

Policy for the Management of the Coral Fishery

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Queensland Government

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1. TITLE

Policy for the Management of the Coral Fishery

2. EFFECTIVE DATE

The provisions of this policy are to take effect on 1 July 2009.

3. PURPOSE

The purpose of this policy is to assist in the management of the Queensland Coral Fishery (QCF) in accordance with the main purpose of the *Fisheries Act 1994* (the Act; refer to Appendix 1 for the main purpose of the Act).

The policy aims to:

1. ensure that Queensland's coral resources are harvested in an ecologically sustainable manner by insuring the QCF against unsustainable effects of:
 - localised concentrations of fishing effort; and
 - targeted take of particular types of coral;
2. reduce impediments to economic development in the QCF;
3. enable adequate monitoring and review of the performance of the QCF; and
4. ensure that operations of the QCF do not reduce the community benefit provided by coral resources in Queensland.

The policy will achieve its purpose and aims by providing a fisheries management framework for the QCF that sits beneath the legislative provisions of the Act and the *Fisheries Regulation 2008* (the Regulation). The main provisions contained within this policy will be given enforceability through conditions attached to Department of Primary Industries and Fisheries (DPI&F) Commercial Harvest Fishery Licences endorsed to operate in the QCF ("coral authorities"). Processes for monitoring performance of the fishery against its management objectives will be contained within a separate policy; the QCF Performance Measurement System.

4. BACKGROUND

4.1 QCF provisions under the Regulation and other policy instruments

The Regulation specifies the area of the QCF as all Queensland tidal waters and foreshores south of latitude 10°41' South and east of longitude 142°31'49" East. However the available area for coral harvesting is further restricted through coral authority conditions and Marine Park zoning arrangements.

The Regulation stipulates that only the following may be taken in the QCF:

- (a) coral of the class *Anthozoa* or *Hydrozoa*, including its uncompact skeletal structures;
- (b) any marine organism living in or on coral mentioned in paragraph (a), other than a marine organism that is a regulated fish;
- (c) coral sand consisting of fine remnants of coral.

The QCF is subject to the Limited Entry Policy guidelines, which have been in place since 1997. Under the guidelines no additional authorities are to be issued for this fishery except where provided for in a Regulation or Management Plan or at the discretion of the Chief Executive administering the Act, where special circumstances exist. These guidelines ensure that management of fisheries resources in Queensland is consistent with the main purpose and principles of ecologically sustainable development as set out in the Act. Immediately prior to the adoption of this policy, 59 coral authorities were in existence.

4.2 QCF provisions under coral authority conditions

Conditions attached to coral authorities include:

- Individual quota allocations;
- Catch & effort reporting requirements;
- Identification of the authorised boat and divers;
- Authorised area of operation; and
- Other miscellaneous provisions.

4.3 QCF provisions under marine park legislation

In waters north of latitude 24°30' south (the southern boundary of the GBRMP), the Great Barrier Reef Marine Park Authority (GBRMPA) and Queensland Parks and Wildlife (QPW) have additional responsibility for management of resource use. Where relevant those agencies require that coral fishery operators also hold a Marine Parks permit. Marine Park zoning restricts coral collecting to General Use Zones, Habitat Protection Zones and most areas of the Conservation Park Zones within the Marine Park.

Issues relating to restricted coral collection from sensitive locations in the Great Barrier Reef Marine Park (GBRMP) e.g. in the Whitsundays Plan of Management area and the Palm Islands Group, are dealt with by GBRMPA and are not addressed by this policy.

This policy has been developed in collaboration with GBRMPA and QPW and performance and management of the QCF is monitored and reviewed in coordination by the three government bodies.

4.4 Fishery characteristics

The QCF is based on the collection of a range of taxa, the extent of which is set out in section 4.1 of this policy.

The different types of coral taken in the fishery are defined below:

- Ornamental coral - corals from the families Pocilloporidae and Acroporidae, initially taken live and traded as either non-living ornaments/art or live aquarium corals. When taken for ornamental purposes, this type of coral is dried, hardened, treated and often decorated. Whilst other taxa are occasionally used for ornamental purposes, the majority of corals targeted for the market belong to the families Pocilloporidae and Acroporidae.
- Specialty coral - a wide variety of hard corals, soft corals, anemones and related (cnidarian) species taken for live display in coral reef aquaria. Corals taken in Queensland for the live aquarium trade are usually small pieces or colonies less than 15 cm in diameter. This policy considers all corals not belonging to the families Pocilloporidae or Acroporidae and not belonging to any of the other categories in this section to be 'specialty coral'.
- Live rock – dead pieces of coral/limestone, often with organisms such as algae, bryozoans, sponges and small corals living on them, taken for use as substrate and for textural and aesthetic purposes in aquaria.
- Coral rubble – coarsely broken up non-living fragments of coral.
- Coral sand - finely broken up remnants of coral taken in small quantities as a consequence of live rock and coral rubble collection. No targeted collection of this component is allowable within the GBRMP.

The QCF has undergone a significant shift in the last decade from predominantly supplying the ornamental coral market to supplying the aquarium industry with specialty coral and live rock. Live rock alone constitutes around 70% of the annual weight of coral taken in Queensland. However small, colourful corals, which are taken

live for both the domestic and international aquarium markets, command the highest values of all products taken in the QCF.

4.4 Key issues within the QCF

The policy achieves its purpose and aims by addressing the key issues impacting upon the QCF. The four main issues that form the basis of policy provisions are outlined below, including an overview of their drivers.

1. *Ensuring the long-term ecologically sustainable take of corals where the composition and volume of species taken changes in response to changing market demands.*

The report entitled "*The sustainability of Queensland's coral harvest fishery*" by Harriott (2001), made the following points in regards to the sustainability of the QCF:

- Limestone rock and rubble are continuously produced in a functioning reef and at the present level of take [and methods], its harvest will not affect reef structure and function on either a local or regional scale.
- Due to the high productivity and the potential for recruitment, the ornamental fishery comprising *Acropora* and *Pocillopora* genera, does not pose a threat to the Great Barrier Reef on either a reef wide or regional scale.
- Concern was expressed that should the whole quota (200 t) be taken in the form of [specialty] aquarium corals then the fishery may be unsustainable.

It is also noted that the fishery takes many species for which there is limited scientific understanding of population dynamics due to the general limitation of scientific research to depths less than 25m.

The policy provides for the sustainability of specialty coral by capping overall take and tracking temporal changes in the species composition of corals taken over small spatial scales.

2. *Minimising the effects of localised concentrations of effort.*

The report entitled "*A Report to the Chair Great Barrier Reef Marine Park Authority on the Coral Collection Fishery*" by Cartwright *et. al* (2002), stated that:

- The fishery at its current level of take and at significantly higher levels is sustainable, however there is a potential for localised depletion of rarer coral species should fishing effort be concentrated.

The policy addresses the need to monitor take of corals at both broad and local scales and implement appropriate responses to unsustainable concentrations of effort. It also provides the flexibility for operators to distribute and/or rotate fishing effort across the fishery area.

Under management arrangements prior to 1 July 2006 the amount of coral quota authorised to be taken from high use areas was 43 tonnes within the Cairns boundary and 36 tonnes within the Keppel boundary (see Appendix 3 for boundary coordinates and maps), from specific coral collection sites only. The CPRWG review of fishery catch and effort data from 2006 to 2008 and the outputs of an ecological risk assessment of the QCF resulted in the establishment of revised suitable levels of catch for these high use areas. These levels have been resolved for specialty coral, live rock/coral rubble and ornamental coral and are to be

monitored through the QCF Performance Measurement System. An investment and effort increase warning issued in 2006 remains in place for these areas.

3. *Improved access to the resource to meet the demands of emerging/growing markets and promote economic development in the QCF.*

Coral fishery operators experienced increasing difficulties obtaining the coral specimens demanded by the market from the restricted coral collection areas and limited depths in place prior to 1 July 2006. These areas were designated based on high abundance of *Pocillopora* and *Acropora* species many years ago, when the fishery mainly targeted ornamental corals. Furthermore, inequity existed and/or developed between different collection areas as a result of their productivity and proximity to markets and infrastructure. These factors acted as a barrier to effective competition within the industry.

The policy addresses the need for industry flexibility to meet changing market demand by providing for take from a broad spatial scale and an unrestricted range of depths.

4. *Ensuring the continued use and enjoyment of coral resources by other user groups.*

Conflict with other user groups has historically been observed in the Cairns and Keppel areas, which are popular areas for tourism operations, and coral and aquarium fish harvesters. These locations are popular due to the proximity of coral reefs to home ports, major coastal population centres and airport facilities.

As corals are perceived to be an iconic group of species, extractive use values (removal of resources from the reef) and passive use values (eg. appreciation of reefs by tourists and divers) appear to be mutually exclusive. The tourism industry has concerns about reduced aesthetic appeal resulting from commercial removal of coral from around popular tourism sites, however commercial collectors argue that to date their operations have coexisted with tourism activities with no observable impacts.

Many of the key corals targeted in the QCF occur at depths of 10-25m, often in inter-reefal and relatively turbid waters. In contrast, most recreational diving and tourism activity occurs in depths of 0-10m, mainly in clear waters around reef crests. It is also noted that under the zoning arrangements for the Great Barrier Reef Marine Park (GBRMP), coral collecting is generally not permitted in key areas for site-dedicated tourist operations.

While it is acknowledged that certain reef areas are subject to depth and spatial overlap between QCF operators and passive reef users, it is considered that in many areas removal of area and depth limitations in the QCF from 1 July 2006 encouraged a natural spatial separation of resource use between the sectors. Processes established outside of this policy in collaboration with QCF operators and community stakeholders aim to address location-specific resource sharing issues.

Climate-induced events such as coral bleaching are acknowledged as a key consideration for the management of the fishery, however their event-specific and often location-specific nature make them untenable to management through set provisions under this policy. Mechanisms established outside of this policy will provide for adaptive, managed responses to event-specific localised issues, including climate-induced events.

4.5 Consultation

Following significant consultation with the QCF industry and other stakeholders the DPI&F adopted the first version of the Policy for the Management of the Coral Fishery on 6 December 2005.

This policy is a revised version of the Policy for the Management of the Coral Fishery, dated 6 December 2005. The policy review was conducted in February 2008 by the Coral Policy Review Working Group (CPRWG), established by the MAC and comprising representatives from government agencies, the research sector and the QCF industry. The CPRWG's recommendations were refined by the MAC and DPI&F to form a draft policy that was disseminated for stakeholder consultation. Stakeholder comments were considered by the MAC and the DPI&F, and addressed within or outside of the policy where appropriate.

5. RELEVANT LEGISLATION

Fisheries Act 1994
Fisheries Regulation 2008

6. DEFINITIONS

Relevant tribunal = the Queensland Fisheries Tribunal to and including 30 November 2009 and the Queensland Civil and Administrative Tribunal from 1 December 2009.

7. INTERPRETATION AND APPLICATION OF POLICY

This policy applies generally and is to be read and applied in conjunction with all other relevant policies of the DPI&F under the Act. It replaces the Policy for the Management of the Coral Fishery, dated 6 December 2005. The policy applies to management decisions of the DPI&F in relation to the QCF. To give effect to the revised policy, the DPI&F will amend conditions to reflect certain provisions under section 8, to commence on 1 July 2009.

Section 63 of the Act invests discretion in the Chief Executive to amend a coral authority, including its conditions. Amendments to authority conditions sought by the Chief Executive to reflect the necessary management arrangements are to be initiated through a written 'show cause' process (N.B. certain exemptions apply under section 63 (4) of the Act).

This policy is to be administered with discretion having regard to the circumstances of each individual coral authority holder. If a QCF operator is dissatisfied with a decision in respect of his/her activities flowing from this policy, he/she is entitled to lodge an appeal to the **relevant tribunal**.

8. POLICY PROVISIONS

The following management arrangements are adopted through this policy, with key provisions gaining enforceability through their replication on coral authority conditions from 1 July 2009.

8.1 Component based quota

The annual Total Allowable Catch (TAC) for the QCF is 200 t*, comprising:

- a "specialty coral" component, limited to a take of 60 t*; and
- an "other coral" component, limited to a take of 140 t* (with some flexibility for taxa that can be reported under both quota components).

* Marginal increases to the stated catch limits may result from rounding of individual quota holdings to whole kilograms.

Each coral authority has conditions stating its quota for “specialty coral” and its quota for “other coral” (live rock /coral rubble/ornamental coral). This policy does not provide for changes to individual quota holdings other than:

- (i) marginal increases when rounding individual quota holdings to whole kilograms; and
- (ii) movement of quota between coral authorities, initiated by authority holders.

8.2 Units of measure and quota usage calculation

The various types of coral taken in the QCF are separated into distinct categories with different quota debiting mechanisms as outlined below (refer to Appendix 2 for full details).

Specialty coral (5 categories)

- Number of pieces, with a weight conversion factor per piece (4 categories)
- Number of pieces and estimated weight (1 category)
- An option of reporting live coral by container volume, with a weight conversion factor per Litre (all categories)

Other coral

- Live rock & coral rubble
 - Container volume, with a weight conversion factor per Litre
- Ornamental coral
 - Option 1: Container volume, with a weight conversion factor per Litre
 - Option 2: Number of pieces and estimated weight
- Coral sand
 - No quota debit (incidental take limit of 5 Litres per trip)

8.3 Collection locations and depths

Operators will generally be authorised to collect coral in Queensland waters (without a depth limitation) north of latitude 24°30' S (the southern boundary of the GBRMP). At the discretion of the Chief Executive, access to two collection areas south of 24°30' S by two authorities for supply to local public aquaria will continue until such time that the special circumstances underlying the arrangement can no longer be demonstrated. No depth limits apply under this policy.

8.4 Managing localised concentrations of effort

Catches within the Cairns and Keppel boundaries (Appendix 3) are to be monitored against benchmarks established under the QCF Performance Measurement System, which includes a management response process. Similar monitoring and management mechanisms are to be introduced in the same manner for any other high-use coral collection areas identified in the future.

8.5 Reporting requirements

Coral authority holders are required to keep and provide logbook information and submit reports of quota usage for purposes of compliance and monitoring of the fishery.

- **Logbook** - QCF operators are required to report catch and effort through daily logbooks. This includes reporting catch to family level in most cases and to species or genera level for certain target species or at-risk species taken in the fishery. Spatial reporting and fishing effort is recorded as GPS coordinates of

highest catch for each reef and diver effort (hours). A revised logbook, accounting for fishery performance and outputs of the QCF ecological risk assessment, is to be implemented in conjunction with the provisions of this policy.

- **Prior notice** – QCF operators are required to lodge a prior notice before the conclusion of each fishing trip, notifying the DPI&F of the quantities of coral taken and estimated time and location of arrival at port. The details provided in a prior notice determine the quota debit for each authority.

9. POLICY AMENDMENTS

This policy replaces the Policy for the Management of the Coral Fishery, dated 6 December 2005, as a result of a formal review process. This process was an intended action from the outset, to allow for a thorough review of fishery performance and management using an adequate time series of catch and effort data, results of ecological risk and sustainability assessments and personal observations.

10. REFERENCES

Cartwright, I., Thalassa Consulting., Harriott, V.J., CRC Reef Research Centre, Willcock, A. and TRAFFIC Oceania (2002) '*A Report to the Chair Great Barrier Reef Marine Park Authority on the Coral Collection Fishery*'.

Harriott, V.J. (2001) '*The sustainability of Queensland's coral harvest fishery*'. CRC Reef Research Centre Technical Report No. 40. CRC Reef Research Centre, Townsville. 33pp.

Appendix 1 – Main purpose of the Act

Section 3 Main purpose of the Act

- (1) “to provide for the use, conservation and enhancement of the community’s fisheries resources and fish habitats in a way that seeks to –
 - (a) apply and balance the principles of ecologically sustainable development; and
 - (b) promote ecologically sustainable development.
- (2) In balancing the principles, each principle is to be given the relative emphasis appropriate in the circumstances.
- (3) In this section –

“ecologically sustainable development” means using, conserving and enhancing the community’s fisheries resources and fish habitats so that –

- (a) the ecological processes on which life depends are maintained; and
- (b) the total quality of life, both now and in the future, can be improved.

“principles of ecologically sustainable development” means the following principles –

- (a) enhancing individual and community well being through economic development that safeguards the well being of future generations;
- (b) providing fairness within and between generations;
- (c) protecting biological diversity, ecological processes and life-support systems;
- (d) in making decisions, effectively integrating fairness and short and long-term economic, environmental and social considerations;
- (e) considering the global dimension of environmental impacts of actions and policies;
- (f) considering the need to maintain and enhance competition, in an environmentally sound way;
- (g) considering the need to develop a strong, growing and diversified economy that can enhance the capacity for environmental protection;
- (h) that decisions and actions should provide for broad community involvement on issues affecting them;
- (i) the precautionary principle.

“precautionary principle” means the principle that, if there is a threat of serious or irreversible environmental damage, lack of scientific certainty should not be used as a reason to postpone measures to prevent environmental degradation, or possible environmental degradation, because of the threat.”

Appendix 2 – Units of measure

Specialty coral (5 sub-groups)

Category LC2

Specialty coral pieces up to 100 g (estimated weight). A conversion factor of 20 pieces per kg (or 1 piece = 50g) is applied for quota monitoring purposes.

Category LC3

Specialty coral pieces from 101 g to 500 g (estimated weight). A conversion factor of 7 pieces per kg (or 1 piece = 140g) is applied for quota monitoring purposes.

Category LC4

Specialty coral pieces from 501 g to 1 kg (estimated weight). A conversion factor of 1.33 pieces per kg (or 1 piece = 750g) is applied for quota monitoring purposes.

Category LC5

Soft coral pieces up to 500g (estimated weight). A conversion factor of 25 pieces per kg (or 1 piece = 40g) is applied for quota monitoring purposes.

Category LC6

Specialty coral pieces above 1 kg (estimated weight). Estimated weights are used for quota monitoring purposes.

NOTES:

- (I) Categories LC2-LC4 can be used to report soft corals; however a more generous conversion factor applies under category LC5, which specifically addresses the light weight and difficulty estimating weights of soft coral species.
- (II) At the operator's discretion, ornamental coral taxa may be reported under the categories LC2-LC6. However this will result in a quota debit from the live coral quota component. A separate category exists specifically for ornamental corals.
- (III) Operators will have an alternative option of reporting all specialty coral (regardless of size) by container volume, with a weight conversion factor per Litre applied for approximation of weights. The conversion factor will be provided to operators by written notice from the chief executive once established through weight sampling. This reporting preference is only to be available through quota reporting systems as standard logbook reporting requirements will apply.

Ornamental Coral

Corals from the families Pocilloporidae and Acroporidae are reported in this category. Product from this category is reported either (i) volumetrically and a conversion factor of 228g per Litre is applied (using the total volume of the container used) for quota monitoring purposes or (ii) as number of pieces and their estimated weight.

Live Rock & Coral Rubble

Dead pieces or fragments (rubble) of coral, often colonized with organisms such as algae, bryozoans, sponges and small corals, are reported in this category. Product from this category is reported volumetrically and a conversion factor of 440g per Litre is applied (using the total volume of the container used) for quota monitoring purposes.

Coral Sand

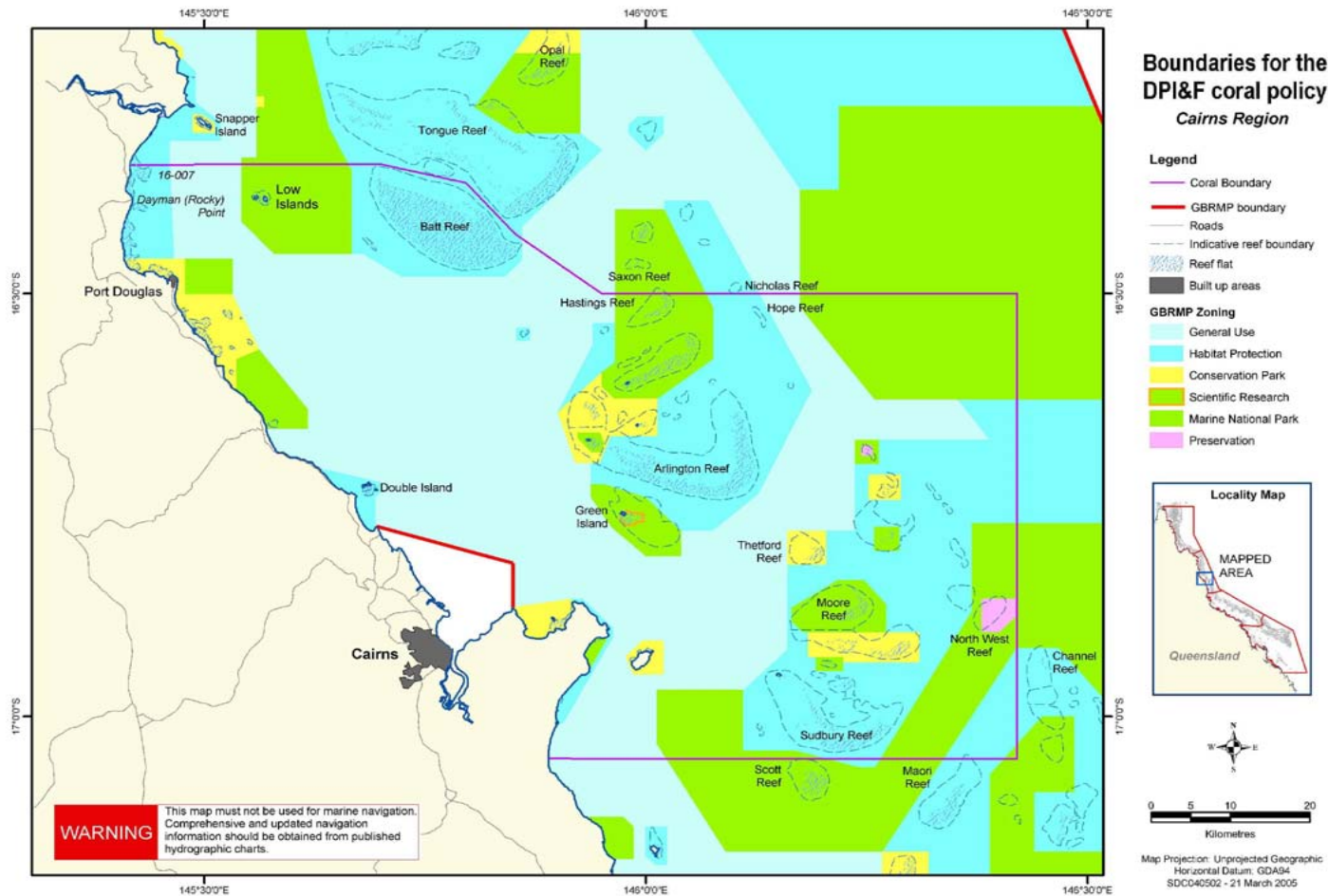
A trip limit of 5L applies for coral sand. This is not deducted from quota.

NOTE: Units of measure and their attributed conversion factors were developed through a combination of field-based sampling, consultation with the QCF industry and scientists, and negotiation through the CFWG. They underwent refinement during the review of the policy in 2008, as a result of an assessment of operations over the preceding 18 months.

Appendix 3 – Cairns and Keppel area boundaries

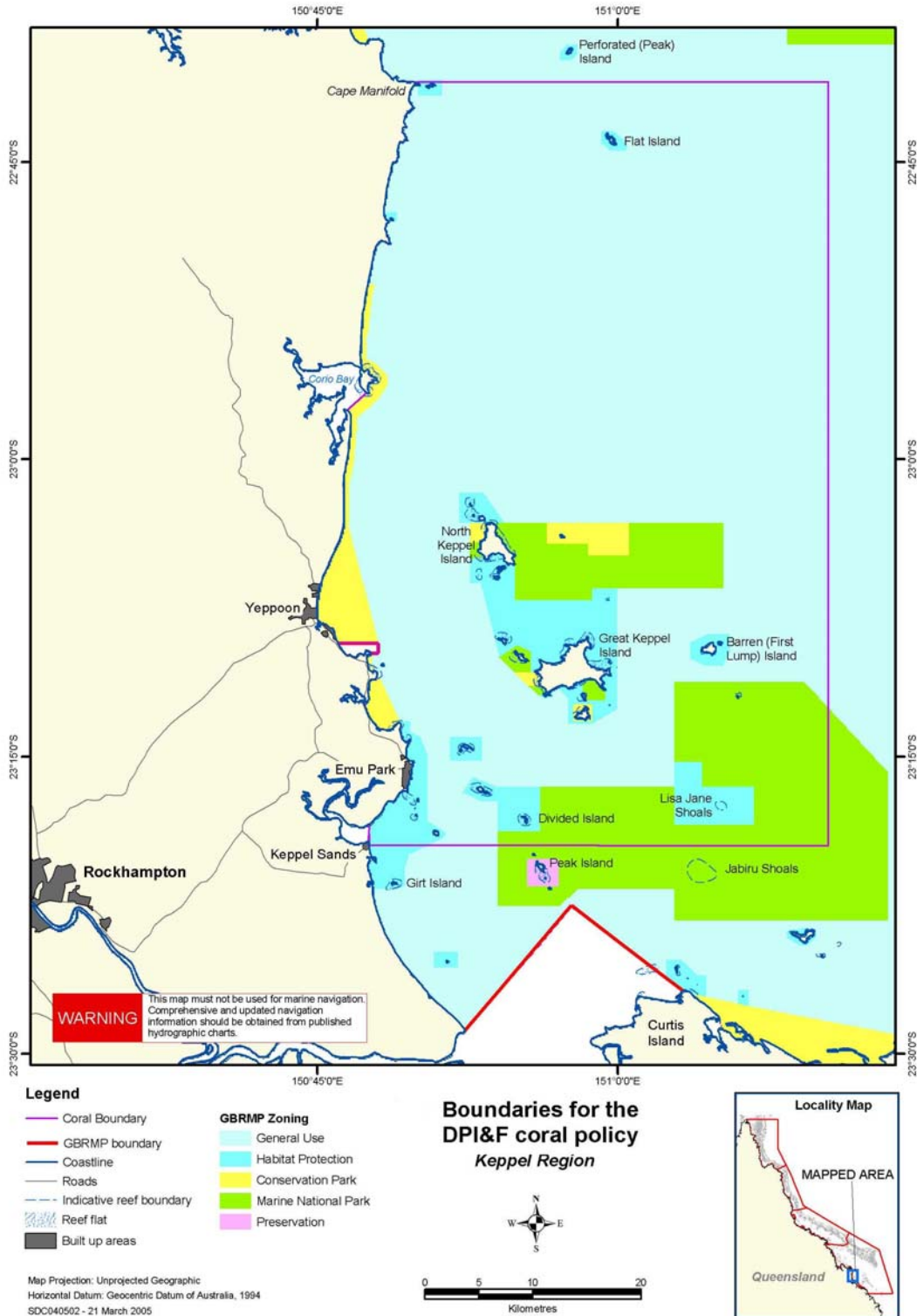
Cairns area: The area bounded by a line commencing at the intersection of the mainland coastline at mean low water and the parallel 16° 20.800' S (at or about 16° 20.800' S, 145° 24.939' E) then running progressively:

1. easterly along the geodesic to 16° 20.802' S, 145° 42.000' E;
2. easterly along the geodesic to 16° 22.100' S, 145° 47.750' E;
3. south-easterly along the geodesic to 16° 25.750' S, 145° 51.099' E;
4. south-easterly along the geodesic to 16° 30.000' S, 145° 57.000' E;
5. east along the parallel to its intersection with longitude 146° 25.200' E;
6. south along the meridian to its intersection with latitude 17° 03.000' S;
7. west along the parallel to its intersection with the mainland coastline at mean low water (at or about 17° 03.000' S, 145° 53.360' E);
8. along the mainland coastline at mean low water to the point of commencement.



Keppel area: The area bounded by a line commencing at the intersection of the mainland coastline at mean low water and the parallel 22° 40.950' S (at or about 22° 40.950' S, 150° 49.867' E) then running progressively:

1. east along the parallel to its intersection with longitude 151° 10.500' E;
2. south along the meridian to its intersection with latitude 23° 19.500' S;
3. west along the parallel to its intersection with the mainland coastline at mean low water (at or about 23° 19.500' S, 150° 47.601' E);
4. along the mainland coastline at mean low water to the point of commencement.



Figures provided courtesy of the Great Barrier Reef Marine Park Authority

Approved [original signed] Deputy Director General, Fisheries, Department of Primary Industries and Fisheries. Date: 29 / 01 / 09