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Adding Fuel to the Fire:
The Underestimated Effects of Climate Change on Security Policy, Illustrated by the Example of the Middle East

by Stefan Lukas

As scientific findings and the events of recent years have shown, environmental conditions in large parts of the world are already changing as a result of human-induced climate change. These changes can also exacerbate existing domestic and international conflicts, as is clearly illustrated by developments in the Middle East. First and foremost, the internal stability of many countries in the region will be under even greater pressure in the future. Yet the consequences of climate change seem to play only a marginal role in much of security policy discourse in Germany. Information on current climatic changes must be included to a larger extent in order to achieve more sustainable, forward-looking security policy discourse.

Considering security policy and climate policy together

Before the coronavirus crisis, every Friday gave us a clear impression: tens of thousands of people were demonstrating in the streets for a change in our way of thinking about political, economic and social action – a shift towards more responsibility for our planet. The ways and means of making this shift remain to be seen; however, there is now scientific consensus that we urgently need to change our way of life. Almost all fields of politics are affected by ecological changes and their consequences. Organisations such as Scientists for Future, whose members now also include advisors of the German government, or climate research institutes such as the Alfred Wegener Institute are only some of the most prominent examples. However, if we look at security policy debates in Germany, we will encounter few actors, other than the big think tanks and some academic chairs, that consider climate change in the same breath with security policy.

Yet existing studies carried out by national and international institutes, such as the Potsdam Institute for Climate Impact Research or the EU Institute for Security Studies in Paris, show that future conflicts around the world can hardly be analysed without considering climate as a factor. This is particularly apparent in some of the conflicts in the Middle East. Apart from Southeast Asia and the Sahel, hardly any other region will suffer as severely as the Middle East from future climatic changes. In the area around the Persian Gulf, new heat records of over 53°C are recorded almost annually. Living conditions in Iran and parts of Iraq are also becoming increasingly hostile, which is initially having the greatest effects on the poorer parts of the population. In rural areas, entire stretches of arable land are at risk of becoming infertile as a result of severe droughts. The harsh conditions in inadequate living quarters, such as slums or impoverished areas on the outskirts of cities, are getting worse in cities that are growing uncontrollably. Against this backdrop, it is

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no wonder that the Middle East is one of the regions with the highest air conditioning energy use worldwide after the United States and East Asia – which has a significant negative effect on the carbon footprint of the countries in the region.

Pakistan: sinking water levels, rising populations

However, rising temperatures are not the only climatic factor putting a steadily growing strain on the quality of life and therefore the internal stability of the countries in the region. In particular, the struggle for increasingly scarce water resources is raising the potential for conflict at both the domestic and international levels. In Pakistan, for example – one of the most populous countries in the world – observations over the past ten years have shown that glacial melting in the Himalayas and Hindu Kush is resulting in a lack of freshwater. In conjunction with poor water management and the uncontrolled growth of cities due to greater migration from rural areas, this will mean that future governments in Islamabad will increasingly be confronted with mounting dissatisfaction and even unrest.[1] In future, public security in particular will be more difficult to maintain in megacities marked by increasing heat, such as Karachi and Lahore, because these cities have already struggled with extreme water shortages in recent years.[2]

In addition, the increasing water shortages result in conflicts with Pakistan's large neighbour India. In particular, the distribution of water from the tributaries of the Indus River is a cause of repeated disputes as recent embankment dam projects on the Indian side can substantially decrease the amount of water flowing through Pakistan. Even though Pakistan and India signed the Indus Waters Treaty brokered by the World Bank in 1960 and further disputes over the Indus' waters have only been fought in court up to this point, the rising demand for water in the urban centres of North India and Pakistan will test the relationship between the two nuclear powers.

The Gulf region: general water shortage

While the combination of a growing population and water scarcity is putting pressure on Pakistan's security policy, the countries of the Arabian Peninsula generally struggle to meet their water needs. According to the World Resources Institute, the countries whose water supplies are most at risk are located on the Arabian Peninsula, with Qatar taking the lead; in the years ahead, the country will have increasing problems generating freshwater. Saudi Arabia can only meet its water needs using huge desalination plants. No more than 10 percent of Saudi water comes from natural groundwater reservoirs. From a security standpoint, this means that the water supply, which is part of the critical infrastructure, is under particular pressure. A case in point is the Saudi capital. Riyadh now has more than 6.5 million inhabitants. The city meets almost 95 percent of its water needs with a single desalination plant in Ras Al-Khair. According to a study by the Center for Strategic and International Studies, permanent failure of the plant in Ras Al-Khair due to an external attack would make it necessary to evacuate the entire capital within a week.

However, indications of a growing risk that could endanger the internal stability of some countries due to increasing water scarcity are not restricted to the region's core states. As a result of large-scale tapping of groundwater reservoirs (aquifers) in Libya, Algeria and other desert countries, fights over the distribution of the remaining reservoirs are also likely to increase there in future as the reserves slowly dwindle. The new challenges that result will primarily affect groups with a nomadic lifestyle, most of which are now militarised, such as the Tuareg. This may also have consequences for state security, as uprisings and conflicts in the desert regions of the Libyan, Algerian and Malian Sahara illustrate.

1 The World Bank estimates that, as a result of Pakistan's poor infrastructure, up to 54 percent of the meltwater from the Himalayas, Karakoram and Hindu Kush seeps away unused or flows into the Persian Gulf.

2 During the last heat wave in 2018/2019, only 40 percent of Karachi's 19 million inhabitants could be provided with freshwater for a time.

What were probably the strongest effects caused by climate change to date could be observed leading up to the Syrian demonstrations starting in 2011 and the ensuing civil war. The conflict was preceded by a 10-year period of extreme drought, which most severely affected the rural and primarily Sunni population in Syria. Not only did migration from rural areas to the poorer outskirts of large cities increase in the wake of this prolonged drought, but the rest of the Syrian population was also hard hit by the resulting increase in the price of bread. This contributed to a particularly high potential for conflict even in the days before the Arab Spring. As a drought is not limited to one country, similar developments could be observed in other countries of the Arab world at the time, especially in Egypt.

Salination and desertification

In addition to the aforementioned examples of the extent to which climate change is already affecting the stability of internal and external security, every region in the Middle East is struggling with additional problems resulting from environmental changes. For example, as in other parts of the world, rising sea levels pose a particular threat to areas that are only slightly above or even below the previous sea level. Besides the often insufficient coastal protection, the main problem is, however, the increasing salination of freshwater reservoirs close to the coast, which has a particularly negative impact on agriculture. This is especially clear in the river deltas of the Indus and the Nile, which are extremely important for agriculture. In Egypt alone, the cities of Alexandria and Port Said are at risk of losing an agricultural area of over 9,000 square kilometres by the end of the century.

In addition to the water scarcity described above, desertification is increasingly occurring along the larger desert regions. Frequently caused by agricultural overexploitation of the soil and water resources in the region, this process often degrades whole stretches of land. A case in point is Lake Bakhtegan. Once Iran's second largest lake, it is now an almost entirely dried-up salt lake, like the Aral Sea, which offers no significant economic or social benefit. Caused by human actions – intensive agriculture and several embankment dam projects – desertification of the area around the lake was accelerated by subsequent local environmental changes. The process not only affected the adjacent inhabited areas and their tourism industry, but also destroyed large parts of the ecological diversity around the lake. An area that used to be one of Iran's largest nature reserves now looks like a barren lunar landscape for miles around.

Rural exodus and urbanisation

The most problematic development, noticeable in the entire region from Morocco to Pakistan, is, however, the increasing migration from the countryside to the cities and the often uncontrolled spread of the cities at the expense of the agricultural surroundings. As in Syria, the rural population is increasingly being displaced from its land by unusually severe extreme weather phenomena, such as droughts and flooding, which are becoming more frequent because of climate change. It can often rain for days, even in arid stretches of land, as was the case in Oman in 2010 and in Iran in 2018. The soil, which is hard due to its dryness, cannot absorb the water, resulting in flooding. The administration and government institutions almost always react helplessly. Even though the phenomenon of urbanisation already existed before the beginning of climate change, the climatic changes also act as an additional factor in urbanisation, increasing the pressure on metropolises, especially in developing and threshold countries. What results is a dangerous "feedback loop": wheat production drops, for example, due to more frequent extreme weather such as heat waves and droughts; as a result, the sections of the population who work in the countryside and are generally poorer lose their livelihood and are forced into rural exodus. As a result of the now fallow areas, urban areas spread even faster, resulting in further urbanisation and less arable land for future sowing. Further migration from rural areas is the consequence. In the area around Lahore in Pakistan, for example, almost 70 percent of farmland was lost over the past 30 years.

Approaches to improved security policy discourse

In general, climate change can be seen as fuelling conflicts throughout the entire Middle East. First and foremost, climate change fuels existing social problems, posing a particular threat to the internal security of the countries in the region. The fact that the developments and events described above were hardly featured in previous conflict analyses also illustrates the insufficient extent to which the topic of climate change has been included in broad security policy discourse so far. The Anglo-American strategic community could serve as a model in this context, as it addresses the matter at numerous conferences and in many articles and other academic papers to a far greater extent than Germany has done up to this point. This begs the question of what measures must be taken to make political decision-makers, business and society more aware of these connections.

Because the Middle East and other examples have already shown that conflicts outside Europe can also have consequences for the European continent, German foreign and security policy is also faced with the question of how to use its own capabilities in Europe to limit the negative effects of climate change on peace and security. While there are already a number of institutes and think tanks that focus on the connections between climatic changes and security policy, broad security policy discourse seems to give the topic a wide berth, especially in Germany. During future public or unofficial debates, climate developments must be taken into account to a far greater extent. Although the consequences of climate change for security policy are increasingly becoming a point of focus at international conferences, for example at the recent 2020 Munich Security Conference, they are still too often considered a niche topic at the national level in Germany.

Starting points could include the further development and advancement of methods for strategic foresight to identify future developments in the various countries at an earlier stage. The expansion and continuation of existing projects at public and private facilities are essential if future debates are to be more forward-looking. Accordingly, a number of funds have now been set up – and not only at the international level. They include the Green Climate Fund and the Climate Investment Funds in which, for example, the Federal Ministry for Economic Cooperation and Development is greatly involved. Initiatives such as the water diplomacy programme established by the German Society for International Cooperation (*Deutsche Gesellschaft für Internationale Zusammenarbeit* – GIZ) and the German Federal Foreign Office in Central Asia and the Sahel, as well as screening programmes such as the EU's INFORMED programme for early detection of disasters and food shortages, serve not only to mediate between individual actors in the various regions, but also to increase resilience in countries at greater risk such as Pakistan or Sudan.

However, if we look at global climate policy trends, we can observe a much more problematic phenomenon that has emerged since the Paris Agreement and also occurs on a smaller scale in Germany: on the initiative of a few actors who have no interest whatsoever in discussing climate policy, even climate summits, like the recent one in Madrid, are brought to a standstill and made almost obsolete. In this context, it is striking that, not only are national delegations, for example from Saudi Arabia, Australia or the United States of America, increasingly taking an obstructionist stance, but enterprises, especially from the oil, coal and automotive industries, are also exercising influence in the climate policy arena. It is therefore essential that a consensus on climate policy issues is reached at least at the European level. As with the issue of refugees, the EU member states' policy in this area is still too inconsistent, as evidenced by the way they dealt with the vast forest fires in the Amazon in 2019. Germany should take a stronger stand alongside France if it wants to once again take a leading role in the fight for more future-oriented policy. If this fails, it will be easier for actors such as the US administration under Donald Trump or the Brazilian president Jair Bolsonaro to prevent a global climate action agenda – to the detriment of all members of the international community.

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