Reef Madness:
The Next Big Green Litigation Campaign?
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Now that Russia has ratified the Kyoto Protocol, Australia is the only industrialized country besides the United States to reject the U.N.-sponsored climate treaty. However, a report[1] commissioned by Climate Action Network Australia and Greenpeace Australia Pacific denies that Australia has any choice in the matter.

The report, prepared by the Sydney Centre for International and Global Law,[2] contends that the World Heritage Convention,[3] a treaty administered by the United Nations Educational, Scientific, and Cultural Organization (UNESCO), obligates Australia to ratify the Kyoto Protocol[4] and, thus, limit its emissions of greenhouse gases (GHG), chiefly carbon dioxide (CO_2) from fossil-fuel combustion. Indeed, according to the report, Australia is obligated to make "deep cuts" in GHG emissions far beyond the reductions required of any nation by Kyoto.

Unsurprisingly, the report's reasoning applies with equal plausibility to the United States. In fact, if the Sydney Centre's argument is correct, then *all* Parties to the Convention, including China, India, and numerous other developing countries, must implement Kyoto-like controls—even though Kyoto exempts such nations from emission limitations.

The Sydney Centre is not the first advocacy group to claim that existing law prohibits a nation's voters and their elected representatives from rejecting Kyoto-style curbs on energy use. To mention just the leading example, a dozen state attorneys general (AGs), 14 environmental groups, and three cities[5] are suing the U.S. Environmental Protection Agency under the Clean Air Act for refusing to regulate GHG emissions from automobiles. The suit is without merit.[6] Congress rejected regulatory climate policies when it last amended the Clean Air Act, and a Senate proposal to establish CO_2 emission standards for automobiles never made it into the Senate's version of the bill, much less the final Act. But it's a safe bet that when the AGs' lawsuit goes down in flames, the Aspiring Governors[7] will cast about for another pro-Kyoto litigation strategy. Will they look to the Sydney Centre for inspiration?

Litigation Logic

The Centre's report, *Global Climate Change and the Great Barrier Reef: Australia's Obligations under the World Heritage Convention*, contains much detail, but the basic argument may be summarized as follows:

(1) "The IPCC [U.N. Intergovernmental Panel on Climate Change] predicts that the globally averaged surface temperature will rise by 1.4 to 5.8 degrees Celsius over the period 1990 to 2100." "Increases in sea temperature of as little as 1 degree

Celsius may lead to coral bleaching and the eventual death of corals." Warmer-than-usual sea temperatures in 1998 and 2002 produced mass bleaching events at the Great Barrier Reef (GBR) [pp. 1, 9, 10].

(2) Australia is a Party to the World Heritage Convention, and since 1981 the GBR has been a World Heritage Area.

(3) Under Article 4 of the Convention, each Party "recognizes the duty" to protect, conserve, and transmit to posterity all natural Heritage sites within its territory, and "will do all it can to this end, to the utmost of its own resources and, where appropriate, with…international assistance and co-operation."

(4) Under Article 5, each Party "shall endeavor, in so far as possible…to take the appropriate legal, scientific, technical, administrative and financial measures necessary" to protect, conserve, and rehabilitate Heritage sites within its territory.

(5) Under Article 6, each Party "undertakes not to take any deliberate measures which might damage directly or indirectly" any Heritage areas, at home or abroad.

(6) A "significant reduction in global emissions of greenhouse gases, well in excess of those set by the Kyoto Protocol ('deep cuts'), is necessary in order to stabilize global temperatures and thereby reduce and reverse the impact upon the Great Barrier Reef." Such measures include "setting a national target of a 60% reduction in greenhouse gas emissions by 2050" [p. 13].

(7) The Kyoto Protocol is the "only international instrument incorporating binding country targets for the reduction of greenhouse gas emissions," and "offers the only mechanism through which the international community may reach agreement on binding targets for achieving deep cuts in global greenhouse gas emissions" [pp. 22, 23].

(8) Australia's decision not to ratify Kyoto conflicts with Australia's Article 4 obligation to "do all it can," "to the utmost of its own resources," including efforts involving "international…co-operation," to protect the GBR.

(9) Australia's decision also conflicts with the Article 5 obligation to "endeavor, in so far as possible" to take "appropriate" "legal" and "administrative" measures to protect the GBR.

(10) Finally, Australia's decision conflicts with the Article 6 obligation to avoid taking "deliberate measures which might damage directly or indirectly" any World Heritage Area. Australia's refusal to join Kyoto "has been a factor delaying" the treaty's entry into force, and jeopardizes the "conclusion of an effective international legal framework to address climate change" and the consequent threat to the GBR [pp. 24, 28].

You Don't Need a Weatherman

The Centre's argument could easily be adapted to attack U.S. law and policies. The United States is home to 20 World Heritage Areas,[8] including Everglades National Park in Florida, and Glacier National Park in Montana. Alarmists blame man-made global warming for the melting of Glacier Park's glaciers, and warn that global warming will accelerate sea-level rise, inundating coastal wetlands like the Everglades.

The "science" behind such allegations is somewhere between weak and fictitious. As University of Virginia climatologist Patrick Michaels has long pointed out,[9] Glacier Park's glaciers melt mainly in the summer months, and there has been no statistically significant summer-time warming in the area since record keeping began in 1895.[10] Also, observational data, including satellite altimetry, show no acceleration in sea level rise during either the past decade or the 20th century overall.[11] Nonetheless, copycatting the Sydney Centre, the AGs could claim that Articles 4 and 5 of the Convention obligate the United States to ratify Kyoto and make "deep cuts" beyond Kyoto in order to preserve Glacier Park and the Everglades.

Further, the AGs could claim that U.S. refusal to ratify Kyoto is a "deliberate measure" that "might damage…indirectly" the GBR and other climate-sensitive Heritage sites around the world, and, thus, conflicts with Article 6 of the World Heritage Convention.

Litigatio Ad Absurdum

Although seemingly compelling, the Centre's argument is a house of cards, because it ducks the threshold question of legislative intent. When the United States in 1973, Australia in 1973, and 176 other nations over the past three decades became Parties to the Convention,[12] did they understand themselves to be affirming an open-ended obligation to ratify future treaties not yet proposed or even imagined? Did they vow to ratify future agreements however incompatible with existing national policies? Did they commit to adopt measures that go beyond the requirements of future treaties—even if they choose to reject those treaties?

The only conceivable answer is no, because any treaty with such unpredictably expansive commitments would be in the nature of a suicide pact—an agreement by each nation to abdicate the authority and responsibility to govern itself.

Under the Centre's interpretation, it is not just industrialized nations such as Australia and the United States that must restrict the use of carbonaceous fuels. If a developing country has any climate-sensitive Heritage sites within its territory, then it too must adopt emission controls, pursuant to Articles 4 and 5 of the Convention, which require each Party to "do all it can…to the utmost of its own resources" and "endeavor, insofar as possible" via "legal" and "administrative" measures to protect such sites. Even if a developing country has no climate-sensitive Heritage sites, it is bound by Article 6 not to imperil such sites elsewhere. Therefore, given the Centre's reading of the Convention, *all* nations must suppress the use of carbon-based energy.

Is that what China, India, and other developing countries signed up for when they ratified the Convention? Clearly not, because it was not what they agreed to when they ratified the Kyoto Protocol! They ratified Kyoto *only on the condition* that it would *not* obligate them to reduce emissions. Yet without binding emission limits on developing countries, there is no feasible way to stabilize atmospheric CO_2 levels. India alone emits two and half times as much CO_2 as does Australia, and China's CO_2 emissions surpass Australia's by more than eight times.[13] China and India's refusal to adopt, or even discuss, binding

limits on their emissions is as "deliberate" as Australia's refusal to ratify Kyoto, arguably jeopardizes the "conclusion of an effective international legal framework to address climate change," and "might directly or indirectly damage" Heritage sites supposedly threatened by the ongoing rise in atmospheric CO_2 levels. So if the Convention obligates Australia to limit its energy use, it must similarly obligate China and India. This inescapable implication of the Centre's argument should amuse Mr. Wang Guangya, China's Ambassador to the U.N., and Ms. Bhaswati Mukerjee, India's Permanent Representative to UNESCO, about as much as clowns and jugglers at a diplomats' ball.

In addition to laying the groundwork for "international and global law"-based caps on energy production in developing countries, the Sydney Centre's legalisms potentially empower "global governance"[14] advocates seeking to restrict international trade, U.S. military power, and world population growth.

Green Protectionism. The European Union (EU) had hoped to use Kyoto to negate the competitive advantage U.S. firms derive from lower taxes, affordable energy, and a more productive workforce (see my *Sensible Sense of Congress Resolution on Climate Change*, pp. 19-20).[15] Instead, because the United States has not ratified the treaty, Kyoto will make energy-intensive U.S. firms even more competitive vis-à-vis their European counterparts. And the deeper the emission cuts that the EU implements, the more global output will tend to shift from Europe to the United States. Thus, Kyoto and its successor agreements are bound to collapse unless the U.N., the World Trade Organization (WTO), or some other body administers "carbon tariffs" to offset the lower production costs of firms in the United States and other nations that do not limit access to carbon-based energy. This partly explains why, in the just-completed round of Kyoto negotiations in Buenos Aires, Friends of the Earth-Europe urged the EU to slap import taxes on energy-intensive U.S. products.[16]

The Kyoto Protocol provides no authority to impose import taxes on countries for non-compliance, let alone for non-ratification. But the Sydney Centre would have us believe that the World Heritage Convention is the controlling legal authority on climate change. If the Convention binds Parties to ratify and even *go beyond* Kyoto, would it not also bind them to "save" Kyoto by restricting imports from non-carbon-constrained countries? If the Convention mandates the "*conclusion* of an *effective* international legal framework to address climate change [emphasis added]," would it not also mandate the economic sanctions requisite to put teeth into Kyoto and penalize those who either fail to comply or refuse to participate? It would certainly seem so, given the Centre's novel reading of the World Heritage Convention. The problem, of course, is that the Convention is as silent about international trade as it is about climate change or energy production.

Disarming America. To update a popular bumper sticker of yesteryear, "One nuclear bomb can ruin your whole Heritage Area." Suppose someone proposes a treaty to establish "nuclear-free zones" everywhere within, say, a 500-mile radius of a World Heritage site. Would Parties to the Convention have an obligation to ratify that proposal? Then again, anti-nuke advocates might argue, no Heritage site can be truly safe as long as any nation anywhere has nuclear weapons, so all Parties must agree to "ban the bomb."

Suppose a rogue nation armed to the teeth with biological and chemical weapons seeks to level the military playing field, claims it wants to safeguard the world's natural heritage, and proposes a nuclear disarmament treaty. Would the United States have a duty to ratify such a pact? Would U.S. refusal to scrap its nukes fall under the proscribed category of a "deliberate measure" that might "directly or indirectly" damage Heritage sites?

Population Control. The emissions alleged to cause global warming mostly come from energy use. Other things being equal, more people means more energy use and, hence, more emissions. As the IPCC's *Special Report on Emissions Scenarios* puts it, "Population projections are arguably the backbone of GHG emissions scenarios, and are comparable in some ways with them" (Chapter 3.2.1).[17] Based on the Centre's argument, a case could be made that every Party to the Convention must institute "family planning," i.e., population control, in order to curb emissions and mitigate global warming.

For example, suppose the U.N. sponsors a treaty to limit global birth rates, replete with mechanisms for trading child reduction credits, so that women wishing to bear more than 2.1 children—the "replacement rate" yielding "zero-population growth" (ZPG)—would have to purchase birth allowances from women bearing fewer than 2.1 children. Would Parties have an obligation to ratify that treaty? Suppose zero-population growth is not low enough to eliminate the risk of anthropogenic climate change—would the Convention obligate Parties to make "deep cuts" in fertility rates beyond those specified in the ZPG treaty? And does the Convention already obligate, for example, Ireland, Brazil, Nigeria, and Indonesia[18] to reduce their birth rates by adopting U.S. and Scandinavian-style abortion laws?

The Centre's reasoning suggests as much, because higher birth rates mean more emissions, emissions potentially enhance the natural greenhouse effect, global warming might damage Heritage areas, and each Party is obligated to take "legal measures" to protect such sites.

Obviously, no nation agreed to let unknown future treaties dictate its policies regarding trade, armaments, and population when it ratified the Convention. But neither did any Party agree to surrender control of its energy policies. The Sydney Centre's legal brief is rubbish.

Turnabout is Fair Play

The irony is that the Centre's reasoning could be deployed to *oppose* the Kyoto Protocol and subsequent "deep cuts" in energy-related carbon emissions. Here's how.

Richer is cleaner.[19] In general, as per capita incomes rise, so do society's demand for and investment in pollution control, environmental cleanup, and ecological stewardship. Wealth creation is especially critical to environmental improvement in poor countries, where scores of World Heritage sites are located. Poverty is the "environment's number one enemy"[20]—in the words of Berkeley Energy and Resource Studies Professor

Emeritus Jack Hollander—because people living on the brink of starvation lack the means and incentives to protect the health and beauty of their surroundings.

To become wealthy enough to protect their environments, energy-poor countries must become energy-rich. As energy analyst John Holdren observes, "Affordable energy in ample quantities is the lifeblood of the industrial societies and a prerequisite for the economic development of the others."[21] However, the Kyoto Protocol cannot "work" (i.e., limit emissions) unless it makes energy *scarcer* and *less affordable*. Extending Kyoto-like controls to developing countries—a necessary component of any serious plan to stabilize GHG levels—would trap millions of people in perpetual *energy poverty*—a condition inimical to their economic and environmental progress.[22] Even if developing countries remain exempt from carbon controls, a Kyoto-induced recession in, say, the United States, would inflict severe collateral damage on poor nations by wiping out billions of dollars annually in U.S. purchases of developing country exports.[23]

In short, because richer is cleaner, because affordable energy is essential to prosperity, and because the growth potential of poor countries is tightly linked to the economic performance of the United States and other industrialized nations, Kyoto and its successor treaties must be viewed as a "deliberate measure" that "might damage…indirectly" numerous Heritage sites around the world. Thus, based on the Centre's logic, Australia has an obligation *not to ratify* the Kyoto Protocol, and other Parties have an obligation to *withdraw* from it.

This paradoxical conclusion—that nations have a *duty* to keep burning fossil fuels—may also find support in recent research indicating that warmer sea temperatures will accelerate coral reef growth rates by as much as one-third compared to pre-industrial times. The Centre assumes that the impacts of warming on reefs are invariably negative. But what if there are ecological benefits as well as harms and the former outweigh the latter? This possibility is discussed below.

Reef Raff

Legal issues aside, are CO_2 emissions harming the GBR and other reef eco-systems?

Corals are communities of tiny organisms—polyps—that live symbiotically with micro-algae that supply them with energy, nutrients, and color. Adverse changes in water temperature, chemistry, or quality can cause the polyps to eject their symbiotic algae, paling or whitening ("bleaching") the coral.[24] Bleaching stresses the coral and can kill the colony if the polyps fail to recruit new algal symbionts. Since 1979 there have been several bleaching/mortality events in coral reefs around the world, usually during periods of high sea temperatures associated with El Niño, but also during periods of low sea temperatures associated with La Niña.[25]

El Niño is a natural phenomenon that occurs when the easterly trade winds that normally pull cold water up from the deeper ocean off the Pacific Coast of South America weaken or even reverse direction.[26] The surface of the tropical Pacific Ocean then heats up,

warming the entire planet. The El Niño of 1997-98 was probably the strongest of the past century. Not once, however, does the Centre's 39-page report mention "El Niño" or related terms, concealing from readers the possibility that the warmer-than-usual sea temperatures of 1998 were due to natural causes.

What evidence is there that GHG emissions cause or contribute to coral bleaching? According to the comprehensive *Status of Coral Reefs of the World: 2004*,[27] "The coral bleaching in 1998 was a 1 in a 1,000-year event in many regions with no past history of such damage in official government records or in the memories of traditional cultures of the affected coral reef countries." Approximately 16 percent of the world's reefs were seriously damaged. (Fortunately, about 40 percent of the damaged reefs are "either recovering well or have recovered" [pp. 7-8], showing how amazingly resilient these marine eco-systems are). According to the IPCC's *Third Assessment Report* (*TAR*, p. 1), the 1990s were "very likely" the "warmest decade" and 1998 the "warmest year" of the past 1,000 years.[28] In addition, the IPCC concludes that, "most of the warming observed over the last 50 years is attributable to human activities" (*TAR*, p. 10). Thus, it would seem, the bleaching events of 1998 were likely due to mankind's enhancement of the greenhouse effect.

In fact, however, the asserted linkage between anthropogenic warming and coral bleaching is problematic. To begin with, there is considerable evidence that the 1990s were *not* the warmest decade of the past millennium. A wealth of proxy data confirm the reality of a world-wide Medieval Warm Period (circa A.D. 800-1300), when average temperatures in North America, Europe, Asia, Africa, and South America were as warm as or warmer than they are today.[29] Also, as can be seen from Figure 2.20 on page 134 of the *TAR*, the IPCC's reconstruction of temperature history—popularly known as the "Hockey Stick"[30]—mixes proxy-data "apples" (such as tree ring widths and densities) for the period from 1000 A.D. to 1900 with instrumental-data "oranges" for the 20th century. The well-documented local heat effects of urbanization[31] give the instrumental record an upward bias. When scientists compare apples to apples, using proxy data to track 20th century temperatures, the mid-1930s and early 1940s appear to be warmer than the 1990s.[32] Yet there is no evidence of mass bleaching/mortality events in the 1930s and 1940s.

The IPCC's conclusion that "most" recent warming is due to GHG emissions is also questionable. That finding rests on (a) the claim (just examined) that the late 20th century warming was "unprecedented" during the past 1,000 years, and (b) the alleged agreement of climate model predictions with observed temperature data. As regards (b), the surface temperature database is not a good test of model projections, because it partly reflects the warming effects of urbanization and other land-use changes.[33] More importantly, observations contradict model predictions of a greenhouse "fingerprint" in the vertical distribution of temperature change in the atmosphere. Almost all models project 50 to100 percent more warming in the lower to mid-troposphere—the layer of air from one to five miles up—than at the surface.[34] Satellite and weather balloon data show the opposite is occurring. Since November 1978, the troposphere has warmed by about 0.08°C per decade[35]—less than half the rate of the surface—and much if not all of that slight

warming is attributable to the strong 1997-98 El Niño. Similarly, as can be seen in Figure 2.11 on page 118 of the *TAR*, most of the modest 0.037°C per decade rise in top-layer average ocean temperature from 1958 to 1998 is attributable to the 1997-98 El Niño and the 1976-77 shift in the Pacific Decadal Oscillation—another natural climate cycle.[36]

To be sure, climate activists often assert that global warming increases the frequency and intensity of El Niño events. However, there is no known link between El Niño and atmospheric greenhouse gas levels.[37]

The Sydney Centre might reply that El Niño has been occurring for millions of years, so if recent episodes induce bleaching, it must be because anthropogenic global warming has already elevated average summertime sea temperatures close to the upper thermal limit of what corals can withstand.[38]

This hypothesis, too, is doubtful, for several reasons.

As carbon dioxide scientists Sherwood, Keith, and Craig Idso point out, the scleractinian corals, which are today's major reef builders, came into being in the mid-Triassic Period, when the Earth was "considerably warmer" than today, and thrived "throughout the Cretaceous, even when temperatures were 10-15°C higher than at present."[39]

Data from the Vostok ice core in Antarctica indicate that all four interglacial periods previous to the one in which we now live were warmer than the present one by 2°C or more.[40] A new proxy record going back 123,000 years, obtained from an ice core in North Greenland, indicates that temperatures during the last interglacial period were 5°C warmer than today.[41] Analysis of coral skeletal remains from the GBR indicates that the tropical ocean about 5,350 years ago was 1.2°C warmer than the mean for the early 1990s.[42] Analysis of the isotopic composition of cave formations in New Zealand indicates that the region was warmer than the present in the early part of the past millennium—about the same time as the Medieval Warm Period in Europe.[43]

Corals have been around for more than 200 million years and survived countless changes in the global environment. If coral were as vulnerable to bleaching and death from global warming as the Centre would have us believe, coral would have become extinct eons ago.

An Alternative Hypothesis

The world's reef ecosystems are threatened, but the real reef crisis predates by decades any possible late-20th-century global warming from greenhouse gases. Pandolfi et al. (2003), a team of a dozen biologists who surveyed 14 of the earth's major reef systems, found that "most…were substantially degraded before 1900," and that, "all of the reefs in our survey were substantially degraded long before the first observations of mass mortality resulting from bleaching and outbreaks of disease."[44]

In a recent literature review,[45] the Idsos catalogue a host of *local* threats to the GBR:

> (1) rising nutrient levels caused by runoff from agricultural activity on land, (2) outbreaks of coral-devouring crown-of-thorns starfish [possibly aggravated by over-harvesting of starfish-eating fish], (3) the barbed hooks and scything nets used in fishing, (4) tourists and developers who build resorts and marinas for them, (5) increased sediment levels [from agricultural runoff, mining, and construction], (6) the nets of prawn trawlers stirring up the growing load of sediments, (7) the 6-10 tons of "bycatch" for each ton of prawns netted that are caught and die, which dramatically changes the composition of reef life, (8) sea life depleted to the point of exhaustion by over-fishing, (9) huge catamarans and dive boats that take thousands of visitors to the Barrier Reef each day and dump their sewage in the sea on the way home, (10) the live reef-fish trade, (11) fishermen using dynamite and cyanide, (12) coral diseases, and (13) pollution.

The Idsos hypothesize that these local affronts to ecosystem health and resilience, especially pollution and sediment loading, are making corals more vulnerable to heat stress and less able to recover from bleaching events than was the case in previous decades and centuries. For example, Scarlett et al. (1999) found potentially toxic levels of the algaecide Irgarol 1051, a photosynthesis inhibitor used in some marine craft coatings, at nine out of ten sampling locations at the Great Barrier Reef. Scarlett *et al.* note that this herbicide "could be affecting the endosymbiotic microalgae of coral polyps, upon which the health of the reef system depends."[46] The Idsos comment:

> Hence, it is only logical to expect that the presence of this debilitating substance—and many others—would weaken various coral components of the GBR and make them more susceptible to other stresses, such as periodic increases in water temperature, possibly leading to serious coral bleaching. Indeed, it is amazing that corals do not bleach more than they do, considering the many direct onslaughts of humanity that tend to weaken them.

Accordingly, the Idsos argue that the first order of business is to improve the management of specific reefs.

That makes practical sense. Policymakers and stewards can do something about over-harvesting, sediment loading, and pollution. They can do zilch about El Niño and nothing even about potential man-made global warming for many decades. And, as Pandolfi *et al.* emphasize, "Regardless of these new threats [such mass bleaching episodes], reefs will not survive without immediate protection from human exploitation over large spatial areas."

Junk Forecasting

What about the long term? The Sydney Centre invokes the IPCC's estimate of 1.4-5.8°C (2.5-10.4°F) of global warming over the next 100 years to justify Kyoto and additional "deep cuts" in carbon emissions. Warming at the high end of the IPCC projection would harm many species, especially those situated at or near the heat-limited boundary of their natural range. But the IPCC's warming estimates are not credible. Consider the startling discovery made by distinguished economists Ian Castles and David Henderson.

Castles and Henderson found that even the IPCC scenario with the *lowest* emissions and temperature increases assumes wildly implausible rates of economic growth in developing countries. In that scenario, per capita GDP in 2100 is more than 70 times 1990 levels in Asian developing countries and nearly 30 times 1990 levels in the rest of the developing world. These growth assumptions would be unrealistic even in a high-emissions scenario. "No significant country has ever achieved a 20-fold increase in output per head in a century, let alone the 30-fold or 70-fold increases projected by the IPCC for most of the world's population," Dr. Castles observes.[47]

Overblown growth projections lead to inflated emission estimates, which in turn lead to overheated climate forecasts. The IPCC's warming projections are unfit to guide public policy about reef conservation or anything else.

Is Global Warming Good for Reefs?

While it is true that high sea temperatures can bleach corals, especially those with pollution-damaged immune systems, it is also the case that warmth promotes coral calcification—the formation of coral skeletons.

A new study[48] by scientists in Australia "suggests that ocean warming will foster considerably faster future rates of coral reef growth that will eventually exceed pre-industrial rates by as much as 35 percent by 2100," says lead author Dr. Ben McNeil,[49] an oceanographer at the University of New South Wales. McNeil is not talking about a trivial amount of warming, but a hefty 3.2°C increase in annual mean sea temperatures at coral reefs during the period from 1950 to 2100. In addition to more robust coral growth, the study also predicts that warming will expand corals' habitat range.

Just as CO_2 enrichment of the atmosphere helps most plants grow larger, faster, and more profusely,[50] and just as recent changes in global climate (increased warmth, sunlight, and rainfall) are enhancing the productivity of green biomass in tropical rainforests,[51] so, it appears, CO_2-induced global warming might help build the world's coral reefs.

The scientific jury is still out on whether significant global warming from man-made CO_2 will occur. And if significant warming does occur, it is anybody's guess how the gains to reefs from increased calcification will compare to the losses from more frequent or intense bleaching events. However, it is at least scientifically possible that the carbon-suppression policies advocated by the Sydney Centre would reduce the long-term growth potential and habitat range of reef eco-systems. If so, then, once again, according to the Centre's own reasoning, Parties to the World Heritage Convention would be obligated not to ratify the Kyoto Protocol or to withdraw from it.

Conclusion

Wittingly or otherwise, the Sydney Centre implies that when Australia, the United States, and other nations became Parties to the World Heritage Convention, they agreed to be

governed by future treaties not yet ratified, proposed, or even imagined. That is absurd, because it is tantamount to saying that 178 nations have tacitly decided to terminate their existence as sovereign states.

Although a possible link between recent bleaching events and greenhouse gas emissions cannot be ruled out, science has not yet established such a nexus, and recent research opens the alternative possibility that reefs may actually benefit from global warming.

This much is clear: Energy rationing schemes like Kyoto can do nothing to save reefs from *known* environmental threats in the policy-relevant timeframe—the next few decades. Alarmist tracts like the Centre's report could even make matters worse by distracting public attention from clear and present dangers, diverting resources from effective stewardship strategies, and fostering the fatalistic view that reefs cannot be conserved in a warming world. As the Idsos caution, those who say we can save the Great Barrier Reef only by massively reducing fossil fuel consumption run the risk of consigning that ecological treasure to oblivion.

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