

Paris Agreement hampered by inconsistent pledges, research finds

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Some countries' Paris Climate Agreement pledges may not be as ambitious as they appear, a new study has found.

The Paris Agreement takes a bottom-up approach to tackling [climate change](#), with countries submitting pledges in the form of nationally

determined contributions (NDCs) to greenhouse emissions. However, writing today in *Environmental Research Letters*, researchers from the Autonomous University of Barcelona (UAB), Spain, reveal a lack of consistency and transparency between the various commitments.

Lead author Lewis King, from UAB, said: "The Paris Climate Agreement was a step in the right direction for international climate policy. But in its current form, it is at best inadequate and at worst grossly ineffective.

"Our study highlights significant issues around transparency and consistency in the agreement's pledges, which may be a contributory factor towards the lack of ambition in the pledges from some parties."

Co-author Professor Jeroen van den Bergh explained: "The sum of the agreement's national pledges on greenhouse gas emission mitigation—in the form of NDCs—falls short of meeting the agreement's 2°C target."

To shed light on the reasons behind this, the researchers analysed the different country-level commitments by categorising and normalising them to make them comparable. Their four categories were:

- Absolute emission reduction targets—absolute emission reductions for a target year in percentage terms relative to a historic base year. The base year is set by the country and ranges from 1990 to 2014, while the target year is typically 2030, and in a few cases 2025.
- 'Business as usual' (BAU) reduction—a percentage reduction in emissions relative to a 'business as usual' scenario, typically to 2030. It is defined by each country itself, causing a large variance in emissions growth among scenarios.
- Emission intensity reductions—a reduction in emission intensity per GDP relative to a historic base year.

- Projects absent of GHG-emission targets—NDCs that do not include an explicit greenhouse gas emission target.

The researchers assessed these categories by adding the dimensions of geographic region and emission intensity per capita.

Mr King said: "Our normalisation of the pledges effectively converts them all to the absolute emission reduction target format, but indicating actual emission change—whether positive or negative—compared with a consistent base year.

"We found that authentic absolute reduction pledges had the highest ambition in terms of tangible emissions reduction. By contrast, pledges in the other three categories tend to produce low ambitions with significant emissions increases of 29-53 per cent at a global level.

"Significantly, we found that Northern America and the EU were the only regions aiming for absolute reductions in emissions. In the Middle East and North Africa, and South Asia, substantial increases are expected."

Professor van de Bergh said: "The current format of the pledges mean it's difficult to accurately assess and compare what the pledges mean in actual emissions terms.

"For example, Russia, India and Pakistan all frame their NDCs in terms of percentage reductions; Russia relative to a base year, India relative to emissions per GDP and Pakistan relative to a BAU scenario. However, after the normalisation, the pledges result in substantial percentage increases in emissions by 2030. Not only does this make the associated pledges difficult to interpret and compare to other pledges without detailed analysis, but may produce a psychological effect of reducing ambition level due to framing the pledge as a percentage reduction even

though emissions actually increase."

Mr King added: "Society has the right to be able to clearly understand and compare climate change commitments by countries, including whether they are fair, ambitious and add up to international climate goals. We also know that providing consistent and easily comparable information about national climate goals helps with public acceptance.

"The current lack of transparency and consistency will hinder the NDC process. To move forward, we suggest the principles of transparency and consistency from the TACCC framework are extended to the framing of the NDCs themselves. This would be easy to achieve, by having countries convert their pledges into clear [emission](#) targets relative to the most recent available base year, inclusive of all significant gases and sectors.

"Not only can this help produce targets of greater ambition that are more open to external scrutiny, but it also will assist in improving effectiveness through minimising counterproductive systemic effects."

More information: Lewis C King et al, Normalisation of Paris agreement NDCs to enhance transparency and ambition, *Environmental Research Letters* (2019). [DOI: 10.1088/1748-9326/ab1146](https://doi.org/10.1088/1748-9326/ab1146)

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