

# Sub-national 'climate clubs' could offer key to combating climate change

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'Climate clubs' offering membership for sub-national states, in addition to just countries, could speed up progress towards a globally-harmonised climate change policy, which in turn offers a way to achieve stronger

climate policies in all countries.

This is the key finding of a new study by researchers from the Institute of Environmental Science and Technology of the Autonomous University of Barcelona (UAB), recently published in the open-access journal *Environmental Research Letters*.

ICTA-UAB researcher and first author Nick Martin explained that the United Nations Framework Convention on Climate Change (UNFCCC) is the default facilitator of global negotiations on climate issues. However, due to the logistic limitations of large groups and involvement being essentially voluntary in nature, progress has been slow. Its two most ambitious initiatives—the defunct Kyoto Protocol and the current Paris Agreement—both relied on voluntary actions and were not legally binding. As a result, such climate policies lack global harmonisation and therefore are bound to remain weak.

They consider that it is important, therefore, to think about alternatives. A 'climate [club](#)' of countries has been suggested as a way to move towards a global agreement that enforces national climate policies through harmonisation.

"We take this idea a step further in our study. Extending a club to comprise sub-national states or provinces that want to implement their own, more ambitious climate policies could allow the inclusion of considerable contributions from important emitters like the US. Given the US intention to withdraw from the Paris Agreement, this could have a significant impact on overall US emissions by allowing more motivated states to take part."

The 'climate club' model is based on a uniform [policy](#)—most likely in the form of carbon pricing. The club would then offer exclusive trade benefits or club goods to members. It could also attract further

membership by imposing penalties on imports from non-members, to limit competition from unregulated sources.

The study used four measures to predict the likelihood of involvement for governments at multiple levels. These included the level of carbon independence, public opinion regarding [climate change](#), current government policy, and level of membership in existing climate-related coalitions.

Dr. Jeroen van den Bergh, ICREA Research Professor at ICTA-UAB and second author, explained that, taken together, these measures provide a good indication of a government's level of ambition regarding climate policy, and therefore its potential willingness to join an international 'climate club'.

"We initially identified a group of nine countries likely to be most receptive to club membership. Although the US and China were not among this group, our findings suggest that the EU (taken as a single country for these purposes) is the preferred initiator of the club, given its high emissions, high GDP and long history of leadership on climate change mitigation". What's more, they believe that China could well be convinced to join a club given its recent sharp rise in concern about local and global emissions.

Considering the current climate policies of the Trump administration, the US would seem highly unlikely to take part in initiatives of this kind for the foreseeable future. However, as US states have quite high levels of decision making at the local level and many control significant economies in their own right, they also evaluated the likelihoods of individual states to consider joining a 'climate club'.

They found that 10 of the 50 states were 'very likely' to consider club membership, with a further 13 'moderately likely' to do so. Jointly , these

23 states represent 36 per cent of the US's national emissions and 56.3 per cent of its GDP.

Less motivated US states could still be persuaded to join through strong export dependencies with four key partners—the EU, Canada, Mexico and China. In fact, 10 of the remaining 'not likely' were found to have strong trade ties to these countries. So, a club containing these four trading partners could be capable of boosting club membership significantly via trade influences. In all, the analysis suggests that US states representing a total of 69.9 per cent of emissions and 77.7 per cent of total GDP may be amenable to club membership via either of these mechanisms."

Dr. van den Bergh concluded: "we recognise the political and legal hurdles climate clubs could face, but considering the limitations of the Paris Agreement and the urgency of implementing effective [climate](#) action, we believe the time is ripe for debating daring solutions."

**More information:** Nick Martin et al, A multi-level climate club with national and sub-national members: theory and application to US states, *Environmental Research Letters* (2019). [DOI: 10.1088/1748-9326/ab5045](#)

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