CLIMATE CHANGE, DROUGHT AND THE 'ISLAMIC STATE' IN SYRIA

Following a wave of uprisings in the Arab world and the promise of the Arab Spring, initially peaceful protests in Syria escalated and the country descended into protracted civil war in 2011. Five years of violent conflict have taken a heavy toll on Syrians. Between 2011 and 2013, the impact of armed conflict rolled socio-economic development indices backwards by 35 years *(UNRWA 2013).* What was first and foremost a reaction to a repressive and corrupt authoritarian regime can, however, also be traced back to climatic changes and the way they contributed to eroding the social contract in Syria. Scarcity of water played a key role contributing to the outbreak of civil war in Syria and continues to impact the strategic choices of parties to the conflict. Violence, devastation and the descent into state fragility provided a perfect breeding ground for jihadist extremists who both benefit from livelihood insecurity and water shortages to mobilize combatants and systematically use water as a weapon of war.



CONTEXTUAL ANALYSIS

Socio-economic and political context

In 2011, driven by years of rapid population growth, the Syrian Arab Republic had a population of roughly 22 million. Five years into the conflict, 6 percent of the population has been killed or wounded and more than 10 million people have been displaced, almost half of them outside national borders *(IDMC 2015).* As of 2015, more than 80 percent of the population was living in poverty, life expectancy had decreased from 76 to 56 years and Syria had fallen from 111 to 173 in the Human Development Index. Economic losses created by the war amounted to over USD 202 billion, or 383 percent of the GDP of 2010 *(SCPR et al, 2015).* In 2015, the country ranked among the ten most fragile states worldwide with the second most critical deterioration compared to 2014, after Libya, according to the Fund for Peace *(FFP 2015).*
Syria's society is characterized by multiple ethnic, sectarian and religious divides dating back to the country's colonial and precolonial history. Approximately two thirds of the population are Sunni Arabs, while the other third is made up by Sunni Kurds, Christians and Alawites (10 percent each) as well as smaller minorities such as the Druze and Ismaili *(Mahmoud and Rosiny 2015).*

The autocratic rule of Hafez al-Assad, and later his son Bashar al-Assad, was based on Alawite domination and control of the state bureaucracy, while regime support was not clearly structured along sectarian and ethnic divisions. Today, the country is strongly divided along religious and sectarian lines, in particular

between Arabs and Kurds as well as Sunnis and Alawites. Even before the conflict, the regime had heavily restricted civil liberties like freedom of expression and access to media and had curtailed minority rights. Corruption, nepotism, mismanagement and favouritism were widespread and have further deteriorated over the past five years *(Freedom House 2015, 2014, 2012, 2011).*

Syria's pre-war economy was characterized by high GDP growth rates and a series of market-oriented reforms, cutting back on state subsidies, modernizing the tax system and facilitating private investment *(Butter 2015).* At the same time, economic development was not pro-poor and contributed to growing rural-urban inequalities and unemployment, particularly in rural areas *(IRIN News 2008a).* Agriculture employed 15 percent of the workforce and contributed 25 percent to the GDP, but was very reliant on subsidies for fertilizer, seeds and fuel *(SNAP 2013; World Bank 2016).*

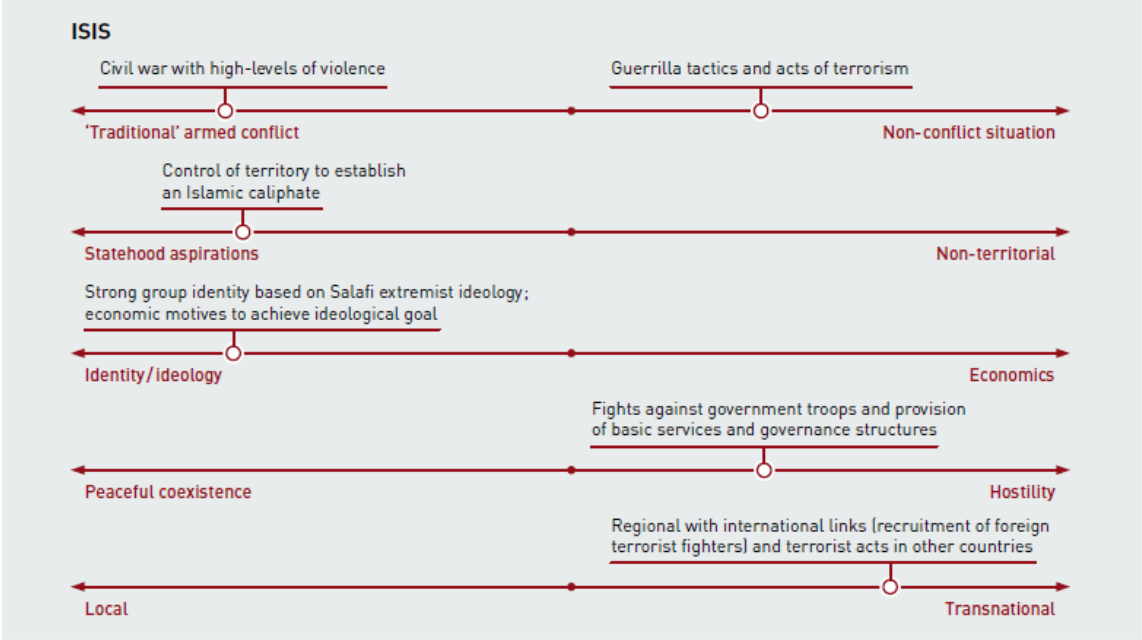
Climate projections

Climatic trends in the Middle East and Mediterranean region point towards increasing temperatures and drier winters, with more frequent events of prolonged drought. Since the beginning of the 20th century, 10 of the 12 driest winters occurred within the past 20 years *(Hoerling et al. 2012).* Average rainfall has reached new record lows over the last three decades. While droughts have always occurred in Syria, their frequency and intensity have increased since the 1990s. Studies suggest that anthropogenic influences have made the occurrence of severe drought 2 to 3 times more likely than natural variability *(Kelley et al. 2015).* Climate analysis of the eastern Mediterranean projects an increase of average summer temperatures by 0.5-0.9° C per decade, 50-60 additional warm days by 2100, and a decrease in annual rainfall by up to 25 percent in the 2060s *(Åkesson and Falk 2015).*

Conflict history and actors

The Syrian uprising was triggered by the imprisonment and torture of a group of school boys in Dara'a by the secret police in 2011. The event in the rural farming town sparked initially peaceful protests against the regime's failure to address the basic needs of the drought-stricken population and against corruption and repression by government officials. The protests were brutally repressed by the regime, and the movement militarized and spread across the country, evolving into full-fledged violent conflict between state authorities and a range of scattered rebel opposition groups. The resulting fragility and lack of territorial control by the state facilitated the rise of the self-proclaimed 'Islamic State' (IS), also known as the 'Islamic State in Iraq and Syria' (ISIS), that had emerged in Iraq and spread to Syria, and the Al-Nusra Front. Fighting also spilled over into neighbouring countries, particularly Lebanon *(Humud and Blanchard et al. 2015; Fröhlich 2016; Jenkins 2014).*

Underlying pressures and drivers of the ongoing conflict can be found in ethno-religious grievances, decades of brutal political repression, economic discontent and the cutting of subsidies to basic commodities, environmental degradation, mismanagement of natural resources, and resulting loss of livelihoods, as well as massive rural to urban migration. The actor constellation in the conflict has changed over time, and the large number of state actors and NSAGs – Shia, Arab Sunni, Kurdish Sunni, Alawites etc. – pursue very different goals that range from overthrowing the Assad government to establishing an Islamic state under Sharia law. What initially resembled the traditional definition of armed conflict with direct battle fronts has over time evolved into fighting that shows many similarities with non-conventional violence in other places *(Briscoe 2013).*



Extremist and terrorist groups

Al-Nusra and ISIS seem less interested in regime change than in controlling territory, applying guerrilla tactics and providing minimal services to the population *(Jenkins 2014).* ISIS's territorial aspirations are underpinned by its goal of establishing an Islamic caliphate. It builds on strong group identity based on Salafi extremist ideology, but economic motives also play an important role in achieving its ideological goals. It mainly uses oil, arms, drugs trafficking and trade in looted antiquities to create revenues. In the areas it controls, ISIS has installed governance structures including military, security and intelligence councils, and controls and manages the education system, humanitarian aid, and water and power systems *(Stanford University 2016).* ISIS is a regional group with strong international links and networks, which it particularly uses for the recruitment of foreign terrorist fighters, committing terrorist attacks worldwide, and for financing. Popular support for ISIS is built on the utopian vision of an Islamic political entity, particularly appealing to young people, and on the alleged protection of disenfranchised Sunni Arabs *(Malka 2014).*

CLIMATE-FRAGILITY RISKS

1) Climate-induced drought, instability and conflict

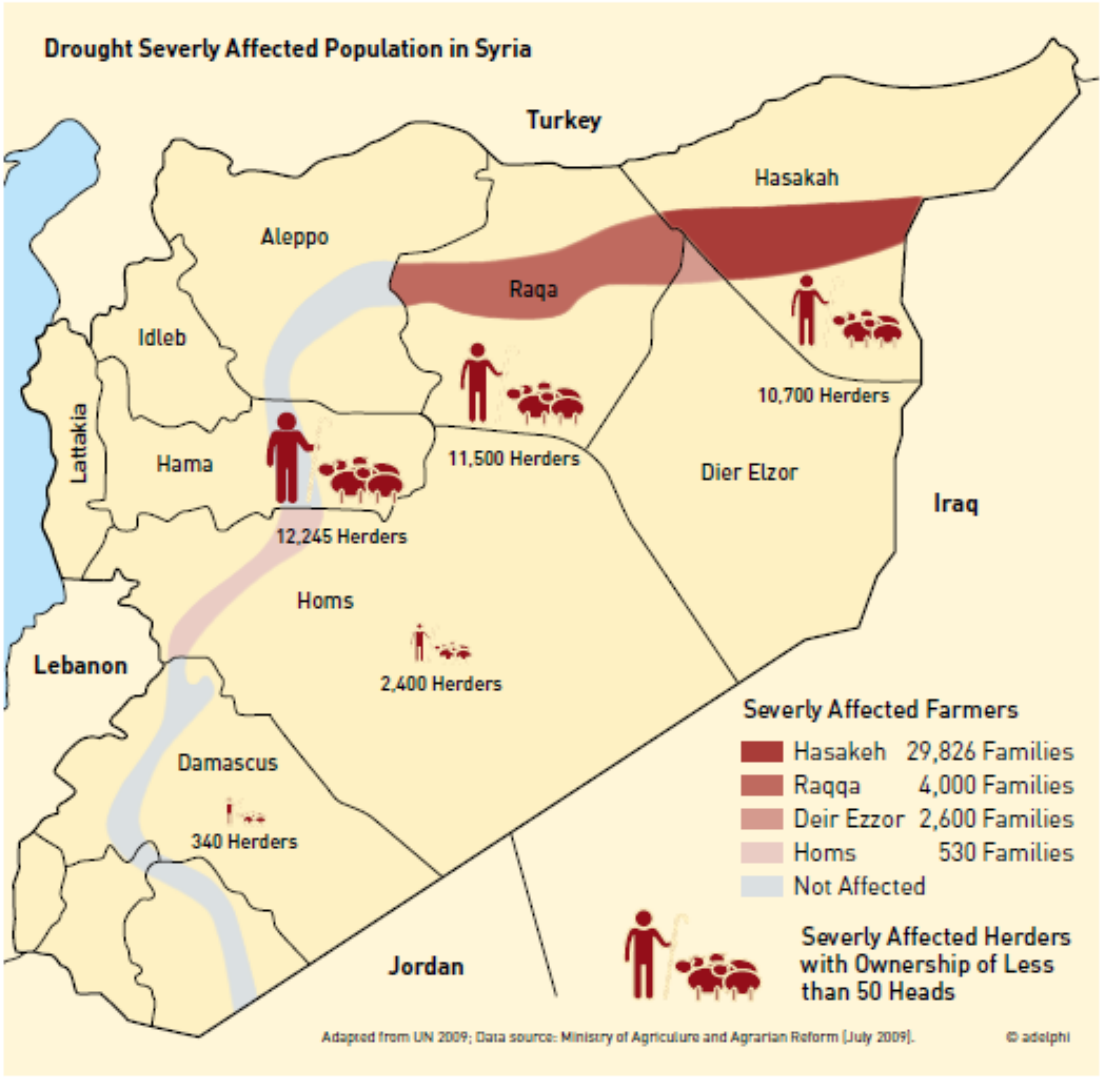
2)

Syria is not naturally water scarce. However, rapid population growth and years of water mismanagement have severely stressed the country's water system. In 2007, Syria's water consumption exceeded the natural replenishment rate by more than 20 percent *(IRIN News 2010).* Most of this overuse came from agriculture, accounting for 90 percent of water use. For many years the government incentivized water- intensive wheat and cotton cultivation with subsidies to sustain self-sufficiency, and highly inefficient flood irrigation contributed to 78 percent of groundwater being overused *(Gleick 2014).*

Syria's water system was thus already vulnerable when a five-year drought hit the country in 2007. It was the worst long-term drought since the beginning of historic records and its impacts on the livelihoods of many farmers and herders were devastating *(Kelley et al. 2015).* Absence of rain, overuse of ground water, and dam projects in Turkey further decreased water availability. In the mostly rain-fed region in the northeast, 1.3 million people dependent on agriculture experienced crop failure and herders lost up to 85 percent of their livestock *(Gleick 2014).* The preceding cut of fuel and food subsidies in 2008/9 and lack of social safety nets decreased people's ability to cope *(de Châtel 2014).* Massive loss of livelihoods caused migration from the countryside into the cities *(Erian et al. 2010).* These were already overcrowded due to the influx of an estimated 1.2-1.5 million Iraqi refugees and rapid population growth. Between 2002 and 2010, the urban population of Syria had grown from 8.9 to 13.8 million *(Kelley et al. 2015).* Crime,

unemployment, food price hikes and stress on urban infrastructure increased, and grievances from disenfranchised urban and displaced rural people combined, deepening pre-existing ethnic and socio-political divides *(King 2016).*
Downplaying the drought, the regime failed to install economic measures to alleviate the impacts of the drought and respond to the mounting humanitarian crisis. The city of Dara'a, where initial protests sparked the uprising, along with Damascus, Hama and Aleppo was one of the main receiving regions of displaced rural people. However, this does not necessarily imply that the rural displaced population initiated the protests. Newer research seems to suggest that urban dwellers who witnessed the unwillingness of the government to support the displaced rural population and address the challenges they posed for urban infrastructure were the ones who participated in the protests *(Fröhlich 2016).* Other sources report that displaced rural populations protested with the urban population *(Imady 2014; Leenders 2012).*

The initially secular opposition movement and protests rapidly descended into a complex sectarian conflict.
Amongst the chaos and instability brought about by fighting between the government, the Free Syrian Army and rebel groups, terrorist groups such as ISIS were able, later in 2014, to ,easily gain control over large parts of contested territory. Although ISIS had already been present in Iraq, it could only expand its influence to Syria when the country was pulled into a civil war. Their initial rise was substantially facilitated by an unstable security situation in Iraq *(Randall 2015).* Though far from being the only or the primary driver of conflict in Syria, climate change did play a catalytic role in accelerating the descent into fragility and facilitating the rise of NSAGs.
To explain why people choose to join extremist groups both the individual decision-making process (Micro level) as well as the context in which the decision takes place (macro level) need to be taken into account.
The fragile political context in Syria was certainly a key factor in facilitating the rise of ISIS but cannot be the only explanatory variable, which is why the next section examines how the impacts of climate change on livelihoods influenced individuals' decisions to join ISIS *(Zeitzoff 2016).*



2) Water scarcity and livelihood insecurity facilitate ISIS recruitment

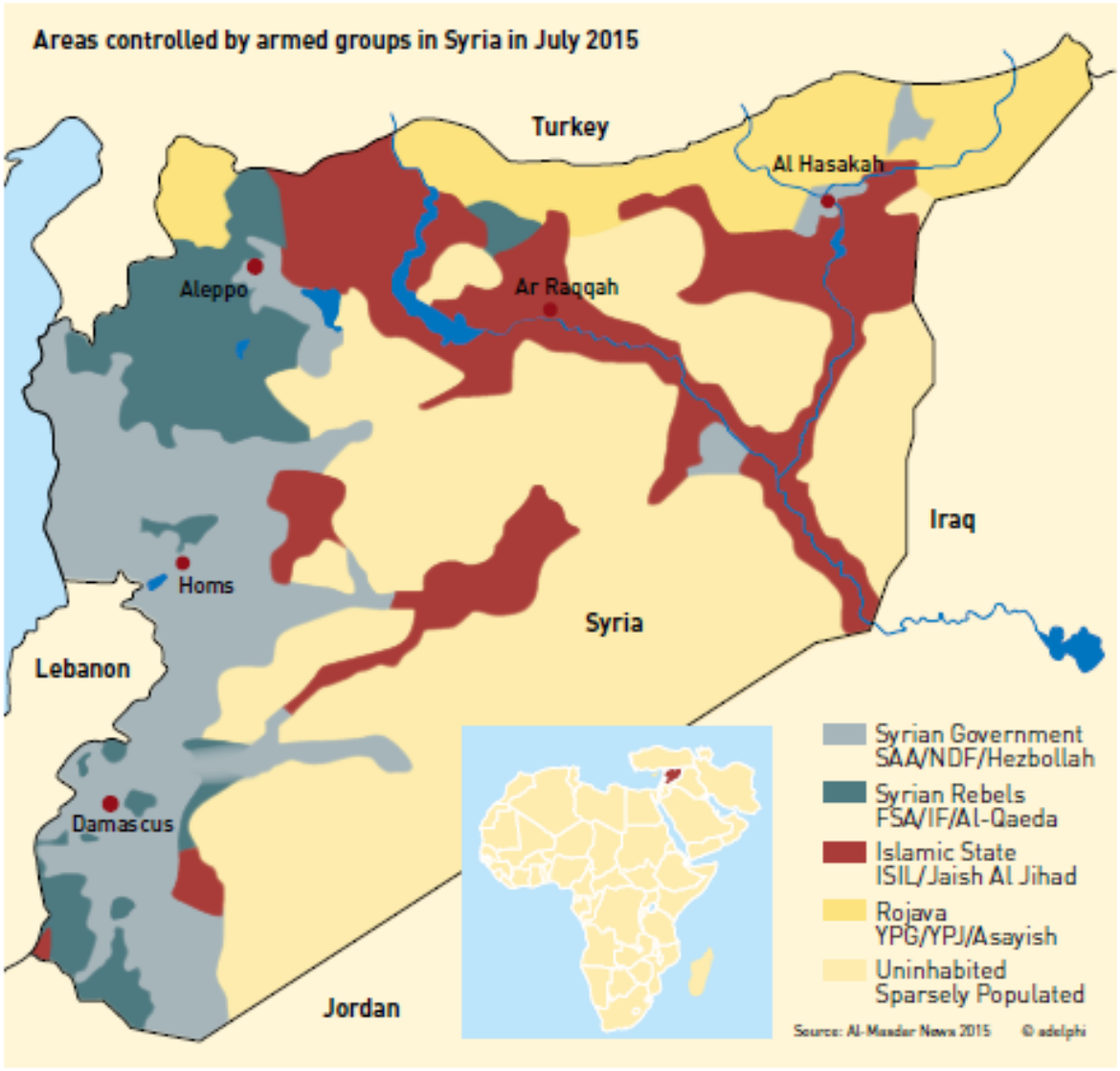
Livelihood insecurity and water scarcity were important factors in creating a fertile ground for terrorist groups' recruitment in Syria. The detrimental effects of climate change on the ecological and human systems, in particular the death of livestock, loss of agricultural land and food insecurity, likely facilitated the rise of militant extremism *(King 2016).* Apart from ideological reasons, the deprivation resulting from policy failure and drought made it much easier for ISIS to recruit as much as 60 to 70 percent of its fighters
locally *(Leggiero 2015; Al-Tamimi 2013).*
ISIS control between 2014 and 2016 was strongest in Syria's northeast, a region that was hit hardest by the 2007-12 drought. As the Syrian regime failed to provide security and relief to the drought-stricken population, grievances intensified and public support for the government decreased. By establishing social services, implementing irrigation projects and providing clean water, ISIS could more easily recruit from disaffected local populations that felt neglected by the state *(Hassan 2014).* A recent study by International
Alert found that the main drivers of vulnerability of Syrians to recruitment by extremist groups include a "lack of economic opportunity, disruptive social context and experiences of violence, displacement, trauma and loss" and lack of education and opportunity *(Aubrey et al. 2016).*
With resources gained from the seizure of oil fields, extortion and foreign support, the terrorist group Financed infrastructure and state-like institutions such as the 'Islamic Administration for Public Services', providing electricity and public transport in Aleppo *(Al-Tamimi 2013).* In its north-eastern territories, ISIS installed "new institutions (judicial, police, economic) and co-opted others (e.g., education, health, and

infrastructure)" *(Laub 2016),* trying to gain public support and legitimacy.
Farmers and herders in the northeast who were faced with crop failure and livestock death had little to no economic prospects and there were no adequate social safety nets in place for them under the Assad regime. As ISIS pays its fighters an estimated USD 400 per month, about five times as much as a normal wage in the region, it also provides economic incentives for young and unemployed people with few perspectives *(Laub 2016).* Economic hardship is a primary driver for Syrians to join armed groups, as unemployment reaches up to 90 percent and most salaries of those who still have employment are insufficient for meeting basic needs *(Aubrey et al. 2016).*

3) ISIS is using water as a weapon

Water was not only a key factor in the Syrian uprising, but continued to play a crucial role in the fighting. Given its vital importance, it can be strategically used to exert political and military pressure. The different actors involved in the Syrian conflict have used different strategies to employ water as a weapon. 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. In other cases, rebel groups diverted water to supply only those neighbourhoods that they controlled, inflicting severe harm upon civilians and farmers dependent on irrigation *(Shamout 2014; Cockburn 2014).* Though different actors instrumentalize water, ISIS is responsible for by far the largest number of incidents *(King 2016).*
ISIS had by 2014 gained territorial control over large parts of Syria and Iraq that contained key parts of the region's water infrastructure. Most notably, the river Euphrates that comes from Turkey and is critical for food, water, energy and industry had largely fallen under ISIS control. This also included the Tabqa dam, which is the source of 20 percent of Syria's electricity, supplies water to 5 million people and is crucial for irrigation *(Shamout 2014).* As the map shows, the regions held by ISIS by mid-2015 extended along Syria's major rivers, showing the strategic importance of water for ISIS.


Climate-induced drought, instability and conflict in Syria
Rapid population growth
Water mismanagement
Dam projects in Turkey
Increasing vulnerability to Climate Change
Climate Change
5 year long drought
Cut of subsidies
Contextual factors:
- history of conflict
- oppressive political regime
Water scarcity
Loss of livelihoods
Migration to cities
Rapid population growth
Pressure on urban infrastructure
Rising unemployment, crime and humanitarian crisis
Influx of refugees from Iraq
High global food prices



Control over dams gave the terrorist group the power to cause hardship in water-scarce areas, harm their enemies and leverage the redirection of the flows to expand territorial control. In 2015, ISIS closed the gates of the Ramadi dam to more easily attack regime forces further downstream. Weaponization of water can also take the form of using it as a source of funding by taxing it, as ISIS did in Raqqa *(King 2016).* In other instances, ISIS did not cut the supply, but rather used water to flood land in order to expel people from their homes *(von Lossow 2015).* At the same time, control over and effective distribution of water can also help ISIS gain legitimacy and work towards its goal of establishing a 'caliphate'. In December 2014, ISIS was reported to have poisoned drinking water with crude oil in Iraq *(Mamoun 2014; von Lossow 2015)* and allegedly also in Syrian towns *(Vishwanath 2015).*

CONCLUSION

In Syria, the impact of climate change facilitated the rise of NSAGs, in particular ISIS, in various ways. First, the conflict in Syria was a result of converging pressures including government failure, extreme weather events, population growth, water resource mismanagement, sectarian grievances, urbanization and unemployment. The resulting fragility and weakness of the Assad regime facilitated the rise of terrorist organisations such as ISIS and Al-Nusra. Secondly, drought-induced water scarcity played an important role in the recruitment of local fighters who had lost their livelihoods and were offered an economic perspective as well as a sense of belonging and appreciation by ISIS. Similarly, ISIS tried to gain and retain legitimacy by providing water and other services to garner support from local populations. Thirdly, NSAGs, in particular ISIS, are using water as a weapon against both other armed actors and civilians. Broadening the perspective to the whole region and looking into the future, a study by UN ESCWA projects longer dry seasons and higher temperatures for the region by the year 2100 *(UN ESCWA 20145).* This means that climate change will continue to have a negative impact on the conflict in Syria. In addition, the potential damage inflicted by using water as a weapon, including damaged infrastructure, crop losses and poisoned drinking water, will have long-lasting effects on the population and challenge effective adaptation.
It is unclear how the impacts of climate change will affect Syria's neighbouring countries. They have Experienced similar conditions of drought, but were hit less hard by the drought between 2007 and 2012. This also underlines that vulnerability always depends on the specific socio-economic and political Context and that there is no single cause for a conflict. However, similar dynamics of mismanagement, unresponsive governments, sectarian divides, economic depression, and climatic shocks are not unlikely to also occur in other countries in the region. Syria can thus serve as a worst-case scenario and warning signal.

Source : Katharina Nett, Lukas Rüttinger **2016 Insurgency, Terrorism and Organised Crime in a Warming Climate. Analysing the Links Between Climate Change and Non-State Armed Groups.** www.adelphi.de