

World 'gravely' unprepared for effects of climate crisis – report

Trillions of dollars needed to avoid 'climate apartheid' but this is less than cost of inaction

Damian Carrington *Environment editor*

@dpcarrington

Tue 10 Sep 2019 01.01 BST



Massive wildfires such as those in Bolivia have been mentioned as evidence that the climate crisis is here. Photograph: David Mercado/Reuters

The world's readiness for the inevitable effects of the climate crisis is "gravely insufficient", according to a report from global leaders.

This lack of preparedness will result in poverty, water shortages and levels of migration soaring, with an "irrefutable toll on human life", the report warns.

Trillion-dollar investment is needed to **avert "climate apartheid"**, where the rich escape the effects and the poor do not, but this investment is far smaller than the eventual cost of doing nothing.

The study says the greatest obstacle is not money but a lack of "political leadership that shakes people out of their collective slumber". A "revolution" is needed in how the dangers of global heating are understood and planned for,

and solutions are funded.

The report has been produced by the **Global Commission on Adaptation** (GCA), convened by 18 nations including the UK. It has contributions from the former UN secretary general Ban Ki-moon, the Microsoft founder, Bill Gates, environment ministers from China, India and Canada, the heads of the World Bank and the UN climate and environment divisions, and others.

Among the most urgent actions recommended are early-warning systems of impending disasters, developing crops that can withstand droughts and restoring mangrove swamps to protect coastlines, while other measures include painting roofs of homes white to reduce heatwave temperatures.

In the foreword to the report, Ban, Gates and Kristalina Georgieva, the World Bank chief executive, write: “The climate crisis is here, now: massive wildfires ravage fragile habitats, city taps run dry, droughts scorch the land and massive floods destroy people’s homes and livelihoods. So far the response has been gravely insufficient.”

Ban said: “I am really concerned about the lack of vision of political leaders. They are much more interested in getting elected and re-elected, and climate issues are not in their priorities. We are seeing this in the US with President Trump.”

The report says severe effects are now inevitable and estimates that unless precautions are taken, 100 million more people could be driven into poverty by 2030. It says the number of people short of water each year will jump by 1.4 billion to 5 billion, causing unprecedented competition for water, fuelling conflict and migration. On the coasts, rising sea levels and storms will drive hundreds of millions from their homes, with costs of \$1tn (£810bn) a year by 2050.

Patrick Verkooijen, the chief executive of the Global Center on Adaptation, said: “What we truly see is the risk of a climate apartheid, where the wealthy pay to escape and the rest are left to suffer. That is a very profound moral injustice.”

But the moral imperative alone will not drive change, he said, and the report also makes an economic case.

“It is a nation’s self-interest to invest in adaptation,” Verkooijen said. The report estimates spending \$1.8tn by 2030 in five key areas could yield \$7.1tn in

net benefits, by avoiding damages and increasing economic growth.

The chair of the UK's Environment Agency, Emma Howard Boyd, is a member of the GCA. The agency has warned England could run short of water **within 25 years** and increased coastal and river flooding may **force some towns** to be abandoned.



Children paddle a raft through waters in Jakarta, Indonesia, where sea levels are rapidly rising. Photograph: Ed Wray/Getty Images

In July, the UK government's official advisers said they were shocked at the **lack of proper plans** to protect people from the effects of the climate crisis.

Bob Ward, the policy director at the Grantham Research Institute on Climate Change and the Environment at the London School of Economics, said: "As one of the governments that commissioned this important GCA report, the UK must heed its conclusions about the large economic benefits from adapting to those impacts of climate change that cannot now be avoided.

"This summer has shown that the UK is not adapted to the changing climate of this century, with heavier rainfall and more frequent and intense heatwaves. Successive environment ministers have failed to give this issue the attention it needs, leading to greater damage to lives and livelihoods."

Cutting carbon emissions is vital, says the GCA report, but this has received nearly 20 times more funding than adaptation in recent years. Climate effects must be factored into decisions by those who make choices about the future, it

says, such as business leaders. Verkooijen said nations should follow France in making it compulsory for large companies to report the climate risks to their businesses.

Coping with the climate storm

The GCA report focuses on several areas of adaptation:

Early warning systems: Just 24 hours' warning of a coming storm or heatwave can cut the ensuing damage by 30%, saving lives and protecting assets worth at least 10 times the cost of the alert system. In Bangladesh, such systems, plus shelters and coastal protection, have already saved hundreds of thousands of lives since the **Bhola cyclone in 1970** killed at least 300,000 people.

Climate-ready infrastructure: Such measures can add 3% to the upfront costs but save \$4 for every \$1 spent. Flood protection is key and Shanghai, and other **Chinese "sponge cities"** are deploying porous pavements, rooftop gardens and trees in parks to soak up water from downpours. Relatively simple measures can also be effective, such as painting roofs with reflective white paint. In the Indian city of Ahmedabad, this has cut temperatures in the rooms below by 5C.

Mangrove protection: These coastal forests buffer storms, protecting 18 million people and preventing \$80bn a year in flood damage. They also provide nurseries for fish and tourist attractions worth billions. But construction, pollution and global heating have destroyed many mangrove forests, from **Australia to Mexico**. The GCA says the benefits of mangrove preservation and restoration are up to 10 times the cost.