

Reclaiming: 0°C as a target for global warming

Biology educators are well aware of the enormous and harmful impact that humanity is currently having on our planet. This manifests itself in a myriad of ways, including loss of biodiversity (with a terrifying increase over background rates of species extinctions) and substantial and rapid climate change.

While, encouragingly, there are an increasing number of efforts to ameliorate these human-caused impacts on the environment – one thinks of the way that limiting global warming to an average of 1.5°C has caught on in the public imagination – it remains the case that things, at present, are getting worse rather than better.

With this in mind, I propose a new target for global warming: 0°C over long-term historical levels, i.e., compared to the average global temperature in the 1830s (Abram et al. 2016). I am well aware that this may (initially) strike even supportive biology educators as unrealistic but let me put forward five arguments that favour such a target.

1. While global warming is not, of course, the only important manifestation of anthropogenic climate change (others include an increase in extreme weather events, ocean acidification, and sea level rises), let alone of humanity's impact on the natural environment, the phrase 'global warming' is the one that resonates most with the general public. Accordingly, a target for global warming makes particular sense.
2. The present widely-agreed target of 1.5°C is ambitious but nevertheless implicitly accepts permanent damage to the Earth's ecosystems and to the lives of many people. The Intergovernmental Panel on Climate Change (IPCC) in 2018 predicted that such a temperature rise would lead to 14% of the world's population being exposed to severe heat at least once every five years, to a sea level rise of 40 cm by 2100, and to a further decline in coral reefs of between 70% and 90% (Levin 2018).
3. The experience of rewilding, in which degraded environments, including even intensively farmed agricultural land, are returned to nature has shown how such bold initiatives can galvanise public support. In, for example, my own country, the UK, rewilding projects have taken off and led to the restoration of farmland and the reintroduction of such native species as pine martens (*Martes martes*) and beavers (*Castor fiber*). Such initiatives have received great public support and been a source of considerable local pride (e.g., Greaves 2021).
4. There is a danger that if even we continue at the present extent of global warming for long, there may be unexpected positive feedback loops, both resulting from and leading to such deleterious events as further melting of permafrost, loss of Antarctic ice shelves, and so forth. Every year that we spend with any global warming above long-term historical levels increases the chance of near irreversible changes.

5. This target can be seen as a ‘realistic utopia’ in the language of Rawls (1993). As Rawls puts it “By showing how the social world may realize the features of a realistic utopia ... political philosophy provides a long-term goal of political endeavor, and in working toward it gives meaning to what we can do today” (p. 128).

The target of 0°C global warming is therefore meant to inspire. It is not a SMART (Specific, Measurable, Achievable, Relevant, and Time-Bound) objective, though it is specific, measurable and relevant. Time will tell whether it is achievable. At present it is aspirational, akin to striving for a world where justice and peace prevail, and a target around which our teaching, and our students’ aspirations, can coalesce.

An ambitious target need not indicate the route by which it will be met. I am not calling for the immediate end of fossil fuel use, nor for all of us to become vegan, nor for a reduction in the number of children people have. Such measures would, of course, go a long way towards helping the goal of 0°C global warming to be met, but there are many ways in which global warming might be reversed, some of them hi-tech, some low-tech, but all requiring the exercise of political will at a number of levels.

I have also suggested that the word ‘reclimating’ be used in connection with this target. ‘Reclimating’ is something of a neologism. It is meant, of course, to echo ‘rewilding’. Sometimes a new word can help focus thought, and action.

Finally, I acknowledge that even if achieved, 0°C global warming will not solve every environmental problem. While it will help reduce anthropogenic extinction rates, it will not halt them. And so long as humanity’s use of the natural environment is unsustainable, the pressures on it will increase. Nevertheless, all political movements have to start somewhere, and this target has the potential to be transformative.

Disclosure statement

No potential conflict of interest was reported by the author.

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