



# The Arab summer: searing heat, soaring violence?

by Florence Gaub

The summer of 2014 has proved to be particularly violent in the Arab world. The Islamic State (IS) captured swathes of Iraq and began to carry out barbaric acts (from sectarian/ethnic cleansing to the beheading of hostages); militia violence plagued Libya; Israel cracked down on Hamas in Gaza; and the carnage in Syria continued unabated.

The spike in violence this year, however, was no exception, with the region appearing to follow a temporal pattern to (re)turn to conflict as temperatures peak between June and September. The 1967 war between Israel and its Arab neighbours began in June; the long, drawn-out hostilities between Iraq and Iran started in September 1980; Israel attacked Lebanon in June 1982 (and again in July 2006); and Saddam Hussein invaded Kuwait in August 1990.

Coups, too, seem to be launched during the summer months: Gamal Abdel Nasser and his Free Officers toppled the Egyptian monarchy in July 1952, the kings of Iraq and Libya fell in July 1958 and September 1969, respectively, while Mauritania saw presidents ousted in August 2005 and 2008. Similarly, the fate of Egypt's President Morsi was sealed in July last year.

But apart from the obvious consideration that it makes more sense operationally to start ground campaigns once the harvest is over (as was the case with both the First and Second World Wars), could there also be a causal link between high temperatures and the prevalence of conflict?

## Hot weather, hot temper?

Although the correlation between the two is not entirely clear, several studies have sought to demonstrate that there is a link between rising temperatures and aggressive behaviour. In the US, for instance, murder and assault rates are over 10% higher than average in summer; and particularly hot summers – with ten extra days over 32°C – experience an additional 7% jump. One explanation for this phenomenon is that violence occurs in summer simply because it can: due to a change in weather conditions, people have the opportunity to interact with each other more often, thereby creating more opportunities for crime. Yet while this is mostly true for the northern hemisphere, this is not the case in the Arab world, where the climate generally remains dry and warm. Cairo's temperatures, for instance, rarely fall below 19°C in winter, making socialising outdoors a year-round possibility.

In contrast to this sociological explanation, the heat hypothesis suggests that the warm weather acts as a direct trigger for violence because physical discomfort leads to an increase in acts of aggression. This theory is supported by 'Ramadan rage': the rise in car accidents and crime rates during Islam's holiest month (9% in countries such as Egypt and Algeria). This was particularly the case in 2014, when Ramadan took place in July (with the sun shining for 14 hours per day compared to 10 in winter), thereby adding the additional burden of time to the stress of the heat. The silver lining here is that, as Ramadan



moves back by 11 days each year, the next time it falls in July will be in 2047.

Climate change is likely to exacerbate the heat hypothesis: if summer temperatures in the region rise, as predicted, by between 2.5°C to 3.7°C over the next three decades, there will be profound consequences at a domestic security level. For example, studies show that an increase of 1° in the US led to 24,000 additional murders and assaults per year.

## Seasons and patterns

But while there is a link between heat and localised violence, it does not translate to the regional level. An analysis of conflict onset in the Arab world since 1948 shows that the two most prevalent months are June and October, thus disproving the heat hypothesis as a single-cause explanation.

Moreover, Ramadan generally appears to reduce regional conflict onsets: of the eleven inter-state wars which have taken place since 1948, only one, the Yom Kippur war, erupted during Ramadan. Of the 14 intra-state conflicts (civil wars, uprisings), none broke out during Islam's holiest month.

But if regional conflicts do not follow seasons, does this mean they occur randomly? Mathematicians such as Lewis Fry Richardson have analysed the timing and lethality of wars (both intra-state and asymmetric) and found that they follow a pattern dependent on the conflict which preceded them. As the region has been stuck in a conflict trap (or possibly loop) for decades, the particularly violent summer of 2014 is therefore the result of a cumulative effect – perhaps reinforced by particularly harsh physical conditions experienced by individual citizens.

## When the cat is away...

Summer temperatures not only have an effect on conflict prevalence or recurrence; with schools generally closed in July and August – in the Arab world as well as in Europe or the US – large parts of the population leave the capital to either cooler climes or go abroad. This has two consequences: first, with top decision-makers away, crises are dealt with by those second in command, who often lack authority. Second, emptier streets facilitate the quick manoeuvring of combat troops (including armoured vehicles).

These two aspects played a considerable role in the Egyptian coup of 1952, with the Free Officers

seizing key infrastructure in Cairo when most of the leadership (including King Farouk) was on holiday in Alexandria. Equally, Libya's King Idris was in Turkey when the army struck in 1969, and Mauritania's President Maaouya Ould Sid'Ahmed Taya was ousted in 2005 whilst in Saudi Arabia. Statistically, therefore, July and August are popular months for Arab coups – as are September and November.

The holiday effect can be exploited during any season, however. The surprise attack on Israel in October 1973 sought to capitalise on the strategic vacuum of the Yom Kippur holiday: invading on Judaism's holiest day meant that mobilisation was slowed significantly. In addition, the Israelis were caught unawares by an attack during Ramadan, which was then taking place at the same time.

Last but not least, meteorological concerns matter as well. One major obstacle to conducting military operations in the region is dust storms, which significantly impair visibility. In the Middle East, these storms occur mainly in the spring; in the Gulf region, northern Iraq and Syria, they are more likely in the summer; and in North Africa, in the winter.

## Changing climate, changing conflict

Summer is accompanied by another strategic side-effect in the Middle East and North Africa (MENA), and one which will likely worsen with climate change: water scarcity. This issue, in turn, is linked to poverty, food insecurity and migration. Droughts and rising temperatures brought down not only the ancient Akkadian Empire in the region (2000 BC) but contributed to the Syrian civil war, too, some four millennia later. A dramatic decrease in rainfall since 2006 pushed more than three million Syrians into poverty, and was certainly a contributing factor to the outbreak of the current conflict. In a similar manner, the continuous decline in rainfall – and the resulting desertification – exacerbated the conflict in Darfur, Sudan, a few years ago.

Much as rising temperatures are likely to have a global impact to differing degrees, they are clear conflict multipliers in the MENA region. If Arab states do not manage to mitigate the effects of these climate-related challenges, future summers will be even hotter, in terms of both temperature and violence. And although heat is not currently a cause of regional conflict, spill-over effects in a region plagued by porous borders cannot be ruled out in the future.

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