

Fiddling with climate change

Composer and string musician, turned award-winning environmentalist, Aubrey Meyer tells *Nature Climate Change* why he is campaigning for countries to adopt his 'contraction and convergence' model of global development to avoid dangerous climate change.

What is contraction and convergence?

It is a structured approach to meeting the objective of the United Nations Framework Convention on Climate Change (UNFCCC) to reduce the concentration of greenhouse gases in the atmosphere to a level that is both safe and stable. Contraction refers to the global reduction in greenhouse-gas emissions that is needed to prevent dangerous climate change. Convergence of the world's nations on an equal per-capita entitlement to the global emissions budget is not just the right way to get a global agreement over this contraction, it's the only way.

Why is the convergence element so crucial?

Without convergence, you will never get contraction. It's as simple as that. The atmosphere is a global commons and everyone has an equal right to emit greenhouse gases into it. If you don't stand for that, you have to defend inequality, which the majority will obviously reject. If that happens, contraction will be too little too late and runaway climate change will be the inevitable outcome. Climate change is an issue of survival, and equity is the price of that survival.

How did you come to be interested in climate change?

Up until the late 1980s I hadn't cottoned on to green issues at all. I grew up in South Africa, where I studied music at school and university. After I came to the UK in 1968, I spent the next 20 years as a professional musician and composer. I played the viola in the London Philharmonic Orchestra, which was wonderful, and wrote a fair amount of chamber music and two ballet scores. One of these — for the Royal Ballet — did spectacularly well, touring around the world to rave reviews. I was looking for the subject of a musical when I read about the murder of Chico Mendes — a Brazilian social activist trying to protect the Amazon rainforest. It was perfect material for a musical, but the more I researched the issue, the more horrified and dumbstruck I became. I was knocked sideways.

I stopped playing music. I joined the Green Party and, in 1990, with several



like-minded individuals, founded the Global Commons Institute. I sold my viola, specifically to buy one of the first desktop computers. It was like cutting off an arm, but I didn't think twice about it and I began to use spreadsheets to analyse and visualize climate data.

How does a professional musician get his head around mathematical modelling of climate change?

A musician never consciously goes round doing mathematics, but music is intensely mathematical. You have a constant length of string at a constant tension. If you halve the length of that string you double the frequency at which it vibrates so you get an octave. If you cut it in thirds you treble the frequency and get an octave and a so-called perfect fifth. This principle, first articulated by Pythagoras, is the entire basis of playing in tune and in time.

What was the reaction to the contraction and convergence model when you first aired it?

At COP2 [the second Conference of the Parties to the UNFCCC] in Geneva in 1996,

we put up a huge poster-sized graphic of the model — the response was tremendous. It really was. In the run-up to COP3 in Kyoto, I was invited to Washington DC and to Beijing to explain the contraction and convergence model in detail. I was bloody terrified. At that stage, I was still seen as a cute musician, a kind of a drop-out. I didn't know what the hell I was doing in the middle of this manic negotiation except that I was really frightened about the issue. It felt a bit like South Africa under apartheid, with a kind of privileged enclave within a much wider sea of underconsumption.

What happened in Kyoto in December 1997?

In the final session of negotiations, China, India and the Africa group all came out strongly in favour of contraction and convergence. The United States agreed. At which point, the chairman suspended the meeting out of the blue. So although the Kyoto Protocol paved the way for emissions trading between developed and developing nations, it fell short of addressing the rate for convergence on equal per-capita carbon entitlements. From that day until this, we've had this stupid, fruitless row, with countries simply plucking emission-reduction targets out of a hat. This has simply led to the sum of ill-will and reluctance, and is nothing like the contraction of emissions that's needed to achieve compliance with the UNFCCC objective.

If we pursue that model any further it'll be clear to everybody that we haven't got a hope in hell. The reason for pushing contraction and convergence is not simply because it is nice and it is fair, but because we really don't want to be melted down in a runaway damage curve that will inevitably follow any further disagreement.

Given this scenario, why has there been so little movement on convergence since the 1990s?

There has been a complete refusal to negotiate over the rate at which nations should converge on equal entitlement. At COP15 in Copenhagen in 2009, the developed nations put forward the Danish Text, which prescribed convergence to equal per-capita entitlements by 2050, completing contraction by 2100. Such an arrangement effectively ignores the interests of developing nations, who would like to see convergence on equal entitlement with immediate effect.

That's equally unrealistic isn't it?

So there has to be a negotiation. In other words, the date for convergence to equal entitlement needs to be somewhere between now and 2050. The states need to engage. How about convergence by 2030? Would that be a suitable compromise? This is absolutely what is needed at COP17 in Durban.

Isn't it understandable that western politicians should be reluctant to enter into such a negotiation?

It is completely understandable. For a developed economy, rapid convergence is going to be painful. Our well-being, our salaries and our future hopes are all tied to more wealth rather than less wealth. We are subtly loyal to the system that has fed us so well until now. It would be nice to imagine that we can continue to grow gross domestic product while reducing greenhouse-gas emissions. But the two are extremely closely linked and nobody's ever achieved it anywhere.

How about growing solar, wind, hydro and other renewable technologies? Investing in renewables is the only conceivable way to fire up your economy without increasing emissions. The renewable sector is very active, but it is continually frustrated by the fact that the commitment to fossil fuels is so strong, so multinational and so dug in. The emergence of a truly effective renewable-based economy is not going to be an accident. It's not going to be the result of talking up technology and getting the banks to invest a bit more money. It will only be the result of a really strategic, coordinated, structured, determined, goal-focused process such as contraction and convergence.

Multinational negotiation on climate change doesn't have the best track record. The kind of global consensus you're asking for is completely unprecedented. It responds to a completely unprecedented global challenge. We've never remotely faced a threat like this. It is orders of magnitude greater than all the other problems we've faced. The negotiators, the civil servants, the media and the public are all horribly out of touch with the basic arithmetic. If we enter a phase of runaway climate change — if the terrestrial and oceanic carbon sinks turn to sources — it's curtains for us.

Why do you think contraction and convergence will save us from dangerous climate change?

The whole essence of contraction and convergence is conflict prevention. We don't want this to end in nations tearing each other's throats out. Contraction and convergence is Mandela — it's truth and reconciliation, and justice without vengeance. I think it is achievable because it's simple, it's rational, it's communicable and there's a very good reason to do it.

INTERVIEW BY HENRY NICHOLLS

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