

The Great Barrier Reef; The Good, The Bad and The Uncertainty

by Rowan Smith

Having recently returned from diving on the [Great Barrier Reef](#) I noticed how friends were then telling me how worried they were by the deteriorating environmental situation there. And they weren't alone.

Television programs and articles have stressed how the Reef is under threat: leaching and bleaching, acidification, rising water temperatures, pollution. Even as I write, a [Chinese coal tanker](#) lies grounded after taking an illegal shortcut and slamming into the protected ecosystem, leaking fuel oil and leaving a scar three kilometers long that will take 20 years to repair itself. (Is the true wonder of the world these days how hopeless we are at looking after our planet?)

I've now been diving on the Great Barrier Reef for five or six years, while holidaying in Port Douglas in far north Queensland, and it can be hard not to explore this magical underwater world without seeing it through these increasingly other-colored, and certainly not rose-colored, goggles.

The tour operators never say much to alleviate one's worries. On the one-hour journey from the Port Douglas marina to the outer reef, they provide an upbeat preview of the day's activities for our large, international party of sightseers, snorkelers and recreational divers. It includes safety drills, destinations (reef sites to be visited), the all-important seasickness tablets, the underwater digital or disposable cameras that can be purchased, and finally a breakaway technical briefing on the day's dives for those doing so.

On none of these trips (made with several different companies) have I ever heard any mention of, commentary on, or structured interpretation about the health of the Reef. Even when guests are informed that they've paid a Government Reef Tax on top of the tour price, no one explains why this was paid. (For the management of the Reef, including ranger patrols, education and research.)

So when an American colleague recently told me the Great Barrier Reef sustainability program is regarded as being best practice, that she understood "Great things are happening out there," I felt a sharp disconnect with much of what I'd been feeling, as well as hearing.

So I went to the fount of all wisdom: Google. Buried amongst the tourism websites about the vivid blue waters and coral-creature-color paradise that is the Great Barrier Reef, I find one entry for the Great Barrier Reef Marine Park Authority ([GBRMPA](#)) .

Winner of a United Nations 2007 World Environment Day Award for Excellence in Marine and Coastal Management , this government organization, along with the Queensland Tourism Industry Council and the Association of Marine Park Tourism Operators, launched in August 2009 the Great Barrier Reef Tourism Climate Change Action Strategy 2009 - 2012. It provides a way forward for the Reef tourism industry, government and other partners to take action in response to climate change.

Reef and eco-tourism expert, [Tony Charters](#), Principal of sustainable tourism consultancy and Convenor Tourism Futures and Global Eco, confirms that GBRMPA has done an excellent job working with the tourism industry, providing such incentives as 15 year permits for independently assessed quality of eco-tourism operations, instead of a usual six. He says there is a distinct, measurable link between high-standard operators and reef protection.

Other innovations include an emissions calculator, specifically developed for Marine Park tourism operators, plus practical lessons on how they can reduce their footprint and adapt to the impacts of climate change. Case studies are also being developed to provide information on the use of bio-diesel in marine operations, on climate change action and response certification schemes, on becoming carbon neutral and understanding carbon offsetting.

Businesses that adopt [Climate Action Certification](#) (through Ecotourism Australia) receive practical assistance to equip themselves for the impacts of climate change and to reduce their contribution to greenhouse gas production.

Charters expects that increasingly frequent extreme weather patterns, such as cyclones, will put pressure on businesses to enact these measures. “The hardest issue for tourism operators is to know at which point they need to adapt their business to take account of climate impacts,” he says. Some of the impacts of climate change will unfold over decades – at what point do you bite the bullet and change your product or operating infrastructure?”

It can be expensive, assessment costs for an application to the GBRMPA range from a few hundred dollars to six-figure sums, depending on what the development is – pontoons, jetties, pipelines, dredging and marinas being examples. It can also be time consuming, a major project generally taking between six months and three years for planning, assessment, construction and management.

So, good things are happening for the longer term, after all. And action is being taken. Certainly my own experience diving on coral reefs has taught me that you can return to the same spot after several years, expecting visual degradation, only to find it looking more abundant in animal, plant and coral life than I’d remembered.

However, I still could not help thinking, despite all the good things happening to the preservation and management of the Reef, about the [Ross Garnaut Review](#).

The Review was an independent study by economist Professor Ross Garnaut, commissioned by Australia’s Commonwealth, state and territory governments. It stated, among other things, how the country’s major environmental assets, so

important to our tourism business, are also highly susceptible to climate change. The Great Barrier Reef is one of the first assets to be named, and the Review illustrated poignantly that a no-mitigation scenario would mean the Great Barrier Reef would be destroyed by 2050.

It states elsewhere how a difference of CO₂ concentrations, say 450 parts per million instead of 550, would be of major significance. The former would still be expected to damage – making mass bleaching twice as common as it is today – but not destroy the Great Barrier Reef and other coral reefs, while the latter would probably lead to their destruction.

And Garnaut’s certainly not alone in his insistence that we need to make significant changes, fast. The [World Wildlife Fund](#) says 14 million tonnes of mud; pesticides and chemical fertilisers continue to wash onto the Reef every year. The “outstanding

universal values of the Reef have already been altered by rapid climate change” says Professor Ken Baldwin in a statement by 13 prominent Australian marine and climate scientists. In 1998 and again in 2002, when summer maximum temperatures rose one to two degrees, unprecedented coral bleaching occurred and extensive mortality due to thermal stress affected over 50 percent of the Reef. The World Wildlife Fund says the amount of sediment flowing from the land into the marine park has quadrupled over the past 150 years, largely due to the expansion of grazing and cropping and the loss of native vegetation and wetlands. And so it goes.

So I find that I’ve arrived back where I started at the surface of this issue, not sure if the news about the future of the Great Barrier Reef is good, or if it’s bad. Like so much climate shifting debate, it seems to all be a matter of degrees.