



Conflict Factsheet

Syrian Civil War: The Role of Climate Change

Type of conflict Main	Intensity 4 
Conflict Locality Western Asia	Time 2011 –ongoing
Countries Syria	Resources Agricultural / Pastoral Land, Water, Resilience of the environment



Livelihood insecurity and migration



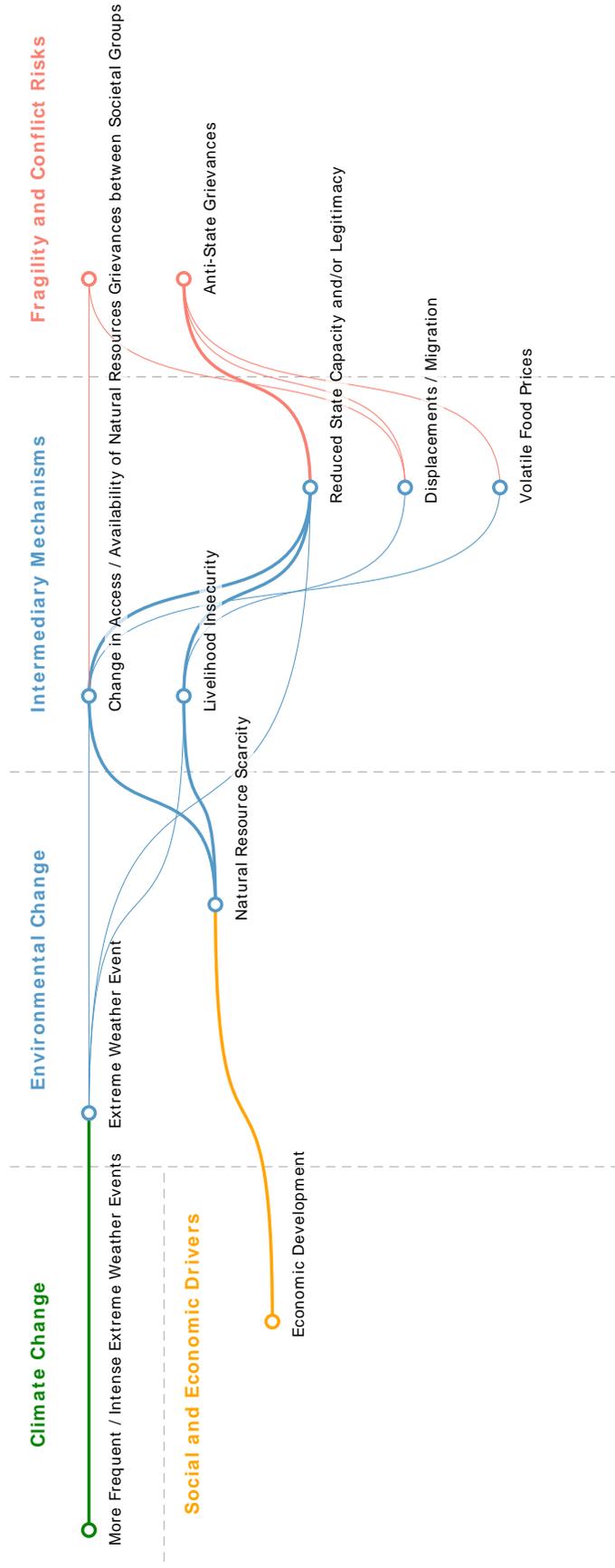
Extreme weather events and disasters

Conflict Summary

Several studies have pointed to a link between climate change and the civil war in Syria, which started in 2011 and is still ongoing. The direct causes of the conflict relate to popular discontent with the government. Yet the mishandling of a major drought in the preceding years likely fed into this discontent, and climate change increased the likelihood for such a drought.



Conceptual Model



Context Factors



Agricultural / Pastoral Land, Water, Resilience of the environment

Dysfunctional Resource Management
Water-stressed Area

Cut in Consumer Subsidies
Eroded Social Contract
Unresponsive Government



Conflict History

In March 2011, “peaceful protests” in the rural town of Dara'a in Syria were violently repressed by the government of Bashar Al-Assad and evolved into an armed rebellion. The conflict has further intensified and reports estimate that approximately 220,000 people lost their lives in the conflict by 2015 (Hadid, 2015). A number of scholars have sought to analyse the original causes of the Syrian conflict. Several studies have drawn a link between the protests of March 2011 and climate change. This case study will analyse this potential link.

Strong impacts of the five-year drought (2006-2010)

In 2011, Syria was emerging from a five-year drought (2006-2010), which strongly hit the population, particularly in the North-east part of the country (De Châtel, 2014). Over this unusually long period of drought – during which nearly 800,000 people lost their livelihood according to the UN –, the population received little relief from the Government (De Châtel, 2014, Nafeez, 2013a). The authorities even tried to minimise the extent of the humanitarian crisis to the international community (Femia and Werrell, 2013).

Massive displacement of population

The situation triggered a massive displacement of farmers and herders, who left rural areas to migrate to cities where they settled in shanty towns and were forced to compete with the already poor urban populations over resources (Sowers et al., 2013; Femia and Werrell, 2013). According to the UN, 50,000 families migrated from rural areas in 2010 (Femia and Werrell, 2013). The food price hikes which followed the drought – the price of wheat doubled from 2010 to 2011 – worsened the humanitarian situation in Syria (Nafeez, 2013a).

Failure of the government to address important needs

In 2011, the resentment of agricultural communities towards the government for its failure to address basic needs led the population of the town of Dara'a to the streets to protest peacefully against the regime (De Châtel, 2014). Although the protests started peacefully, the repression of the government against demonstrators spread the wave of protests, which then evolved into a bloody conflict between the authorities and various rebel groups (Nafeez, 2013a.; De Châtel, 2014).

Root causes of the civil war

Climate

There is a plethora of factors which must be taken in to account to explain the root causes of the uprisings in Syria: Some scholars have highlighted a link between climate change and the conflict, stating that the drought which led to the uprisings in 2011 was made more likely by a regional trend towards higher temperatures and drier winters (Werrell, Femia & Sternberg, 2015). Over the past decades, the Mediterranean littoral and the Middle East has warmed up considerably, leading to an intensification of drought cycles. Of the 12 driest winters hitting the region since 1902, 10 have occurred in just the last 20 years. These changes matter as the region receives most of its precipitation during the winter. According to a study from the US National Oceanic and Atmospheric Administration (NOAA), this change towards drier conditions cannot be explained by natural variability alone. Anthropogenic greenhouse gas and



aerosol forcing, as well as increases in sea surface temperature are major contributing factors as well (Hoerling, Eischeid, Perlwitz et al., 2012). However, a more complete analysis of the country situation shows that there are more causes for conflict and that climate change should rather be considered as a “threat multiplier” than a main cause of the conflict (Femia and Werrell, 2013).

State fragility

The first aspect is the lack of sustainability in the state’s management of agricultural and water policies since 1963 (De Châtel, 2014). Since the military coup which placed the Ba’ath party – Bashar Al-Assad’s party – at the head of the state, the party sought to gain public support by granting massive subsidies for water and agriculture (Sowers et al., 2013). For 50 years, the government has been supporting “overambitious” agricultural projects (De Châtel, 2014). Subsidies for water-intensive crops, the promotion of overgrazing as well as inefficient irrigation methods and groundwater extraction led to the depletion of both soils and water (Femia and Werrell, 2013).

Because of these practices, the levels of the aquifers have been decreasing at an alarming rate since the 1960s – a trend which accelerated between the 1980s and the 2000s – whilst the quality of the remaining water in the aquifers has been deteriorating (Ibid.; De Châtel, 2014). Government plans for modernising water management systems were not followed by actions (De Châtel, 2014). Over the years, the inefficient – and sometimes “inexistent” – water policies of the Syrian Government have thus contributed to desertification (Ibid.). The fast growing population, which is partly due to the government policy launched in the 1950s to promote births, accelerated this desertification process (Ibid.).

Removal of Subsidies and Corruption

A second aspect relates to the changes in economic policy since Bashar Al-Assad took power in 2000. In 2008, the dwindling oil production led the government to remove fuel subsidies (Nafeez, 2013b). The skyrocketing oil prices combined with the food price shock put even more pressure on the population (Nafeez, 2013a, Nafeez, 2013b). To address the country’s economic challenges, Bashar Al-Assad put an end to fuel and food subsidies and instead invested in industrial sectors which only benefited a small Alawite elite, the religious group to which Al-Assad belongs (Nafeez, 2013b; Sowers et al., 2013).

The lack of transparency and corruption which developed out of these elitist business activities added to the discontent of the population (Nafeez, 2013b; De Châtel, 2014). For instance, in 2005, water legislation obliged farmers to license wells on their territory – to prevent the digging of illegal wells – and to renew their license each year (De Châtel, 2014). However, this policy led to a high level of corruption amongst officials, who forced farmers to pay bribes in exchange for licenses (Ibid.). This was one of the triggers which led the population of Dara’a to the streets (Ibid.).

Overstating the importance of the drought in the conflict “diverts attention from the core problem”

Beyond these two aspects related to natural resource management, Syrians had many grievances related to political oppression, and the example of revolution in other Arab countries was obviously important in triggering the original protests. Although scientific studies show that climate change has intensified the droughts, its role thus has to be put into context, as one Syria expert wrote: “While climate change may have contributed to worsening the effects of the drought, overstating its importance is an unhelpful distraction that diverts attention away from the core problem: the long-term mismanagement



of natural resources” (De Châtel 2014). Furthermore, an exaggerated focus on climate change shifts the burden of responsibility for the devastation of Syria’s natural resources away from the successive Syrian governments since the 1950s and allows the Assad regime to blame external factors for its own failures” (Ibid.).

Recent Developments

Since March 2011, the civil war in Syria has forced almost half of the population to flee their home. The displacement of the population has deepened fault lines amongst the population, leading to competition over resources and alignment along ethnic lines (De Châtel, 2014; Femia and Werrell, 2013). The emergence of the group Islamic State of Iraq and the Levant (ISIL) in the region has added another threat to the conflict. Recently, both the government and the ISIL have started diverting water, using it as leverage against each other (EJOLT, 2014). As the country experiences extreme water shortages, controlling water supplies has become a way of controlling territories and of putting pressure on opponents. Some experts argue that control of water will be decisive for who will win this war (Vidal, 2014). Meanwhile, this is an additional pressure on the population who already suffers from malnutrition and health issues and is sometimes forced to drink from puddles on the street to survive (Ibid.).

Resolution Efforts

Failed negotiation attempts of the International Community

Despite several attempts to negotiate peace agreements between the Syrian Government and the rebels, the efforts of the international community have failed to put an end to the civil war in Syria. Several donors including the EU, the UNDP, Kuwait, Russia, Hungary and Japan contribute to fund UN humanitarian operations to address the basic needs of the population and to restore their livelihood (UNDP, 2014).

The conflict is anything but resolved and any efforts aimed at long-term peacebuilding, such as those related to reducing the conflict potential of water scarcity in the region, will only be applicable once violence has stopped in the country.

Measures to address the environmental root causes

The literature indicates a number of steps or measures which could help address the environmental root causes of the conflict. These measures target core weaknesses that led to discontent in the first place. The first critical measure concerns addressing the effects of climate change in order to ensure the long-term stability and resiliency of the country (Femia and Werrell, 2013).

Improve water infrastructure

Second, considering the inefficient water infrastructure in the country, scholars deem it necessary to expand efficient irrigation technologies and practices and groundwater monitoring (Gleick, 2014). Several technologies could help reduce the use of water, such as drip-irrigation systems, no-tillage cultivation as well as the use of water-efficient and high-yield crops (Waterbury, 2013).

Improve water management at the national and transboundary level

Third, the authorities would need to establish a stronger legal framework to ensure the enforcement of the laws; water legislation in the 2000s was either not enforced or not existent (De Châtel, 2014). Last



but not least, improving international cooperation over the joint management of shared/transboundary rivers is important (Gleick, 2014). In fact, the lack of agreement amongst Turkey, Syria and Iraq over the management of the Euphrates River might increase the degradation of the soils and the pollution of the water – through salinity and chemicals – and thus intensify the pressure on the population.

According to Erikson and Lorenz, salinity and pollution through chemicals are likely to have “greater, and more immediate” effects on the population in the basin than a reduction in water quantity (Erikson and Lorenz, 2013). Before the eruption of the uprisings, Turkey, Syria and Iraq were on a good track towards cooperation (see [Turkey, Syria and Iraq: conflict over the Euphrates-Tigris](#)) (Ibid.). Yet the hostility between the Turkish and Syrian governments makes any short-term cooperation very unlikely, and the role of the PKK, which has been a long-lasting bone of contention between Turkey and Syria, may add further complications in the future.

In conclusion, there is no evidence for a direct link between climate change and the uprisings from March 2011 in Syria. Climate change has only been one factor among several, and an indirect one insofar as its impact was exacerbated by the consequences of decades of natural resource mismanagement. Yet studies estimate that climate change is likely to put ever greater pressure on natural resources in the region over the next decades, notably regarding the increase of droughts (Femia and Werrell, 2013). Given the many other cleavages in the region, this may never lead to outright 'climate wars'. Yet to limit the potentially exacerbating role of climate change through its impact on crucial natural resources, it will be critical to improve conflict resolution mechanisms in general and natural resource management in particular.



Intensities & Influences



INTENSITIES

International / Geopolitical Intensity

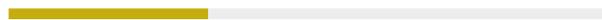


Human Suffering



INFLUENCES

Environmental Influences



Societal Influences



Violent Conflict

Yes



Salience with nation

National



Mass displacement

More than 100.000 or more than 10% of the country's population are displaced within the country.



Cross Border Mass Displacement

Best estimate that more than 100.000 or more than 10% of country population are displaced across borders.



Resolution Success

Reduction in Violence

There was no reduction in violence.

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Resolve of displacement problems

Displacement continues to cause discontent and/or other problems.

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Reduction in geographical scope

There has been no reduction in geographical scope.

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Increased capacity to address grievance in the future

There is no increased capacity to address grievances in the future.

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Grievance Resolution

Grievances have been completely ignored.

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Causal Attribution of Decrease in Conflict Intensity

There has been no reduction in intensity

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Entry Points for Resilience and Peace Building

Peacekeeping	3
The international community has failed to negotiate a peace agreement between the Syrian government and the rebels despite several attempts. Long-term peace building will only be possible once violence ceases in the country.	
Cooperation	0
An improved international cooperation over the joint management of transboundary rivers such as the Euphrates River is needed in order to prevent the degradation of soils and the pollution of water	
Humanitarian & Development aid	2
Several donors including the European Union, the United Nations Development Programme (UNDP), Kuwait, Russia, Hungary and Japan contribute to UN humanitarian operations to address the basic needs of the population and to restore their livelihood.	
Improving resource efficiency	0
Considering the inefficient water infrastructure in the country, scholars have proposed several technologies and practices that could help reduce the use of water, as well as losses due to damaged infrastructure. An improved resource management is critical, particularly due to the potentially exacerbating role of climate change. Yet, efficiency of the water sector will not only depend on technical solutions, but also a stronger legal framework for the enforcement of water legislation.	

Resources and Materials

Conflict References

[Turkey, Syria and Iraq: Conflict over the Euphrates-Tigris](#)

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Further information

<https://factbook.ecc-platform.org/conflicts/syrian-civil-war-role-climate-change>