

# THE CLIMATE NEXUS

Senior military, intelligence and scientific officials in the US have issued a stark warning that climate change is a threat to America's national security and cannot be ignored, whatever the White House deniers may claim. **Matt Maynard** talks to the experts behind the report

## 'In South Africa there have been a lot of people saying the government could have made much better decisions'



Capetonians queue for water as supplies run low in the South African capital

### WATER CRISIS

Dr Colin Kelley was a signatory to the *Responsibility to Prepare* document and works for the US Centre for Climate and Security that produced it. In the final days before its publication, a dystopian story of imminent resource failure was emerging from South Africa.

'Day-Zero' – as the all-too-appropriate disaster movie name implied – described the day the Western Cape was going to run out of drinking water. Bath plugs were removed from hotels, food crop irrigation was cut by up to 80 per cent and the citizens of Cape Town reduced their water consumption to 50 litres a day. After 45 days of widespread solidarity by citizens, disaster was forestalled.

Yet the damage was done, with an estimated 50,000 seasonal harvest labourers out of work. House prices in the Western Cape fell and food prices are expected to rise. In the heat of this year's Day-Zero crisis, and amid wide-reaching corruption accusations, the country took the opportunity to topple the president, Jacob Zuma.

Dr Kelley is the author of influential research that describes links between the origins of the civil war in Syria and the record-breaking drought that preceded it and he keenly emphasises the point that water stress can be a crucial factor in political unrest. His research from 2008 in the Fertile Crescent describes how 'the slow and ineffective response of the Assad regime' was a factor in mobilising the rurally-displaced.

While Kelley is circumspect about extrapolating any firm conclusions from Syria to Cape Town, he does make the point there are some similarities between the two such as worsening drought and the pressures of rapidly rising populations. He also points out that

the political process in both circumstances extenuated the problems: 'In South Africa, there have been a lot of people saying the government could have made much better decisions.' Leading South African political scientist and internationally renowned water expert, Dr Anthony Turton, goes further and argues that Zuma clearly thought it was in his political interest to take advantage of the drought and cause as many problems as he could for the opposition-led Western Cape.

The links between drought and poor governance can flow both ways. For example, in California, the water shortages have actually been caused by poor governance. Water stress in California, Kelly argues, 'is more to do with water policy, not water shortages.'

The problems caused by climate-induced stresses and the inability of politicians to deal with such issues clearly affects governments around the world. While many would have thought the US has much greater resilience than developing nations to deal with such problems, the reality is more challenging. Just as South Africa allowed a process of the hollowing out of key institutions by a corrupt government taking advantage of a climate threat, it seems the deniers in the White House are encouraging a dismantling of government systems designed to protect the country from the impacts of a changing physical world.

### FOOD CONFLICTS

On 5 December 2014, an explosion ripped the side off a Vietnamese fishing boat in the Natuna Sea. The vessel had been illegally operating in Indonesian waters. Once the crew had been detained, it was dramatically destroyed by the nation's navy. Over the next few weeks,

**A**ccording to the Intergovernmental Panel on Climate Change (IPCC), 'human influence on the climate system is clear,' and a 'warming' trend in that system is 'unequivocal.' Credible scientists are no longer researching if climate change is happening. Instead, efforts have now turned towards mitigation and adaptation.

Yet governments such as the current US administration have made themselves outliers in the concerted global efforts to tackle this threat. President Trump's 'America First' nationalist rhetoric wavers at best between portraying climate change as an exaggerated and distant possibility; and at worst, a conspiracy theory designed to limit US growth. Key government positions have been filled by climate sceptics, most notably Environmental Protection Administrator Scott Pruitt.

There are, however, powerful forces now at work in the US that refuse to ignore the rumblings of a rapidly

warming planet. Military, national security, homeland security, intelligence and foreign policy experts from across the country refuse to accept a heads-buried-in-the-sand stance. *A Responsibility to Prepare* is the name of a report published by 54 signatories from the Climate and Security Advisory Group and endorsed by US Secretary of Defense James Mattis. Trump's own security officials are deeply concerned by his failure to address the 'significant and unprecedented national and homeland security risks posed by the changing climate.'

Rising sea levels plus increased frequency and intensity of storms have recently been returning to US shores. Even more alarming for the Climate and Security Advisory Group, is the effect these weather patterns will have on less economically and politically stable powers around the world. The report describes how climate change is bringing 'dramatic changes in food, water and energy availability.' Rising temperatures, changing rainfall patterns and unexpected weather events deplete drinking supplies, cause fish to migrate and destroy power infrastructure. Even though the full brunt is not yet being felt on its home shores, the report starkly suggests that failure by the US to properly understand the issues means such impacts will swiftly be incoming.



A near-empty dam in Cape Town was a stark visual symbol of the 'Day-Zero' issue



Indonesian fishers displaying their wares at market. The local fishing industry has been harmed by illegal incursions from nearby countries such as Vietnam and Malaysia

the Indonesian Minister for Fisheries and Maritime Affairs – Susi Pudjiastuti – created international waves by detonating dozens more boats, and impounding many more – including 22 Chinese vessels.

According to the IPCC, more than a billion people rely on fish as their main animal protein source. Cullen Hendrix works for the US Centre for Climate and Security, and shared expertise on the extreme lengths to which the Indonesian government has gone to protect its national food supply. ‘It’s not so much that Indonesian fishers or citizens are going hungry,’ Hendrix explains, ‘the issue is [that] Indonesian fishing interests are losing profits.’

Hendrix is conscious of how food price inflation, when passed onto citizens, quickly can transform into unrest. ‘One of the major drivers of the Arab Spring in 2010 and 2011,’ he says, was ‘prices and grievances related to food policy.’

Climate change is a motivating factor behind Pudjiastuti’s actions. Over the last 40 years, IPCC literature reviews have found strong evidence of changes in temperature, salinity, sea level, carbon, pH, oxygen and temperature in world oceans. Between 1971 and 2000, the strongest trends in warming have been found near the sea surface with a mean decadal change of 0.11°C.

‘Just as people may flee increasingly uninhabitable ecosystems,’ says Hendrix, ‘fish will seek to adapt to warming oceans by moving to new environs.’ Boats,



Susi Pudjiastuti addressing the 2017 Oceans Conference in New York

therefore, follow migrating fish across international borders, bringing them into Pudjiastuti’s sights. Further complications arise from rising sea level, Hendrix adds, ‘turning land into ocean and complicating the delineation of maritime boundaries.’

While Pudjiastuti’s fireworks have been applauded by environmental groups, the response seems out of tune with the international spirit of agreement that the United Nations Framework Convention on Climate Change hopes to promote through bilateral discussions. Need for much greater degrees of international collaboration is, in fact, strongly



A Malaysian fishing boat is destroyed by the Indonesian navy as part of a controversial crackdown on illegal fishing

expressed in the *Responsibility to Prepare* document, with a key focus on ‘supporting allied and partner nation resilience to climate change risks,’ (albeit only ‘in strategically significant regions’). Hendrix puts it rather more succinctly: ‘Any strategy that relies primarily on blowing things up militarises an issue that at root requires international coordination and cooperation.’

**ENERGY SECURITY**

On 9 October 2015, a data visualiser for the US Department of Energy named Daniel Wood created an online article called *How Climate Change Threatens*

**‘Any strategy that relies on blowing things up militarises an issue that requires international coordination and cooperation’**

*America’s Energy Infrastructure in Every Region* and uploaded it to Energy.gov. ‘We live in a rapidly changing world,’ it began, ‘the effects of climate change – such as heat waves, rising sea levels and more severe storms – are already being felt across the United States.’ The article was an explainer for a simultaneously published report – *Climate Change and the US Energy Sector*. The document had become a legal requirement after President Obama’s 2013 Executive Order 13653, tasking all government departments with explaining how they were preparing for a changing climate.

Wood had started work at the Department of Energy at the same time as the Executive Order, during the beginning of Obama’s second administration. ‘At that point, we started to shift into talking more directly about climate change,’ he says. ‘We really didn’t – as a country and as an Energy Department – talk about climate change directly until then.’ The online article Wood published in October 2015 was accompanied by his trademark-kaleidoscopic graphics. If the reader clicks on ‘Southern Great Plains – home to oil and gas production,’ information appears detailing ‘the growing threat from Atlantic hurricanes and sea level rise, (putting) important energy resources at risk from coastal flooding and wind damage.’

Meanwhile, a new election campaign was getting underway. As a Trump presidency became a reality, an extraordinary statement was signed by 50 of the Republican Party’s most senior national security officials. Donald Trump, it stated, would be a ‘dangerous president and would put at risk our national security and well-being.’ Once in office, and just one month before the start of hurricane season, Trump rescinded the Obama era order requiring government departments to prepare for climate change. The full force of the Energy Department’s prophetic words was unloaded by Hurricane Harvey at the Texan coast in August 2016.

Besides the lives and homes that Harvey destroyed, the hurricane shut down almost a quarter of US refining capacity and passed on an immediate three per cent price rise to US citizens at the petrol pump. Irma followed next in September, smashing through the southeastern states. Scientific evidence that warmer seas increase the intensity and frequency of tropical storms had been established by 1987. Yet when EPA administrator Scott Pruitt was asked if the 2016 storms were exacerbated by climate change, he prevaricated, stating that such early conclusions would be ‘very, very insensitive to this [sic] people in Florida.’

## Damage from Hurricane Harvey caused a quarter of US oil refining capacity to shut down



Floodwaters following Hurricane Harvey hit the streets of Texas in August 2016, damaging infrastructure (above) and causing problems at both governmental and personal levels (right)

Perhaps the most potent call to arms made by the Climate and Security Advisory Group is the very tangible threat from ‘more frequent and severe weather events... impacting critical infrastructure that military and national security organisations rely on.’

The 2017 documentary *Tidewater* communicated this with shots of the largest naval base in the world experiencing frequent flood water in Hampton Roads, Virginia. ‘The naysayers are jeopardising US national security,’ a voice says over images of waves pounding into a naval docking bay.

Interestingly, director Roger Sorkin deliberately didn’t use the words ‘climate change,’ ‘global warming,’ or ‘carbon’ in the film according to an interview with Yale University. By cutting flash-point language, Sorkin hoped to depoliticise the documentary, thereby engaging ‘conservative coastal communities’ as well as ‘viewers who tend to associate all things related to climate change, with liberalism.’

Yet while governments around the world are failing to protect their countries against climate change – other protective forces are at work. Market forces are gradually rendering coal obsolete, while renewable energy use is growing. The US military is preparing too: recognising the destabilising threat that climate change causes to foreign governments, as well as the domestic threat to its coastal installations. Public consciousness is perhaps the most powerful force in driving political change and, ‘even in this country,’ Kelley says of the US, ‘people are connecting climate change to extreme events.’

Nevertheless, in some developing countries, the interconnected relationship of key resources – sometimes known as the food-water-energy nexus – is already beginning to break down. Experts such as Turton in South Africa believe that keeping these three balls in the air is no longer manageable in South Africa. Instead, he argues, countries will need to resort to regionally supporting one another as only when such outward-looking thinking is applied to national policy, will governments secure water, fish and fuel for the future. ●

A slew of anti-climate, energy-focused policies followed: withdrawal from the Paris Climate Agreement; expansion of the Keystone Pipeline and review of the Clean Water Plan. Two years to the day that Wood’s article went to press, Pruitt announced that the 2015 Clean Power Plan to limit US CO<sub>2</sub> emissions, would be overturned.

Crucially, climate change was entirely absent from Trump’s National Security Strategy in December 2017, with 106 members of Congress urging him in a subsequent letter to ‘deal with this growing geopolitical threat,’ stating that his omission ‘discredits those who deal in scientific fact.’

Three months later in March 2018, the president fired his National Security Adviser HR McMaster. The landscape had been made clear: when climate concerns threatened the administration’s goals, the nation’s security would be left to suffer.

### NEXUS THINKING

Wood won’t be drawn on the failings of the administration to mitigate against climate change. Staff changes caused confusion and indecision in the five months he continued working under the Trump led-government – ‘we were just fighting to keep the lights on,’ he grants. But his reasons for subsequently leaving to work at an NGO, he insists, were not political.

The security community is equally forthright. Speaking on behalf of the Climate and Security Advisory Group this April, Colonel Wilkerson, described climate deniers within his own Republican party as Luddites, emphasising that climate change will be restored as a national security issue ‘as soon as someone with some sense comes into the White House.’ Appealing for support from Trump’s political base, the *Responsibility to Prepare* report states how action now will ‘reduce the enormous... financial cost of future climate change.’

