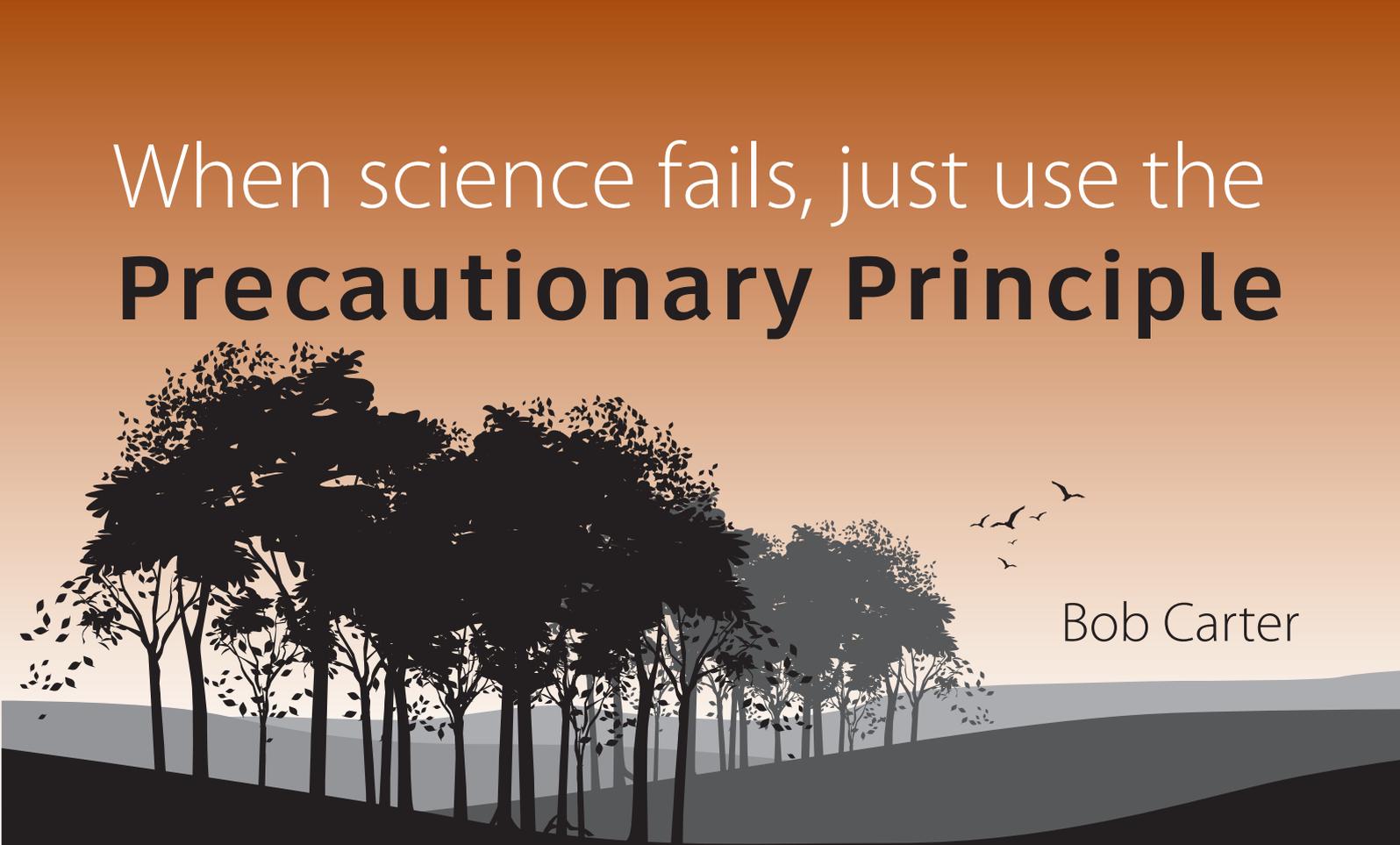


When science fails, just use the Precautionary Principle



Bob Carter

The precautionary principle has been much in the news lately in connection with climate change.

The principle is intended to assist governments and peoples with risk analysis of environmental issues. First formulated at a United Nations environment conference at Rio de Janeiro in 1992, it stated that 'Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation'. Heavy campaigning from environmental pressure groups since then has caused many governments to use the principle as a tool for policy development—generally under a more restrictive wording that says something like

'where there is a potential for harm from a technology, then use of that technology should be restricted until and unless it is demonstrated or proved to be safe'.

That there is a disturbing lack of intellectual rigour, not to mention the presence of ambiguity, in these and other definitions has not prevented the precautionary principle from being incorporated into law in several countries. For instance, the EU Cartagena Protocol on Biosafety (January 2000) asserts the principle in its operational text as a binding environmental requirement. In Australia, the Commonwealth *Fisheries Management Act* 1991 (Section 516A) requires the regulatory authority 'to pursue the objective of ensuring that the exploitation of fisheries resources and the carrying on of any related activities are conducted in a manner consistent with the principles of ecologically sustainable development and the exercise of the precautionary principle'. Of most concern, perhaps, is that experience shows

that the adoption of the precautionary principle as a policy guideline is inevitably followed later by the development of legally binding precautionary rules.

Returning to climate change, those who give public talks on the issue are well used to vigorous questioning, the topic being a polarised one. Inevitably, and often quickly, after a talk comes the relaxing question—'but surely because there is a risk of damage from human-caused climate change, we must apply the precautionary principle to try to prevent the change'.

Relaxing? Yes, because the question is an acknowledgement that the audience, or at least the questioner, has run out of scientific arguments. It has become clear to him or her that the scientific evidence for human-caused climate harm is at best ambiguous. So having exhausted the science at no avail to the cause, refuge is sought in sociology.

There are, of course, numerous

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other solecisms implicit in our questioners' plea. They include: that there is a 100 per cent risk of damage from natural climate events, which happen every day; that no amount of precaution is going to stop natural climate change; that we cannot measure, much less isolate, any presumed human climate signal globally; that extra atmospheric carbon dioxide causes mild warming only, and is at least as likely to be beneficial as harmful; and that the causes of climate change are many, various and very incompletely understood. These being largely scientific arguments, they will of course never carry the day against a warmaholic, because such persons are afflicted not by science but by faith.

Driven by their addiction to alarmism, and a false belief that the causes of climate change are understood, environmental lobby groups worldwide urge the adoption of the precautionary principle to solve the 'global warming problem'. They argue that the world needs to move to a 'post-carbon' economy as soon as possible in order to curtail drastically the carbon dioxide emissions that they allege are causing warming. Yet it is only unvalidated computer models that suggest dangerous warming will occur, the observable facts being quite implacable that additional carbon dioxide brings mild warming only, most of which has already occurred because of the logarithmic nature of the relationship between increased carbon dioxide and increasing temperature.

Believing, as they do, that carbon dioxide emissions are dangerous, warming zealots assert under the precautionary principle that it is better to be safe than sorry—so give up driving your SUV now, and get ready to pay swinging carbon taxes as well. In the climate and energy context, however, it is not clear what is safe and what is sorry. For to destroy the energy economy of the modern industrialised world, with the

certainty of at least a doubling in energy prices, could scarcely be termed 'safe'. And 'sorry' might well turn out to be too gentle a word for our feelings should we do just that in return for what transpires to be an unmeasurable difference in future temperature and climate.

An estimated 6,000 persons have

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just attended a United Nations climate meeting in Nairobi that focused on carbon taxes and related issues (just contemplate the carbon footprint of the delegates' travel alone). Despite all the moral posturing and frisbee science on show in Nairobi, most participants were there to make money or achieve power as part of the biggest Baptists and Bootleggers coalition that the world has ever seen. Prime amongst the Baptists were managers from the environmental NGOs, government bureaucrats and national politicians, whose actions were intended to deliver membership subscriptions, departmental budgets, and votes, respectively—all justified by the presumed moral worthiness of their climate cause. Leading the Bootleggers were the merchant bankers and other financiers who can sense the rich plunderings that lie just over the horizon,

and who were egged on by the science managers whose research budgets now depend so strongly on warming alarmism and the media representatives for whom such alarmism sells product.

The real economic needs and the actual—as opposed to imaginary—environmental problems that today beset under-developed nations were swamped during this guilt-laden jamboree of Western self-interest. Bjørn Lomborg is entirely right to point out that if the West has environmental or aid money to spend, then it should use it to solve real, high priority problems rather than frittering it away ineffectually on the chimera of 'stopping' global warming.

There is such a thing as relative risk analysis, and it is missing from virtually all the public bleatings about climate change. Sensibly managing environmental issues is not about combating every single threat that can be dreamed up in the vivid imaginations of environmentally concerned citizens. As Lord Nigel Lawson has recently written 'As a general rule, rationality suggests that we concentrate on present crises, and on future ones where the probability of disaster if we do not act appears significant—usually because the signs of its emergence are already incontrovertible. The fact that a theoretical danger would be devastating is not enough to justify substantial expenditure'. Risk analysis, then, is about judging the balance of risk on a wide scale of possible misadventures, and about paying most attention to demonstrable, near-horizon threats.

The risk of climate change is, of course, not small. In fact the risk is 100 per cent, because climate has always changed and always will. The last seven years of climate stasis, during which global average temperature has not changed significantly since 1998, is unusual. Nothing seems surer than that cooling or warming will reassert itself



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shortly, but regrettably we don't know which. The deterministic computer models used by the Intergovernmental Panel on Climate Change (IPCC) predict warming (but then they predicted warming, wrongly, for 1998–2005 too), whereas other computer models based on the forward projection of natural climate rhythms predict cooling for the next few decades. Which leads us right back to the precautionary principle again.

In order to take precautions, it is necessary to understand what one is taking them against. 'Well, the risk of climate change is near enough to 100 per cent', say the experts, 'so take precautions against that'. 'Yes, but what will the direction of change be?' you reply. 'About a 50 per cent chance of warming and 50 per cent of cooling' comes the answer. At this point, a pause is needed to reflect on how we might apply the precautionary principle to two alternative yet equally likely outcomes.

The answer lies, one supposes, in assessing which outcome would be the more damaging. At the level of a full glaciation, it is obvious that cooling will be more damaging to human interests than warming—for the novelty of an ice-cap developing over most of northern North America and Scandinavia would soon wear off, and the economic damage would be horrendous. But even at the level of another Little Ice Age, it is likely that the costs and damages of cooling would greatly exceed those of warming. Precaution would say that perhaps the best, non-polluting way to help avert such cool-

ing—which, note, has recently been predicted to occur over the next few decades by both American and Russian scientists—would be to inject extra carbon dioxide into the atmosphere. After all, one of the things that global warming zealots and skeptics alike agree about is that carbon dioxide is a greenhouse gas that causes mild warming. And, while we're at it, instead of a carbon tax to penalise emitters, perhaps governments could stimulate emissions by removing subsidies from uneconomic and environmentally damaging 'alternative' sources of power, such as wind farms, thus favouring coal- or gas-fired power stations.

But all of this analysis leaves unmentioned what is perhaps the biggest problem with the precautionary principle, which is that it is a moral precept masquerading under a scientific cloak.

In science, the term 'principle' refers to a relationship that has been derived from experimental data or observation, and that can usually be expressed mathematically. Thus Le Châtelier's Principle states that introducing a change into a chemical system at equilibrium will cause the system to shift in a way that minimises the change; for example, increasing the concentration of an ingredient in a chemical reaction will cause an increase in the amount of the product of the reaction, as has been confirmed by countless numbers of chemical experimenters since 1884. In contrast, the term 'principle' in everyday life generally refers to the assumption of one moral rule or another, as manifest in the phrase 'she stuck to her principle of doing no harm to an-

other'.

These two usages could not be more different, for where scientific principles acknowledge the supremacy of experiment and observation, everyday principles adhere instead to untestable moral propositions. Adhering to a moral principle through thick and thin is certainly a part of the precautionary principle as practiced by environmentalists, and as such it is a principle of the wrong type to be used for the formulation of public environmental policy.

After comprehensive analysis, the Science and Technology Committee of the UK House of Commons recently came to a similar conclusion, commenting that 'we can confirm our initial view that the term 'precautionary principle' should not be used, and recommend that it cease to be included in policy guidance'. The committee added that 'In our view, the terms 'precautionary principle' and 'precautionary approach' in isolation from ... clarification have been the subject of such confusion and different interpretations as to be devalued and of little practical help, particularly in public debate'.

Put another way, all that is needed to fix the precautionary principle is a little more rigour. *Rigour mortis.*

