Point: Creative Conservation Efforts are Necessary to Preserve the Great Barrier Reef

Thesis: While conservation of the Great Barrier Reef is vital, not enough is known about its ecosystems to intervene in its processes. Instead, conservationists would be better advised to use economic strategies to limit the impact of tourism and runoff. Other threats to the reef, most importantly global warming, require even more creative thinking.

Summary: The Great Barrier Reef Marine Park has significant natural protections in its favour. However, runoff from increased agriculture on the mainland and global warming do pose significant threats. These problems cannot be solved by direct intervention at the site of the reef. Rather, they require strategic lobbying by conservationists and the adoption of ideas which they may previously have not considered.

Keeping it Great
Conservation of the Great Barrier Reef Marine Park (GBRMP) is very important but it is also important that conservation efforts be deployed in well-planned directions. According to Dr Louise Goggin, a marine biologist with the CRC Reef Research Centre in Queensland, the reef's natural strengths include its position—many of the 2,900 natural reefs are offshore, remote, and not easily accessible, with a low level of human use. Additionally, Australia's coastal population centres are fairly low compared to other nations; Australians are not heavily dependent on subsistence fishing, nor are destructive marine practices, such as blasting or poisoning, the norm. Finally, the Great Barrier Reef is protected and managed, with extensive no-take zones, and has been and is being studied and monitored intensely.
Noting these natural protections can provide structure and direction for future conservation efforts. Certainly, in and of themselves, they are not a guarantee of continued health for the Great Barrier Reef Marine Park in the future. Poor water quality caused by increasing levels of runoff could make detrimental changes to the ecosystems in the reef. Also, while much of the coastline adjacent to the reef is remote and sparsely populated, in the small areas where population is dense, tourism and fishing could be having a serious impact on that part of the reef. Most dangerous, however, are the seawater temperature rises brought about by global warming, which are causing serious coral bleaching, damaging ecosystems on a large scale. Additionally, increases in carbon emissions and the resulting ocean acidification are having an impact on the coral's ability to create calcareous skeletons (calcium carbonate skeletons)—a concern for any ocean creatures with calcareous skeletons, such as coral, clams, sea urchins, and molluscs.

When working on solutions for these potential problems, it is also important to acknowledge the actual hardiness of the reef itself. There appears to be a popular belief that its ecosystems are delicate and easily thrown out of "balance" by intrusive factors from "outside" those ecosystems. As the highly respected coral reef scientist Terry Hughes (2008, p. 85) puts it,

Coral reefs are often described (inaccurately) as fragile ecosystems in delicate balance with nature; this notion goes hand in hand with the outmoded idea from visiting colonial scientists that the tropics are benign and stable environments. But are coral reefs stable, fragile ecosystems? The answer is no, especially at the scales most relevant to human interaction with reefs. Coral reefs are subject to a high frequency of recurrent disturbances, and they have evolved and thrive in a dynamic environment. This seems to suggest that it should be possible to adopt a conservation strategy that would still allow for increased agriculture on the mainland, as long as the runoff which reached the reef was somehow controlled.

Increased agriculture in this region is important for Australia's food security. Maintaining a supply of affordable food has become a serious concern all around the world. While it seems hard to imagine anyone in Australia ever being short of food, as the crisis worsens around the world, every country will be affected. According to an Australian Parliament Senate (Senate Select Committee on Agriculture and Related Industries, 2010) enquiry into the issue:

From Australia's perspective, it is imperative that we maintain a productive base capable of meeting the food needs of the domestic population to ensure food security in the event that other countries become unwilling to trade food grown within their borders. Even more important, however, is the need for Australia, as a major food exporter, to contribute to meeting the global food task and thereby prevent the potentially disastrous consequences of major food shortages. Food security is something that needs to be planned for immediately. If Australians wait until the global crisis begins to affect them, conservation considerations, such as the need to control the agricultural runoff which reaches the Great Barrier Reef, will become a secondary concern. Those concerned with the preservation of the reef have to be aware that food supply will always come first. Once this is acknowledged, conservation strategies which take food security into account can be developed. Also, if the problem is tackled now, food supply can be planned in such a way that it minimises the impact on global warming. If planning is left to the last minute, damaging production practices will surely be adopted and the reef as a whole, rather than just the small areas near shore, will suffer a great deal more.
A possible conservation strategy might be lobbying government to provide more funds and incentive for research for improving the water quality of agricultural runoff. This sort of research could be of benefit all over the world, but particularly in the case of the Great Barrier Reef. To a large extent, such plans are already in place. But more focus needs to be brought to bear on the successes and failures of these plans to ensure sustainability. However, increased emphasis on remediing terrestrial runoff problems could distract from other pressing issues, such as the effect climate change is having on the entire reef. As Brodie and Fabricius (2008, p. 112) put it:

terrestrial pollution is not the only stress facing the ecosystems of the GBR, and it is the combination of multiple stresses (from global climate change, fishing and pollution principally) that will escalate threats to the long term viability of the system. Management of water quality issues alone, no matter how effective, are unlikely to prevent further degradation.

Coral reefs around the world are changing rapidly in response to global warming and climate change. While some indicate that the effects of global warming will have an impact in the near future, coral reefs are showing the results now. Large areas of remote reefs, otherwise untouched by human disturbance, are indicating stress as a result of ocean warming and many reef-dwelling organisms have died (Hoegh-Guldberg, 2008, p. 106).

In this sense, coral reefs are a good indicator of what will happen if the world fails to respond to the challenge of global warming. If global carbon emissions are not cut 90 per cent by 2050, the Great Barrier Reef will continue to suffer and could be in grave danger. Fixing this problem is necessarily an effort that will have little to do with the Great Barrier Reef itself. Rather, it will have to take a global view of conservation. It is important not to neglect local efforts to improve water quality and maintain wise fishing quotas, but perhaps now is the time to focus more effort on getting Australia and larger countries—predominantly the United States and China—to start closing coal-fired power stations. Only success in this action, of all possible courses, can have the impact necessarily to maintain the long-term health of the Great Barrier Reef.

Ponder This
1. Revise the thesis and summary at the beginning of the essay, tightening it up, based on the essay you have just read.

   - 2. Identify the known threats to the Great Barrier Reef. Has the author been comprehensive in his assessment of those threats? How would their inclusion affect the success of the essay in forwarding the author’s argument?

   - 3. Assess the supporting data that the author provides. What are the features of strong supporting data that lend credibility to the author’s argument?

   - 4. The author proposes closing coal-fired power stations in the final paragraph. Would it have been more effective for him to offer that and other solutions elsewhere in the article? Where would you have raised that issue and how would you have incorporated it into the essay?

   - These essays and any opinions, information or representations contained therein are the creation of the particular author and do not necessarily reflect the opinion of EBSCO Information Services.

Bibliography
Books

Brodie, J & K Fabricius 2008, "Terrestrial Runoff to the Great Barrier Reef and the Implications for its Long Term Ecological Status", in Hutchings, PA, M Kingsford & O


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