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## Let's be SMART about climate goals

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Although largely scientifically robust, there are elements within the politically-negotiated Paris Agreement where defined methods deviate from the best available assessment of what is physically required to achieve its set goals. Fundamentally, one such deviation is about the net zero greenhouse gas (GHG) emissions goal: current interpretations and applications thereof in nationally determined contributions deviate from what is actually required to halt human-induced global warming.

Here I show that, while attempting to be comprehensive, most of the nationally declared climate goals are unspecific if not misleading, do not actually deliver on temperature stabilisation and have a problematic treatment of future carbon removal (CDR) expectations. On the one hand, the net zero CO<sub>2</sub>-eq goals overemphasise the need for CDR deployment to reach climate targets, since net-negative CO<sub>2</sub> emissions are required to compensate for non-CO<sub>2</sub> GHGs. On the other hand, accounting for natural sinks as CDR within national net-zero goals overestimates current and future CDR potentials and mitigation actions, and will not actually deliver anthropogenic net zero CO<sub>2</sub>.

I accordingly propose to re-orient national climate action towards Specific, Measurable, Achievable, Relevant and Time-bound (SMART) goals, such as a net zero fossil fuel CO<sub>2</sub> emissions target by mid-century.