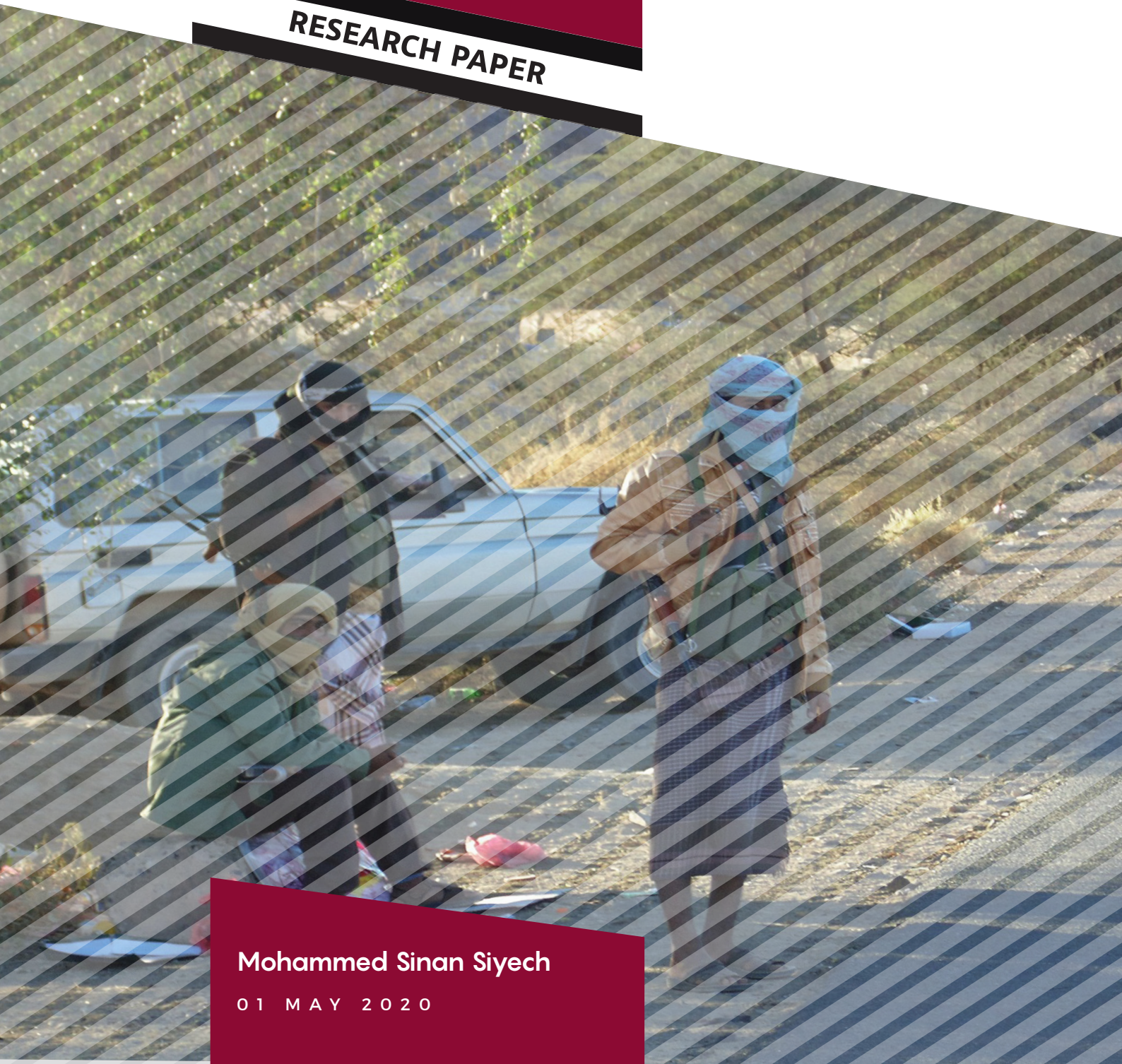


CLIMATE CHANGE AND VIOLENT NON STATE ACTORS IN THE MIDDLE EAST

RESEARCH PAPER



Mohammed Sinan Siyech

01 MAY 2020

**CLIMATE CHANGE AND
VIOLENT NON STATE ACTORS
IN THE MIDDLE EAST**



Mohammed Sinan Siyech is a Senior Analyst with the International Centre for Political Violence and Terrorism Research, a constituent unit of the S Rajaratnam School of International Studies at Nanyang Technological University in Singapore.



Contents

INTRODUCTION	6
CLIMATE CHANGE IN THE MIDDLE EAST	8
THEORIZING CLIMATE CHANGE AND TERRORISM/INSURGENCY	10
ILLUSTRATION: AL QAEDA IN THE ARABIAN PENINSULA	14
POLICY IMPLICATIONS	16
REGIONAL COOPERATION	18
THE ROLE OF CIVIL SOCIETY	19
CONCLUSION	21
ENDNOTES	22



Introduction¹

In recent years, climate change has become more recognized both globally and in the Middle East and North Africa region. Many countries in the region now bear hotter temperatures, face droughts, decreasing agricultural efficiency, floods and increasing natural disasters such as cyclones and hurricanes.

As such, climate change also has many secondary effects due to its ability to exacerbate problems across the globe. For instance, new research has shown that climate change has the ability to trigger a financial meltdown to the world over.² Moreover, climate change also has the potential to facilitate the release of deadly pathogens that have until now been preserved in permafrost – which is melting at a faster rate due to longer summers and higher average temperatures.³

This paper looks at one such secondary effect being the effect of climate change on violent non state actors, a category that incorporates insurgency, terrorism and extremism in the MENA region.⁴ It argues that climate change fundamentally exacerbates various fissures in the existing socio-economic environment that are already plaguing a volatile conflict-ridden region. Consequently, it shows that insurgents and terrorist groups have seized various opportunities provided by these climate change induced cleavages to strengthen themselves.

This paper is divided as follows: First, it theorizes the relationship between climate change and terrorism by drawing on previous instances where insurgent/terrorist groups have been strengthened because of climate change induced issues. As such it comes with a three-step framework that solidifies the nexus between climate change and terrorism/insurgency.

**CLIMATE CHANGE
FUNDAMENTALLY
EXACERBATES VARIOUS
FISSURES IN THE EXISTING
SOCIO-ECONOMIC
ENVIRONMENT THAT ARE
ALREADY PLAGUING A
VOLATILE CONFLICT-
RIDDEN REGION**

Specifically, it argues that climate change acts as a force multiplier in contexts of conflict, facilitating the growth of terrorist groups. It does so in three ways; 1) Causing shortages in food, water and energy leading to disenfranchised citizens, which in turn facilitates recruitment by insurgent groups to increase. 2) Inducing disasters, allowing for terrorist groups to provide humanitarian aid while also benefiting from the diversion of military resources towards addressing post disaster scenarios as opposed to conducting counter – insurgency operations and- 3) Increasing irregular migration causing structural strains on state resources, thereby reducing resilience and inviting instability within which terrorist groups thrive.

These linkages are not direct but rather overarching in nature. As such, while providing examples of such linkages, this paper also draws on examples from outside the MENA region as well as relying on reports from parts of Africa and South and Southeast Asia, where climate change and environmental effects have led to the strengthening of terrorist/insurgent groups. This derivation of linkages from regions outside of MENA is essential, since they help provide visualization for end-users of areas that have already undergone such nexuses. Focusing on the MENA region, a study of Al Qaeda in the Arabian Peninsula and how it has benefitted from climate change issues in Yemen will be presented. Lastly, relevant policy implications for the Middle East will be discussed.

Briefly, it is important to note that combating climate change is a matter of human security. As defined by the United Nations Human Rights Council, human security is a fundamental right of humans to be free from fear, want and indignity making the notion far more human centric than traditional state security.⁵ While this normally means deliverance from peace and conflict, it does also refer to issues of poverty, food security and other aspects. As this paper illustrates, many primary and secondary effects of climate change often also lead to increased human insecurity.

However, combating violent non-state actors, while also a matter of human security is largely relegated to traditional security. Therefore, in suggesting the various recommendations for governments in the MENA region, this paper recognizes that it is state security that will be given more importance than human security simply because violent non-state actors threaten the very credibility of governments. As such, while it is unfortunate that an issue such as climate change is, here, limited to its effects on terrorism and insurgency, it is a hope that this is one small contribution to combatting the problem indirectly.

Climate Change in the Middle East:

The Middle East region will see a majority of its nations coming up in the list of countries most affected by climate change globally. Given the extreme weather conditions in the region, many of the nations of the Middle East have already begun to see the effects of this phenomenon. For instance, countries like Iraq and Kuwait have seen temperatures soar up to 54 Degrees Celsius,⁶ making it impossible to walk in non-shaded areas for long. Such temperatures also increase risks of heat stroke especially for migrant workers thus, slowing down construction activities among other problems.⁷ In this section, three of the most overarching threats of climate change are discussed.

Water security: A huge concern for all Middle Eastern countries in the future will be the lack of water due to climate change. With more than six percent of the world's population residing in the region and access to only one percent of the world's water resources,⁸ the Middle East is one of the world's driest regions with 12 of the most water scarce nations in the world.⁹

With more than six percent of the world's population residing in the region and access to only one percent of the world's water resources, the Middle East is one of the world's driest regions with 12 of the most water scarce nations in the world

While historically the supply of water has been lower than the demand in many parts of the region, countries like Bahrain, Saudi Arabia, and Kuwait continue to consume far more than the local natural water supply with consumption rates of 240%, 940% and 2400% respectively.¹⁰ Most of this water is utilized for agricultural purposes representing up to 85% of usage in some countries.¹¹

All of this has led to a significant drop in water aquifers and reserves across the region. The World Bank for example has predicted that the water availability per capita in the Middle East will drop by half by 2050.¹² At the same time, studies have shown how freshwater reserves have reduced considerably in the region, with water equivalent to the amount in the dead sea evaporating or getting used up every year.¹³ Moreover, processes like desalination have also led to the dumping of toxic waste material into oceans, disturbing the delicate balance of the ecosphere in the oceans while also leading to seepage into groundwater reserves, thereby depleting drinkable sources of water.¹⁴

Yet, the case of water security does not just limit itself to reductions in usable water but also the issue of increase in floods. For instance, Saudi Arabia has faced an increasing number of floods leading to human fatalities. The World Economic Forum (WEF) has warned that in future, increasing instances of rainfall in some places across the region may even lead to flash floods.¹⁵ Given that many countries have engaged in extensive infrastructure projects including roadways, causing the blockage of some natural paths where water would have otherwise disappeared, there is an even further increase in the occurrence of flooding in the region.¹⁶

Another form of water inundation that the MENA region is likely to face in future is the sinking of various cities due to increasing sea levels. This has been caused due to the melting of glaciers in the South and North poles of the earth. As such, sea water has slowly been increasing on various fronts such as cities like Alexandria and Port Said in Egypt which may face sinkage.¹⁷ The cost of relocating populations in such cities, with populations in the millions, would be catastrophic for nations like Egypt already suffering from various economic problems. Moreover, nations like the UAE and others which have embarked on ambitious waterfront construction projects now risk losing such properties back to the sea, causing massive investment losses.¹⁸

The MENA region is likely to face in future is the sinking of various cities due to increasing sea levels. This has been caused due to the melting of glaciers in the South and North poles of the earth

Food security is another overlapping concern of climate change in the region. According to the Food and Agricultural Organization (FAO), the Middle East is the only region in the world apart from sub-Saharan Africa that has recently seen an increase in the number of undernourished people.¹⁹ At the same time, the Food and Agricultural Organization has noted that the region also sees about 60 billion dollars (or approximately one third of total production) of food wasted.²⁰ Thus, in some ways, food security in the Middle East is about the mismanagement of resources as much as it is about a lack of production.

While much research on food security and climate change focuses on food production in the region, it is also important to note that climate change also affects the availability and stability of food supply, as well as the usage of supply chains.²¹ Climate change in the region can lead to decreasing crop yields which is a result of higher temperatures (as mentioned above). However, this is not the only effect of climate change on food security in the region.

A large amount of staple crops such as wheat and maize are imported into the Middle East region with some estimates noting almost 70%.²² In an interconnected world, also facing the increasing effects of climate change such as droughts and increase in temperature, global food production and supply chains often get disrupted leading to increased fluctuations in food prices thereby leading to decreased food security in the region.

Moreover, the agriculture sector which already accounts for large amounts of water usage, in turn has to increase water usage even more to support production in light of the higher number of droughts, and scarcity of rainfall. Hence, it further increases dependencies on unsustainable agricultural practices. Taken together, all of these details lead to increased shocks in food production as well as supply chains thereby increasing the prevalence of food insecurity in the region.

Energy Security: Finally, the last major aspect that climate change will surely impact is the energy demand in the region. The increased scarcity of water and rainfall will likely beget more energy/water intensive methods of agricultural production which will place even larger strains on the energy infrastructure currently in place. This is because, without rainfall, farmers resort to energy intensive efforts like pumping water from underground that requires even more energy than normal. Moreover, higher temperatures also lead to an increase in air conditioner usage across the region, which is all the more energy intensive especially in places like the Middle East.

Yet at the same time, Climate change is also exacerbated by the use of non-renewable resources such as oil and gas while ignoring renewable resources such as water, wind and solar energy. In this regard, while the UAE and Qatar have increased their share in renewable energy quite drastically, there remains much to be done.²³ Indeed, as various simulations have shown, reticence in using renewable energy sources and its impact on global warming can increase energy demand by more than 25% in the next few decades reducing the overall security of energy across the nation.²⁴

Theorizing climate change and terrorism/insurgency

This paper specifically takes the stand that climate change exacerbates many of the already existing problems in the MENA region (which of course differ from nation to nation) which in turn fuels terrorist groups to increase propaganda and recruitment efforts. Violent NSA's are often able to enlist individuals due to a number of factors. For instance, structural factors such as discrimination, socio-economic inequality and corruption lead to poorer living conditions

Climate change exacerbates many of the already existing problems in the MENA region (which of course differ from nation to nation) which in turn fuels terrorist groups to increase propaganda and recruitment efforts

and by extension increase anger against the government which in turn facilitates terrorist recruitment.²⁵ Climate change only exacerbates these structural factors leading to more disenfranchisement and hence, higher recruitment levels. Consequently, the specific nexus takes place through the following ways:

1. Food/Water Security and Insurgency: Insurgent groups as noted by various different authors often seek control over land and resources. Among the reasons for their success, one of them is the control of territory.²⁶ This control of territory, in many cases arises due to government failure in the provision of services in certain areas thus allowing such groups to fill up vacuums of administration. This is likely the reason that various reports have noted that poorly governed regions in countries like Afghanistan and Yemen are often more susceptible to being overrun and controlled by insurgent groups.²⁷ This is due to the ability of such groups to provide the very same services that the government is tasked with.

Given the exacerbation of food and water insecurity due to environmental changes, terrorist groups have the potential to capitalize on grievances arising from such shortages and begin recruitment and also cause conflicts. For example, in India, the Naxalites, a Marxist insurgent group has often been seen to compete with the government for control of resources especially during times of scarcity.²⁸ Moreover, the Naxalites often use anti-government grievances (borne out of the lack of resources) as propaganda to support their recruitment efforts.²⁹ At their peak, these anti-government sentiments helped the Naxalites take control of about 125 out of 700 districts across India whereby they provided essential services such as health services, minimum wages and agricultural reforms among others.³⁰

Given the exacerbation of food and water insecurity due to environmental changes, terrorist groups have the potential to capitalize on grievances arising from such shortages and begin recruitment and also cause conflicts

In extreme cases, famines can also cause army troops to revolt against the government posing two problems: 1) sparking a civil war within and 2) diverting resources from counter insurgency actions. Both these outcomes occurred in the 1970's after a famine took effect in a war and insurgency ridden Ethiopia. The situation escalated so severely that a faction of the army broke ranks and deposed the then Ethiopian ruler, Haile Selassie. Due to this diversion of attention, an Ethiopian insurgency that started off in the 1960's was drastically strengthened.³¹ While these famines were not a direct result of climate change, if further climate change induced famines affect war ravaged areas across the Middle East there would surely be other ramifications.

2. Disaster – insurgency nexus: the connection between environmental degradation and the rise of natural disasters has been widely reported across various platforms. However, it is imperative to also note that such disasters can also benefit insurgent and terrorist groups in a few ways. Firstly, natural disasters can, in some cases, prolong conflict by overwhelming local emergency groups resulting in the arrival of national military responses. This was best addressed by the New Zealand defence minister who argued that disaster relief should assume primary importance among armed forces in South East Asia due to the disaster-prone nature of the region.³²

In such a situation, it is often plausible that forces required for counter-insurgency operations are diverted to areas that require disaster relief. For example, during the 2010 floods in Pakistan, 70,000 military personnel were deployed for humanitarian reasons in flood affected areas.³³ According to some commentators, this resulted in a delay in launching offensives against insurgent groups in the Federally Administered Tribal Areas (FATA).

Furthermore, analysts have also shown that in order to mitigate the 10 billion USD worth of losses caused by the flood, the government had to divert resources from other ministries leading to a decrease in military funding for the next two years.³⁴ Such diversions of both troops and funding can prolong insurgencies, demonstrating that while terrorism may not be caused by the climate crisis, terrorist activities can definitely be aided by their secondary effects.

This disaster insurgency nexus does not stop at the diversion of troops nor funding. Security agencies have also shown that both, in Pakistan and in other parts of the

world, terrorist groups conducting disaster relief in the aftermath of natural disasters have helped boost their credibility and help them gain more recruits. This was evidenced in the case of the Lashkar e-Taiba and its affiliate organization Jamaat ud-Daawah which were responsible for providing aid to various individuals affected by flooding in 2010.³⁵

3. Climate change induced wealth inequality and terrorism recruitment: Remarkably, one of the effects of climate change is its effect on wealth inequality. According to a recent 2019 UN report, climate change risks pushing 120 million people across the world into poverty.³⁶ While this in itself is problematic, it is exacerbated even more due to the resultant increase in inequality. As many have argued, wealthier people are able to escape the extreme effects of climate change despite contributing more to it.³⁷ Wealth inequality is one of the strongest factors in helping terrorist groups swell its numbers.³⁸

Despite rich patrons such as Osama Bin Laden heading terrorist groups, it has also been observed that foot soldiers of various terrorist groups are largely comprised of poorer individuals who do not necessarily subscribe to the ideology of the group but rather only join these groups as means to earn a living for their family

Indeed, despite rich patrons such as Osama Bin Laden heading terrorist groups, it has also been observed that foot soldiers of various terrorist groups are largely comprised of poorer individuals who do not necessarily subscribe to the ideology of the group but rather only join these groups as means to earn a living for their family.³⁹ This was seen in the case of the Islamic State which at its peak paid its recruits up to 1200 US dollars per month, in a crumbling Iraqi and Syrian economic atmosphere.⁴⁰ Thus, climate change may increase the pool of people from whom terrorists can recruit people due to increasing wealth inequality.

The link between wealth inequality and terrorism while proven, is not direct and similarly the link between climate change and wealth inequality is also not direct, rendering the effect of climate change on terrorism (which is already driven by wealth inequality) even more indirect. However, what climate change lacks in direct effects, it makes up in scale in terms of the number of people affected, i.e. climate change is so massive a phenomenon that even small linkages will cause newer security problems for governments across the world.

As such, while the section above has outlined the various nexuses between climate change and violent non-state actors, the next section looks at how this is played through a case study of Al Qaeda in the Arabian Peninsula based in Yemen.

Illustration: Al Qaeda in the Arabian Peninsula

AQAP is a terrorist group that has strengthened as a result of the lack of governance, corruption and civil war in Yemen (specifically in the southern and central belts of the country).⁴¹ The protracted civil war since 2015 has even allowed for the group to conquer the town of Mukalla in the Hadramouth province for almost a year whereby it provided various services to the people of the city before finally being driven out by Emirati forces.⁴²

It is important here to note that during this time, the AQAP was able to maintain control over the territory for almost a year for various reasons. Among them, climate change induced issues played an important role in solidifying the group's control as well.

For instance, climate change has been among the reasons for reducing the available water supply in Yemen with only 86 cubic meters square of water per person (in contrast to 2260 cubic meters square per person in the UK).⁴³ As a result places like the capital Sana'a as well as once fertile regions like Ibb in the central region of Yemen are set to become inhabitable within the next few years. Moreover, the lack of water and the usage of such high quantities for irrigating narcotic crops like Qat have also led to an increase in food insecurity throughout the nation.⁴⁴ Indeed, with 16 million people (out of a total of 24 million) facing food shortages, the UN has identified the situation in Yemen as the world's worst food crisis.⁴⁵

Taking advantage of this situation, the AQAP has taken extensive steps to win the hearts and minds of the people in the region. While many reports have shown that they did this by leveraging sectarian differences,⁴⁶ a more surprising revelation has been the ability of the group to take advantage of this food and water insecurity issue. As early as 2013, documents retrieved from the AQAP's possession revealed that the group's top leaders were concerned about providing water services to the local populations of different AQ branches.

As such, to operationalize this, they went about supplying fresh water to local populations who were suffering from thirst. Additionally, in order to deepen their credibility, they also engaged in building various wells and water infrastructure projects across the town of Mukalla and other surrounding areas.⁴⁷ The fact that they threatened contractors with death for corruption or undue delays in work helped to ensure that projects are completed quickly thereby helping the group boost itself in the eyes of the local population.

Similarly, the group has also benefited from the lack of food security in the region as well. The group used twitter to show the public how it had been involved in handing out food to various citizens of Mukalla.⁴⁸ This was especially crucial given the food shortages the city was facing in the midst of the civil war. AQAP was also able to recruit more members simply because they provided a steady income for everyone to help pay for higher prices of food in the city – an issue exacerbated by both the civil war and climate change.⁴⁹ While this could only impact a small population, just the mere perception that the group was able to provide for citizens likely helped improve its credentials and reputation among the public.

As such, to operationalize this, they went about supplying fresh water to local populations who were suffering from thirst. Additionally, in order to deepen their credibility, they also engaged in building various wells and water infrastructure projects across the town of Mukalla and other surrounding areas

Lastly, there was also another area that AQAP was able to benefit from due to climate change. In 2015, Cyclone Chapala which was classified as an Extremely Severe Cyclonic Storm (ESCS) led to the death of many people and the destruction of property amounting to 100's of millions in USD.⁵⁰ It has been estimated that the Cyclone was the most severe storm to hit the nation. According to researchers its occurrence was most likely due to manmade reasons leading to climate change.⁵¹

Against this backdrop, the first thing that AQAP did was to organize the evacuations of various people who were about to be hit by the cyclone, an activity that should have been organized by the government.⁵² Moreover, the group was also able to provide disaster relief for some of the citizens affected by the flood, further entrenching itself as an organization worthy of the people.

Even more importantly, the group was not just able to increase its stature among the local populace through its activities but also among larger jihadist audiences as well as those that sympathized with such groups by using aggressive propaganda campaigns. Many of these actions were publicized on twitter and also via other forms of social media.⁵³ As the recommendations section shows, this understanding is crucial to counter such actors who use extensive propaganda.

Although AQAP was driven out of Mukalla in 2017/2018, the group has 1) already cast a strong impression among the local populace as one that respected the crisis of food and water (even if it was problematic in many other areas) and 2) learnt a substantial amount of methodology if it ever came to power again. Moreover, the fact that it had also spoken to other branches of AQ such as AQIM about the importance of water security means that it will likely transfer this knowledge to other AQ branches which are still very operational across much of the Middle East. Therefore, it is clear that the climate change led impact on the strength of terrorist groups cannot be ignored.

Policy Implications

Given the connections between the two phenomena that have been linked, it is imperative to suggest policy recommendations to help deal with this threat. Despite climate change presenting a broader existential threat than its effects on NSA's, it is likely that such linked recommendations will create more ripples among policy circles in the Middle East. Moreover, it is also important to keep in mind that dealing with the twin problems requires more than government involvement. As such, this section is divided into different subsections to discuss what governments can do individually, regionally (i.e. in cooperation with neighbours) and what civil society organizations such as Non – Governmental Organizations (NGO's) can do to assuage the problem better.

Individual Governments

The suggestions provided below are classified into two categories, direct and indirect policy recommendations:

Direct recommendations: The very first action that governments can take is to recognize that such a linkage between climate change and violent non-state actors does indeed exist. To do so would require bringing these issues up on both, national and international platforms. Fortunately, there has already been some precedence regarding this nexus, which manifested in a 2009 UN report.⁵⁴ Moreover, many Security Council meetings have also begun to discuss these security implications. While much of these discussions have focused on Africa⁵⁵ for obvious reasons, as the region is plagued by dwindling resources, there is a growing need to turn the spotlight towards other regions, especially the Middle East. This realization also needs to occur within the scope of domestic audiences and governments across the Middle East.

However, as of now, there exists much sluggishness within such governments. Social issues such as freedom of speech and the yearning for democratic reforms alongside protracted conflicts in the region often trump climate change as more pressing issues in public opinion. This also leads to lesser discussion among parliamentary lawmakers.⁵⁶

Social issues such as freedom of speech and the yearning for democratic reforms alongside protracted conflicts in the region often trump climate change as more pressing issues in public opinion

Furthermore, the authoritarian nature of many governments in the region, often scares editorial groups from publishing relevant domestic developments pertaining to climate change. In this context, it is hard for the security implications of climate change to feature in both, public and parliamentary discussions. However, should governments want to make any sort of headway towards tackling this nexus, it is important to first set up - at least as a start - low budget research cells with expertise in both climate change and violent non-state actors to enable experts in both domains to converse and come up with solutions. This will at least serve as a basis for setting up further research without making it a daunting or expensive task for governments in the future.

Secondly, governments can draw on research on this nexus to identify weak points in their infrastructure and in resource security to ensure that insurgent groups do not take advantage of such tensions to shore up their own numbers. This would involve looking at various groups that have benefitted from the effects of climate change in the region. One of these groups, as discussed above is AQAP, but researchers would also benefit from reading into the activities of other groups such as the Islamic State (IS) and how it benefitted from the food and water insecurity in the region, that was introduced by climate change. Moreover, the Middle East is also plagued with many other violent non-state actors that governments can look to research.

Thirdly, it is also true that in many places, terrorist groups often act out of benefit and even when they act in a manner that help populations, often they are also causing environmental and other sorts of damage. Governments across the MENA region can thus, work to counter terrorist/insurgent group narratives that paint a picture of them helping and supporting local populations with various problems by highlighting the various aggressions and damages that these group cause.

Indirect recommendations: Indeed, none of the above recommendations can truly make an impact if first governments themselves are not able to battle climate change and its associated effects. Thus, should the MENA region hope to avoid the various problems associated with climate change and its impact on terrorism, it should learn to tackle climate change in greater detail. To do so will require strong measures including the following set of steps.

Firstly, governments in the MENA region have to move towards renewable sources of energy and divest away from oil. This in itself can reduce the amount of energy expended in digging up and using oil while also providing cleaner sources of energy. While there has been some good news in this section with many countries now beginning to rely more on wind and water energy, the share of renewable energy is still comparatively small compared to fossil fuels.

Secondly, governments have to focus on increasing water systems across the region. This can be done by implementing policy to embed better water treatment and collection systems to provide for agriculture and drinking purposes.

Governments in the MENA region have to move towards renewable sources of energy and divest away from oil. This in itself can reduce the amount of energy expended in digging up and using oil while also providing cleaner sources of energy

Thirdly, governments across the region also have to look at the amount of food waste generated in the region and more strictly regulate and restrict food wastage. For instance, the Food and Agricultural Organization has noted that one third of all food that is produced in the MENA region is wasted, amounting to 60 Billion dollars.⁵⁷ Not only do governments miss chances to increase food security but there is also a massive amount of water and energy that is used up to produce this food which is then wasted.

In reality though, it is difficult to foresee many of these changes being implemented because of vested interests. According to official estimates fossil fuels produce billions of dollars in profits every year, making it very hard for governments and companies in the region to lower oil production on which most of its economy rests. Moreover, war and conflict which in itself are large contributors to environmental decay are also profitable for many companies, especially those that sell weapons.

Regional Cooperation

By themselves, countries can only achieve so much. However, environmental concerns also fall under the concept of the “Tragedy of the Commons”. Essentially, this means that while countries often act out of self-interest leading to higher resource consumption, the other countries in the region are harmed as a consequence since they all depend on common resources. For example, the Nile river runs through about 11 countries over the duration of its course and its importance has even spurred declarations of

war readiness if its distribution were to be disturbed by nations like Egypt. This was when nations like Ethiopia built dams which would reduce the water flow to Sudan and Egypt demonstrating how indiscriminate usage of such resources leads to overall harm across many nations.

In this sense then, solutions to prevent the strength of non-state actors from escalating also demands sound cooperation between various nations on many fronts. Firstly, organizations like the GCC and the Arab league should set up sub committees and joint intelligence sharing centers working on the linkages between environmental change and non-state actors that are taking place. Secondly, the organization should also hold its own members accountable to the various environmental goals that it has set throughout time. Thirdly, governments should also facilitate the work of civil society actors (outlined below) in helping to fill the gaps they cannot.

Solutions to prevent the strength of non-state actors from escalating also demands sound cooperation between various nations on many fronts

Thirdly, countries also need to come together to work on better models of cooperation especially on sensitive issues like water

and agriculture to prevent conflicts which only add to the various structural problems that strengthen non-state actors. For example, shared electricity grids (which are already well underway and in progress across the MENA region) need to be improved and encouraged across many nations. Not only do they help reduce resources required to build huge new electricity plants, but they also force nations to cooperate by disincentivizing conflicts thereby also depriving non-state actors from feeding off such conflicts.

The role of civil society

Civil Society, a reference to the various Non-Governmental and Non-Profit organizations that are working on various different issues plaguing different parts of the world, including food security, gender equality and other related problems. The advantages of such actors are that often they are able to fill in gaps that governments either do not or cannot. Indeed, Non-Governmental Organizations often command the credibility and respect that governments are unable to, due to the essential services that these organizations provide.

In many ways, NGO's are peaceful Non-state actors that (sometimes) work in tandem with governments and are largely antithetical to violent non-state actors by their very

existence. NGO's also have multi-regional and multi-national presences as well, increasing their ability to work with multiple governments thereby acting as a force multiplier for regional agreements. In this sense, NGO's can provide various benefits in the fight against climate change and its effects on violent non-state actors.

Firstly, local NGO's can directly see the effects of climate change and its indirect effects on violent non-state actors. For example, they are often able to identify various reasons why populations are unhappy with the government – possible factors aiding the recruitment of terrorists and as a result can help classify these reasons according to those that are due to climate change (food, energy and water shortage etc.) and those that are purely due to bad governance (authoritarian regimes, corruption etc.) . Indeed, obtaining this information can be difficult for governments that may not be trusted by some parts of the population, a common issue prevalent around the world.

Secondly, working with international NGO's, independent researchers and academics, much of this data can help translate into solid linkages between climate change and its effects on violent non-state actors/terrorism. This can allow for excellent analysis and responses that help better understand this situation.

Moreover, given the multi-national presence of NGO's across different nations, they are also able to curate such information from different countries which may be facing the very same issue. This will also help with coordinating regional responses especially if the information collected can be adequately analyzed.

Fourthly, these multi-national NGO's are often able to obtain funding from different sources that will help further reduce the burden of governments. While this suggestion does not imply that NGO's should act as a stand-in for governments, it is entirely possible that some governments may not be willing to dedicate resources to these causes until such threats are made clear. In this situation, pre-existing mechanisms to identify and analyze such linkages will go a long way in persuading reticent governments to allocate resources towards the cause.

Non-Governmental Organizations, being peaceful Non-State Actors, also serve to counter the influence of violent non-state actors. For instance, if a sense of identity, purposefulness,

If a sense of identity, purposefulness, change or even a need for money is what terrorist and insurgent groups offer, civil society actors often offer the same but without fears of proscription/arrests looming over the head of members

change or even a need for money is what terrorist and insurgent groups offer, civil society actors often offer the same but without fears of proscription/arrests looming over the head of members. Accordingly, even though governments may often be inadequate in providing essential services, a feeling of alienation from the government can be redirected towards working for greater causes rather than joining violent organizations.

Lastly, the importance of civil state actors in a region littered with authoritarian governments also provides a strong impetus to ensure that not all power is concentrated in the hands of the government, which in the long run, may only exacerbate problems and increase insurgencies. For instance, in this backdrop, NGO's offer credible alternatives to government agendas and in some cases, even help keep government power in check by providing alternative services and aid.

Conclusion

This paper has discussed the linkages between Violent Non-State Actors and climate change in the Middle East. Using a case study of Al Qaeda in the Arabian Peninsula, it has demonstrated how violent non-state actors in fact benefit from the effects of climate change. Specifically, it has showed that terrorist and insurgent groups benefit by drawing on issues such as food/water insecurity, the gap in socio-economic inequality and the increase of natural disasters in the region.

Given the indirect nature of the relationship between violent non-state actors and climate change, it is likely that most governments will be slow to the uptake to combat the same. This paper also stresses that there is in fact a link which cannot be ignored. Even if violent NSA's are not solely benefitted by this, it is still quite helpful to their cause due to their ability to gain from the secondary effects of climate change. Working to fix loopholes on this front can help governments greatly in stifling any efforts from such actors, thereby maintaining traditional security and human security, while also conserving and better utilizing the earth's resources.

Endnotes

- 1- The author would like to thank Sinan Hatahet and Parvathi Anantha for helping review the paper.
- 2- Adam Tooze, "Why Central Banks need to step up on Global Warming", Foreign Policy, July 20, 2019, <https://foreignpolicy.com/2019/07/20/why-central-banks-need-to-step-up-on-global-warming/>
- 3- Robinson Meyer, "The Zombie Diseases of Climate Change", The Atlantic, November 06, 2017, <https://www.theatlantic.com/science/archive/2017/11/the-zombie-diseases-of-climate-change/544274/>
- 4- From here on, the paper will use the terms violent non-state actors, terrorists and insurgents somewhat interchangeably. In the case study of AQAP provided below, the group can be considered as an insurgent group because of its display of organization along insurgent lines.
- 5- "What Is Human Security", United Nations Trust Fund for Human Security, <https://www.un.org/humansecurity/what-is-human-security/>
- 6- "Think the heat wave in Europe and N. America is bad? Try living in the Middle East" , France24, July 26, 2019, <https://www.france24.com/en/20190726-heat-wave-europe-north-america-worse-middle-east-extreme-temperatures-climate-change>
- 7- Annie Kelli, Niamh McIntyre and Pete Pattison, "Revealed: hundreds of migrant workers dying of heat stress in Qatar each year", The Guardian, October 02, 2019, <https://www.theguardian.com/global-development/2019/oct/02/revealed-hundreds-of-migrant-workers-dying-of-heat-stress-in-qatar-each-year>
- 8- Katy Scott, "Can the Middle East solve its water problem?" , CNN, March 20, 2019, <https://edition.cnn.com/2018/07/11/middleeast/middle-east-water/index.html>
- 9- Ghanima al Otaibai, "By the numbers: Facts about water crisis in the Arab World", World Bank, March 19, 2015, <http://blogs.worldbank.org/arabvoices/numbers-facts-about-water-crisis-arab-world>
- 10- Ibid
- 11- Isam Basour, "Soils and Food Security in the Arab World", in eds. Sohail Murad, Elias Baydoun, Nuhad Daghir Water, Energy & Food Sustainability in the Middle East. Springer: Switzerland. 2017. 296.
- 12- Ghanima al Otaibai, "By the numbers: Facts about water crisis in the Arab World", World Bank, March 19, 2015, <http://blogs.worldbank.org/arabvoices/numbers-facts-about-water-crisis-arab-world>
- 13- Ibid
- 14- Erica Gries, "Slaking the World's Thirst with Seawater Dumps Toxic Brine in Oceans", Scientific American, February 07, 2019 <https://www.scientificamerican.com/article/slaking-the-worlds-thirst-with-seawater-dumps-toxic-brine-in-oceans/>
- 15- Douglas Broom, "How the Middle East is suffering on the front lines of climate change", World Economic Forum, April 05, 2019, <https://www.weforum.org/agenda/2019/04/middle-east-front-lines-climate-change-mena/>
- 16- Ibid
- 17- Keiran Cooke, "Sinking cities: How climate change is ravaging the Middle East" Middle East Eye, November 23, 2018, <https://www.middleeasteye.net/news/sinking-cities-how-climate-change-ravaging-middle-east>
- 18- Richard Spencer, "The World is sinking: Dubai islands 'falling into the sea', "March 20, 2011, the Telegraph, <https://www.telegraph.co.uk/news/worldnews/middleeast/dubai/8271643/The-World-is-sinking-Dubai-islands-falling-into-the-sea.html>
- 19- "Food Security & Nutrition around the World", Food and Agricultural Organization, 2018 <http://www.fao.org/state-of-food-security-nutrition/2018/en/>
- 20- Atara Shields, "Tackling The Middle East's Food Waste Crisis", Medialine, 06 December, 2018, <https://themedialine.org/student-journalists/tackling-the-middle-east-s-food-waste-crisis/>
- 21- Christopher Flavelle, "Climate Change Threatens the World's Food Supply, United Nations Warns", NYTimes, August 18, 2019, <https://www.nytimes.com/2019/08/08/climate/climate-change-food-supply.html>
- 22- Nadine Kathkhuda, "Food Security in the Middle East", EcoMENA, June 30, 2017, <https://www.ecomena.org/food-middle-east/>
- 23- Aisha Al-Sarahi, "Renewable Energy in the Gulf Arab States", *Center for Contemporary Arab States*, November 18, 2019, <https://ccas.georgetown.edu/2019/11/18/renewable-energy-in-the-gulf-arab-states/>
- 24- "More energy needed to cope with climate change", Science Daily, June 24, 2019, <https://www.sciencedaily.com/releases/2019/06/190624111437.htm>
- 25- Three other factors remain facilitative factors such as the role of the media, personal incidents such emotional turmoil, loss of loved ones etc. and the trigger factors such as mass targeting of certain communities. For more on

this refer to Tore Bjorgo's book

- 26- David Kilcullen, *Counterinsurgency*, Oxford: Oxford University Press.
- 27- Angel Rabasa et. Al. "Ungoverned Territories: Understanding and Reducing Terrorism Risks", Rand Corporation Report. 2007.
- 28- Pernilla Nordquist and Florian Kempe, "Climate Change and Violent Conflict: Sparse Evidence from South Asia and South East Asia", SIPRI Insights on Peace and Security, September 2018.
- 29- Sudeep Chakravarthy, "The creative side of propaganda", Livemint, March 14, 2016, <https://www.livemint.com/Opinion/p7gW1Q6QY3Xmpn8j4YoC9J/The-creative-side-of-propaganda.html>
- 30- Jonathan Kennedy, "Gangsters or Gandhians? The Political Sociology of the Maoist Insurgency in India", *India Review*, 2014, 13 (3), 212 - 234
- 31- Christopher Paul, Colin P. Clarke, Beth Grill, Molly Dunigan, "Paths to Victory: Detailed Insurgency Case Studies", (Boston: Rand Corporation), 198-213.
- 32- Ron Mark, "Minister of Defence: Speech for the Shangri-La Dialogue; Singapore", Beehive.NZ. June 28, 2018, <https://www.beehive.govt.nz/speech/minister-defence-speech-shangri-la-dialogue-singapore>
- 33- Lolita C. Baldor, *Flooding Hurts Pakistan Terror Fight*. Associated Press. September 18, 2010, <http://www.utsandiego.com/news/2010/sep/08/pakistan-official-flooding-willhurt-terror-fight>
- 34- Joshua Estin. (2015). *Fuel to the Fire: Natural Disasters and the Duration of Civil Conflict*. *International Interactions*, 42(2), 322-349.
- 35- Saeed Chadda, "Pakistan floods: Islamic fundamentalists fill state aid void", *The Guardian*, August 03, 2010, <https://www.theguardian.com/world/2010/aug/03/islamist-groups-pakistan-aid-void>
- 36- Damian Carrington, "Climate apartheid: UN expert says human rights may not survive", *The Guardian*, June 25, 2019, <https://www.theguardian.com/environment/2019/jun/25/climate-apartheid-united-nations-expert-says-human-rights-may-not-survive-crisis>
- 37- Richard Hall, "In the future, only the rich will be able to escape the unbearable heat from climate change. In Iraq, it's already happening" *The Independent*, August 10, 2019, <https://www.independent.co.uk/news/world/middle-east/climate-change-apartheid-poor-iraq-effects-heatwave-a9049206.html>
- 38- Tim Krieger and Daniel Meirreiks, "Does income inequality lead to terrorism? Evidence from the post-9/11 era", *Diskussionsbeiträge Working Paper*, No.2015-04, <https://www.econstor.eu/bitstream/10419/111351/1/827719736.pdf>
See Also, Sholomo O. Goldman and Nadar Roy, "The Size of Terror Organizations: Poverty and Economic Inequality as Mobilizing Forces", *Studies in Conflict and Terrorism*. 2020.
- 39- Krieger, T.; Meierrieks, D. (2019): "Income Inequality, Redistribution and Domestic Terrorism", *World Development* 116, 125-136,
- 40- Jose Pagliery, "ISIS cuts its fighters' salaries by 50%", *CNN*, January 19, 2016, <https://money.cnn.com/2016/01/19/news/world/isis-salary-cuts/index.html>
- 41- Katherine Zimmerman, "AQAP: A Resurgent Threat", *CTC Sentinel*, September 2015, <https://ctc.usma.edu/aqap-a-resurgent-threat/>
- 42- Adam Barron, "The Gulf Country That Will Shape the Future of Yemen", *The Atlantic*, September 22, 2018, <https://www.theatlantic.com/international/archive/2018/09/yemen-mukalla-uae-al-qaeda/570943/>
- 43- "Future Impact of Climate Change Visible Now in Yemen", *World Bank*, November 24, 2014 <https://www.world-bank.org/en/news/feature/2014/11/24/future-impact-of-climate-change-visible-now-in-yemen>
- 44- Adam Hefez, "How Yemen Chewed Itself Dry" *Foreign Affairs*, July 23, 2013, <https://www.foreignaffairs.com/articles/yemen/2013-07-23/how-yemen-chewed-itself-dry>
- 45- "Yemen: This is the world's largest food crisis", *World Food Programme*, March 29, 2019, <https://unwfp.maps.arcgis.com/apps/Cascade/index.html?appid=a8e9e0ef4b854f3f921bo8d29683oe28>
- 46- Michael Horton, "Fighting the Long War: The Evolution of al-Qa'ida in the Arabian Peninsula", *CTC Sentinel*, January 2017, Vol 10(1), 17-23 https://ctc.usma.edu/app/uploads/2017/01/CTC-Sentinel_Vol9Iss1120.pdf
- 47- Michael Horton, "Fighting the Long War: The Evolution of al-Qa'ida in the Arabian Peninsula" *CTC Sentinel*, January 2017, <https://ctc.usma.edu/fighting-the-long-war-the-evolution-of-al-qa-ida-in-the-arabian-peninsula/>
- 48- Thomas Jocelyn, "AQAP provides social services, implements sharia while advancing in southern Yemen", *Long War Journal*, February 03, 2016, <https://www.longwarjournal.org/archives/2016/02/aqap-provides-social-services-implements-sharia-while-advancing-in-southern-yemen.php>

- 49- Yara Bayoumy, Noah Browning and Mohammed Ghobari, "How Saudi Arabia's war in Yemen has made al Qaeda stronger – and richer", Reuters, April 08, 2016, <https://www.reuters.com/investigates/special-report/yemen-aqap/>
- 50- "Global Catastrophe Recap" AON Benfield report, 2015, <http://thoughtleadership.aonbenfield.com/Documents/20160106-if-december-global-recap.pdf>
- 51- Kieran T. Bhatia, Gabriel A. Vecchi, [...], and Carolyn E. Whitlock, "Recent increases in tropical cyclone intensification rates", Nature Communication, August 2019, 28:10.
- 52- Almigdad Mojalli, "Yemen's curse: civil war, bombs, and now floods", New Humanitarian, November 28, 2015, <https://www.thenewhumanitarian.org/fr/node/255718>
- 53- Thomas Jocelyn, "AQAP provides social services, implements sharia while advancing in southern Yemen", Long War Journal, February 03, 2016, <https://www.longwarjournal.org/archives/2016/02/aqap-provides-social-services-implements-sharia-while-advancing-in-southern-yemen.php>
- 54- "Climate change and its possible security implications", Security Council, September 2009, <https://www.securitycouncilreport.org/atf/cf/%7B65BFCF9B-6D27-4E9C-8CD3-CF6E4FF96FF9%7D/sg%20report%202009.pdf>
- 55- "Climate Change Could Mean More Terrorism in the Future", UNODC, <https://www.unodc.org/nigeria/en/climate-change-could-mean-more-terrorism-in-the-future.html>
- 56- "Climate change is making the Arab world more miserable", The Economist, May 31, 2018, <https://www.economist.com/middle-east-and-africa/2018/05/31/climate-change-is-making-the-arab-world-more-miserable>
- 57- Athara Sheilds, "Tackling The Middle East's Food Waste Crisis", The Medialine, December 06, 2018, <https://themedialine.org/student-journalists/tackling-the-middle-east-s-food-waste-crisis/>

ABOUT ALSHARQ FORUM

The Sharq Forum is an independent international network whose mission is to undertake impartial research and develop long-term strategies to ensure the political development, social justice and economic prosperity of the people of Al-Sharq. The Forum does this through promoting the ideals of democratic participation, an informed citizenry, multi-stakeholder dialogue, social justice, and public-spirited research.

Address: Istanbul Vizyon Park A1 Plaza Floor:6

No:68 Postal Code: 34197

Bahçelievler/ Istanbul / Turkey

Telephone: +902126031815

Fax: +902126031665

Email: info@sharqforum.org



AL SHARQ
STRATEGIC
RESEARCH

research.sharqforum.org



/ SharqStrategic

