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CLIMATE CHANGE AND ARMED CONFLICT IN AFGHANISTAN AND BEYOND

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Climate change has substantial negative impacts on fragile states and is reinforcing conflicts over natural resources with Afghanistan as case in point. The country is linked with the Indus region and has been characterized by longer periods of drought, sharply declining groundwater as well as increasing conflicts over water and farm land. Climate change has thus long since affected Afghanistan and its neighbours. Moreover, decades of civil war have destroyed water infrastructure and have generated new conflict lines, depriving the population of their livelihoods and often resulting in displacement and forced migration. International crisis management and stabilization operations should take these developments into account, and support effective water management to counter a root cause of conflict, amongst many others.

The climate situation in Afghanistan is shaped by the catchment areas of the Indus River and the glacier regions of the Himalayas as well as the Hindu Kush mountains. The Helmand and Kabul river basins, which are fed by these rivers, provide large parts of the Afghan population with water. According to a study by Philippus Wester et al. from 2019, one third of these glaciers will have melted away by 2100, causing river levels to drop dramatically. This forecast is a clear indication of climate change that could intensify armed conflict and further aggravate the socio-economic situation and human security in the region.

The protracted armed conflict in Afghanistan has experienced several stages since 1979 (Soviet intervention, Taliban-regime, US-led intervention, insurgencies, etc.). This has created a civil war economy that has caused serious environmental damages, rendered agricultural land uncultivable and destroyed irrigation systems.

The water supply for the fast-growing population in Afghanistan is completely insufficient. This water crisis is another challenge that is hardly likely to be resolved because of armed conflict, corruption and ignorance of the local stakeholders. 27% of approx. 35 million inhabitants do not have access to clean water. In addition, 80% of the population depends on natural resources, arable land or livestock for their subsistence.

As a consequence, food safety in both urban and rural areas depends heavily on climatic conditions, which have deteriorated significantly. 90% of the water consumption is being absorbed by agriculture and livestock breeding, which represents a major imbalance. In addition, the groundwater reserves in Afghanistan are decreasing drastically. The Afghan government has few options; one is to expand internationally financed hydro-projects on trans-boundary rivers, which also creates disputes and the demand for preventive water diplomacy.

As a result, international financial and technical assistance is required. The UN is leading the way with its UN Environment Programme (UNEP) in order to combat consequences of climate change in Afghanistan.

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NATO‘s Resolute Support Mission (RSM) is building capacities for the Afghan National Army with Austrian troop contribution. Conflict-related consequences of climate change are not on the agenda of RSM, but the mission has introduced a staff officer for “Theatre Environmental Protection“ dealing mainly with waste management of the mission. Regardless of a potential troop withdrawal, Covid-19 and the outcome of peace negotiations, four conflict scenarios can be identified in the context of climate change and water stress.

Water-related risks in Kabul

The groundwater reserves in Kabul with its rapidly growing population are running low. To get access to fresh water, new wells have to be deeper than ever before, which is cost-intensive. According to the U.S. Geological Survey, the groundwater level in Kabul decreased by 1.5 metre per year between 2002 and 2012. Only 20% of the population in Kabul has access to pure drinking water.

The elites and companies are able to monopolize clean water resources. This has led to a deterioration of social cohesion. Non-state actors such as militias could benefit from general water scarcity. In a worst case scenario, armed conflict between factions to obtain water superiority in Kabul could be the consequence.

Struggle for arable land

As fertile farmland is diminishing, conflicts over resources in Afghanistan take place at various levels: between provinces, districts, and militias; between drug producers or upstream and downstream villages. The nomadic population (e.g. over two million Kuchi nomads) is under particular pressure to constantly find new pastures and water sources for their livestock.

The dependence on subsistence agriculture and its products (e.g. rice, corn, watermelons, pomegranate or saffron) is another threat to the population during long periods of drought. Climate change and environmental degradation have given rise to land disputes and poverty. Deprivation of livelihoods and famine are negative consequences that contributes to instability, crime and internal displacement. Dried-out soils can hardly absorb any water and intensify the effects of flooding. Therefore, militias and other stakeholders do not hesitate to use force in order to gain control over rural areas with good water supply and arable land for poppy fields, but also other products.

Conflict escalation in the opium industry

Afghanistan is still the largest opium producer in the world. Poppy cultivation is a crucial component to keep the civil war economy flourishing and provides livelihoods for tens of thousands of farmers and their families. Suitable areas for cultivation are increasingly contested due to water scarcity and high profits. The revenues also benefit Afghan stakeholders such as militias, Taliban and government circles.

According to UNODC, the area with opium fields reached a new peak in 2017 with 3,280 km². Since then, drug production has remained stable. Opium trade shows continued growth and accounts for at least 10% (approx. 2 billion USD) of Afghanistan‘s gross domestic product. In 2018 - a year plagued by severe drought - a decrease of 20% in drug cultivation was recorded.

Climate change is thus becoming a strategic factor for the opium industry and has contributed to increased local conflicts. A correlation between poppy cultivation, protracted droughts and insecurity can be identified.

Transnational water conflicts between Afghanistan and its neighbours

The demand for effective and efficient water distribution and exploitation in Afghanistan is being reinforced by climate change and rural exodus. Annually, approx. 80 billion m^3 of renewable water resources are available, of which more than 70 percent (!) are flowing to Iran and Pakistan and are therefore lost. Examples are the Kabul River, which flows into the Indus River in Pakistan, or the Helmand River, which flows into Iran. Frozen conflicts between Afghanistan, Iran and Pakistan over the exploitation of these rivers can therefore escalate.

International hydroelectric projects have started in Afghanistan as early as in the 1930s and continued until 1979. Since 2001, new hydro projects have been discussed despite the ongoing armed conflict. India, a long-term partner of Afghanistan, is engaged in the country geo-strategically in order to weaken the water supply of its rival Pakistan through dam projects. For instance, India is constructing the Shahtoot Dam on the Maidan River, in cooperation with the World Bank Group, to ensure the water supply of Kabul and beyond. This could further fuel the rivalry between India and Pakistan as this dam will substantially reduce water flows to Pakistan when fully operational in 2021.

The same applies to the "Afghanistan-India Friendship Dam", which India completed in 2016 in the province of Herat and which increases the Helmand River. The dam has reduced Afghanistan's dependency on electricity, but has caused political disputes with Iran. Most hydro-projects in Afghanistan are therefore inextricably linked to Pakistan and Iran in their effects and make comprehensive bilateral water agreements urgently necessary.

Conclusions

Climate change is definitely having negative impacts on the resilience of Afghanistan in general, its strategic water reserves in particular and it has created additional conflict lines. Water disputes are starting at the sources of the Hindu Kush mountains and have become a reality at interstate, provincial, city and municipal levels. It aggravates disruptions in neighbourly relations and harms the Afghan population just like the ongoing ideological clashes or systemic rivalries.

Solutions to overcome resource conflicts are not easy to find, as officials often ignore water-related crises in Afghanistan. The country depends too much on India's assistance for water storage and hydropower projects and should counterbalance this with the inclusion of other donors and investors.

Solutions and Recommendations

Promoting intergovernmental agreements on water usage: "Hydro Diplomacy" is an important instrument for conflict prevention. It has the potential to ease the consequences of climate change. However, Afghanistan's record of bilateral water agreements is limited. The most notable is an agreement with Iran on the exploitation of the Helmand River (1973). There is no agreement with Pakistan in this context. Afghanistan stubbornly refuses to sign an agreement with Pakistan on the use of the Kabul River because it would make it more difficult to build dams supported by India. Diplomatic efforts and technical assistance should be intensified and Austrian hydropower expertise transferred into the region.

Supporting the UN Environment Programme (UNEP) in Afghanistan: Austria could contribute to strengthen Afghanistan's resilience regarding drought and water crises. UNEP supports water management schemes, food safety, agroforestry systems and climate-related early warning systems. To this end, Afghan farmers should be enabled to cultivate resilient crops with less water demand (e.g. carrots or onions) in addition to water-intensive crops such as rice and corn. Alternatives to poppies, such as saffron or pistachios, should be promoted.

European know-how transfer of water management: The EU and Austria should support Afghanistan to create a nationwide database on natural resources and risks. A starting point would be the creation of scientific forums on climate change and its impacts on conflicts in order to be able to make evidence-based decision. The mapping of water resources may contribute to a more efficient water usage. Afghan experts should be trained with the aim of establishing a stable water infrastructure for the benefit of the local population. The engagement of the Intergovernmental Panel on Climate Change (IPCC) of the UN would be beneficial for all stakeholders and crisis management in this context.

Promoting local water management at grassroots level ("Mirab" system): The Mirab is a traditional Afghan institution, a community leader or elder elected by local landlords to manage irrigation systems and water distribution on community level. He can also be called upon as a mediator in water disputes. The Mirab's role as a water manager is likely to become more relevant as a result of the increasing water shortage, as UNEP has already recognized. The EU should also support the Mirab system in regions with water shortages or water conflicts, paying particular attention to local tribal laws and the needs of the population.

Establishing and promoting Environmental Security Adviser in missions: Since climate-relevant security risks are clearly on the rise, international peace operations have a need for action in this regard. The example of the United Nations Assistance Mission in Somalia (UNSOM) could serve as a model for the inclusion of environmental security advisors in Afghanistan in the civil (e.g. UNAMA, UNDP, EU Delegation) and military domains (e.g. RSM and prospective future missions in Afghanistan).

Supporting governmental competence centres in Afghanistan to develop resilience with regard to climate shocks ("Drought Operations Coordination Centre"): This involves setting up an early warning system for the pre-emptive provision of support for those affected in drought regions, in the event of flooding and avalanche disasters. International troops and advisors in geosciences could provide valuable support in this domain.

International actors should support the promotion of water agreements between Afghanistan, Iran and Pakistan, environmental protection programmes (UNEP), strategic water infrastructure (mapping of resources), and local water management (e.g. Mirab). The efficient use of water is the lowest common denominator for security, peace and livelihood in the region. It can make a difference to strengthen stabilization efforts and resilience towards climate change.

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