5 Great Barrier Reef

LAND, RIVERS AND SEA

Investing in water stewardship boosts agriculture, fishing and tourism, and helps to conserve one of the world's iconic environmental assets

© Reef Catchments

"If stuff that runs off our farm is affecting the Reef we need to do what we can to reduce it. And that's the idea of this, to get proactive and show what can be done. Hopefully that will lead to change within the industry."
Gerry Deguara, sugarcane grower, Queensland

Catchment run-off is one of the biggest threats to the health of many marine areas around the world.

This is particularly true for the Great Barrier Reef, one of the world's natural wonders and a World Heritage Site. Water running off catchments collects farm fertilizer, pesticides and soil, and flushes these pollutants out onto the Reef. The impact on corals and seagrass, and the species that rely on them for food and shelter, is immense.

A recent study found that reef coral cover has halved since 1985 (De'ath et al., 2012). More than 40 per cent of this loss was due to outbreaks of the coral-eating crown of thorns starfish, which are fuelled by fertilizer run-off from farms. With the decline in the Reef's health – exacerbated by outdated fishing practices, and threats such as port expansion, the dumping of dredge spoil and climate change – the World Heritage Committee is considering adding the Great Barrier Reef to its "In Danger" list.

WWF is working with farmers, governments and companies to cut pollution so coral can recover, and to enable the Great Barrier Reef to build resilience to the increasing impacts of climate change. The work promotes more sustainable commodity production, and better water stewardship, water security and freshwater habitat protection.

One key initiative is Project Catalyst, which brings together sugarcane growers, The Coca-Cola Foundation, government agencies and WWF to test and implement new practices that reduce pollution and improve farm productivity. Nearly 100 Queensland farmers are involved in the project.

To get the cuts to pollution necessary for the Great Barrier Reef's survival, this good work needs to be scaled-up across all of the catchments that run into the Reef – encompassing millions of hectares and thousands of farms. This will require a significant boost in private and public investment. Australian national and state governments have so far committed AUS$750 million (US$670 million) over 10 years to support the health of the Reef. Some of this funding will help farmers invest in better practices and technology that will increase productivity while reducing pollution, erosion and water use.

While much more needs to be done, the initial results are impressive. In the last five years, some 2,000 farmers have adopted improved management practices across more than 3 million hectares. Early indications show that total pesticide pollution has been cut by 15 per cent and fertilizer pollution by 13 per cent – although some participating farmers have achieved even greater reductions. Farmers benefit too, seeing improved productivity and spending less on chemical inputs.

Market forces can also play a significant role in improving production practices. WWF is working with large buyers of sugar and supply chain businesses to promote Bonsucro, an international

standard for more sustainable sugar production, and to help farmers improve their practices in order to achieve certification. Work is also being carried out to develop similar standards and better management practices with the cattle industry, the other major user of land in the Great Barrier Reef catchment area. Consumers are encouraged to reduce their impact on the Reef by choosing products that are verified as sustainable.

The economic case for much greater investment is clear. According to the Australian government, the Great Barrier Reef World Heritage Area adds AUS$5.68 billion (US$5.10 billion) a year to the Australian economy and generates almost 69,000 full-time equivalent jobs (Deloitte Access Economics, 2013). Investing in its health not only preserves one of the world's environmental wonders, but also boosts the fishing and tourism industries and the communities that rely on them.

Similar pollution reduction models can be applied across many catchments globally, helping communities to benefit from more productive agriculture, fishing and tourism industries, and protecting the natural assets upon which they depend.

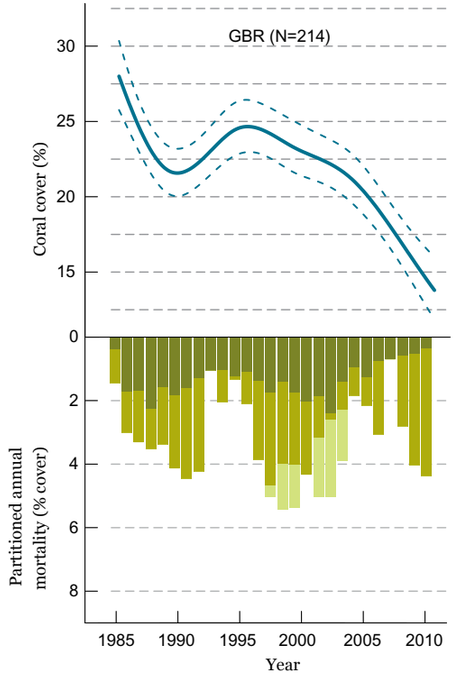


Figure 65: The 27-year decline of the coral cover on the Great Barrier Reef
Tropical cyclones, coral predation by crown of thorns starfish (COTS) and coral bleaching accounted for 48, 42 and 10 per cent of the estimated loss respectively (De'ath et al., 2012).

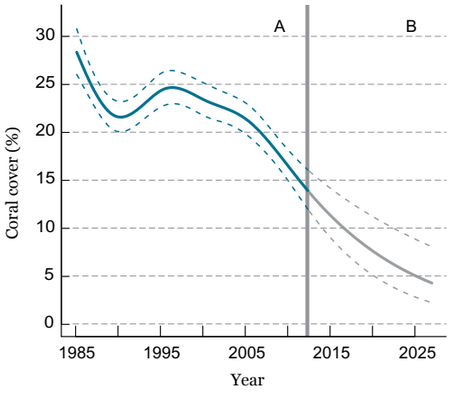
Key

- COTS
- Cyclones
- Bleaching
- N Number of reefs

Figure 66: A projection study (B) based on De'ath et al., 2012 (A), shows that if the declining trend continued, coral cover would be half of 2012 levels by 2022
(AIMS, 2012).

Key

- Trend line
- Confidence limits
- Trend line
- Confidence limits



Preserve natural capital: The Great Barrier Reef is the world's largest coral reef ecosystem and a World Heritage Site. It is recognized as one of the most significant sites for biodiversity, supporting tens of thousands of species, many of which are of global conservation significance.

Produce better: Sugarcane growers implementing better practices have reduced pesticide pollution by 15 per cent and fertilizer pollution by 13 per cent – keeping chemicals on farm where they are needed, and off the Reef.

Consume more wisely: Consumers can help protect the environment by supporting producers and production schemes that are striving to reduce impacts on the environment, such as, for example, Bonsucro certified sugar and MSC-certified seafood.

Redirect financial flows: Improving farming practices on land provides a huge return on investment, since the Reef is worth AUS$5.68 billion (US$5.10 billion) a year to the Australian economy and supports almost 69,000 jobs.

INVESTING IN THE REEF'S HEALTH NOT ONLY PRESERVES ONE OF THE WONDERS OF THE NATURAL WORLD BUT ALSO BOOSTS FISHING AND TOURISM INDUSTRIES AND THE COMMUNITIES THAT RELY ON THEM