

# Beyond 2015 and the Paris Agreement: Projecting Future Global Warming & Information Conflicts

## *Carbon Budgets: A Decision-making Aid or the Decision Endpoint?*

[Dr Ted Christie](#), 27 September 2017



### Disclosure Statement

*Ted Christie does not work for, consult to, own shares in or receive funding from any company or organisation that would benefit from this article, and has no relevant Carbon*

**TAGS:** Carbon budgets; global temperature rise; science; models; uncertainty; decision-making; MIT; Nature Geoscience; Carbon Brief

The ***carbon budget concept*** has been described as “*a brilliant way to illustrate the importance of zero emissions, the need for rapid mitigation, and to compare different temperature targets. We need it for that*”.

“*[But] one thing this paper [Nature Geoscience] has convinced me, is that the carbon budget concept is just simply too uncertain to be of any practical use in policy*”.

## SUMMARY

1.0 Contrary to a long-held misconception, science does not generate exact knowledge with logical certainty. The option taken by climate science, in this regard, is to project findings on future warming and cumulative CO<sub>2</sub> emissions at defined levels of probability for achieving the temperature goals of the Paris Agreement. It is also relevant that the Paris Agreement does not impose an obligation on UNFCCC Parties to be bound by the findings arising from the IPCC scientific database.

2.0 Against the background of these features, climate science should adopt the approach taken for environmental management in circumstances when uncertainty exists in the accuracy of future projections. That is, modelling studies e.g. *carbon budgets and global temperature rise*, should be an aid for informed decision-making by policy-makers, not the decision end-point.

3.0 The information conflicts that have arisen for research on carbon budgets and global temperature rise could be offset using a [\*\*data mediation using a scientific round-table\*\*](#). The round-table would be convened by the *Task Force on National Greenhouse Gas Inventories*. The Task Force is responsible for assessing and developing inventory methods and practices which are scientifically sound and relevant for all countries.

*The members of the round-table would be leaders of international modelling groups representing a broad spectrum of global climate interests. The outcome would be to agree, by consensus, on the accepted methodology – including all underlying assumptions – as well as the relevant and reliable scientific evidence to be applied; all in accord with the standards and criteria of science.*

4.0 The common ground between the *MIT (2017) Global Temperature Rise study* and the *Nature Geoscience (2017) Carbon Budget study* on future action for global warming illustrates a significant element for informed decision-making. The two research approaches for studying a common climate change goal are essential complements.

*Where common ground exists between these two different approaches, it increases the power of science and so the weight given to the findings for policy.*

5.0 To achieve its long-term temperature goal, Article 4 of the Paris Agreement requires, amongst other things, for emission reductions to be in accordance with “*best available science*”, and on the basis of “*equity*”, and in the context of “*sustainable development*” and efforts to “*eradicate poverty*”.

*Future carbon budgets need to integrate equity and sustainable development in the model’s framework. They are key elements for climate policy and ensure decisions lead to viable outcomes securing as much available value as possible.*

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