Chapter 19
Torres Strait Bêche-de-mer and Trochus fisheries

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FIGURE 19.1 Area of the Torres Strait Bêche-de-mer and Trochus fisheries

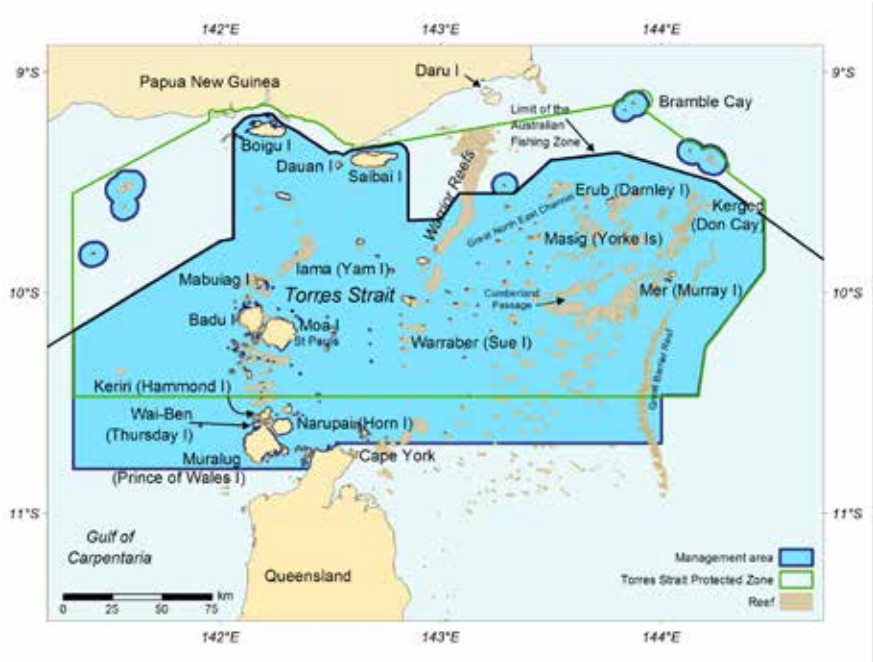


TABLE 19.1 Status of the Torres Strait Bêche-de-mer and Trochus fisheries

Status	2016		2017		Comments
Biological status	**Fishing mortality**	**Biomass**	**Fishing mortality**	**Biomass**	
Black teatfish (*Holothuria whitmaei*)					No catch in 2017. Recent survey indicates a recovering stock.
Prickly redfish (*Thelenota ananas*)					Catch is below TAC. Survey indicates relatively stable densities.
Sandfish (*Holothuria scabra*)					No catch in 2017. Most recent full survey (2009) indicated that stock was overfished.
White teatfish (*Holothuria fuscogilva*)					Catch is below TAC. Survey indicates relatively stable densities.
Other sea cucumbers (up to 18 species)					Uncertain biomass and fishing mortality status for at least one species taken in 2017.
Trochus (*Trochus niloticus*)					Minimal catch in 2017. Uncertain biomass status.
Economic status	Estimates of NER are not available. NER are uncertain in the 2017 fishing season. The catch of valuable species such a prickly redfish decreased significantly; however, there was a significant increase in the catch of other sea cucumber species.				

Notes: **NER** Net economic returns. **TAC** Total allowable catch.

Fishing mortality	Not subject to overfishing	Subject to overfishing	Uncertain
Biomass	Not overfished	Overfished	Uncertain

19.1 Description of the fishery

Area fished

Both the Torres Strait Bêche-de-mer Fishery (TSBDMF) and the Torres Strait Trochus Fishery (TSTF) operate in tidal waters within the Torres Strait Protected Zone (TSPZ) and south of the TSPZ, in the waters defined as the 'outside but near area' (Figure 19.1; AFMA 2011, 2013).

Bêche-de-mer (sea cucumber) has historically been harvested in the eastern parts of Torres Strait, with most of the catch typically taken from the Great North East Channel, Don Cay, Darnley Island, Cumberland Channel and Great Barrier Reef regions. Western Torres Strait is included in the fishery, but is documented as having naturally low abundance of sea cucumbers (AFMA 2013).

Catch of trochus has been low in recent years. In 2005 (a year for which we have a reasonable idea of catch location), most trochus was taken from central-eastern Torres Strait regions, including the Great North East Channel, Darnley Island and Warraber regions (AFMA 2011).

Fishing methods and key species

Historically, the main species of sea cucumber harvested in Torres Strait have been black teatfish (*Holothuria whitmaei*), prickly redfish (*Thelenota ananas*), sandfish (*H. scabra*), white teatfish (*H. fuscogilva*), surf redfish (*Actinopyga mauritiana*), deepwater redfish (*A. echinites*) and other blackfish species (*Actinopyga* spp.). Sea cucumbers are collected by hand, usually while free-diving or reef-top walking. Reef walking occurs at low tide along the reef edges. Diving occurs from dinghies, crewed by two or three fishers. Although the depth range of most targeted species is between 0 and 20 m, a combined ban on hookah (surface-supplied underwater breathing apparatus) and scuba diving limits most fishing effort to a depth of approximately 10 m. Following collection, sea cucumbers are processed for market; typically, this involves gutting, grading, cleaning, boiling, salting, smoking and drying (AFMA 2013).

Trochus (*Trochus niloticus*) typically occurs on high-energy areas of reefs, on substrates dominated by stony or coral pavements and associated with turf algae (Murphy et al. 2010). Trochus is collected by hand while reef-top walking at low tide, or from reef tops and reef edges while free-diving (without scuba or hookah gear) (AFMA 2011).

No byproduct or bycatch occurs in these fisheries because fishing by hand allows preferred species to be selected. Interactions with protected species are minimal. The only concerns relate to physical damage to coral reef structures from walking during collection at low tide (Department of the Environment 2014).

Management methods

The TSBDMF is managed using a range of input and output controls. Input controls include limiting participation in the fishery to Traditional Inhabitant Boat (TIB) licence holders. Traditional Inhabitants who wish to fish commercially for sea cucumbers are required to hold a TIB licence and use a boat no longer than 7 m. Collection is limited to hand fishing, including use of non-mechanical handheld devices; use of hookah and scuba gear is prohibited. Output controls include minimum size limits on 10 species; zero total allowable catch (TAC) for sandfish, black teatfish and surf redfish; and TACs for white teatfish (15 t), prickly redfish (20 t) and other sea cucumber species combined (80 t). Torres Strait Islanders are also entitled to take three sea cucumbers per person per day, or six sea cucumbers per dinghy per day, for personal use.

The TSTF is managed using various input and output controls. Input controls include limiting participation in the fishery to TIB licence holders, limiting fishers to vessels of a maximum of 20 m, restricting trochus harvest to hand fishing using non-mechanical devices, and prohibiting the use of hookah and scuba gear. Output controls include minimum (80 mm) and maximum (125 mm) basal diameter size limits, and a TAC of 150 t.

Although the Commonwealth Fisheries Harvest Strategy Policy (HSP; DAFF 2007) does not apply to fisheries jointly managed by the Australian Government and other (domestic or international) management agencies, the HSP does represent the government's preferred approach to management. The Torres Strait Protected Zone Joint Authority (PZJA) has asked its management forums to provide advice on the application of the HSP to Torres Strait fisheries. No formal harvest strategies are in effect in the TSBDMF or the TSTF; however, a formal harvest strategy for the TSBDMF is being developed.

Fishing effort

Effort in the TSBDMF had been increasing in recent years; however, it has dropped off in the last two years. A small amount of catch was recorded in the TSTF in 2017. The number of fishing permits in both the TSBDMF and the TSTF were higher in 2017 than in 2016 (Table 19.2).

Catch

Historically, sandfish was a primary target species in the TSBDMF, mostly fished on the Warrior Reef complex (Figure 19.1). Following a considerable decline in sandfish abundance and the subsequent introduction of a zero TAC in 1998, targeting shifted to black teatfish, and what was thought to be surf redfish but is now understood to be primarily deepwater redfish and a number of blackfish species (Skewes et al. 2010).

Substantial updates to reported catch data for the TSBDMF have been made in recent years. This has led to changes in catches for some species over those previously reported by ABARES. Total catch for the TSBDMF in 2017 was 18.9 t, up from just under 14.4 t in 2016.

A small catch of trochus was reported for 2017. Small amounts of trochus were likely to have been taken in previous years that were unreported (AFMA, 2018, pers. comm.).

From 1 December 2017, all operators in Torres Strait fisheries (excluding the Torres Strait Prawn Fishery) have been required to land their catch to a licensed fish receiver (see Chapter 15). The introduction of this system is expected to improve the accuracy of future catch data.

Black teatfish
Tim Skewes, CSIRO

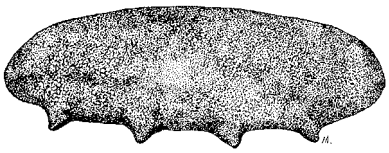
TABLE 19.2 Main features and statistics for the TSBDMF and the TSTF

Fishery statistics a	2016			2017		
Stock	**TAC (t)**	**Catch (t)**	**Real value (2015–16)**	**TAC (t)**	**Catch (t)**	**Real value (2016–17)**
Black teatfish	0	0	na	0	0	na
Prickly redfish	20	11.2	na	20	4.1	na
Sandfish	0	0.5 **b**	0	0	0	na
White teatfish	15	1	na	15	0.1	na
Other sea cucumber species (18 species)	80	2.2	na	80	14.7 **c**	na
Total fishery (TSBDMF)	**115**	**14.9**	**na**	**115**	**18.9**	**na**
Trochus	150	0	0	150	0.1	na
Total fishery (TSTF)	**150**	**0**	**0**	**150**	**0.1**	**na**
Fishery-level statistics						
Effort (no. of sellers)	Bêche-de-mer: 24 Trochus: 0			Bêche-de-mer: 10 Trochus: 1		
Fishing permits (as at 30 June)	Bêche-de-mer: 124 Trochus: 71			Bêche-de-mer: 150 Trochus: 80		
Active vessels	na			na		
Observer coverage	0			0		
Fishing methods	Hand collection—free-dive or reef walking					
Primary landing ports	Torres Strait Island fish receivers					
Management methods Bêche-de-mer Trochus	 Input controls: limited entry, gear restrictions, vessel length restrictions Output controls: TACs, size limits Input controls: limited entry, gear restrictions, vessel length restrictions Output controls: TACs, size limits					
Primary markets Bêche-de-mer Trochus	 Domestic: minimal International: Asia—predominantly China, Hong Kong and Singapore Domestic: minimal International: historically, markets have included China, France, Germany, Italy, Japan, the Philippines, Spain, Thailand, the United Kingdom and the United States					
Management plan	No formal management plans					

a Fishery statistics are provided by fishing season, unless otherwise indicated. Fishing season is 1 January – 31 December. Real-value statistics are by financial year. Reported catch is understood to be gutted wet weight. **b** Illegal, unreported and unregulated catch from foreign vessels. **c** Some part of the 'other sea cucumber' catch may be prickly redfish.
Notes: **na** Not available. **TAC** Total allowable catch.

19.2 Biological status

Black teatfish (*Holothuria whitmaei*)



Line drawing: FAO

Stock structure

Black teatfish in Torres Strait is assumed to represent a single biological stock (T Skewes, CSIRO, 2013, pers. comm.).

Stock assessment

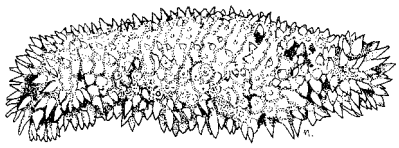
The Torres Strait black teatfish stock was last surveyed in 2009 (Skewes et al. 2010). This survey showed increases in the mean density (from fewer than 1 individual per hectare to just over 10 individuals per hectare), mean length (an increase of almost 6 per cent) and mean weight (an increase of more than 11 per cent) of black teatfish compared with the 2005 survey. However, there is considerable uncertainty around these estimates. Because of the increased densities and animal size, Skewes et al. (2010) recommended reopening the fishery for black teatfish with a TAC of 25 t, which would be an extraction rate of about 4 per cent of the lower 90th percentile of the standing stock estimate (estimated at 625 t). A separate study of black teatfish on the Great Barrier Reef had estimated that harvest rates of less than 5 per cent of the virgin biomass were likely to be sustainable (Uthicke, Welch & Benzie 2003).

In November 2011, the Hand Collectables Working Group, informed by the outcomes of Skewes et al. (2010), considered options for increasing the zero TAC. It noted that increasing the TAC would result in increased targeting of this species, which would probably stimulate interest in the fishery. It also acknowledged that a level of precaution is required in developing the fishery to minimise the risks of exceeding the TAC, localised depletion and unsustainable harvest of other species. As a result, the PZJA endorsed a one-month trial of fishing for black teatfish in 2014 and 2015, operating under a 15 t TAC. Some overcatch was recorded in both years. A zero TAC was set for 2016 and 2017.

Stock status determination

No catch was reported in 2016 or 2017. On this basis, the stock is classified as **not subject to overfishing**. Given the indications of recovery from the most recent survey, black teatfish is classified as **not overfished**.

Prickly redfish (*Thelenota ananas*)



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Stock structure

Prickly redfish in Torres Strait is assumed to represent a single biological stock (T Skewes, CSIRO, 2013, pers. comm.).

Stock assessment

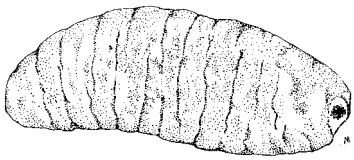
The Torres Strait prickly redfish stock was last surveyed in 2009 (Skewes et al. 2010). This survey indicated that densities had remained relatively stable across surveys in 1995, 2002, 2005 and 2009, ranging from 1.42 to 2.15 prickly redfish per hectare. Between 2005 and 2009, the density increased from 1.44 to 1.99 prickly redfish per hectare. The mean size of prickly redfish increased from 2,147 to 2,812 g between 2005 and 2009. Well-established and consistent methodologies were used in the surveys, but considerable uncertainty remains around these estimates.

The TAC for prickly redfish in 2017 (20 t) is based on an estimate of maximum sustainable yield (MSY), using a biomass estimate from the 2002 survey (Skewes et al. 2004). MSY was estimated using a simplified surplus production model that relies on estimates of biomass and natural mortality (M). The surplus production model assumed an MSY of $0.2MB_0$ and used the lower bound of the 90 per cent confidence interval of the 2002 estimate of standing stock (approximately 343 t) as B_0. Following the 2002 survey of eastern Torres Strait, Skewes et al. (2004) classified prickly redfish as 'exploited' where the population was currently being fished, or had previously been fished, but showed no evidence of severe depletion. The application of meta-rules for calculating the TAC, based on the level of exploitation, led to the MSY estimate being halved, generating a TAC of 20 t. The combination of using the lower bound of the 90 per cent confidence interval for biomass, using a 0.2 scaling factor for natural mortality (instead of the more typical 0.5) and halving the final MSY estimate (to account for previous exploitation) resulted in a TAC that is considered to be conservative.

Stock status determination

Since calculation of the TAC in 2004, catches of prickly redfish have been sporadic, but increasing. Reported catch has been below the 20 t TAC in every year except 2015, when it exceeded 28 t. While the data that supports the current TAC are close to 15 years old, the average catch for the period since the TAC was calculated (2004) has been substantially below the 20 t TAC (around 6 t). On this basis, the stock is classified as **not subject to overfishing**. Densities, lengths and weights of prickly redfish remained relatively stable between 1995 and 2009, and there are no more recent data to indicate that this situation has changed. As a result, the stock is classified as **not overfished**.

Sandfish (*Holothuria scabra*)



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Stock structure

Sandfish in Torres Strait is assumed to represent a single biological stock (T Skewes, CSIRO, 2013, pers. comm.).

Stock assessment

The Torres Strait sandfish stock was last surveyed in 2010 (Murphy et al. 2011). At that time, survey densities were around 80 per cent lower than in 1995, when the stock was already considered to be depleted. Results from the survey indicated a mean density of 94 ± 50 sandfish per hectare (± standard error [SE]), which was similar to that in 2004 (94 ± 25 sandfish per hectare), suggesting that there had been no recovery up to the time of the 2010 survey. The reason for the lack of observable recovery of sandfish between 1998 and 2010 is not clear, given that the fishery has been closed since 1998. Murphy et al. (2011) suggested several possible causes, including illegal fishing and poor recruitment.

With respect to recruitment, Murphy et al. (2011) hypothesised that the relatively low density of sandfish remaining on Warrior Reef may have reduced fertilisation success, because remaining sandfish are widely dispersed. Murphy et al. (2011) also noted that sandfish can burrow into the sand, making them difficult for survey observers to see. However, Murphy et al. (2011) considered it unlikely that the proportion of buried sandfish would have differed from one survey to the next. This is because, all surveys sampled the same sites during the same season, lunar phase, tide and time of day, providing confidence in comparability of density estimates between years. Low density estimates in recent surveys are therefore likely to indicate actual low density, rather than underestimates resulting from increased proportions of buried sandfish.

In 2012, CSIRO and the Australian Fisheries Management Authority (AFMA), conducted a small-scale experimental fishing trial of the Warrior Reef sandfish stock (Murphy et al. 2012). Methodology differed significantly from that used in previous surveys. Differences included sampling at different 'locations'[1] from the previous surveys (only three previous 'sites' were included), walking random search tracks rather than straight-line transects and choosing fishing areas of known high density (see Murphy et al. 2012). Previous survey reports emphasised the importance of sampling at the same sites (at the same lunar phase, tide and time of day) for each survey, to allow repeated measures for statistical analysis of data (for example, Murphy et al. 2010). Given the methodological differences, caution should be used when comparing the 2012 work with previous surveys. Although the findings of the 2012 study indicate that the density, biomass and size frequency of the stock had improved, it is unclear whether these data reflect real improvements in the stock or are artefacts of the different experimental design. The stock status determination provided here therefore continues to rely on the findings of the most recent full-scale sandfish survey (Murphy et al. 2010).

Stock status determination

Sandfish has been subject to a zero TAC since 1998. Illegal catch taken by Papua New Guinea nationals has been reported in recent years, but no such reports were received for 2017. On this basis, the stock is classified as **not subject to overfishing**. Since no recovery in overall density was observed between the full-scale surveys in 2004 and 2010, and there is no other robust information to inform stock status, the stock remains classified as **overfished**.

1 The term 'location' was used in the 2012 experimental fishing trial rather than 'site'. These locations were data logger tracks that indicated where experimental fishing occurred. They were labelled locations rather than sites because they were not generally separated by 500 m, a characteristic of the sites used in previous full-scale stock surveys. Locations were chosen by individual fishers rather than being specified by experimental design. Of the 37 locations fished, 14 were next to three sites surveyed for sandfish in previous years (N Murphy, CSIRO, 2013, pers. comm.).

White teatfish (*Holothuria fuscogilva*)

Line drawing: FAO

Stock structure

White teatfish in Torres Strait is assumed to represent a single biological stock (T Skewes, CSIRO, 2013, pers. comm.).

Stock assessment

The Torres Strait white teatfish stock was last surveyed in 2009 (Skewes et al. 2010). The results of this survey indicated that white teatfish density was relatively stable (or possibly increased) from surveys in 1995, 2002 and 2005. Mean density (±SE) increased from 0.47 (±0.20) to 0.85 (±0.43) per hectare between 2005 and 2009 (Skewes et al. 2010). Differences in the density estimates among years were not statistically significant. Between 2005 and 2009, mean weight increased from 2,341 to 2,736 g, and mean length increased from 276 to 296 mm.

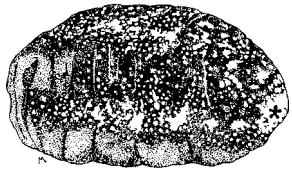
The 2009 survey estimated the biomass of white teatfish to be 110 t. The resulting TAC for white teatfish (using the same methods described for prickly redfish) was 15 t. However, it is likely that this survey underestimated the biomass, as a result of the 20 m safety limit imposed on diving depth for survey operations. White teatfish can occur at depths of more than 40 m, and previous research indicates that most inhabit waters deeper than 20 m (SPC 1994). Furthermore, the northern Don Cay region (Figure 19.1) was not included in the survey, potentially contributing to an underestimate of stock size. Past surveys may also have underestimated abundance and biomass for similar reasons. Given the historical restrictions on the use of breathing apparatus in this fishery, the depth preference of white teatfish is also likely to have protected the species from some level of fishing effort.

Stock status determination

Recent catches of white teatfish have been sporadic, with all but one year being below the 15 t TAC (16.4 t reported in 2014). Although the data that support the current TAC are close to 15 years old, the average catch for the period since the TAC was calculated (2004) has been substantially below the TAC (around 4 t).

The reported catch in 2017 was around 0.1 t. This stock is therefore classified as **not subject to overfishing**. The relatively stable densities, mean weights and lengths from surveys up to 2009 indicate that the portion of the stock available to the fishery has also remained relatively stable. Because there are no more recent data to indicate that this situation has changed, this stock is classified as **not overfished**.

Other sea cucumbers (18 species)



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Stock structure

The 'other sea cucumber' stock is a basket stock made up of up to 18 species of sea cucumber. Together, these species are considered to constitute a single stock for management purposes.

Stock assessment

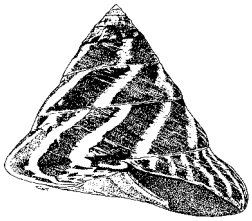
Many of the individual species within this multispecies stock have been included in previous surveys (1995, 2002, 2005 and 2009) of sea cucumbers in Torres Strait. The results of the 2002 survey were used to estimate MSY, and subsequently TACs, for 15 of the species (see section on prickly redfish for methodology for MSY and TAC calculation). For species considered to be 'unexploited' (that is, little or no fishing currently or in the recent past), the recommended TAC was equal to the estimate of MSY; for species currently or previously fished, but showing no evidence of severe depletion, the recommended TAC was half of MSY; and for species considered 'overexploited' (where the population is severely depleted and densities are several times lower than unfished biomass levels) or with MSY estimates less than 10 t, the recommended TAC was zero. Because of the multispecies nature of this stock, the PZJA has established an 80 t TAC for all species combined. This TAC is not biologically meaningful at the individual species level.

Stock status determination

Catch of this stock in 2017 comprised a number of species, at least one of which is considered to have been reduced to low levels (deepwater redfish *Actinopyga echinites*). It is unclear if the level of catch in 2017 would impact or impede effective recruitment and recovery of this species. As such, the stock is considered to be **uncertain** with regard to the level of fishing mortality.

At the time of the last full-scale survey, some species that make up this multispecies stock were considered to have been reduced to low levels by historical fishing. Further, it has been a number of years since the last survey was undertaken. As a result, the biomass status of some species, and therefore the stock as a whole, remains **uncertain**.

Trochus (*Trochus niloticus*)



Line drawing: FAO

Stock structure

Trochus in Torres Strait is assumed to represent a single biological stock (T Skewes, CSIRO, 2013, pers. comm.).

Stock assessment

Trochus was surveyed in Torres Strait in 1995, 2002, 2005 and 2009, mostly in combination with surveys of sea cucumbers and other reef-dwelling marine resources. The 2009 survey sampled 113 sites (11 specifically for trochus) over 10 days, during which 73 specimens were found at 12 sites. The survey transects sampled to a depth of 20 m, but trochus was not found deeper than 3 m. Murphy et al. (2010) suggested that the low numbers, and often complete absence, of trochus may be because trochus has quite different habitat requirements from those of sea cucumbers. When suitable trochus habitat was identified and specifically targeted, animals were commonly found. In the 2009 survey, the average density of trochus was estimated at 25 individuals per hectare (lower 90th percentile: 5 individuals per hectare), with a standing stock estimate of 634 t (lower 90th percentile: 138 t). The density of trochus in 2009 was similar to that observed in 1995, and the authors suggested that it was comparable to that of unfished stocks in other South Pacific locations.

Despite the well-established and repeated methodology used in the surveys, the reliability of the estimates of density and standing stock is uncertain because of the small number of sites at which trochus was found (only 12 of 113 sites), the low total number of trochus observed (73) and the resulting high variability around mean estimates of density. Murphy et al. (2010) concluded that the density estimates had very low precision and that the probability of detecting even large changes in trochus density was low.

Murphy et al. (2010) recommended setting a trigger catch level of 75 t (live shell weight), based on historical information, anecdotal harvest patterns and a 20 per cent exploitation rate of the estimated standing stock. It was recommended that the TAC should be reassessed and a stock assessment undertaken if catch exceeded this level. The current TAC for trochus in Torres Strait is 150 t, but there is no robust assessment or survey basis for that level of catch (Murphy et al. 2010).

Stock status determination

A small catch of trochus was reported in 2017 (around 100 kg). It is also likely that there were small amounts of unreported catch in previous years (AFMA, 2018, pers. comm.). Given the uncertain biomass status, it is also unclear what level of catch is sustainable. However, it is unlikely that 100 kg would have a measurable impact on biomass. As a result, the stock is classified as **not subject to overfishing**. Given the long history of fishing for trochus in Torres Strait (pre-European settlement; DPIE 1994), the unfished biomass is unknown. Furthermore, although the results of the 2009 survey suggested that trochus densities were similar to unfished stocks in other South Pacific locations, the very low precision of the results means that the biomass status of trochus remains **uncertain**.

19.3 Economic status

Key economic trends

Estimates of net economic returns (NER) are not available for the TSBDMF or the TSTF. Estimates of the gross value of production are also not available for either fishery.

Because it is relatively easy to collect sea cucumbers, and the value of, and demand (mostly from Asia) for, sea cucumber are increasing, the stock needs to be closely monitored to avoid overfishing. Most of Australia's export of sea cucumber is to China, Hong Kong and Singapore. The level of participation in the TSTF is relatively low because of a decline in overseas market demand for shells.

Management arrangements

Both fisheries are managed under TACs and a range of input controls. For the TSBDMF, with the opening of the black teatfish fishery, the catch of other species, such as prickly redfish, increased significantly in 2014 and 2015. For the TSTF, no catch has been recorded to 2016, and very little catch was taken in 2017, suggesting that it is not profitable.

Performance against economic objective

The HSP is not prescribed for Torres Strait fisheries, and there are no explicit economic targets for the TSBDMF or the TSTF.

For the TSBDMF, the PZJA aims to provide for the sustainable use of the resource, develop stocks for the benefit of Australian Traditional Inhabitants and develop a long-term strategy for sandfish (PZJA 2014a). The trial opening of a black teatfish fishery in 2014 and 2015, and hookah gear trials in 2011–12 appear to have generated increased activity in the TSBDMF. Rebuilding the sandfish stock should increase the potential benefits to local communities from the fishery.

For the TSTF, the PZJA aims to make best use of the resource, maximise opportunities for Traditional Inhabitants and encourage participation in the fishery (PZJA 2014b). Expectations of low economic returns are likely to have contributed to low participation in the fishery.

19.4 Environmental status

Both the bêche-de-mer and trochus fisheries are included in the List of Exempt Native Specimens under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). The TSBDMF is exempt from export controls until 18 December 2020 and the TSTF is exempt until 9 October 2026.

No ecological risk assessments have been conducted for the bêche-de-mer fishery or the trochus fishery. The most recent EPBC Act assessments of the fisheries (Department of the Environment 2014) assume that impacts on the ecosystem of each fishery would be restricted to exploitation of target species; translocation of species through anchor and hull fouling; and impacts on reef ecosystems related to anchoring, mooring and other anthropogenic activities, such as reef-top walking.

AFMA publishes quarterly logbook reports of interactions with protected species on its website. No interactions with species protected under the EPBC Act were reported in either fishery in 2017.

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