

Briefing for journalists:

Myth-busting in energy and climate change

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Scope:

This briefing looks at some of the myths seen most commonly in energy and climate change, and sets out the facts on each.

Context:

"It often happens that if a lie be believed only for an hour, it has done its work, and there is no farther occasion for it. Falsehood flies, and truth comes limping after it."

JONATHAN SWIFT, SATIRIST, AUTHOR AND JOURNALIST, 1710

Misinformation, disinformation, distortion, lying: whatever you call it, discussion of climate change and the clean energy transition is full of half-truths and myths. Partly this is because the subjects are sometimes complex and nuanced, leading to misunderstandings: and partly because some people have a vested interest in distorting the facts.

Journalists can fall prey to misinformation. Often we have only a short time to work on a report; the underlying science is hard to understand; research using the internet can produce falsehoods; it can be hard to find an unbiased expert; and vested interests (including, in some cases, the owner of the media outlet) can steer our reporting away from the facts. Obviously, the interests of society lie in journalism not promoting any myths, false beliefs, misinformation or lies. In the long term, getting the facts right is in the interests of the media outlet and the journalist too, because that is how to earn trust.

In this briefing, we detail some commonly-held myths about climate change and the clean energy transition and contrast them with the reality.

1 | MYTH:

CLIMATE CHANGE IS NATURAL, NOT CAUSED BY HUMANITY

REALITY:

Throughout Earth's history, the climate has always changed. But [it is certain](#) that the climate change we are seeing now is driven primarily by humanity's emissions of greenhouse gases into the atmosphere. In fact, science indicates that human influence [is responsible for all the climate change we are seeing.](#)

There are two main lines of evidence for this: 1) every natural factor that affects the climate, such as changes in the Sun's output or volcanic eruptions, has far too small an effect to be changing the climate at this scale and speed – so these natural processes cannot explain modern-day climate warming; and 2) computer models show that only greenhouse gases and other human influences can explain the changes we are experiencing.

2 | MYTH:

THERE IS NOTHING WE CAN DO TO STOP CLIMATE CHANGE, WE SHOULD JUST ADAPT TO ITS IMPACTS

REALITY:

The climate is changing far faster – by some measures, [100 times faster](#) – than at any time in Earth's history. This makes it far harder for both nature and human societies to adapt.

There is already a growing list of impacts that surpass what scientists term '[limits to adaptation](#).' This means either that there is no way to adapt – for example, no way to protect an entire small island nation from sea level rise or protect the entire global ocean from acidification – or that doing so would be hugely expensive and disrupting, beyond a society's capacity to pay for it. The further that climate change progresses, the more adaptation limits will be exceeded.

Meanwhile, although global greenhouse gas emissions continue to rise, [they are doing so more slowly](#) than in recent decades – which is evidence that clean energy and climate policies are working. There are more examples of this. In the first half of 2022, the growth in renewable generation [accounted for all of the global increase](#) in electricity demand. The growth in electric vehicles [is already cutting global oil demand](#) by about 1.5 million barrels per day (approximately 1.5%). These trends indicate that stopping, or at least slowing, climate change is feasible.

3 | MYTH:

CLIMATE CHANGE WILL BENEFIT COLD COUNTRIES

REALITY:

There are likely to be some benefits to cold countries such as Russia and Canada. It may, for example, [become possible to grow crops further north](#), while mineral resource exploitation and ocean trade could open up.

However, these advantages are restricted to a few countries and are counterbalanced by local and international negative impacts. For example, infrastructure built on permafrost is at greater risk of collapse. Mountain snow disappears, potentially affecting water supplies and tourism. Ecosystems, including crops, will be disrupted, and the forest fire risk grows. Impacts in other parts of the world will affect imports and migration patterns.

4 | MYTH:

YOU CAN'T SAY WHETHER CLIMATE CHANGE CAUSED ANY PARTICULAR EXTREME WEATHER EVENT

REALITY:

To avoid confusion, this should not be framed around the word 'cause.'

Since 2003 scientists have routinely studied individual extreme weather events including heatwaves, droughts, storms, cold spells and floods. The question they usually ask is whether climate change made the event more likely to occur, or more intense. The technique is called event attribution, and the method uses a combination of historical records and computer modelling.

[Hundreds of extreme weather events](#) have so far been linked to climate change. Some examples from 2022: climate change made the extreme heat seen in parts of South America in December [about 60 times more likely](#) to occur; made the summer drought in parts of Europe and China [about 4 times more likely](#); and [increased the intensity of rain](#) in South Africa in April by 5-8%. The further climate change progresses, the more influence it will have on extreme weather events.

5 | MYTH:

GEORGIA HASN'T CAUSED CLIMATE CHANGE, SO WHY ARE WE BEING FORCED TO REDUCE EMISSIONS AND CHANGE OUR ENERGY SYSTEM?

REALITY:

Georgia [is responsible for a tiny fraction](#) of global greenhouse gas emissions. [On a per-person basis](#) Georgians emit the equivalent of about 4.5 tonnes of CO2 per year. By contrast the figures are 18 tonnes for Russia and the US, about 9 tonnes for China and several EU countries such as Germany, Finland and Belgium (although Sweden is almost level with Georgia at 4.6 tonnes), 8 tonnes for Azerbaijan and 6 tonnes for Turkey. Georgians emit more than Armenians (3 tonnes per person) and people in most developing countries, such as India at 2.5 tonnes.

In United Nations climate negotiations, countries are not forced to adopt any level of emission cuts – each country decides its own commitment, known as a [Nationally Determined Contribution \(NDC\)](#).

There are now many reasons for moving to a clean energy system in addition to climate change. These include lower and more stable energy costs, less air pollution, and less reliance on fossil fuel imports from aggressive or unstable petrostates. These co-benefits are why [many countries have set net zero emission targets](#) (for example, 2050 for the EU and US, 2060 for China, 2070 for India) and are investing heavily in clean energy. For example, [last year China's installation of renewables](#) increased by 25%, while sales of electric vehicles doubled to six million.

6 | MYTH:

RENEWABLE ENERGY IS TOO EXPENSIVE

REALITY:

Georgia's electricity system is unusual in having so much hydropower (up to 75% of generation). [Only 16 countries globally](#), and in Europe only two (Norway and Albania), generate a higher percentage using hydro. This makes discussion of 'the renewable energy transition' in Georgia different from in most other countries. Globally, the main renewable technologies are wind and solar, which now produce over 10% of electricity globally; and the main transition is from coal- and gas-powered generation to wind and solar.

While the costs of hydro have remained stable over time, [the price](#) of wind power has roughly halved in a decade, and the cost of solar has fallen by 85%. This means that in virtually every country, [wind and solar are now the cheapest forms of energy](#). Some countries with a large amount of wind and solar will also need to invest in energy storage and other ways to even out supply and demand, as wind and solar do not generate all the time. But storage costs are also falling rapidly (85% in a decade).

