# Setting goals for global climate governance: an inter-disciplinary perspective

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Anthropogenic climate change is a pronouncement, although one we have realized only slowly, that the intellectual divide between Nature and Culture is redundant. It has no bearing on reality. The era of the Anthropocene started before we had even invented it. By the time Paul Crutzen coined the term at the turn of the new millennium (QUOTE), we had already well passed the point when our collective footprint on the planet, and especially upon the atmosphere, was pressing so hard as to change the functioning of our Earth system.

As the series of IPCC assessments from 1990 onwards has made clear, not least the bold pronouncements about detection and attribution made by WG1 in Paris last February, the defining physical transformation of the Anthropocene is now occurring above our heads. Our weather is semi-artificial (SLIDE), influenced increasingly by the changes we are imposing on the global atmosphere. It is becoming harder, not that it was ever easy, to separate Acts of God from Acts of Man. The insurance industry is having to re-think its language. Our climate is, to borrow an expression, a co-construction of Nature and Culture.

Since humans are now an active agent in shaping the climatic future we have inevitably had to face the question … should our climate agency be inadvertent or advertent, purposeless or planned, a mere by-product of our pursuit of tangential individual and collective goals or a consequence of a deliberated and hard-won global strategy? Do we really want to share with Nature this burden of climate design?

Well, this decision was in fact taken by the world 15 years ago, in Rio in 1992. With the signing of the UN FCCC, 180 nations committed themselves to the task of

climate control. We are therefore willing, keen even, to shoulder this task. But the extent to which we *can* consciously guide (dare we say manage?) global climate remains unknown.

The idea of controlling the weather has a long pedigree about which a fascinating story can be told, but one too long for this afternoon. Some of the grandest schemes for weather control have emerged from both wings of the ideological spectrum – the American frontiersman thinking of the 19C and Soviet-inspired state control in the 20C (SLIDE). We also increasingly control the micro-climates in our cars, our homes and our buildings. Sophisticated engineering systems secure for their inhabitants a desired (and alterable) level of comfort. 'Climate-control' is now a standard selling point for all new cars. And where our habitats are open rather than closed – and where meso-scale climates cannot be engineered - we construct and reconstruct whole cities (like Phoenix or Las Vegas) or whole countries (like the Netherlands) to secure our survival in the face of uncontrollable aridity or threatening seas.

But to return to global climate control … we have taken on the task but where do we set the thermostat? What is the comfort zone for global climate (SLIDE) – keeping it within the bounds of the last generation (±0.2C), the last millennium (±0.5C), or the Holocene (±1C)? Are we brave enough, or foolish enough, to push the thermostat up by 2C or more? What should our designer climate look like? What is the ultimate goal of our ambitious attempts at climate control?

A controlled system needs a controlling agent or agency … a master-mind perhaps, or a governor. So whose hand is on the control panel? Some may still claim to see God's hand in control. Or maybe it is the 'invisible hand' of Adam Smith's market – even if does it have a 'green thumb' as Al Gore would like to think. Can we do better than the neo-liberal ideology of the market-place?

Many people think we can do better by creating a new global polity – the political hardware to enact global governance and policy. Hence the notion, I guess, of Frank Biermann's Earth System Governance (SLIDE) and his four principles of: credibility, stability, adaptiveness and inclusiveness. This idea forms the very motive and rationale for this whole conference.

Now I don't want to focus on the future of Earth System Governance – the design and operation of such a system. Others are better qualified than I. But I do want to make some remarks on the ultimate goals of global climate control and what they signify to me.

Of course the classic formulation of the goal remains Article 2 of the UN FCCC (QUOTE).

> *"The ultimate objective of this Convention is … to achieve stabilisation of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous interference with the climate system. Such a level should be achieved within a timeframe sufficient to allow ecosystems to adapt naturally to climate change, to ensure that food production is not threatened and to enable economic development to proceed in a sustainable manner."*

In the fifteen years that Article 2 has been on the negotiating table, the goals of climate policy have been framed in a number of different ways … as emissions, concentration or temperature targets; they have been proposed or implemented at a number of different scales … community, state, nation, region or world; and they have been mapped out different distances into the future … 2012, 2020, 2030, 2050. All of these framings have been loosely inspired by the 1992 notion of avoiding 'dangerous anthropogenic interference' with the climate system. Here are my seven different categories of goal-setting (SLIDE).

- Technology goals – e.g. the AP6: development, deployment, transfer of low carbon technology
- C intensity/GDP – e.g. the USA to reduce intensity by 18% by 2012
- Relative reduction in absolute C emissions – e.g. 60% (or 90%?) reduction by 2050 for UK; 20% (or 30%?) by the EU; 25% by 2020 by California
- C or GHG concentration targets – e.g. 450-550ppmv (Stern Review); or 380-450ppm (Harvey's recent suggestion to avoid dangerous anthropogenic interference)
- Global temperature – e.g. to ensure warming is no more than 2degC above the 19C level (EU)
- Biogeophysical – e.g. to avoid tipping points in the Earth System (melting of the Greenland Ice Sheet)
- Social goals - e.g. the eight Millennium Development Goals: poverty, hunger, child mortality, infectious disease, gender equality, etc.

The sequencing of this list is important – it starts with society and ends with society.
And I want to suggest that these climate policy goals are always a proxy for other things – for maintaining ecosystem integrity, economic security and food production in the case of Article 2 – or for achieving or enhancing poverty reduction, trade liberalization, national security, sustainable consumption, climate

protection (by which I mean climate risk management), etc., as revealed by the various discourses that exist around global climate policy. In other words, these other things are subsumed within the head-lined goals of climate policy. And they are subsumed by construction. Climate can't be controlled without these other elements of our political, energy and welfare economies being reformed and re-structured, without these other goals either being met (or maybe missed).

These other underlying realities should therefore be exposed and accommodated in the processes of negotiation. How serious are we about the elimination of trade subsidies, about a commitment to open borders, about the eradication of hunger? Is it global or national security that we really care about? And it suggests to me that rather than trying to steer a complex climate system to a precisely (or even loosely) defined outcome, these realities require a diversity of so-called "climate goals" to co-exist in any governance regime. When dealing with such complexity we are better off focusing on constraining the inputs to the system rather than debating and predicting the chimerical outcomes.

Hence technology goals and social goals should be central to our thinking (SLIDE).

As the policy debate over fragmented versus universal governance regimes starts leaning in one direction – towards the fragmentation of actors, policies and institutions - so too should the debate over the goals of climate policy lean in this same fragmented direction. The paradox of our now co-produced and globalised economy and climate is that we can only hope to exercise any conscious control over such hybrid entities through fragmented and localized policies. Bottom-up interventions rather than top-down ones; pluralist clumsiness over hegemonic hierarchy.

I suggest that our fixation on global temperature, emissions reduction and concentration stabilization targets, inspired by our lock-in to the Framework Convention, has placed a straightjacket on our thinking about the goals of Earth System Governance. It is hubris to think that we can macro-manage our way to a designer climate with an unco-operative Nature.

But we *can* hold out the possibility, at least the possibility, of micro-managing some of the constitutive and regional elements of our emergent global climate economy. But how Culture and Nature will then co-conspire to construct our future climate will probably surprise us.