Australian Government
Great Barrier Reef Marine Park Authority

Reef Authority

Reef Interventions at Tourism Sites

The Reef Authority recognises that reef interventions at tourism sites can improve the recovery of the Reef and promote a positive, action-focused visitor experience. This also provides an opportunity for tourism operators to proactively build resilience within their much-loved site.

Tourism operators play a key role in how we protect and manage the Great Barrier Reef. Their high frequency visitation to the reef puts them in the best position to provide regular pulse checks of the health of the Reef and witness changes when they happen.

What is coral transplantation?

One type of reef intervention action is coral transplantation, which involves the movement of coral (e.g. adults, juvenile, larvae) within its own reef complex or gene pool and can aid in the natural recovery of coral reefs by increasing coral cover, biodiversity and complexity.

Coral transplantation activities, including coral gardening, larval reseeding, and outplanting on Reef Stars, are currently undertaken at some sites in the Great Barrier Reef Marine Park.

A permit is required to conduct coral transplantation activities in the Marine Park. Detailed information is required as part of the application process, including information relating to:

- justification of activity,
- coral species and size to be collected,
- site health status and environmental parameters (e.g. depth and substrate) of the donor and transplant sites, including a general health assessment of the collected coral,
- the methods and equipment used during the collection and outplanting process,
- demonstrated experience, and
- consistency with other relevant Reef Authority policies.

Following collection and replanting, monthly monitoring may be required for at least 12 months to assess the growth and survivorship, fish abundance and overall coral cover at the transplant site.

Some coral transplantation activities may be allowable under Part 5 of the *Great Barrier Reef Marine Park Zoning Plan 2003* (Zoning Plan), for example, in late 2023 and early 2024 two cyclones impacted the northern Great Barrier Reef, with affected tourism operators contacted and provided temporary authority to turn and/or re-attach damaged corals at their sites.

Below are case studies of how the tourism industry (in some instances in partnership with researchers) is helping build the resilience of the Great Barrier Reef.

Case Study 1 – Coral Gardening
Opal Reef

Coral gardening involves the attachment of small coral fragments (corals of opportunity) to suitable growing substrate where bare patches occur. Fragments are collected as "corals of opportunity" for direct out planting or placement onto coral nurseries. Coral nurseries enable donor corals to grow to a suitable size prior to propagation and out planting. A range of out planting methodologies (e.g. Coralclip® - a small spring-loaded clip that attaches to hard coral rock via masonry nails developed by the Coral Nurture Program) have been used successfully in the Great Barrier Reef.


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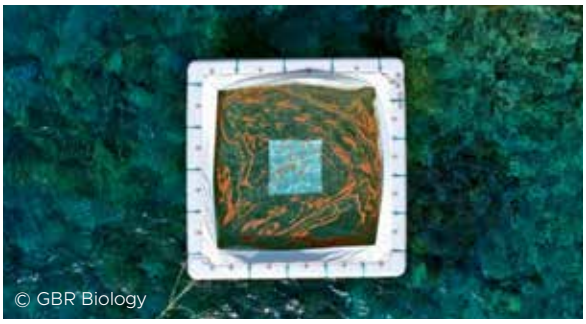
Case Study 2 – Larval Reseeding
Moore Reef

Coral gametes (mature male or female reproductive cells) are collected at a suitable donor site during broadcast spawning events using specially designed coral spawn catchers. The coral gametes are then reared and monitored as they develop into larvae over a 6-day period. Once the coral larvae are ready to settle, the larvae are released at a targeted site with the aim of increasing the density of recruitment.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Case Study 3 – Reef Stars
Bait Reef

Reef stars are hexagonal frames that can be placed on the seabed in areas of loose coral rubble or sand. They provide a stable platform that can be used to attach live coral fragments (corals of opportunity) to while they continue to grow and eventually completely cover the reef star structure. Reef stars were originally developed by Mars Sustainable Solutions for use in Indonesia to rehabilitate reefs impacted by blast-fishing.


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