeglądach obronnych Polski, Stanów Zjednoczonych i Wielkiej Brytanii w XXI wieku

Streszczenie: Zmiany klimatu są procesem, który wpływa na bezpieczeństwo w skali globalnej. Z tego względu w XXI wieku zaczęły być uwzględniane w planowaniu obronnym państw NATO. Aby prześledzić ten proces artykuł wykorzystuje metodę porównawczą, aby przyjrzeć się temu, w jaki sposób zostały one włączone do strategicznych dokumentów obronnych Polski, Stanów Zjednoczonych oraz Wielkiej Brytanii.

Słowa kluczowe: zmiany klimatu; bezpieczeństwo narodowe; planowanie obronne

Introduction

Climate change is currently recognised as one of the most significant challenges the international community is facing. Its main cause is steadily rising carbon dioxide emissions. This, in turn, has its source in the process of industrialization of the non-western parts of the world, mainly China and India, that contribute to carbon dioxide already released by the West. Due to the unprecedented scale of threats generated, climate change affects all dimensions of human activity, including security (CNA, 2007; Dodds, Higham, & Sherman, 2009; Lacy, 2005).

As environmental challenges have been recognized by NATO for a few decades already, climate change was also relatively early identified as a factor having the potential to significantly affect NATO planning and operations. A special programme on the issue was launched by the Scientific Committee at the end of the Cold War (Wörner, 1989). As early as in the 2010 Strategic Concept, it was argued that climate change magnifies uncertainty in the security environment and brings harmful consequences. In conclusion, NATO stated that "As an Alliance, NATO does not have a formal role in regulating the greenhouse gas emissions that experts believe lead to global warming. NATO could, however, be called upon to help cope with security challenges stemming from such consequences of climate change as a melting polar ice cap or an increase in catastrophic storms and other natural disasters". (NATO, 2010). Furthermore, climate change was also mentioned among key environmental factors shaping the future security environment in the 2014 Wales Summit Declaration (*Wales Summit Declaration*, 2014). Although certain NATO bodies, such as the Emerging Security Challenges Division, are involved in climate change-related issues, there is neither a specific cell nor coordination mechanism among the member states in this regard.

To the various extent, climate change has been included in defence planning processes since the beginning of the 21st century. The aim of this paper is to compare how this issue has been implemented in defence reviews of the North Atlantic Alliance states (hereinafter referred to as NATO) using the examples of the Republic of Poland (hereinafter RP), the United States (hereinafter the US), and the United Kingdom (hereinafter the UK).

The paper is divided into four main parts. In the literature review, the author looks at how the impact of climate change on security has been analysed by Polish scholars. Further parts are devoted to individual NATO members. The second part examines the climate change in the defence reviews of the RP, the third in the US' defence reviews, and the fourth in the UK's reviews.

In conclusion, the author refers to political shifts that have occurred recently, which may affect the examined issue. Although civilian control of the military is a fundamental feature of democracy, it implies that when climate change questioners are elected, they may obstruct armed forces adaptation process to changing security environment. Thus, political influence on defence planning may hamper the ability of NATO to adapt and develop capabilities in relation to climate change. Establishment of a specific internal body with competencies

would, therefore, serve two goals: on the NATO level, it would allow for the creation of lacking capabilities while on the national level it would shield armed forces from slowing climate change adaptation.

Climate Change and Security Nexus in the Polish Literature

The climate change and national security nexus were analysed in the field of Polish military education for at least few years. The issue was examined by the National Defence Academy (in Polish: Akademia Obrony Narodowej, hereinafter AON) scholar. He carried out simulations of climate change processes regarding changes in Poland's coastline. Although the significant threat to the military capabilities of the RP was not found, climate change will generate risks for the agglomerations of Szczecin and Gdańsk and the tourist infrastructure located in between these two cities (Drzewiecki, 2015). In addition, at the Faculty of National Security AON the following number of students' theses on the topic were defended: one master thesis in 2011, one master and four bachelor theses in 2012, and two bachelor theses in 2013, eight theses overall (Kalinowska, Mijewska, & Szymczyk-Golan, 2013, 2014, 2015).

However, the only study published so far in Poland, which approaches the topic in a comprehensive way, is "Climate change and national security of Poland" issued in 2011. Its purpose was to determine whether climate change poses a threat to Poland's security. The authors divided potential threats into external and internal ones. The external threats include military security and migration processes. The most important of military threats include: 1) increase in the number of resource wars and the resulting increased participation of Polish soldiers in activities outside their home country; and 2) the necessity of soldiers training and equipment adaptation to changing weather conditions. The migration process will correspond to both individual weather events (e.g. tsunami occurrence, the frequency of which will grow) and long-term climate change processes. In this context, the authors suggest that Poland will probably cease to be merely a transit country for climate refugees and become a destination. Based on international estimates, they calculated that the number of migrants could reach up to 250 million people. Greater focus is on internal security of the RP, that was divided into 1) health security (increased illnesses), 2) water security (natural hazards and threats for water and sewage infrastructure), 3) risks of buildings disasters, 4) threats for food security (potential famine), and 5) energy security (risks for

critical energy infrastructure). Surprisingly, there is a passage in the same part of the document about the role of climate diplomacy in building up "soft power" of Poland. As this piece of analysis was prepared by scholars who are professionally connected to the field of ecology and therefore not associated with the security sector, it does not provide any insights on how Poland's security services should respond to climate change threats (Karaczun et al, 2011).

The importance of the problem of climate change was also underlined by the Polish Naval Academy (Akademia Marynarki Wojennej, hereinafter AMW) scholar. He argued that the key goals of providing national security are creating conditions for development and meeting the challenges of uncertainty. Therefore, protecting the environment is each citizen's constitutional duty to protect and defend the homeland. However, when measured by ecological indicators, the 21st century's Poland remains at the end of rankings of European states. Thus, the bad condition of Poland's environment and insufficient action is to be assumed. He proposed the following actions:

- improving the efficiency of electrical devices and internal combustion engines;
- improving buildings thermal insulation;
- substitution of internal combustion engines to hydrogen-based ones, fuel to be obtained from water using renewable energy;
- substitution of hard and brown coal with renewable energy sources;
- improving coal-fired power plants efficiency;
- equipping landfills with methane recovery installations;
- substitution of local sources of heating with central heating;
- ending deforestation (Kopczewski, 2010).
- Skoneczny (2011) distinguished the following climate change-related risks for the security of the European Union:
- limited access to water
- reduction in agricultural production
- infectious diseases and other health problems
- sea and ocean levels rise.
- As a result, these risks will create the following security threats for the European Union:
- increased number of "failed states"
- terrorism
- permanent wars
- ecological conflicts.

Therefore, the author argues that due to the unprecedented scale of potential threats, climate change should be included in the Poland's security policy and specific actions should follow. Firstly, Poland should step up diplomatic activities, in both political and military international organizations. On the one hand, it is necessary to help developing countries to make a transition to a low-carbon economy through subsidies or debt liquidation. On the other hand, within the NATO framework, contingency plans are to be prepared, the impact of climate change on member states' security. Secondly, at the state level, Skoneczny also suggests certain actions. The first one is to introduce global issues into the priorities of Poland's security policy. The second one is the establishment of an advisory and control body in the field of climate policy. Finally, social campaign and climate risk maps for individual regions of Poland are to be made (Skoneczny, 2011).

The issue of climate change is also to be found in the key strategic security document, which is the National Security Strategy of the Republic of Poland (*Strategia Bezpieczeństwa Narodowego*, hereinafter SBN). It is closely linked to the Strategic Review of National Security. Combined, they represent a perception of security environment by the administration that issued them (Malec, 2011). Climate change was included in the 2007 SBN in the section entitled "National security conditions of the Republic of Poland" (Biuro Bezpieczeństwa Narodowego, 2007, p. 7). However, the issue was presented there as the energy security matter, an area of economic security (Ciszek, 2012, pp. 36-37). It cannot be forgotten that in the 2007 SBN, the entire section was devoted to ecological security. The following statement can be found in it: "Poland will continue its engagement in regional and global international cooperation on environmental protection, including combating the greenhouse effect." (Biuro Bezpieczeństwa Narodowego, 2007, pp. 19-20). Interestingly, the concepts of climate change and the greenhouse effect were used interchangeably for a period of time, after which the latter came out of use. The use of both in the 2007 SBN indicates a lack of terminological consistency.

Climate change was more broadly analysed in the 2014 SBN, that is still in force. Firstly, the concept of "climate security" appears among the strategic objectives of the RP in the field of security. By itself, it is worth of attention as Poland is heavily dependent on coal, the main source of carbon dioxide. Secondly, climate change was identified as a component of the Polish security environment. Thirdly, adaptation to changing climate conditions is part of the operational strategy. More

precisely, adaptation measures are to be found in the section entitled "Economic activities in the sphere of security". Fourthly, the "Economic subsystem" section states that "International cooperation in the field of environmental security will be developed, covering the support for organizations and international agreements favouring the reduction of emissions of pollutants, global climate policy and preservation of biodiversity, respecting the level of development and structure of national economies of participating states" (Biuro Bezpieczeństwa Narodowego, 2014, pp. 12, 19, 41).

Climate Change in Defense Planning Documents of Poland

The Strategic Defence Review of the RP (Strategiczny Przegląd Obronny RP, hereinafter SPO) is a document, which is devoted specifically to defence matters of Poland. The first document of a kind was prepared in 2005–06. However, its aim was limited – to indicate the direction of the transformation of the Polish Armed Forces (hereinafter referred to as SZRP). Therefore, the document did not cover the whole defence system of the state. For this reason, it was criticized by experts. The successive SPO was completed in January 2011 and included the medium- and long-term security environment analysis (Malec, 2011, p. 25).

Therefore, climate change appeared in SPO 2010–11 in a few passages, firstly, in the "Natural environment conditions" section. The need to adapt and build new infrastructure for Polish armed forces in accordance with environmental protection laws was acknowledged. This is because, as an integral element of the Polish state structure subjected to the law in this regard, Polish armed forces will be required to take action to tackle climate change. The likelihood of climate change appearance by the 2010–11 SPO is recognized as high, and impact as weak and negative (Ministerstwo Obrony Narodowej, 2011, p. 47). Climate change is also mentioned as a factor affecting the operating environment of the SZRP. The authors of SPO rightly observe the non-linear nature of these changes. Undoubtedly, the intensity and frequency of extreme weather phenomena will increase in the future. These events will include cyclones and heavy rains, some of which will be present in Poland (Ministerstwo Obrony Narodowej, 2011, p. 48). It should be noted in the conclusion that, similarly to the 2007 SBN, in the 2010-11 SPO, the concept of climate change and greenhouse effect were used interchangeably, indicating a lack of terminological consequence.

In the 2016 SPO, at least in its publicly available shortened version "The

Concept of Defence of the Republic of Poland", one can no longer find any reference to climate change. The document correctly points to the need for energy resources diversification by Poland (Ministerstwo Obrony Narodowej, 2017, p. 31), which fits neatly into the geopolitical character of the publication. It also seems to confirm important change in perception of international relations (including security environment) in Poland over the recent years, that is turn to an extremely Hobbesian vision of the international realm. It is seen by the current government as an area of anarchy, in which the stronger rules while confrontation and conflicts of national interests are the natural state of matters (Kulesa, 2018, p. 2). This way of perception naturally excludes climate change from the analysis of the security environment, which, as a global threat, requires international cooperation. The concept of "climate change" is also missing in the currently expanding "(mini) BBN dictionary" (so-called "Small Dictionary of Security", developed by the Polish National Security Bureau), which aims on including new terms both from theory and security practice (Biuro Bezpieczeństwa Narodowego, 2018).

It should be noted that climate change also appeared in other defence planning documents of the RP. Though, all of these documents were published before 2015, when the ruling party changed. For example, the Defence Strategy of 2009 states unequivocally that climate change creates humanitarian and political effects (Ministerstwo Obrony Narodowej, 2009, p. 5). In 2013 the 2009 Defence Strategy was replaced by the Development Strategy of the National Security System of the Republic of Poland 2022 (Strategia Rozwoju Systemu Bezpieczeństwa Narodowego Rzeczypospolitej Polskiej 2022, SRSBN RP). Although in this document climate change is not directly mentioned, climate-related issues are declared as serious challenges. These include floods, long-term droughts and consequential local water deficits, large-scale fires, hurricanes, landslides or infectious diseases epidemics (Ministerstwo Obrony Narodowej, 2013, p. 13).

Climate Change in Defense Reviews of the US

The legal basis for the introduction of climate change to the US defence reviews was provided by, adopted on an annual basis, the National Defence Spending Act (hereinafter NDAA), which outlines the annual budget and expenses of the Department of Defence (hereinafter DoD). Its 2008 edition states that the first National Security Strategy (NSS), the National Defence Strategy (NDS) and the Quadrennial Defence Review (QDR), prepared after the implementation

of the 2008 NDAA, are expected to have a forecast on the impact of climate change DoD missions. Such analysis was supposed to include preparation for natural disasters caused by extreme weather events. The 2008 NDAA literally recommends the use of scientific research for analysing strategic, social, political and economic dimensions of climate change and emphasizes the role of the UN Intergovernmental Panel on Climate Change (IPCC) research, as a benchmark in this respect (US House of Representatives, 2007, pp. 290).

Therefore, climate change appeared in the 2010 QDR. The review admits that climate change will affect DoD operations in two ways. Firstly, by altering the operating environment of the US army. Although by itself, it is not a military threat, climate change increases the risk of conflict, contributing to food and water shortages, mass migration or disease spreading. Climate change also makes the risk that the US armed forces will be needed in assisting humanitarian disasters higher. Probably, this is a lesson learned from humanitarian aid that the US Navy provided for the victims of the 2004 earthquake. Secondly, DoD must take preparatory actions for the impact that the changing climate will have on military infrastructure and capabilities of the US armed forces. Numerous of its facilities are located in areas that are already (or will soon be) affected by changing climate. Preparatory actions are therefore carried out at both the national and international levels. The latter requires cooperation with other actors that have appropriate competences. In addition, in the 2010 QDR introduction of policies aimed on saving energy and accelerating the implementation of innovative energy technologies by the US armed forces are recommended. Lastly, it indicates the necessity to carry out a comprehensive assessment of the impact of climate change on military installations and the implementation of adaptation measures (Gates, 2010, pp. 84–86).

The 2014 QDR draws attention to development problems related to climate change. One of them is increasing and increasingly wealthy urban populations of India, China and Brazil. These people will be vulnerable to building and infrastructure destruction and arable land deterioration. Tensions caused by climate change will affect interstate rivalry for available natural resources, at the same time imposing additional burden for economies, societies and government institutions. Climate change has been therefore referred to as "threat multiplier". As such, it deepens poverty, environmental degradation, political instability and social tensions. That way, it contributes to the creation of environment

positive for the development of terrorist activities and other forms of violence (Department of Defense, 2014, p. 8). The 2014 QDR, in the same way as the 2010 QDR, makes it clear that DoD undertakes preparatory actions. As the document points out, the operational capabilities of the US armed forces depend on free access to land, air, sea and space domains. To ensure that access, a comprehensive assessment of all installations, already mentioned in the previous review, should be completed. Finally, what can be surprising from the perspective of a military document, climate change is also seen as an opportunity for broader international cooperation (Department of Defense, 2014, p. 25).

Such an installation survey has been carried out and covered about 3500 US military facilities. The highest number of reported impacts of climate change was caused by drought (approx. 22%), winds (22%), flooding (about 20%). Approximately 10% of the facilities were affected by extreme temperatures, whereas floods caused by storms were indicated by about 6,5% of the subjects while fires hit about 6% of the investigated facilities (Office of the Under Secretary of Defence for Acquisition Technology and Logistics, 2018, p. 16).

In 2018, QDR was replaced by the National Defence Strategy (NDS). Documents are fundamentally different: NDS, unlike QDR, is a secret document. Therefore, it is not surprising that the 11 pages long NDS Summary is significantly shorter than the QDR 2014. As a result, it is tightly focused on military threats for the international order and modernization of the US armed forces (Department of Defense, 2018). One does not find climate change any longer.

It should be noted that some branches of the US armed forces have prepared documents for the planning of responses to climate change on their own. First and foremost is the U.S. Navy, which has published an adaptation road map as early as in 2010 (US Navy, 2010). In addition, the Arctic, the region most affected by warming, which results in ice melting, is central to four US documents. Two of them (the action plan and the report for the Congress) were prepared in the DoD (Department of Defense, 2013, 2016), third in the US Navy (US Navy, 2014), and the fourth was prepared by, cooperating with the US armed forces, the US Coast Guard (2013).

Climate Change in Defense Reviews of the UK

Climate change was introduced in the 2010 UK defense review in the "Extended Security" section. Based on relative likelihood and predicted impact, the authors

identified several broad security threats. These include terrorism; instability and conflicts beyond British state's territory; cybersecurity, energy security; organized crime; border security; proliferation and the arms control. Climate change intersects with a few of these areas. Firstly, they will exacerbate the impact of factors leading to instability, such as poor governance and poverty. Secondly, climate change will increase the likelihood of occurrence and impact of crisis situations. Thirdly, recommendations regarding institutional changes are made in the 2010 review. The competences of existing structures already responsible for dealing with climate change are to be extended to include management of related national security threats (GB Cabinet Office & Parliament, 2010, pp. 44, 49, 52, 66).

The succeeding document published was the 2015 National Security Strategy and Strategic Defense and Security Review. As the title suggests, its nature is not merely military and reflects the perception of the whole security environment by the British government. For this reason, climate change is extensively discussed. It is stressed in the introduction that the security of the UK depends on finding a solution to mankind's common global problems – including climate change. The impact of instability in failed states is reiterated and therefore the role of development aid, which prevents exacerbation of the problems these weak governments face. In addition, the whole section is devoted to climate change and resulting resource shortages. The document points to the Middle East and North Africa as regions exposed to water shortages. Sub-Saharan Africa will be vulnerable to crop losses. Rising sea levels will threaten urban areas and small insular states. The more frequent occurrence of extreme weather phenomena can destabilize not only everyday life but also agricultural activities and supply chains, increasing the likelihood of political instability, conflict and migration. The document recognizes climate change as a factor bringing negative consequences of climate change that the overseas territories of the UK as well as influencing the UK's energy security. Climate diplomacy is to be one of the sources of "soft power", as the UK intends to engage in concrete actions against them at both bilateral and multilateral levels. This is because – along with health safety – climate change is one of two key risk areas threatening the stability and long-term security of the UK (GB Prime Minister & Parliament, 2015, pp. 6, 17, 21, 25, 47, 65).

The document further identifies specific actions that have already been taken the British government and plans for the future. Financial aid is provided by the UK's International Climate Fund, which was supported with 3.87 billion pounds

between April 2011 to March 2016. It helps the world's poorest people to adapt to climate change and promotes cleaner and greener economic growth. The UK government declared to increase the funding by at least 50% to support the reduction of carbon dioxide emissions and, at the same time, facilitate access to energy, increase the survivability of the most vulnerable and poorest people and reduce deforestation. This, in turn, will help to reduce not only the negative impacts of climate change but also disaster response costs. In addition, the UK declares will to continue focusing diplomatic efforts on leading global action to reduce emissions through national policies, bilateral cooperation and negotiations under the United Nations Framework Convention on Climate Change (UNFCCC) (GB Prime Minister & Parliament, 2015, p. 66).

Summary

Climate change, although known for decades as the so-called "greenhouse effect", has gained global publicity only in the 21st century. The industrialization has increased conditions of living for many: firstly for the western and, since 2000, for large non-western population, mainly those of China and India. However, this comes with a cost. Increased living standards affected natural environment and contributed to climate change through carbon dioxide emissions. As a result, the armed forces of various countries have started to perceive climate change as a factor destabilizing the operating environment. As a result, it has been implemented (albeit to varying degrees) in defence planning documents of all three analysed countries. It is a common feature of all analysed documents to notice the causal link between development problems (which are created and/or exacerbated by climate change) as well as instability and threats to national and international security.

However, the armed forces considerations cannot be seen outside of broader political and social contexts. In recent years, both in Poland and in the United States, management of security area was taken over by people who, to various degrees, put the problem of climate change in question. From this perspective, the absence of this problem in the Polish SPO of 2016 is understandable, distinguishing this document not only from the previous defence review but also from other Polish strategic documents. The 2014 SBN and the 2012 SRSBN that acknowledge problems arising from changing climate, remain in force, generating conceptual chaos. The lack of implementation of this issue in the Polish 2016 SPO

is therefore consistent with the decline of Polish scholarly community interest, as indicated in the literature review. All of the studies cited therein were published before 2015. On the other hand, it is worth noting that climate change has recently appeared in security context in expert media outlets, where, so far, usually have been treated with distance (Energetyka24, 2017b, 2017a; Wiech, 2018). Likewise, they have been removed from the new US NSS announced by President Trump in 2017 years (Trump, 2017) and from the presented in 2018 NDS. On the other hand, it should not be forgotten that the climate change-related threats were explicitly inscribed in the 2018 NDAA (The US House of Representatives, 2017), which makes the clear assessment of the current position of the US considerably more difficult and similar to Polish position in this regard. From the perspective of the documents herein analysed, the UK's 2015 defence review is the only major one currently in force, which directly points to its role for the armed forces.

This means that, although the climate change-related risks are clearly accentuated by climate change researchers – e.g., in the 2018 autumn report of IPCC (Intergovernmental Panel on Climate Change, 2018) – their implementation varies and depends on the political process. As has been shown, they appear in major strategic documents, only to be deleted by subsequent administrations. This certainly hampers the adaptation processes of NATO armed forces and undermines their capabilities in changing the natural environment as climate changes will remain with us in the very long term. Although NATO Secretary-General Jens Stoltenberg has recently said that "NATO will not be the tool or the international platform where we make climate change agreements" a solution can be the creation of specific climate change-related institutions within NATO. Its goal would be twofold. Firstly, on the NATO level, it would coordinate military activities aimed on climate change adaptation. In that way, at least some of the ways NATO currently is tackling climate change – "strategic analysis; support for scientific cooperation; enhancing energy efficiency and environmental protection in the military; building resilience to natural disasters; and capability planning" – could be concentrated in one place. On a national level, such a body would partially shield armed forces of member states from slowing their adaptation process if climate change questioners would be elected.

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