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Climate Change: Can It Pose as a Newly Established Contributor to Terrorist Actions?

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Abstract

Although climate change and terrorism are two terms that are mostly analyzed separately, they tend to be two global threats in a feedback loop relationship. Climate change causes fragility and instability because of the lack of natural resources and the vulnerability of human security. Considering this situation, NSAGs (Non-State Armed Groups) take advantage of this fragility and proliferate. In order to be established, they even attempt to earn the support of the local population. Food insecurity, water/land scarcities caused by climate change lead to intense poverty of the local population. As a result, they are more vulnerable to the recruitment of NSAGs, which promise them economic incentives. Various case studies demonstrate that NSAGs such as Boko Haram in Lake Chad exploit and manipulate the local population to impose their regime. For this purpose, NSAGs use natural resources such as water strategically by using them as weapons or by forbidding access to these vital resources. Governments have attempted to control this exacerbation of terrorist actions in the environmental framework but the solution of the problem demands the collaboration of multiple actors. Policy makers will be able to address these challenges by building resilient societies that engage people with their problems.

Keywords: climate change, terrorism, human security, NSAGs, natural resources, national security, environment, eco-terrorism, violent attacks, humanitarian aid

Introduction

Climate change and its consequences pose international security at serious risks. Climate change differentiates from global warming and it is defined as any significant change in the measures of climate lasting for an extended period of time (Lytle, 2021). It is heavily connected with national security, which is exceptionally vital in this study. The conditions prevailing in certain areas where there is lack of water, land and other natural resources, lead to a general instability. In the last years, there has been a worrying increase of the instability caused by those scarcities, leading to an inextricable link between environmental and national security. The effects of climate change and

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environmental collapse are already visible in several conflict areas around the world, but the main question that arises is to what extent climate change affects the operation of terrorist organizations.

This research starts by a brief presentation of the extent of climate change in our times and its impact on human security. The second chapter illustrates how climate change can pose as a contributor to terrorist actions in a fragile and unstable environment. Subsequently, it is worth mentioning the definition of the NSAGs (Non-State Armed Groups) and the examination of their main categories, including various case studies, such as Boko Haram in the Lake Chad region, ISIS in Syria and the Taliban in Afghanistan. The third chapter indicates that NSAGs attempt to establish their regime by managing natural resources and even using them as strategic weapons. The last chapter analyzes the measurements taken by governments and suggests policies in different sectors that can lead to improvement.

1. The lack of natural resources causes fragility.

Climate change is considered as a low start threat. The most common threats against natural security are reported as direct attacks and events, which opposes the slow action of climate change. An example of an immediate threat to national security is the terrorist attacks of 11th of September in 2001, which stamped the pages of modern history. However, slow-start threats, such as climate change are having more and more impact on national security (Asaka, 2021).

According to Telford (2020), climate change acts as a multiplier of threats to instability. It can worsen the already existing social vulnerability, if there are no measures taken on time. Social vulnerability has been linked with the spread of terrorism, as the terrorist groups are known for recruiting members from poverty-stricken youth. For example, Pakistan is a great area for NSAGs (Non-State Armed Groups) to be constituted and established. The fact that it is located in an area of great political importance, creates constant tensions and political conflicts. In addition, climate change often causes high flood risks and severe water scarcity. The continuous political and climate changes pose a great danger to the national and environmental security of the area. In many areas, it is a common tactic for the NSAGs to use the scarcity of natural resources and polluting even the small quantities of drinking water that has been left, in order to push the locals to join them (Rüttinger, et al, 2015). To sum up, climate insecurity is defined as the conditions under which the effect of climate change threatens a group of various actors. There is a feedback loop relationship between climate change and terrorism, in which climate change enables and multiplies terrorist actions, which in turn drives to climate change.

Within the past, Non-State Armed Groups were defined as organized groups that were part of an international or beyond the state armed conflict. As Nett and Rüttinger analyze (2016), they were perceived as actors who are trying to get political power and initiate political change. They all share a fundamental organizational structure that continues over a certain period of time, the status to utilize force to attain political, financial or ideological targets, out of the state control (UNSSC, 2015). NSAGs usually don't have formal obligations and they don't participate in state structures. Consequently, NSAGs are not committed to international humanitarian law (DCAF, 2015).

At this point, Goodman, S. (2021), makes a special mention of the correlation of environmental security with national security and our developing reliance around the world on non-renewable vitality sources and particularly on fossil powers. The worldwide oil enslavement has driven to the unending war on the Afghanistan-Iraq front, with thousands of casualties. This situation highlights the need to reduce our dependence on any energy source, or at least increase our reliance on renewable vitality sources. The efficiency of the national army is deeply connected with national security, so it is extremely important to achieve its independence from non-renewable energy sources and the development of sustainable facilities. The integration of environmental and energy parameters into the design of military operations around the basis of sustainability has beneficial effects on both national security strategy and communities across the country. The collaboration of the areas in order to discuss the use of land can lead to a general plan for the treatment of climate change.

Also, it is extremely important to be prepared for extreme weather phenomena. As the climate is continuously changing, more hurricanes, cyclones, fires, earthquakes tend to happen. These events put national security at great risk, as they cause the loss of human lives, material disasters and more. This highlights the importance of being prepared for all those extreme events. Homeland security has evolved around protection from a terrorist threat, but it is evolving to include responses to natural disasters (Goodman, 2021).

Finally, natural security issues are one of the most critical issues of our time and must be integrated into national security planning (European Commission, 2008; UN Security Council, 2011). Although the different effects of climate change are still being examined, there are two pillars to approach this phenomenon: the mitigation, which is the attempt to reduce all human activities that may lead and contribute to climate change and adaptation, in order to adapt in the new environmental data. Mitigation and adaptation should be considered as part of national security planning in order to efficiently face multiple risks (Nett & Rüttinger, 2016).

2. NSAGs and the support of the local population.

According to Nett and Rüttinger (2016), the instability that has been caused by climate change in the international arena, has been used by many non-state actors in order for them to be established, using new patterns of violence. Climate change acts as a risk multiplier in regards to NSAGs. There are two main ways that climate change helps the rise and growth of the NSAGs. Firstly, due to high levels of fragility that have been located in many areas, NSAGs often try to fill the gaps by providing basic services in places. In this way, they gain legitimacy and the support of the locals. Secondly, in many nations climate change is having an increasingly negative influence on livelihoods, such as food poverty and water scarcity. As a result, the affected population groups are more prone to both negative climatic impacts and NSAGs recruitment. It is intensively worrying how NSAGs take advantage of the fragile conditions created by compound climate-fragility risks.

Nowadays NSAGs tend to operate in an environment without conflict, using the unconventional armed violence, which means that they don't use violence in a way of armed conflict. Usually, they cause conflicts with financial motivations which are funded by illegal profitable activities. NSAGs involve a wide range of participants, in short range like youth and street gangs, organized crime and in a wider range such as professional terrorist groups (Schneckener 2010). Although they look different from each other, they have common characteristics, as they use organized crime as the main source of pressure and extremist violence with different motivations. Another fundamental change that has been happening through the years is that NSAGs tend to use organized crime as their main way to achieve their goals (UNSSC, 2015). Furthermore, as Briscoe (2013) illustrates, they achieve a network that relies on civilians that is beneficial for their purpose. NSAGs are flourishing in states which have conflicts or an unstable political system, trying to establish their authority and earn the favor of the population. The more the networks are spread, the more power and chances of domination NSAGs have.

NSAGs can be separated into three different categories (Nett and Rüttinger. 2016). Firstly, they could be characterized by the patterns of violence they use, whether is traditional conflict or non-conflict use of violence. Secondly, they are differentiated by their territorial conquest, for example if they are interested in claiming a territory or if they just want to destabilize the government of the country. Thirdly, they choose their strategy according to their main economic goals. Another important characteristic that defines NSAGs, is their relationship with society and state, which determines the degree of their consolidation in each nation. Last but not least, we can distinguish each NSAG from whether it is a strictly national phenomenon or if it extends beyond borders.

In order to comprehend the influence of climate change to the NSAGs' activities, we could focus on one of the most known NSAGs that is located on Lake Chad and it's known as Boko Haram. Lake Chad's region, which includes Niger, Nigeria, Chad and Cameroon, has been suffering from financial difficulties, decreasing resources and conflicts (Freedom House, 2015). Climate change adds up even more pressure, since extensive severe droughts have caused a huge shrinking of the Lake, which is the main sector of employment in the area. Lack of water and fertile land causes competition which might lead to social tensions. Also, the huge growth of population, which is calculated to 38 million people, in combination with the severe lack of economic opportunities (Department of State, 2015), leaves a perfect spot for NSAGs to establish.

Boko Haram is an islamist extremist group that was founded in 2002 by Myhammed Yusuf and it launched a conflict against the Nigerian government in 2009. From 2015 it is also called Islamic State in West Africa or Islamic State's West African Province. Its initial purpose was to fight the injustice and the corruption against the lower classes, caused by the Western presence (The Editors of Encyclopaedia Britannica, 2021). It gained control of 18 local government areas in Nigeria (Abubakar, 2015). It started as a non-violent Islamic movement, but it turned into an extremist group, whose cause is the establishment of an Islamic state under Sharia law. (Campbell, 2014) As the resources in Chad Basin, such as quality fresh water, fishes, the capability of vegetable cultivation and livestock are decreasing, violent conflicts and social tensions have appeared. This situation provides a fertile ground for NSAGs. Boko Haram recruits young men by offering payments in order to carry out violent attacks (Olojo, 2013), or by using other brutal methods such as kidnapping, forced marriages etc. (Amnesty International, 2015). In addition, Boko Haram uses natural resources as a weapon, in order to exert even more pressure. Nonetheless, Boko Haram seems to understand the importance of this strategy and keeps using it, since as Nett and Rüttinger (2016: 27) indicate *"the scarcer resources become, the more power it gives to those who control them"*.

The uprising of armed opposition groups, including the Taliban, has caused a complex system in Afghanistan, where violence over natural resources is mostly observed. The withdrawal of most foreign forces enhanced the Taliban territorial power. Economic incentive seems to overcome the ideological field, as Taliban and other terrorist networks, driven by profit, conduct human trafficking, drug trafficking, kidnapping and contraband smuggling (Rollins and Wyler, 2013). In 2008, disputes over natural resources like land and water were the most common source of violent conflict with 53 percent of all cases (Brown and Blankenship, 2013). Afghanistan has consistently been the world's largest source of illicit opium and the main supplier of heroin since the 1990s (UNODC, 2020).

The industry around opium comprised 15 percent of Afghanistan's GDP in 2013 (IMF, 2014). The Taliban and other insurgent groups benefit from the taxes levied on produced opium and opium against the eradication of illegal opium in order to secure the support of farmers in remote rural areas for their insurgency (UNODC, 2020). Without reliable access to irrigation for water-intensive crops like wheat, the more drought-resistant opium poppy seems much more profitable (Gould & Pate, 2019). As a result, following the intensity of climate change and the government's weakness to manage these unsustainable conditions (Barfield, 2012), NSAGs are taking advantage of food and water insecurity and even gain a lot of supporters as they give farmers the opportunity *'to access markets, provide capital for investment and thereby support economic development'* (Nett & Rüttinger, 2016: 42). The opium cultivation is highest in the most insecure regions in the south and the west, bordering Pakistan and Iran considering Afghanistan's complicated topography with its mountain ranges and inland borders that the government cannot easily control. This fragility has severely affected the operation of institutions (Nett & Rüttinger, 2016).

Drought caused by climatic changes poses a very serious threat to Afghanistan as desertification can lead to violence between violent clashes and pastoralists. Moreover, water scarcity is a vital issue. "The availability of water per capita is projected to decline by 50 percent by 2040" (Nett & Rüttinger, 2016: 42). Warm temperatures, evapotranspiration and lower levels of rainfall in combination with insufficient water management systems can be an intense threat to Afghan citizens (Cavallito, 2021). Data from the Norwegian Refugee Council demonstrate that food insecurity affects one-third of the population (Norwegian Refugee Council, 2021). The impoverishment that may occur will make them extremely vulnerable and may even lead them to join terrorist organizations that promise them various financial incentives. According to the U.S. broadcaster, the Taliban pay their soldiers between 5 and 10 dollars a day, which is more than they could get from farming (Cavallito, 2021).

3. NSAGs use natural resources as weapons.

As the reservoirs continue to dry up, severe droughts caused by climate change have spread the vulnerability of the water system. As the world's fresh water supply becomes increasingly scarce, NSAGs are multiplying their attacks and manipulating the supply as a coercion strategy. Extremist groups, including Al Qaeda, have expressed interest in contaminating drinking water in the United States. A report by the New Jersey Office of Homeland Security and Preparedness identified 26 specific threats of water contamination in the United States between 1968 and 2008 to recent reports from the Nigerian military, Boko Haram has implemented new weapons which are based on natural resources. (Somers, 2019). In places dislodged by the army, they poisoned water

sources, making water usage unsafe for both humans and wildlife. Although it remains an open question if this activity aims against the local population, it is evident that natural resources are a crucial strategic tool. As a result, the potential damage is extremely high and this strategy becomes increasingly menacing in the face of a changing climate. Furthermore, when governments are incapable of managing natural resources, competition for scarce resources is intense and likely to cause violence and instability (Nett & Rüttinger, 2016). Drought can also create tinderbox conditions, increasing the likelihood of deliberate fires in densely populated areas. For example, the Lebanese militant group Hezbollah used forest fires as part of its military strategy during the 2006 conflict with Israel. The fire, thus, can equally constitute an important tool for war. In 2012, the online magazine Inspire exposed jihadi Internet forums detailing how to construct an “ember bomb” to target forested areas of the United States. One military officer wrote in his 2005 thesis: *“An opportunistic terrorist can unleash multiple fires creating a conflagration potentially equal to a multi-megaton nuclear weapon.”* (Somers, 2019: 1).

Water can be strategically used to apply political and military pressure. In 2014, a number of reports stated that opposition forces and the regime used deliberate water and electricity supply cuts to weaken the opponent in the divided city of Aleppo. Moreover, rebel groups diverted water only for communities under their control, causing serious damage to civilians and farmers who depend on irrigation. The river Euphrates that comes from Turkey and is important for food, water, energy and industry has mostly fallen under ISIS control. This also included the Tabqa dam, the source of 20 percent of Syria’s electricity. Tabqa dam supplies water to 5 million people and is crucial for irrigation (Shamout, 2018).

Terrorist groups control the water barriers and hence, in order to cause damage in water-scarce areas and increase their territorial control. In 2015, ISIS attacked regime forces further downstream by blocking the gates of the Ramadi (Shamout, 2018). In addition, water can be used as a weapon by taxing it and as a result, be an important source of funding (Nett & Rüttinger, 2016).

4. Measures taken by governments

According to Nett & Rüttinger (2016), foreign policy makers must play an active role in order to prevent climate change, violence, conflict and fragility, but first they must understand the complex nature of NSAG’s. Their goal is to create resilient states that can face the risks of NSAGs. Three sectors can help the policy makers face the problem of NSAGs: climate change adaptation, development and humanitarian aid, peacebuilding and conflict prevention.

Strategies that are against violent extremism do not take climate change into consideration and as a result the interventions can lead to failure (UNDP, 2016). In areas with a lot of conflicts, peacebuilding strategies that are linked to climate change can bring about external support and development (Crawford et al., 2015).

The quality of public services and goods affects the ability of local communities to cope with climate risks that are related to NSAGs. Weak infrastructure could increase the conflicts for local resources (Detges, 2016). The solution of the livelihood insecurity problem and the recommendation of alternative sources is more likely to cause resistance to the integration in extremist groups and to climate risks. As Nett and Rüttinger (2016) illustrate, changes to sectors such as agriculture, livestock, forestry and fisheries can reduce the possibilities of joining NSAGs. More specifically:

- *Agriculture:* The agricultural sector is influenced by climate risks and it provides employment and resources in the majority of the world. In order to adapt to changing climatic conditions, agricultural practices can be shifted towards less water-intensive and more drought-resilient crops. In addition, governments need to reassure that food adequacy will remain sustainable and crops will be easily estimated. Prudent management of irrigation systems will reduce climate risks and the impacts of drought (Nett & Rüttinger, 2016).
- *Fisheries and aquaculture:* Climate changes as cyclones, floods, sea-level rise, droughts, temperature and rainfall fluctuations have a negative impact on the economic returns from fishing. Those who are more likely to be affected by these climate risks are mostly the small-scale fishers or day laborers (Vivekananda et al., 2014). A decrease in fishing revenue will increase illegal fishing and piracy (Hyde, 2016). Policy must take initiatives in order to face the risks that are linked to livelihoods.
- *Forestry:* Forests are used for commercial and cultural uses and as a result they can cause a lot of conflicts. A lot of NSAGs (especially from East, Central and West Africa) sell and tax forest resources such as tropical timber and charcoal because of the lack of supervision of forest land and resources. Local mafia, Islamist extremists and rebel movements, including al-Shabaab (a terrorist group linked to Somalia's Al-Qaeda) are funded from the annual trade in illegal logging (Nellemann et al., 2014). At a global level, governments make efforts in order to face the problem of illegal timber trade and protect forests by creating

programs such as REDD+ and the EU's Forest Law Enforcement, Governance and Trade (FLEGT).

- *Livelihood security of youth populations:* In some areas, young people have low employment opportunities and as a result they are attracted by armed groups or other illegal activities such as drug trafficking, piracy or poaching. Government policies must take into consideration demographics and gender when considering climate resilient livelihood strategies (Nett & Rüttinger, 2016).
- *Migration:* Policies must improve the host-migrant relations by helping them have equitable access to resources, lines of communication and information. In this way, hosts and migrant communities will build trust and consequently, conflicts and risks of illegal activities and criminality will be reduced (Nett & Rüttinger, 2016).

Environmental disasters can cause fragility in governments. NSAGs can take advantage of this weakness in order to dominate in the political scene. On the other hand, some examples, such as the disaster response in Aceh to the tsunami in 2004 show that governments can use disasters as opportunities to increase resilience and build peace (Ruettinger et al., 2015). Governments should reassure that resources are distributed immediately and fairly and prevent NSGAs from providing services such as access to clean water, food aid and medical care in order to replace state services.

According to Shreve and Kelman (2014), foreign policy should also spend enough money to reinforce early warning systems so as to predict the risks. Countries that are prone to disasters need to take emergency decisions in order to avoid the domination of criminal groups. Governments and civil society should collaborate and warn specific groups about the threats of exploitation and human trafficking in times of disasters. The more efficient the collaboration becomes, the more difficult is the appearance of smuggling and human trafficking.

Weak governance, poverty, inequality and marginalization are often the reasons why rapid urbanization happens. The increase of NSAGs depends on the way cities face these threats. Humanitarian aid, peacebuilding and conflict prevention should focus on cities that are affected by fragility and conflicts. A collaboration between the poor urban and the periphery population with governance systems and services will solve the problem of livelihood insecurity and contribute to economic development (Mosel et al., 2016; Nett & Rüttinger, 2016).

It is worth mentioning that the National Homeland Security Strategy should include sustainable principles and practices in order to prevent NSAGs from the exploitation of the environment. The

implementation of a strategy regarding national infrastructure protection will lead to sustainability. For instance, the U.S. military has realized that sustainability is an important strategic security element. Furthermore, large and complex distribution systems are more likely to fail and that's the reason why governments must fund investments on a smaller scale, especially in distributed infrastructure systems. Ultimately, it is important to improve sustainable water technologies in order to enhance the EPA Water Security Initiative (Somers, 2019).

Despite these attempts, the government was unable to manage climate change and as a result, citizens created a movement of civil activism. The actions of this movement are known as eco-terrorism which are associated with organizations as the Earth Liberation Front (ELF) and the Animal Liberation Front (ALF). Although the activities of these groups are linked with illegal behaviors as sabotage, arson or trespassing, they have different intentions of terrorism as they don't want to harm human life. The incapability of policies lead to radicalized movements such as the ITS (Spadaro, 2020).

As Paola Andrea Spadaro (2020) clarifies, ALF and ELF were the main representatives of eco-terrorism threat, which rose from 1980 to 2012. The actions of such organizations could be considered similar to those of Al-Qaeda and ISIS, by using violent tactics against western societies. However, the United States eventually suppressed these movements.

ICRC (International Committee of the Red Cross) cooperates with armed groups in order to provide humanitarian assistance to persons that are affected by armed conflict and other situations of violence. Nowadays, armed conflicts are defined from the death of civilians, the disaster of houses and livelihoods, sexual violence, lack of resources and health care and the recruitment of children into fighting forces (Pejic, Herbet & Rodenhäuser, 2021).

As Jelena Pejic and Tilman Rodenhäuser emphasize (2021), the goal of ICRC is to collaborate with all parties (including NSAGs) in order to gain access to civilian populations and persons located in territories in which armed groups operate. In this way, ICRC will be able to protect populations suffering from armed conflicts. To sum up, this humanitarian organization can offer its services to the parties to a non-international armed conflict, including non-State ones.

As Vosniak (2021) highlights, for a successful collaboration, NSAGs must respect existing humanitarian norms under international humanitarian law (IHL). However, there must be a better engagement with NSAGs, because they are usually breaking the law. The United Nations could play a crucial role and stimulate NSAGs to implement IHL. The UN Security Council has already found ways in order to encourage NSAGs to comply with the law.

At this point, we can refer to an example of a country that has taken external help from an international organization. Attacks by terrorist groups linked to al-Qaeda or the Islamic State networks have risen sharply in West and Central Africa, especially in the Sahel region. UNODC (United Nations Office on Drugs and Crime) supports national efforts in creating strategies against terrorism and its financing. According to the United Nations Office on Drugs and Crime (2021), UNODC strengthens legislative and policy frameworks, enhances knowledge and skills to prosecute cases and enforces mechanisms for regional and international cooperation. In conclusion, climate change mitigation and environmental protection measures are considered as basic prerequisites to combat the root causes of the Sahel's insecurity and rising (jihadist) violence. Although, these measures based on false premises may lead to more conflicts than solutions: jihadists can take advantage of this situation (Raineri, 2020).

Conclusion

Climate change is a major threat to international peace and security. The effects of climate change heighten competition for resources such as land, food, and water, fueling socioeconomic tensions and, increasingly often, leading to mass displacement. We can conclude that climate change and violent attacks are inextricably connected. The escalating scarcity of basic resources such as water, the increased desertification of agricultural regions, and the overall rise in temperatures have caused a severe fragility and sociopolitical vulnerability. Thus, climate change can undoubtedly pose as a contributor to terrorist attacks to an extended dimension, as the use of environmental stress is a strategic tool for NSAGs in order to recruit citizens and proceed to more violent actions. If governments, businesses, civil society, youth, and academia work together, we can create a green future where suffering is diminished, justice is upheld, and harmony is restored between people and planet

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