

## Nuclear weapons and climate change: two existential threats

Nuclear annihilation and climate catastrophe are the two biggest threats to human existence. This has been confirmed by the atomic scientists that maintain the Doomsday Clock: this year its hands were set at 100 seconds to midnight, the closest it has been since its foundation in 1947. They cite the potency of the dual threats of nuclear weapons and climate change as the reasons.

The threat of climate change, which has received an increased level of attention in recent years, is usually understood as a separate issue to that of nuclear disarmament. But rather than only tackling these issues in isolation, the threat of nuclear war and the threat of climate change share a symbiotic relationship as each threat exacerbates the other in a variety of ways.

CND campaigns for robust action on climate change to be coupled with nuclear disarmament and believe that anti-nuclear activists and climate change activists are natural allies.

### What is climate change?

Among scientists there is a consensus that human activity has increased carbon dioxide emissions, resulting in increased global temperatures and a change in our climate. This has resulted in an increase in extreme weather events such as floods, hurricanes, and storms and has led to significant changes such as the melting of the polar ice caps. It is an ongoing and increasing problem.

These changes have already had a devastating effect on millions of lives and will continue to affect the Earth's biodiversity, sea levels and agriculture, all with hugely detrimental effects on people's lives and livelihoods. In the past year we have witnessed previously unthinkable weather events such as wildfires in the Arctic, in addition to those in Australia, estimated to have killed up to one billion animals, as well as flooding in rural parts of England and Wales.

Despite the grave nature of this threat we are woefully underprepared for what is to come. A report released last year by the Global Commission on Adaption (GCA), which took contributions from 18 nations including the UK, described the preparations made to deal with climate change's effects as 'gravely insufficient'. It declared that further inaction would result in poverty, water shortages and soaring levels of migration.<sup>1</sup> By 2050, the costs of dealing with the problems created by climate change will reach a trillion dollars a year.

The scale of the threat we face is not unknown. In 2018, the UN warned that we had only 12 years to

stop the human and planetary misery that would be unleashed by a rise in global temperatures beyond 1.5C. Despite this, we consistently see governments across the globe failing to take meaningful action.

### Climate change and nuclear conflict

Across the world, the devastating effects of climate change are making the onset of a nuclear conflict more likely. Climate change is affecting access to resources such as land, food and clean water across the globe.

This is particularly significant in places such as Kashmir, which has long been a site of tension between two nuclear-armed states, India and Pakistan, and where a new source of disagreement has occurred over the water from the Himalayas, which passes through Kashmir on its way to Pakistan. In response to an attack on one of its army bases in 2016, the Indian government announced plans to accelerate the construction of dams in Kashmir, action which Pakistan views as a violation of the bilateral Indus Water Treaty and an act of war. Conflict has previously broken out between India and Pakistan on three occasions since the 1948 partition, and in recent years both countries have threatened to use nuclear weapons in retaliation to the other. With extreme weather such as severe drought only set to increase with the onset of climate breakdown, the situation looks set to become increasingly precarious as the two states seemingly move closer to a potential nuclear conflict which would have dire consequences for millions of people on the subcontinent and beyond.

Rising tensions between India and Pakistan are not the only example of nuclear-armed states being pushed closer to conflict by climate change. India has also reportedly come into competition with China over both countries' attempts to dominate the water resources of the Brahmaputra, a vast river linking the Himalayas to the Bay of Bengal. There is also the question of the Arctic where geopolitical tensions and the possibility of conflict are being enabled by the melting of the ice caps. If, as predicted, the ice caps largely disappear in summertime and become significantly reduced in winter, access to approximately 30% of the world's remaining undiscovered natural gas will be up for grabs. The Arctic also offers faster shipping routes into Europe. Neither of these opportunities have gone unnoticed by the nuclear states with both Russia and the United States rehabilitating old cold war bases within reach of the Arctic Circle.

Across the globe, conflict over natural resources will increase pressure on governments to deliver for their citizens, with a risk of state overthrow if they are unable to do so. Already we are seeing rogue actors seizing on this opportunity to gain legitimacy as states in the most affected areas lose their ability to meet their citizens' expectations. Whether it is inhabitants of the Lake Chad region forced to become reliant on Boko Haram due to climate change or the water crisis in the Horn of Africa worsening existing issues of inequality, societal tensions and weakness of state institutions, climate change is exacerbating conflict across the globe. These are developments which will only accelerate in the coming years and to which nuclear-armed states are by no means immune.

### **Nuclear war and climate devastation**

Previous studies have found that a limited nuclear outbreak would wreak havoc on global temperatures and food supply chains, with more recent studies offering even graver warnings.

A 2014 academic study used computer modelling to describe how, in the event of a 'limited regional war', five megatons of black carbon would instantly enter the atmosphere, rainfall would drop, temperatures would instantly fall, the ozone layer would thin and the frost-free growing period for crops would shorten by up to 40 days.<sup>2</sup>

Moreover, a 2018 study from the international Physicians for the Prevention of Nuclear War (IPPNW) found that a regional nuclear war in South Asia would have such a catastrophic effect on the climate, and therefore agricultural production, that it would result in a global famine which threatened up to two billion people.<sup>3</sup> This would also heighten the potential of other threats such as an epidemic which would, in turn, endanger up to 500 million more lives.

### **The cost of inaction**

Every penny of the £205 billion that the UK government will spend on replacing Trident is money that should be spent on combating climate change. For instance, that money could pay to install solar panels in every home or build enough wind turbines to power all households in the UK.

Back in 2015, when the UK government published its own National Security Strategy and Strategic Defence and Security Review, nuclear war was only considered a tier two threat whilst major natural hazards were listed as a tier one threat, with the latter increasing each year as a result of climate change.

Inaction has its own economic cost in both the short and long term. As we saw in 2019, the floods across England and Wales caused huge disruption to the lives of thousands of people and councils have had to spend vast amounts on shoring up flood defences. Part of the reason the UK found itself so woefully underprepared for the floods is linked to the fact that the UK's environment agency, tasked with preparing for such events, has seen its budget cut by 50% since 2010. While the government has now pledged to double the amount it invests in the flood defence programme in England to £5.2 billion over the next six years, this is significantly less than the cost of running Trident over the same period.

Longer term, the costs of climate change will be monumental. Extreme weather will become a more regular occurrence with the government having to spend vast amounts on rebuilding. There are already up to 40 million people worldwide who have been forced to leave their home and seek refuge elsewhere as a result of climate change and further inaction will only see this number, and the resulting pressure on those states still habitable, increase.

These calculations don't even begin to consider the monetary cost, in addition to the vast human cost, that would be required in the aftermath of the outbreak of a nuclear conflict to rebuild any semblance of a society for those who might survive.

### **Nuclear's carbon footprint**

Trident uses massive energy and resources in research, production, operation, dismantling and eventual waste storage, never mind the environmental catastrophe that would be created if it was ever deployed. This is in addition to the environmental devastation wreaked by decades of uranium mining, nuclear testing and nuclear waste dumping.

A particularly disturbing example of the intersection between climate change and nuclear development can be found in the Marshall Islands. On Runit Island there is a Dome – known locally as The Tomb – containing more than 3.1 million cubic feet of US-produced radioactive soil and debris, including lethal amounts of plutonium which will soon be submerged by rising sea levels, releasing radioactive waste into the ocean.

Consecutive British governments have also struggled with the question of nuclear waste, often avoiding public enquiries with Special Development Orders and using heavy police responses against ordinary members of the public opposed to its plans. The opposition is unsurprising as plans, such as those revealed by files recently released from the National Archive, showed that the UK government had planned to dump the radioactive waste of 22 nuclear submarines in the sea off North West Scotland.

## Shared solutions

The shared relationship between nuclear weapons and climate change also means that they have shared solutions. Calls for action on climate change should be coupled with calls for nuclear disarmament, we should demand that Britain not only become a world-leader in tackling climate change, but also on the disarming of nuclear weapons.

The £205 billion saved on Trident replacement could help fund Britain's transition to carbon neutrality by 2050, or sooner. The government could use the money to embark on an ambitious Green New Deal plan, enabling a state-led rapid response to the threat of climate change and creating a generation of jobs in renewable industries, insulating our homes, upgrading public transport and restoring green spaces.

Part of that money would allow the government to help re-train the highly skilled engineers and technicians currently working on

Britain's nuclear weapons system, ensuring their skills can be used to guarantee the future of our planet.

It would also allow Britain to set an example to nuclear-armed states across the world, demonstrating how the vast resources freed up by divestment from nuclear weapons can be used in the fight against climate change, helping ensure a future free from the dual existential threats of climate catastrophe and nuclear extinction.

CND is proud to be a part of the movement that is rising up to demand action on climate change. We are part of XR Peace and support other peaceful campaigners including the school strikers. We believe that properly understanding the relationship between the looming threats of climate breakdown and the potential outbreak of nuclear conflict is essential to peace building efforts in the twenty-first century.

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- 1 'Adapt now: a global call for leadership on climate resilience', 2019, [https://cdn.gca.org/assets/2019-09/GlobalCommission\\_Report\\_FINAL.pdf](https://cdn.gca.org/assets/2019-09/GlobalCommission_Report_FINAL.pdf)
  - 2 'Multidecadal global cooling and unprecedented ozone loss following a regional nuclear conflict', Mills et al, 2014 <https://agupubs.onlinelibrary.wiley.com/doi/full/10.1002/2013EF000205>
  - 3 'Nuclear Famine: Two Billion People at Risk?', 2018, <https://www.psr.org/wp-content/uploads/2018/04/two-billion-at-risk.pdf>

