

# Annual status report 2010

## East Coast Bêche-de-mer Fishery



Fisheries Queensland, a service of the Department of Employment, Economic Development and Innovation (DEEDI), seeks to maximise the economic potential of Queensland's primary industries on a sustainable basis.

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## Fishery Profile 2009–10

<b>Key species</b> Harvest of all species of sea cucumber is permitted. Key species include white teatfish, burrowing blackfish and sandfish.	<b>Total number of commercial licences in 2009–10</b> 18 licences (held by three operators)
<b>Total harvest from all sectors</b> Approximately 352 t + unquantified recreational and Indigenous catch	<b>Commercial licences accessing the fishery in 2009–10</b> Seven
<b>Commercial harvest</b> Approximately 352 t	<b>Fishery season</b> All year round
<b>Recreational harvest</b> No estimate but considered negligible	<b>Fishery symbols</b> B1
<b>Indigenous harvest</b> No estimate but considered negligible	<b>Monitoring undertaken</b> Catch monitoring through compulsory logbook. Prior reporting of commercial catch against respective quota allocations.
<b>Charter harvest</b> Nil	<b>FOP days monitored in 2009–10</b> Nil
<b>Allocation between sectors</b> Primarily a commercial fishery	<b>Accreditation under the EPBC Act</b> Wildlife Trade Operation expires on 20 June 2011
<b>Total exports</b> Primarily to China	<b>Logbook validation</b> Yes—completed November 2006
<b>Commercial Gross Value of Production (GVP)</b> Approximately \$4.9 million	<b>Quota managed</b> Commercial Total Allowable Catch (TAC) 361 tonnes landed form (salted/frozen boiled). TAC 0 t for black teatfish, 64 t for white teatfish (divided into 51 t north of 19°S (Zone 1) and 13 t south of 19°S (Zone 2)) and 297 t of other species.

Key fish resources	Stock status
White teatfish ( <i>Holothuria (Microthele) nobilis</i> ), burrowing blackfish ( <i>Actinopyga spinea</i> ) and sandfish ( <i>Holothuria scabra</i> ).	Not yet assessed
<b>Comments:</b> It is anticipated that the status of the key fish resources will be assessed as a part of the 2011 stock status program and reported in the 2011 annual status report.	

## Introduction

The Queensland East Coast Bêche-de-mer<sup>1</sup> fishery (ECBDMF) is one of the oldest fisheries in the state, with commercial harvesting beginning in the early 1800s. Fishers can harvest all species of sea cucumber found in Queensland waters. However, the fishery has a history of focusing effort on the most commercially valuable species, such as sandfish, white teatfish, and more recently, burrowing blackfish. Product harvested in the ECBDMF is entirely exported, predominantly to China and other Asian nations for consumption and use in traditional Chinese medicines.

Through industry innovation and initiatives, the ECBDMF has grown to become one of the limited number of sustainably managed sea cucumber fisheries in the world. Fisheries Queensland, part of the Department of Employment, Economic Development and Innovation (DEEDI), is responsible for the management of the ECBDMF.

This report covers the July 2009 to June 2010 financial year.

## Fishery description

### Fishing methods

Commercial fishing under the B1 fishery symbol is authorised from Tin Can Bay (26°S) to Cape York (10°41'S) (Figure 1). Historically, effort has been focused on reef areas in northern Queensland between Townsville (19°30'S) and Cape York (10°41'S). Harvesting occurs to depths of up to 30 m (a safe working depth for occupational diving), leaving much of the deeper Great Barrier Reef (GBR) lagoon free of commercial harvesting. The ECBDMF is adjacent to the Commonwealth-managed Torres Strait Bêche-de-mer and Coral Sea Fisheries.

Commercial sea cucumber fishers are permitted to harvest by hand, using free-diving methods or with the aid of hookah apparatus or Self Contained Underwater Breathing Apparatus (SCUBA). Recreational fishers are permitted only to harvest by hand, without the aid of hookah apparatus or SCUBA.

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<sup>1</sup> Bêche-de-mer (or trepang) is the term referring to the commercial product produced by processing (gutting, boiling and drying) the body of sea cucumber or holothurian.



Figure 1: Boundary of the Queensland East Coast Bêche-de-mer Fishery.

### Key species

The key species are white teatfish *Holothuria (Microthele) nobilis*, burrowing blackfish *Actinopyga spinea* and sandfish *Holothuria scabra*.

The following information can be broadly applied to Queensland bêche-de-mer species. Sea cucumbers are benthic, deposit feeders that inhabit shallow waters up to depths of 30 m (Conand 1998). Life history parameters are relatively unknown however it is suggested that some species are quite long lived and have naturally low recruitment and growth rates (Uthicke and Conand 2005; Uthicke et al. 2004).

Many species are broadcast spawners and fertilization takes place in the water column. Tropical species are not known to form aggregations during spawning times. Most bêche-de-mer species are dioecious (separate male and female), although some are hermaphrodites. They have planktonic larvae that, depending on the species, can spend 10 to 90 days in the plankton layer, and can be widely dispersed by water currents. Successful reproduction of such broadcast-spawning animals is therefore density dependent; hence the removal of density reduces fertilization and subsequent recruitment (Uthicke et al. 2004).

Holothurians are slow moving benthic animals and they are usually found in association with seagrass, algae and corals. They are important components of the reef and inshore ecosystem. Studies on lollyfish and greenfish have shown they are important component of a benthic recycling system on reefs (Uthicke 2001). It is thought that all sediment-feeders such as holothurians have this important ecological role. The commercial species targeted in the ECBDMF are generally found in two broad habitat types—inshore shallow-water coastal environments and tropical coral reef environments.

## Main management methods used

Fisheries Queensland manages the ECBDMF using a combination of input and output controls, including:

- Commercial Total Allowable Catch (TAC) of 361 tonnes (t). In 2009–10, the commercial TAC comprised 0 t of black teatfish, 64 t of white teatfish (divided into 51 t north of 19°S (Zone 1) and 13 t south of 19°S (Zone 2)) and 297 t of other species.
- Limited entry: 18 transferable licences.
- Species-specific minimum size limits<sup>2</sup> (sandfish 20 cm; white teatfish 40 cm; black teatfish 30 cm; prickly redfish 50 cm; blackfish 20 cm; deepwater redfish 20 cm; surf redfish 25 cm; lollyfish 20 cm; greenfish 20 cm; curryfish 35 cm; elephant trunkfish 40 cm; brown sandfish 25 cm; leopard fish 35 cm; amberfish 50 cm; all other species 15 cm).
- Gear limitations: hand harvest only with a maximum of four<sup>3</sup> divers in the water fishing at any one time. Boat and dory limits also apply.
- Area closures: Great Barrier Reef Marine Park (GBRMP) implemented by Great Barrier Reef Marine Park Authority (GBRMPA) and Queensland State Marine Parks (GBR Coast Marine Park and Great Sandy Marine Park).<sup>4</sup>
- Rotational zoning scheme (RZS): the ECBDMF is divided into 154 zones of approximately 100 to 150 square nautical miles (nm) that can be fished for a

maximum of 15 days in any one year. Each area is allocated for fishing only one year in every three.<sup>5</sup>

- Recreational bag limit: no more than five in total (all species combined, other than black teatfish).<sup>6</sup>

## Catch statistics

### Commercial

The 2009–10 quota year is the sixth year of operation of the fishery following the introduction of the Rotational Zoning Scheme (RZS). In 2009–10 the total commercial harvest of bêche-de-mer was approximately 352 t. Total catch and catch per unit effort (CPUE) have remained stable between 2008–09 and 2009–10 (Figure 2).

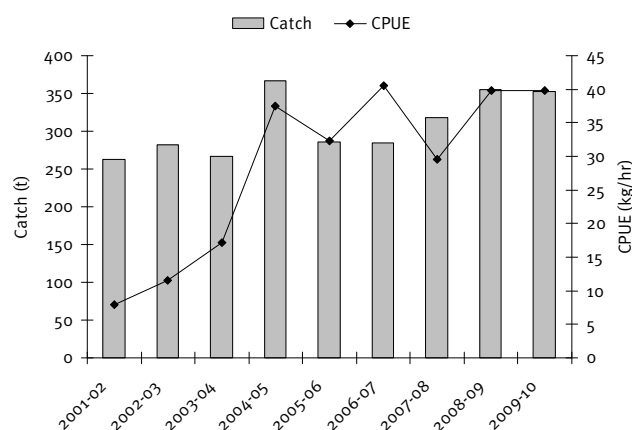


Figure 2: Total catch (t) and CPUE (kg/hr) for the ECBDMF from 2001–02 to 2009–10 (Source: Fisheries Queensland CFISH database 15 October 2010).

Commercial species composition during 2009–10 remained similar to that reported in 2008–09. Burrowing blackfish was the most dominant species, contributing 70% of the total catch to the ECBDMF, white teatfish attributed 20% and curryfish attributed approximately 9% (Figure 3). The increase in curryfish harvest is directly related to a developing commercial interest in this species. Fisheries Queensland were advised in 2008 that industry would be increasing ‘prospecting’ effort on the species. Prior to 2008, curryfish was considered only lightly utilised due to difficulties associated with quality of the end product. Techniques aimed at improving eating quality are proving successful. Full exploitation of curryfish will not be permitted however until sustainable yield estimates can be developed through scientifically rigorous resource assessments.

<sup>2</sup> Minimum size limits are at least 15% greater than the current best estimates of size at first maturity for each species.

<sup>3</sup> Whilst legislation states up to 10 divers may be fishing at any given time, a Memorandum of Understanding (MOU) drawn up by industry has further limited divers to four.

<sup>4</sup> Approximately 37% of commercially diveable sea cucumber habitat in the GBRMP is closed to fishing (Roelofs 2004).

<sup>5</sup> As per the MOU between sea cucumber industry operators.

<sup>6</sup> The recreational take of black teatfish is prohibited.

Prickly redfish catch decreased from 41.7 t to 19.5 t between 2008–09 and 2009–10 which equates to a drop in harvest by 58%. The decrease in catch of prickly redfish is principally a result of the higher value and wider distribution of curryfish. Prickly redfish is a less valuable species in comparison to other harvestable species.

Fisheries Queensland and the sea cucumber industry are continuing to monitor the harvest of burrowing blackfish through the use of improved reporting for the species in logbooks and prior reports. Since the division of burrowing blackfish from the blackfish complex in 2006–07 harvest of this species has continued to increase.

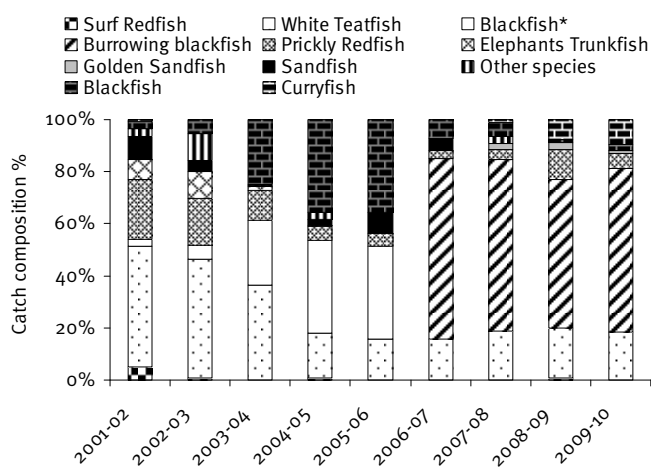


Figure 3: Species contribution to total catch for the ECBDMF from 2001–02 to 2009–10 (Source: Fisheries Queensland CFISH database 15 October 2010). \*Includes burrowing blackfish, relevant pre 2006–07 when the two species were not differentiated.

White teatfish harvest decreased between 2008–09 and 2009–10 by approximately 3.5 t. As a result of the 5% decrease in catch the CPUE<sup>7</sup> for white teatfish decreased to 30 kg/hr (Figure 4). In 2008–09 and 2009–10 inconsistencies were identified between white teatfish buyers' returns and white teatfish derived weights from prior reporting. Inconsistencies in the catch data prompted discussion between fishery managers and industry and improvements to the reporting frameworks are being considered. Fisheries Queensland will continue to monitor white teatfish catch closely over the 2010–11 quota year, along with developing improved management arrangements for the fishery.

Fisheries Queensland assessed the effectiveness of harvesting white teatfish under the RZS in 2010. The

assessment found that the rotational zoning component has effectively limited fishing effort for white teatfish and other secondary species in spatially discrete areas and has provided resting periods of two in every three years for two-thirds of available reefs. Fisheries Queensland considers that the risk of localised depletion to these species is extremely low when fishers operate under the RZS.

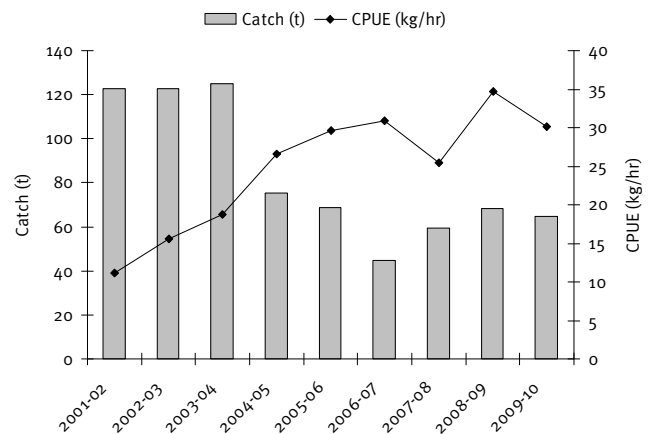


Figure 4: Total catch (kg) and CPUE (kg/hour) for white teatfish in the ECBDMF from 2001–02 to 2009–10 (Source: Fisheries Queensland CFISH database 15 October 2010).

The issue of discrepancies in species identification was raised at the Fisheries Queensland Sea Cucumber Working Group meeting in May 2009. The industry has undertaken to improve their reporting on catches.

All other sea cucumber species collected in the reporting year are considered to be by-product in this fishery.

## Recreational

There is no recreational fishery information available for bêche-de-mer. However the harvest from this sector is considered to be negligible.

## Charter

There is no charter fishery for bêche-de-mer.

## Indigenous

There is no Indigenous fishery information available for bêche-de-mer. However the harvest from this sector is considered to be negligible.

<sup>7</sup> Where fisher hours were not reported, an average of previous fishing hours by licence was calculated.

## Spatial issues/trends

Fisheries Queensland are investigating the use of finer-scale spatial information to ensure that the status and performance of the fishery can be adequately reviewed (e.g. assessing the effectiveness of the RZS fishing strategy at minimising local-scale depletions).

The voluntary RZS is part of an industry Memorandum of Understanding designed to distribute effort across the fishery area and to mitigate the risk of localised depletion, a trait commonly attributed to sea cucumber fisheries. The RZS is an innovative industry-led initiative that demonstrates the commitment of operators to the long-term sustainability of the fishery.

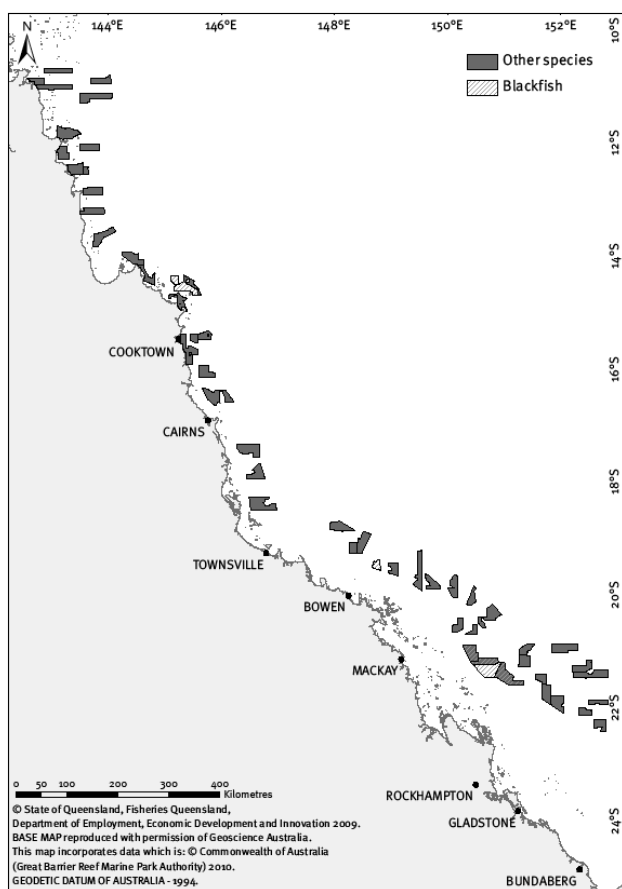


Figure 5: RZS zones nominated by industry for harvest of Blackfish and 'other species' in 2009–10.

Of the 154 available RZS zones, four were nominated for blackfish harvest and 52 were nominated for the harvest of other species in the 2009–10 quota year, of which compliance is monitored through the vessel monitoring system. Figure 5 shows the locations of the nominated zones along the Queensland coast. For species other than blackfish, operators were limited to 15 days in any one nominated zone, whereas there were no limits on effort in the blackfish zones.

## Socio-economic characteristics and trends

The prices for sea cucumber products (per processed kg) were relatively stable in 2009–10 with burrowing blackfish at \$12.50/kg, golden sandfish at \$15/kg, and white teatfish at \$23.50/kg. The price paid is dependant on the size of the specimen and the quality of handling.

The GVP of the ECBDMF for 2009–10 was approximately \$4.9 million, an increase in value of 5% since 2008–09. The increased GVP of the ECBDMF is a result of an increase in the harvest of higher value species (i.e. increased catch of burrowing blackfish and curryfish in 2009–10 when compared to 2008–10). The GVP is calculated on the price paid to fishers at the first point of sale (i.e. beach price).

## Biological and ecological information

### Monitoring programs

The ECBDMF is monitored using catch and effort data collected through the Fisheries Queensland compulsory logbook program (see Catch statistics section).

### Bycatch

Harvest of sea cucumber in the ECBDMF is by hand collection, a highly selective method of fishing that only collects individuals specifically chosen for harvest. Bycatch is restricted to releasing undersized specimens of the target species immediately at the collection site.

The post-release mortality of discarded sea cucumbers has not been assessed, but is expected to be low. Minimum size limits and the preference of operators to select the most marketable-sized animals during collection suggest that minimal discarding would occur.

### Interactions with protected species

In 2009–10 there were no reported interactions with protected species in the ECBDMF.

### Ecosystem impacts

The ECBDMF operates within the boundaries of the Great Barrier Reef Marine Park which is managed by the Great Barrier Reef Marine Park Authority (GBRMPA). Water quality, marine fauna and flora, and the physical environment is closely monitored by the GBRMPA through its involvement in a suite of local, state and Commonwealth community and scientific monitoring programs.

# Sustainability Assessment

## Performance against fishery objectives

Fisheries Queensland implemented a Performance Measurement System (PMS) for the ECBDMF in 2008. An assessment of the fishery in meeting its management objectives is provided in Table 1.

The ECBDMF PMS can be found at

[http://www.dpi.qld.gov.au/documents/Fisheries\\_SustainableFishing/Fisheries-PMS-Beche-de-mer-2008.pdf](http://www.dpi.qld.gov.au/documents/Fisheries_SustainableFishing/Fisheries-PMS-Beche-de-mer-2008.pdf)

Table 1: Performance measures and outcomes for the East Coast Bêche-de-mer Fishery 2009–10.

Performance measure	Performance
<i>Target species</i>	
<p>Catch reported through compulsory daily fisher logbooks exceeds individual species review reference points (total catch per quota year) (t):</p> <p>Sandfish (<i>Holothuria scabra</i>)–15t;  Golden sandfish (<i>Holothuria scabra</i> var. <i>versicolor</i>)–10t;  Prickly redfish (<i>Thelenota ananas</i>)–40t;  Surf redfish (<i>Actinopyga mauritiana</i>)–25t;  Deep water redfish (<i>Actinopyga echinites</i>)–25t;  Stonefish (<i>Actinopyga lecanora</i>)–10t;  Blackfish (<i>Actinopyga miliaris</i>)–25t;  Burrowing blackfish (<i>Actinopyga spinea</i>)–15t;  Tigerfish (<i>Bohadschia argus</i>)–25t;  Greenfish (<i>Stichopus chloronotus</i>)–50t;  Curryfish (<i>Stichopus vastus</i>)–25t;  Curryfish (<i>Stichopus hermanni</i>)–50t;  Brown sandfish (<i>Bohadschia marmorata</i>)–25t;  Amberfish (<i>Thelonata anax</i>)–50t;  Flowerfish (<i>Bohadschia graeffe</i>)–25t;  Lollyfish (<i>Holothuria atra</i>)–50t;  Snakefish (<i>Holothuria coluber</i>)–25t;  Pinkfish (<i>Holothuria edulis</i>)–50t;  Elephant trunkfish (<i>Holothuria fuscopunctata</i>)–50t</p>	<p><i>Triggered</i></p> <p>Analysis of the burrowing blackfish catches taken between 1 July 2009 and 30 June 2010 indicate that the review reference point for burrowing blackfish was exceeded by approximately 76 t. Fisheries Queensland is investigating the issue further to determine the underlying cause.</p>
<p>Surveyed populations undergo a repeated measures re-survey in the third year following their initial survey.</p> <p>ECBDM Working Group agreed that the PMS would be amended to include the following provision: <i>Should a burrowing blackfish zone TAC be exceeded in a season, then a re-survey of that area will be instituted. If the re-survey is not conducted however, a TAC of 15 t per season will be instituted in that area until such time as a re-survey is completed.</i></p>	<p><i>Not triggered</i></p> <p>In 2009–10 the harvest of burrowing blackfish in allocated zones was less than the specified TAC.</p> <p>In 2009–10 industry members undertook a re-survey of the Gould Reef following a trigger in the 2008–09 season. A draft report has been reviewed by Fisheries Queensland, with the finalised version due to be released next year.</p>



Performance measure	Performance
Results of repeated measures surveys on target populations in spatially discrete areas indicates that the estimated standing biomass has decreased by $\geq 15\%$ .	<i>Not assessed</i>  In 2009–10 industry members undertook a re-survey of the Gould Reef. A draft report has been reviewed by Fisheries Queensland, with the finalised version due to be released next year.
<p>1. Effort in any MOU zone exceed 15 days per year</p> <p>2. Operators fish outside the MOU zones allocated for a particular fishing year.</p> <p>3. Population density is estimated to be at least 70% of the unfished population density.</p>	<p><i>1. Triggered</i></p> <p>Two zones recorded <math>&gt;15</math> days fishing activity. One zone recorded an extra 3.5 days—the extra days cannot be consolidated with logbook records. Fisheries Queensland is investigating the discrepancy.</p> <p>The other zone recorded an extra 16 days—this zone is adjacent to a nominated BBZ and VMS polling was unable to discriminate between the two. It is likely that some of the days were fished in the BBZ and not the rotational zone. Fisheries Queensland is investigating the discrepancy.</p> <p><i>2. Not triggered</i></p> <p><i>3. Not measured</i></p> <p>This measure is industry dependent and relates to the re-opening of a fishery for a species—black teatfish is the only species in the ECBDMF meeting this requirement and no population density estimates were made in 2009–10.</p>
<i>Protected species</i>	
The percentage of protected animals released alive is less than 90%.	<i>Not triggered</i>  No interactions with protected species were reported in 2009–10.
<i>Ecosystem</i>	
A significant negative impact on the ecosystem is identified as a direct result of fishing activities in the ECBDMF.	<i>Not triggered</i>  Fisheries Queensland are not aware of any information in 2009–10 indicating unsustainable negative impacts of removing commercial target BDM on the ecosystem.
<i>Social</i>	
More than 30% of the active vessels in the fleet are used to commit an offence under the Fisheries Regulation.	<i>Not triggered</i>  One of the six active vessels (17%) in the fleet was used to commit an offence under the Fisheries Regulation during 2009–10.

## Current sustainability status & concerns

Available data including the measurement of performance indicators and the results of scientifically supported resource surveys suggests that the harvest of sea cucumber is sustainable at current levels. Significant changes to the way the sea cucumber resources are harvested in the fishery following the introduction of the RZS in 2004 have greatly reduced the likelihood of localised and serial depletions occurring (Lowden 2005; Roelofs 2004). The range of input and output controls currently implemented (commercial TAC, size limits, closures) are precautionary approaches to management that have the capacity to protect the fishery

from increases in effort. The fishery is regarded as being managed in a precautionary and sustainable manner by the Australian Government Department of Sustainability, Environment, Water, Population and Communities (SEWPaC), as evidenced by the renewal of the fishery's Wildlife Trade Operation declaration in 2007.

Overall quota for white teatfish has decreased in recent years to reflect changes in reporting form, changes to available fishing area under the RZS, continued strong demand for white teatfish, and developing the markets and demand for other species such as burrowing black fish and curryfish. A history of changes to quota is provided in Table 2.

Table 2: Changes to the Total Allowable Commercial Catch in the ECBDMF since 2003. Note that black teatfish has a zero quota until resource surveys are completed and sustainable harvest levels are developed.

Year	White teatfish (north of 19° S)	White teatfish (south of 19° S)	Other species	Total	Rationale
< 2003–04	89 t (no north/south split)		291 t	380 t	Arrangements prior to RZS implementation.
2003–04	56.8 t	32 t	291.2 t	380 t	The TACC (wet gutted weight) for white teatfish is distributed in a fixed proportion between the northern zone and the southern zone as a mechanism to reduce the potential for depletion of white teatfish stocks. Each licence in the fishery has an allocated portion of the white teatfish TACC.
<u>August 2007</u>	56.8 t	13 t	291.2 t	361 t	TACC weights adjusted to reflect <u>processed – salted or blanched – weights</u> .
<u>May 2008</u>	40 t	13 t	308 t	361 t	Reduced to reflect availability of associated white teatfish resource - i.e. 127.8t when 75% of fishing ground was available equates to approximately 40 t with the current 20-25% of Great Barrier Reef fishing ground available to fishing.

The commercial harvest of black teatfish was stopped in 1999 following industry raised concerns over sustainability of the stock. A performance measure has been developed that aims to recover stocks of sea cucumber species that are currently considered to be below sustainable levels, to a level where a sustainable harvest may be determined. The measure requires that a fishery independent assessment be conducted to determine the level of available biomass for each species that is considered to be below sustainable levels. The level will be used to determine whether the fishery for a species can re-open. Any survey designed to provide species-specific available biomass levels will require significant industry support or funding through external

agencies. The commercial TAC for black teatfish will remain at 0 t until such evidence is provided.

The stock status will be assessed for key BDM species in 2011.

## Research

### Recent research and implications

Fisheries Queensland is not aware of any recent research specific to the East Coast Bêche-de-mer Fishery during the reporting year.

## Collaborative research

The ECBDMF operates in waters adjacent to the Coral Sea and the Torres Strait Fisheries, both under AFMA management.<sup>8</sup> There are currently no collaborative research projects being undertaken in these fisheries. An annual biomass assessment is conducted by CSIRO in the Torres Strait and results may be useful in enhancing knowledge of stock dynamics for the same species in the ECBDMF. Regular dialogue occurs between all management and research agencies to discuss issues common to all sea cucumber fisheries.

## Fishery management

### Compliance report

During 2009–10, 22 units, including 21 commercial fishing vessels, were inspected in the ECBDMF by Queensland Boating and Fisheries Patrol (QBFP). One offence was detected during the course of these inspections—a fisher contravened a condition on their authority involving boatmarks—consequently they were presented with a Fisheries Infringement Notice.

### Changes to management arrangements in the reporting year

In the 2008–2009 ECBDMF ASR it was reported that licence conditions were amended to reduce the quota of white teatfish (both northern and southern zones) and re-allocate that amount of quota to other species. Redistribution of the quota was never actioned in due to administrative issues; Fisheries Queensland intends to progress this TAC adjustment for the 2010–11 season.

### Communication and education

Future consultation with stakeholders in this fishery will occur through many mechanisms:

- On a strategic level the Queensland Fisheries Advisory Committee (QFAC) shall consider the ECBDMF in the context of all Queensland fisheries and prioritises issues associated with it accordingly. Once fisheries management priorities have been determined, the agency may establish a small number of Technical Advisory Groups (TAGs) to provide technical information that will assist

Fisheries Queensland to pursue these priorities (which may or may not impact the ECBDMF).

- Fisheries Queensland may also establish technical working groups to generate information upon which to base decisions. For the ECBDMF, Fisheries Queensland can convene the Sea Cucumber and Trochus Working Group on as needs basis to review and provide advice to the agency or to inform the decisions of a body such as QFAC. This group has a defined list of members sourced from industry, the scientific community, conservation and management agencies.
- Fisheries Queensland consults directly with industry members through attendance at industry association meetings, port visits, newsletters and other means.

There are also legislated requirements for consultation; such as Regulatory Assessment Statements (RAS) that ensure stakeholders in the fishery are consulted about significant changes in management arrangements.

Education forms an important component of the compliance strategy for all of Queensland's fisheries. QBFP are proactive in their education programs which include attending events, such as boating and fishing shows and Seafood Industry events, to liaise with fishers, delivering lectures, utilising various forms of media to release important information, answering enquiries and conducting extensive one on one education with both commercial and recreational fishers during the course of field patrols and inspections. During inspections officers hand out recreational fishing guides and flyers which contain information on size and in-possession limits and answer queries from commercial fishers on an ad hoc basis. Education plays a particularly important role when new legislation is implemented and QBFP make every effort to ensure that all fishers have a good understanding of their rights and responsibilities.

### Complementary management

The ECBDMF is managed by Fisheries Queensland in consultation with GBRMPA (permits are issued by GBRMPA for this fishery).

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<sup>8</sup> The Torres Strait Fisheries are jointly managed by Fisheries Queensland and the AFMA.

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## Front cover image

Sandfish (*Holothuria scabra*)

