The Good News and the Bad News

The GBR remains pristine but resource mismanagement threatens the nation

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Despite 40 years of reported threats, the GBR remains a vast area of pristine reefs. Most are remote and rarely even visited. Even the most trivial human influence is difficult to find. The following is a brief overview of the real world situation with regard to the major matters of incessant concern to government, researchers, activists and the news media.

- Overfishing All fishing is prohibited on a third of the reef. The commercial catch is limited by quota to a total which equates to an average harvest rate of about 9 Kg/Km²/yr. This is less than one-quarter of 1% of the 4000 Kg/Km²/yr conservative estimate of the sustainable average rate for coral reef fisheries. Like all Australian fisheries, those of the GBR are in decline, but this is solely from over regulation. There is no evidence at all of overfishing and it is not even a rationally arguable hypothetical possibility.
- Value to tourism The often cited multibillion dollar estimates of the value of reef tourism are the total value for all tourism in the region. However, half of all visitors do not visit the reef at all and for most of those who do it is a one day one time excursion, The value of actual reef tours is comparable to that of the wholesale value of the commercial fishing catch. If the economic value of recreational fishing is included, fishing is far larger and it is much more again if the value of seafood dining is considered.
- Crown-of-Thorns starfish Population outbreaks continue to come and go and reefs recover as they always have. No relation to any human activity has ever been established and similar natural population fluctuations are characteristic of other starfishes and sea urchins in many other places.
- Sedimentation It is often stated that sedimentation has increased fourfold since European settlement; but, this is only an estimate from computer modeling. However, models can only reflect the understanding of the modeller. Modeled results are not evidence unless the model has been verified. The only real evidence for increased sedimentation is based on a proxy for terrestrial sediment in the form of a Barium isotope. The concentration of this isotope in a few core samples from corals has been used to infer changes in sedimentation rate. However, the relation of the isotope to the sediment is far from certain and the results are improbable. They suggest a fourfold increase in sedimentation immediately after the introduction of 50,000 head of cattle into the Burdekin catchment in 1869 but no subsequent increase from the million head there today. A much better argument might be made for decreased sedimentation in the region from reduced burning, improved pasturage and replacement of rainforest having little ground cover under the canopy by crops and grasses with much better soil holding capability.
- Fertiliser runoff Nutrient concentrations in GBR catchment rivers is highest toward the end of the dry season when discharge into the GBR lagoon is almost nil. At this time the nutrient levels are still within recommended limits. Most of the discharge from these rivers occurs in brief flood events in the wet season. At this time nutrient concentrations in the rivers are greatly diluted and this dilution is quickly increased thousands of times over after discharge into the sea. Over the past two decades fertaliser usage in the GBR catchment has declined with steeply rising costs and more efficient usage. Nutrient runoff from farming and grazing is a non-problen which is getting smaller and no evidence has ever been found for detrimental effects on the GBR. In recent years natural nutrient surges associated with internal waves have been discovered to be common events on various reefs including the GBR. These bring cold nutrient rich deep ocean water up onto reefs with increases in nutrient concentrations up to 100 times greater than anything coming from the coast. As these are natural events they have been assumed to be beneficial to the reefs. No one has explained why ten to one hundred times lesser nutrient fluxes from land are assumed to be

so harmful.

- Herbicides and pesticides In the rivers these are within safe limits for drinking water.
 Diluted by thousands to millions of times in the ocean the exposure of marine life is far less
 than that of our food crops and our own children. As our mortality is declining and crop
 yields are increasing, the reef creatures would seem to be under little threat. Unfortunately
 the sensitivity of modern methods of detection seem to have exceeded our capacity to
 rationally assess the results.
- Sewerage discharge from boats For thousands of years people on reef islands have used the sea as their toilet with no ill effects to either the reef or themselves. Every multicellular animal in the teeming multitudes that live on reefs urinates and deficates there. A small sand cay with 25,000 seabirds on it can have the sewerage discharge of 1000 humans. The result is only a slight increase in marine plant growth and grazing fishes which only an experienced observer might notice. The only thing accomplished by banning sewerage discharge from boats will be to turn an elegant, natural, environmentally friendly solution into a stupid, costly, wasteful, unnecessary problem.

The reef is fine. It's purported problems exist only in the fevered imagination of the eco-salvation industry.