



1. Introduction

The Purple Heart Network (PHN) is a charity based in Scotland. One of our aims is to raise awareness of the links between environmental and social justice and advocate for action that addresses both the human and environmental cost of climate change, at home and across the globe.

This briefing has been developed in response to the recent decision of the UK government to enter into the conflict in Syria; at PHN we think it's important to understand the context of the conflict fully, particularly the interplay between the environmental and human factors and the role of climate change as a contributing factor.

This paper is based upon a number of research and evidence sources which are cited throughout, and was inspired by the paper, [*Water, Drought, Climate Change, and Conflict in Syria published in February 2014 by Peter H Gleick, The Pacific Institute, California.*](#)

2. Background

The conflict in Syria began in 2011, as a result of uprisings amongst citizens who demanded their President, Bashar al-Assad, stand down and make way for democratic elections. al-Assad, who inherited the Presidency, refused and attempted to quash civilian protests using state police and the military.

The conflict in Syria is complex. There are 3 factions involved – Syrian State forces under the rule of Bashar al-Assad, rebel groups which include the Free Syrian Army (made up of civilians and defectors from the state army) and Islamic State (IS).

Since the conflict began in 2011 a number of allied countries have intervened including France, Belgium, the United States and now, of course, Britain. These countries have intervened to support rebel forces and in 2013 the US Senate agreed to arm the rebels in support of their bid to overthrow al-Assad, who, amongst other human rights atrocities, is thought to have used biological weapons on civilians.

It is thought that around 250,000 people have died as a result of the conflict with 120,000 of those being civilians. This is considered to be a conservative estimate; in addition to these casualties, around 9 million people have been displaced¹.

As the conflict has gone on sectarianism has played an increasing role, with each faction identifying to a particular branch of Islam. IS are considered to be the most radical of the factions and are believed to be imposing sharia law on each new territory they conquer. Over the last 18 to 24 months international focus has concentrated on the involvement of IS, whose activities have been reported on by the [*Syrian Observatory for Human Rights*](#), highlighting the extreme violence with which they impose their rule on civilians. Recent reports suggest IS are now in conflict with Syrian rebels.

¹ Amnesty International, Syria Report, <http://www.amnestyusa.org/our-work/countries/middle-east-and-north-africa/syria>

2.1 Why is the UK involved?

The UK is involved because they believe that Islamic State is strengthening their control over Syria. Although the UK will not send in ground forces they have committed to a series of air strikes, bombing key IS strong holds.

Unfortunately air strikes will take place in areas populated by civilians, such as Raqqa, so the possibility of civilian casualties is high.

3. So what role could Climate Change possible play in this Conflict?

Climate change is clearly not the only factor, or the main factor contributing to the conflict in Syria, however if we investigate the impact of climate change on the region's environmental resources and in turn human behaviour & movement a compelling argument emerges.

- Water Stress

Water stress refers to a situation where a country or region does not have enough water resources to meet its needs. The region where Syria is located has experienced water stress issues for thousands of years, it is one of the driest places in the world, receiving less than 250mm of rainfall each year (parts of Scotland experience rainfall of 3000mm per year²).

Since 1950 the population of Syria has grown from 3 million to 22 million in 2012³ resulting in an 86% decrease in the amount of renewable water⁴ available per head of population and in 2011 the country was identified by The World Resource Institute (WRI) as being at medium to high risk of water-stress. The WRI predict, that if current trends continue, Syria will be one of the most water stressed countries on earth by 2040.⁵

For the last 9 years Syria has experienced extreme and enduring drought which is still ongoing. Between 2006 and 2009 the amount of barley and wheat produced in the country dropped by 47% and 67% respectively⁶ and as the drought continued through 2010 and 2011 the number of people experiencing food poverty and economic poverty increased.

This unprecedented drought led to the failure of crops, the death of livestock and was described as the 'worst long-term drought and most severe set of crop failures since agricultural civilisations began'⁷ The drought and its impact resulted in rising water, fuel and economic poverty amongst farmers and agricultural workers, who began migrating to from rural to urban areas.

Around 1.5 million people are thought to have migrated into urban areas, creating additional stresses on unemployment levels, urban resources and social unrest. Many migrants made their way to the cities of Deir ez-Zour, Daraa and Hama, incidentally regions of particular note in the democratic uprisings.

² Scottish Environmental Statistics Online, Scottish Government, 2014, <http://www.scotland.gov.uk/seso/>

³ World Population Review, Syrian Population, <http://worldpopulationreview.com/countries/syria-population/>

⁴ Renewable Water is the amount of natural water available to a country from surface and groundwater sources.

⁵ Ranking the World's Most Water Stressed Countries in 2040, Maddocks, Young & Reig, WRI, August 2015

⁶ Drought Vulnerability in the Arab Region, Arab Centre for Studies of Arid Zones and Dry Lands, Wadid Erian,

⁷ Climate Change and Food Culture, Gary Nabhan, Grist, 2010

On the outbreak of civil war, as unrest increased and developed into violence the opposing forces focused upon water resources as a weapon, intentionally damaging water systems as part of military strategy. Demonstrating just how powerful water resources are in countries where they are scarce.

3.1 Is Climate Change to blame for increased drought and water shortage?

In a 2010⁸ scientists from the International Centre for Advanced Mediterranean Agronomic Studies used drought indices to identify trends across 5 decades in Syria. They found significant increases in the number of consecutive dry days in both wet and dry seasons in every area of the country they studied across the period.

A subsequent study also suggests winter rainfall is reducing in the area and that it is becoming hotter and drier, this has resulted in increased evaporation of groundwater resources e.g. lakes and rivers at a rate 'too great to be explained by natural variability alone.'⁹

Climate change can be seen as a direct driver in the changing environment, as these changes cause droughts and water shortage. The social and human impact is also clearly identifiable, as crops fail, livestock die and livelihoods are lost, water, food and economic poverty rise.

Changes in climate can also exacerbate these issues in indirect ways by changing the way humans engage with their environment e.g. through unsustainable agricultural practices which result in land degradation or the overuse or poor management of available water resources.

Without addressing the causes of climate change and the impacts of climate change it is unlikely that these issues will be resolved and, unfortunately, climate modelling suggests decreased rainfall and increased droughts are a trend which will continue in the region.

4. Our Position

As a charity committed to the advancement of social and environmental justice The Purple Heart Network believes the human rights of all global citizens should be protected.

Further Military action in Syria is unlikely to address the social, political or environmental issues in the country. In relation to the socio-environmental landscape it is likely that military action will make the situation worse - destroying infrastructure, degrading ecosystems and land and further displacing humans, local people with skills and knowledge that could help the area recover whilst addressing some of the causal factors too.

We would advocate non-military interventions that bring sustainable peace and stability to the people of Syria, interventions that ensure they have the capacity and capability to rebuild their country in ways that tackle the direct and causal factors which contribute to social and environmental injustice.

5. More Information

If you would like more information on this briefing please contact Johanna at johannaspeirs@phn.org.uk.

⁸ Drought changes over last five decades in Syria, Skaf & Mathbout, CIHEAM, 2010

<http://om.ciheam.org/om/pdf/a95/00801334.pdf>

⁹ On the Increased Frequency of Mediterranean Drought, Hoerling et al., NOAA/Earth System Research Laboratory, 2012, , <http://journals.ametsoc.org/doi/abs/10.1175/JCLI-D-11-00296.1>