

The Eco-salvation Industry and AGW

in Australia's tropics

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When an environmental concern receives widespread public attention increased funding for research soon follows. Research targeted at investigating a purported problem never finds it to be unimportant or non-existent. Almost invariably evidence is produced to indicate it is more widespread, intense or complicated than previously thought and further research is called for.

Environmental activists likewise recognise that publicity generates support and they have become adept at campaigns designed to attract media attention while offering the public a bargain basement purchase of righteousness through donation to a good cause free of the moral complexities which so often attend genuine charity.

Environmental threats which endanger charismatic creatures and/or iconic natural places of great beauty are certain to attract media attention and public concern resulting in generous support for research and donations to environmental organizations purporting to save them. Saving the Great Barrier Reef, the Cape York Wilderness, the Queensland rainforest, Kakadu and the Kimberlies now supports a billion dollar industry of researchers, administrators and environmental organizations.

While a few real problems do exist, most of the money and effort are predicated on hypothetical possibilities for which there is no real evidence but they are simply things that might be or could happen.

As the preeminent natural icon of Australia, the Great Barrier Reef has been a favoured concern for the eco-salvation Industry. For more than four decades, not a year has passed without media announcements of dire threats to the reef. Some have been new, others old ones, refurbished or just reiterated. Always, the source is presented as an "expert".

Reef doomscreaming has provided attention, acclaim and generous support for what has become a virtual guild of researchers predicting the reef's immanent demise. Although they profess great concern, they have no interest in any possibility a problem may not be as bad as is feared. In fact, they rather fiercely reject any such suggestion; which seems quite incongruous with genuine concern

Over the years, coral-eating starfish, oil pollution, overfishing, fertilizer runoff, silt, agrichemicals, sewerage, anchor damage, people walking on the reef, ship groundings

and global warming have been proclaimed to be serious threats to the reef. None of these prophecies of doom, however, have become real and the GBR continues to be a vast and essentially pristine natural region where measurable human effects remain rare or trivial. Still, unlike the boy who cried 'Wolf!', or Chicken Little who claimed the sky was falling, GBR doomscreaming never seems to lose credibility. The big problem for truth and reality in this regard is that the reef is largely inaccessible. It's somewhere over the horizon, it's underwater and it's vast. Anyone can claim anything and who's to know differently?

The strong El Niño event of 1998 resulted in unusually high surface water temperatures and widespread coral bleaching in many locations around the world. On the GBR some bleaching occurred but the effect was less severe than in many other areas. Despite the fact that El Niño events are defined by high sea surface temperatures and the strength of this one had numerous precedents over thousands of years it was quickly claimed by AGW advocates to be a consequence of global warming. On the GBR a more severe bleaching event followed in 2002 in conjunction with another El Niño. This was then said to show that the frequency and severity of bleaching events was increasing and because of global warming they would soon become annual events.

From 60 to 95 per cent of worldwide reefs were estimated to have been affected in 1998. However, this figure is somewhat misleading in that it is not an estimate of the actual proportion of total coral affected but only the percentage of reefs where any bleaching at all was seen. Where it occurred, bleaching generally only affected variable portions of the shallow tops of particular reefs. Since then no further global events have occurred and recovery both on the GBR and elsewhere has been surprisingly rapid.

Although it is generally believed that global warming has resulted in increased coral bleaching and is a severe threat to reefs, the high surface water temperatures associated with bleaching have not been the result of exceptionally high air temperatures. Bleaching is a consequence of extended periods of calm weather during which mixing from wave action ceases and surface water becomes exceptionally warm. Such warming is especially marked in very shallow water such as on reef flats. At the same time the absence of waves also eliminates the wave driven currents that normally flush the top of reefs.

Bleaching conditions require at least a week or more of calm weather to develop and this may happen every few years, only once in a century, or never, depending on location. On oceanic reefs it is less common due to ocean swell and currents even in calm weather. In coastal areas it is more common due to the reduction in such water movements.

A significant drop in trade winds with extended periods of calm and high surface water temperatures are characteristic of El Niño conditions. Bleaching scars and isotope

temperature records in cores from living and subfossil corals bear abundant evidence of past bleaching events going back thousands of years. Even fossil corals millions of years old show similar patterns. There is no evidence for any recent increase in such events and nothing to suggest more El Niños or calmer weather as a result of global warming. To the contrary, the climate models project increased winds.

Five centuries of historical records and several millennia of sediment records indicate that the recent frequency and intensity of El Niño events is well within past limits and some the strongest events occurred during the cooler period of the Little Ice Age. Abundant uncontested evidence from numerous sediment studies indicates that oceanic surface temperatures were higher during the Medieval Warm Period about 1,000 years ago than at present. They were even higher during the Holocene climate optimum 5,000-9,000 years ago and higher yet during the previous interglacial period about 125,000 years ago.

Going back still further, over most of geologic time the Earth has been much more tropical than at present and corals flourished. Most of the coral genera living on today's reefs were present in very similar form on reefs 20 million years ago. Many go back 50 million years and some were even around 120 million years ago. All have not just survived; but, they have flourished when Earth's climate was much warmer than now or anything projected as a result of AGW.

The most likely effect on reefs of a warming climate would be an expansion of their geographic extent and there is some evidence this has already occurred as a result of the mild warming of the past several decades. In Florida recent growth of coral has occurred farther north than it did a few decades ago; although, in the same areas sub-fossil corals indicate previous such advances in the recent past. Similarly, at the southern limit of reef growth the corals of Moreton Bay off Brisbane have also flourished over recent years.

Despite the prophecies of imminent doom after the widespread bleaching associated with the 1998 El Niño, similar widespread events have not recurred and most affected reefs have recovered more fully and rapidly than expected.

The same coral species that bleach on some reefs often thrive elsewhere at higher temperatures and in some bleaching locations subsequent events have shown less effect even at higher temperatures. The reason is believed to lie in differing strains of their algal symbionts which are adapted to different temperatures. How far such adaptation can go is not known but species distributions of corals and associated water temperatures indicate that the temperatures involved in bleaching events on the GBR have been several degrees below what the same species routinely survive elsewhere. In fact, the normally warmer far northern portion of the GBR has suffered least from bleaching.

By 2006-07 public concern over bleaching of the GBR reached a level that could without exaggeration be termed hysteria. Widespread media attention was given to proposals to protect the reef by erecting shade cloth over it or by cooling it with a sprinkler system. The extraordinary cost of implementing and maintaining such a scheme on any meaningful scale was never mentioned nor was the certainty of its frequent devastation by tropical cyclones. Remarkably, these absurdly impractical ideas were accorded serious attention and were endorsed by tourism businesses, environmentalists, and researchers. Even the Federal Tourism Minister signed on. To add the ridiculous to the absurd the Great Barrier Reef Marine Park Authority went so far as to fund a feasibility study.

Following the 2002 event no further mass bleaching has occurred. The winter of 2007 resulted in record and near record low temperatures all across the southern hemisphere. A June story in the Brisbane Courier Mail reported that barramundi populations in the North of Australia were predicted to decline because global warming would make the northern waters too warm for them. The next month a story in the same newspaper reported a massive mortality of barramundi in the reservoir at Mount Isa due to lethally low temperatures. In August an article in The Australian reported coral bleaching as record cold hit reefs in southern Queensland.

With the cooling trend in climate now clearly manifesting globally, climate alarmism with regard to the GBR has recently shifted focus to oceanic acidification. The purported concern here is that increasing atmospheric CO₂ will acidify the oceans enough that corals will be unable to secrete their limestone skeletons. The balance of evidence again indicates otherwise.

Three widespread studies of reef coral calcification rates in SE Asia, on the Great Barrier Reef and in the Caribbean all found substantially increased calcification rates over the past half century. However, the reef catastrophists have now come up with a much more limited study which found reduced average calcification during a 16 year period in a few coral specimens from inshore reefs on the GBR. These inshore reefs are frequently subject to environmental extremes and the time period involved encompassed the two recent bleaching events. Whether the inhibition of growth found in these specimens was a consequence of acidification as was suggested or other factors such as temperature, turbidity or salinity is unknown. Nevertheless, much was made of this barely detectable trend in a very limited, highly varied sample. Without the tenuous suggestion of a link to GW it is doubtful this study would have even found publication in a peer reviewed journal.

Observations from locations where CO₂ is vented into the sea by geological processes indicate little detriment to corals or other marine life up to a level corresponding to a 4x

increase in atmospheric CO₂. The most prominent observable effect of the increased CO₂ is, as it is above the surface, a flourishing of plant life.

Sea water pH varies geographically. In the Western Caribbean area it averages only about 7.90-7.95 which is at the lower end of geographic variability and lower than predicted for the GBR in 2100. Still, this area has the richest reef development in the tropical Atlantic. Then too, a number of modern reef coral genera first appear in the Cretaceous period when CO₂ levels were 3-10x greater than at present.

Elsewhere, across Australia's tropic regions, predicted climate impacts are entirely speculation founded on projections from unverified models of complex processes about which we understand very little. Tarot cards offer a sounder record of accuracy.

The suggestion of a link to AGW lends great importance to what would otherwise merely be seen as minor natural fluctuations of no particular interest to anyone. Biologists in particular have signed up wholesale for unquestioning faith in a highly complex and uncertain physical theory of about which they are poorly informed or even equipped to understand.

As for the climate models themselves, their projections are constantly being changed with new "adjustments". They are highly dependant on numerous uncertain assumptions and estimates, incorporate greatly simplified treatments of complex poorly understood phenomena and can be tweaked to produce a broad range of equally plausible projections. Their outputs reflect much more the belief of the modeller than of any accurate depiction of climate. Even so, for what it is worth, most such models predict minimal warming in the tropics but much greater increases at high latitudes.

Predictions of catastrophic consequences to the GBR are not even based on any model but are simply speculation. Even the more extreme projections only depict tropical oceanic conditions which are still well within the limits that thriving reefs now tolerate in other places. The most likely effect of warmer oceans would be to expand the geographic extent of reefs to higher latitudes.

Repeated experience teaches that alarmist predictions of future events have an exceedingly poor record of accuracy. In view of the many uncertainties and assumptions involved in AGW it seems particularly important to consider real world evidence for any indication of predicted trends. Thus far there is none.

Whatever the future reality may prove to be, it seems extremely unlikely the world will drastically curtail energy use on the basis of hypothetical projections. Almost certainly an increasing shortfall in oil and gas supplies will force greater efficiency and a shift to

nuclear and renewable sources. Sometime in the not too distant future the effects of declining birth rates and an aging population will also begin to have an impact. As always, the real problems we face will probably be quite different than we expect.

Australia's annual carbon dioxide emissions are only about 1.5 per cent of the global total. This is barely equal to China's increase in 6 months. Estimates of natural uptake in our land and EEZ area are greater than our emissions. As a nation we should be accumulating carbon credits.

The biggest problem we face is not an unquantifiable risk of climate change at some unknown future time. It is keeping the economy functioning until energy alternatives are a functional reality. The entire AGW scenario is predicated on continued and increasing consumption of fossil fuel; but, the inability of conventional energy supplies to meet growing demand is already confronting us. With or without global warming we must begin to develop alternative sources of energy and maintaining a healthy economy is essential to achieve this.

Without liquid hydrocarbon fuels for transportation and mobile machinery our existing economy cannot continue to function or to even feed the current population. It doesn't run on hypotheticals. At least several decades will be required for development and widespread implementation of alternative energy solutions. Premature attempts to adopt immature, unproven technology fostered by ill-conceived subsidies and regulations entails a high risk of resulting in more harm than help. The emerging bio-fuels disaster is an example.

Production of synfuel from coal is a proven technology that could fill the energy gap we face. The only obstacle to implementation is objections arising from the hypothetical danger of anthropogenic global warming. The sale of about five times the amount of coal is required to pay for an energy equivalent amount of oil. We could produce all our liquid fuel needs from coal and there are companies wanting to do so; but, they can't because of CO2 emissions. However, these would be half of what is generated by the coal we sell to buy the oil. Apparently it must be believed that our coal doesn't produce CO2 if burned overseas.

The emerging choice is becoming more and more apparent. We can either adhere to the dogma of what has become a climate change cult and endure severe economic hardship and even hunger or risk a dubious prophesy to take a clear path to the future. The choice is a no brainer between a direct route down Easy Street or a detour through Jonestown.

The absence of ongoing global warming over the past decade and pronounced global cooling of the past two years cannot credibly be dismissed as simply local variability in

weather. It is clearly global and contrary to all predictions of carbon dioxide governed global warming.

Climate alarmism has gone too far out on a very long limb for any retreat. A cooling trend in climate would be disastrous for the whole anthropogenic global warming ideology and result in an unprecedented loss of credibility for a large sector of the scientific community. The escalating fears they express are not so much the result of any important new evidence as they are an expression of their own increasingly desperate hope.