

Thinking about the future: a conversation between Colin Butler and Dr Andrew Glikson, Christmas Eve, 2008

Colin:

I offer these thoughts about why we don't, as a society, understand the risk of climate change (CC) and other forms of global environmental change (GEC):

1. The Greens have warned of GEC and CC (though not overpopulation) for at least 25 years.
2. Much of what the Greens said/predicted 25 years ago has become mainstream – yet the mainstream discourse (political parties, media) virtually never mention this; they don't want in any way to validate the Greens - probably because the Greens have too much redistributionist “baggage” to become truly mainstream.
3. Australian minister for climate change Penny Wong (who, by the way, seems to me pragmatic to the point of being potentially ruthless) is trying to use the projected Australian population increase to inflate the value of our impending 5% greenhouse gas (GHG) reduction. What is never said is that much of this population increase is from immigration, i.e., not essential, i.e., “populate or perish” still dominates in both Australian political parties and in the elite Australian industrial/economic discourse.
4. I honestly think our only hope is if Obama's funding can generate amazing technological breakthroughs, but let's face it, nothing on the scale needed seems plausible, though maybe solar thermal energy is our best bet. If the

price of that form of energy becomes competitive with coal then it could take off in China/India. In addition, however, the Obama administration is going to have to revive Limits to Growth thinking and create a new global deal for Africa. As he has such a strong Kenyan connection maybe this is not impossible, but can he bring enough of the US population with him?

5. AND/OR, the other hope is that that the climate models may prove too pessimistic, especially with regard to future food production. (I just prepared a 90 minute set of slides regarding CC and food production, for the World Health Organisation) and sea level rise. At the moment, I am willing to think that we might have several more decades, even a century before sea level rise and famine really kick in, but even 2150 is not so far away ... and we may have much less time than that.
6. I have – for at least ten years now – thought I am witnessing a Greek tragedy. We all do our very best, in this task we join with several million people who are equally sincere, but as a civilization we are going to have to experience a very hard lesson. Is this really any different to that of a testosterone fuelled youth, speeding in his car, even though (or maybe in some way because) he saw the police call for safe holiday driving, on the TV, only the night before?

Best wishes,

Colin

Andrew:

Thanks for your thoughts Colin.

I wish I could agree we have several more decades to "cool the planet"

Unfortunately, at this stage, the Arctic Sea ice melt, West Antarctica ice shelf collapse, slow-down of the Gulf Stream, increasing droughts and not least - rising methane emissions - may suggest the climate is crossing yet another tipping point.

With my best wishes

Andrew Glikson

Colin:

Thanks Andrew,

My point is – not that I am happy about it – that I genuinely fear a global catastrophe, maybe a new Dark Age, maybe even worse, but like those who heard and ignored Cassandra (who proved correct of course), the world won't listen to us. The two essential differences between this collapse occurring in 2020 or 2120 are (1) in the latter case you and I will surely be dead, and (2) the latter case means it can still be prevented.

The earlier case means it's already too late ... not that I'm in any way justifying us doing nothing. But it could also occur in 2040, in which case maybe we'll see it (just) and maybe it could still be stopped. Meantime, we have to continue to try to build a snowball effect in changing human consciousness without falling into despair. As we know, changing the dynamics of human society is very hard (including via the non-profit organisation I co-founded in 1989 (<http://www.bodhi.net.au>)). I am just not that confident we can do it (as you may recall, I was also a general practitioner for more

than a decade. How many times did my attempts to educate my patients about the dangers of smoking etc fall on deaf ears ... we are a stubborn species!)

As for runaway CC via methane etc release .. I know CH<sub>4</sub> has recently been on the rise – but I am unaware of evidence to show the long-feared positive feedback of GHG from the tundra or seabed is in fact occurring (I recall citing Cicerone on this topic in a paper I published on CC in the early 1990s: Cicerone RJ. 'Methane linked to warming.' **Nature**. 1988; 334:198).

eg: Rigby M, Prinn RG, Fraser PJ, Simmonds PG, Langenfelds RL, Huang J, *et al*. Renewed growth of atmospheric methane. *Geophysical Research Letters*. 2008;35:L22805. From the abstract: “High bacterial methane emissions from wetlands in an unusually warm Siberia seem to have played some part in the northern hemisphere increase. The authors also suspect that an unproven drop in hydroxyl free radicals could be driving the trend.” There is no mention of the more diabolic feedback, although of course it might be just around the corner.

Also, there seems to be no proof that the number of methane bubbles observed in the Arctic Ocean is greater than before.

However, do not think I am not worried! It's just that if I worry too much I fall into despair, and that doesn't help anyone.

Best wishes

Colin

Andrew:

It appears all living forms, on the individual and collective scales, suffer from blind spots.

Kangaroos never learn not to cross the highways and get killed.

Starlings keep flying into chimneys

People (well, most) can not tell the climate from the weather.

Having been partly successful in avoiding further destruction of the ozone layer, it appears Homo "sapiens", using <300 million years-old fossil energy sources, has reached an impasse.

There can be little doubt that humans, having survived extreme glacial/interglacial upheavals, are as adapted as to be able to survive 4 to 6 degrees C rise and fall in remote corners of Earth (Siberia, Canada, Alaska, the Himalayas, volcanic islands and so on).

On the other hand, megalopolis conurbations / suburbia-international have never been viable ways of life.

Having placed a man on the moon, I refuse to believe science can not develop atmospheric CO<sub>2</sub> sequestration technology, if only they channeled the resources they do into saving corrupt bankers, the motor car industry, and maintaining the military to the tune of \$trillions.

(Perspectives from the Roman Empire: the legions can not be contained in the barracks but have to be kept busy fighting the Barbarians; Silver coins need to be thrown to the mob from the roof of the Palatine; Gladiators need to entertain the masses, and the Christians thrown to the lions)

CO<sub>2</sub> Sequestration, coupled with stratospheric albedo enhancement measures (SO<sub>2</sub>, aluminium particles [disseminated in the stratosphere in order to increase albedo]) could reduce CO<sub>2</sub> to 350 ppm and below, if only they do it **in time** before feedbacks run out of control.

Are they going to convert the Industrial-Military complex to an environmental protection agency?

Trouble with politicians, those who try and change things from the inside find that, instead, the "inside" changes them.

As to the science:

- (1) Most climate scientists base climate projections on General Circulation Models, plotting linear to accelerating or tapering-off CO<sub>2</sub> and temperature trends.
- (2) These models only take limited account of Carbon cycle feedbacks and almost no account of ice sheet/water remelt, which Hansen et al (2008) estimate as responsible to near-50 percent of feedback forcings.
- (3) With the exception of US paleoclimate scientists, only few climate scientists take full account of the abrupt tipping points shown by the recent climate history of Earth,

when temperature changes of 1 to 4 degrees C occurred over a few years.

(4) Science and scientists are inherently conservative. My petition with Barrie Pittock approached 230 leading environmental scientists, out of whom only 40 agreed to endorse the (fairly conservative) statement.

(5) Climate scientist employed by research organizations (Australian Commonwealth Scientific and Research Organization, Bureau of Meteorology) are to a certain extent bound by their Departmental policies.

(6) This leaves University scientists, but communicating developments as alarming as the climate crisis is a thankless task.

(7) There are climate scientists who tend to be more caution on the side of their own career/standing/"respectability" than on the moral/ethical/public good side.

(8) Huge blind spots exist. Politicians/economists/social scientists etc **think in terms of compromises**, yet no compromise is possible *vis-a-vis* nature. The "5%" to "40%" etc game takes little account of runaway atmospheric processes.

(9) In my view what is needed is a rapid 6-8 percent reduction in CO<sub>2</sub> emissions per-year (as reviewed by Monbiot) coupled with stratospheric SO<sub>2</sub> injections.

(10) I enclose a number of my short Crikey.com news items which deal with these issues

During 2006-2008 meetings with more than 50 Parliamentarians indicated most have little or no understanding of the nature of climate processes. Top business people appear to be almost impervious to an approach.

I am afraid people will end up learning the hard way, at which stage it may be too late and futile to say "I told you so".

Yet hope is intrinsic to life. We have to maintain hope.

Best wishes

Andrew