A Report Card for Australia's Sharks and Rays

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A Report Card for Australia's Sharks and Rays

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Status of Australian Shark and Ray Stocks

331	Species assessed	Australia is home to more than a quarter of the world's shark, ray and chimaera species. This report card covers all covers all known species in 341 stocks (some species have multiple stocks)
230	Sustainable stocks	Stocks that have been assessed to be sustainable at current levels of fishing. Most are managed through fisheries regulations, and some may also have very small catches. Example: Gummy Shark (southern stock)
11	Recovering stocks	Stocks that have declined in the past, but through improved management and protection are recovering. Examples: Melbourne Skate, Dusky Shark (western stock)
15	Depleting stocks	Stocks that are taken in fisheries and have declined in abundance, but not below levels that cause sustainability issues. Require careful management to avoid further decline. Examples: Bight Skate, Shortfin Mako
19	Depleted stocks	Stocks that have been adversely affected by fishing or other threats. Most are already protected or being actively managed for recovery. Examples: Maugean Skate, Grey Nurse Shark (eastern stock)
18	Undefined stocks	Some species lack sufficient information to determine their status. These species require more data collection, but are not believed to be at immediate risk. Examples: Antarctic Starry Skate, Southern Mandarin Dogfish
48	Negligible stocks	Some species rarely, if ever, interact with fisheries in Australia, because they occur outside the range of fisheries (e.g. very deep sea) or are of a size that precludes their capture. Examples: Blue Skate, Basking Shark

Australia's sharks, rays and chimaeras

Australia's waters contain a rich and diverse range of cartilaginous (chondrichthyan) fishes – sharks, rays and chimaeras. At the time of production there were 331 species described that are known to occur here: 183 sharks, 134 rays and 14 chimaeras. When the Shark Report Card was first produced in 2019 the total was 322 species, and scientists continue to survey our waters and describe new species. These species account for the more than a quarter of the global biodiversity of this group. Importantly, nearly a half of these species are endemic to Australian waters, that is, they are found nowhere else in the world (White and Kyne 2010). This rich diversity of species provides Australia with considerable benefit. Some species are economically important to Australia's fisheries (e.g. Gummy Shark, which supports sustainable annual catches of over 2000 t), and have wide ranging social and economic values, including by supporting tourism (e.g. Whale Sharks at Ningaloo Reef, Reef Manta Rays at Lady Elliot Island). Sharks and rays are also important to many Indigenous Australians featuring in the traditions, cultures and livelihoods of Aboriginal and Torres Strait Islander peoples. In addition to these direct benefits to Australians, these animals play important roles in maintaining and regulating marine ecosystems, keeping marine systems in balance, and thus providing indirect benefits via a healthy marine environment (Dulvy et al. 2017).

Unfortunately, many species of sharks and rays are also vulnerable to threats such as fishing, habitat loss and climate change. Slow growth and limited numbers of offspring mean that many species can be quickly depleted and, once depleted, can take long periods to recover (Simpfendorfer et al. 2011). Globally, sharks and rays are under increasing pressure, with more than a third of known species threatened with an elevated risk of extinction according to the International Union for the Conservation of Nature (IUCN) Red List of Threatened Species (Dulvy et al. 2021). While Australia's marine waters do not face the same intensity of fishing pressure experienced in many other parts of the world, some species occurring in Australia's water are at significant risk due to a combination of historical and ongoing pressures, and ecological and life-history characteristics that make them sensitive to these pressures. Some species have disappeared from large parts of their historic range because of human pressures. For example, the Green Sawfish has disappeared from the New South Wales and southern Queensland coast.

Purpose

Given the global threats to sharks, and concerns about the status of this group of key marine predators, it is important that there is a broad understanding of the status of this group in Australia's waters. Such a knowledge ensures that environmental managers, policy makers, advocacy groups and the public can act to address any species that are identified as needing improved management. This Report Card of Australia's Sharks and Rays is designed to fulfil this purpose. It reports the status of all shark, ray and chimaera species known from Australia's waters to provide a snapshot of the health of Australia's stocks[1]. It provides a summary for each of the 331 species assessed and compiles a summary of the outcomes of the assessments into this report card document. The Shark Report Card was first produced in 2019 (Simpfendorfer et al. 2019), but only covered all of Australia's sharks and a few of the rays. The new version provides comprehensive coverage of all species from all of the groups.

Methodology

[1] Individual species can form separate populations in different geographical areas that are referred to as stocks. For example, the Grey Nurse Shark has two separate Australian stocks – one on the west coast, the other on the east coast.

The Australian Shark and Ray Report Card presents a systematic assessment of the status of all of Australia's sharks, rays and chimaerans, the majority of which are probably unknown to most Australians. In doing so, the Report Card provides a scientifically robust account of what is happening to Australia's shark and ray resources, identifying the species and stocks that are currently healthy and likely to be healthy into the future, and those species that are in decline and need further management intervention and conservation.

The standard against which species were assessed was the same as that used by the Status of Australian Fish Stocks (SAFS, www.fish.gov.au). This standard is aimed at identifying the sustainability of each species in Australian fisheries, or stock if more than one has been identified for a species. The SAFS standard has six statuses (Table 1), four categories from Sustainable to Depleted, and two categories for species for which insufficient knowledge of catch occurs to conduct an assessment. The information requirements to carry out assessments using quantitative estimates of biomass and fishing mortality (the preferred SAFS approach) are large, and this occurs for only a handful of shark and ray species. To carry out assessments for species with limited data a different approach based on a proxy was required. This was achieved using the decline criterion used by the IUCN Red List of Threatened Species since national Red List assessments are available for almost all of Australia's shark, ray and chimaera species. These Red List assessments were originally developed at a workshop attended by 23 of Australia's leading shark and ray scientists held at James Cook University in 2015 as part of the original Shark Report Card project. These Red List assessments were added to and updated by the Action Plan for Australian Shark and Rays project in 2021. A workshop of species experts was held in Hobart in July 2022 to further reviewed the Red List and SAFS assessments, with a particular focus on rays, to ensure the latest available information was identified and used.

The IUCN Red List Categories and Criteria are the established International standard protocols for assessing species' extinction risk, and provide the basis for assessing species' status under the new Common Assessment Method being used by the Commonwealth and most state and territory governments. The stock status was determined from the IUCN Red List category using a guide specifically developed for this purpose (Appendix A). This approach can be applied to sharks and rays because almost all of them are assessed using the IUCN Red List A criterion (population decline) which is a proxy for biomass level. However, there are a few species that are assessed using the B (small range size) and C (small population size) criteria (e.g. Colclough's shark, Northern River Shark) that make this approach more difficult. For these species additional information was sourced to help resolve their status. However, for many of them they were assessed as Undefined stocks because of a lack of information on the level of population decline.

The Australian Shark and Ray Report Card assessed the status of a total of 331 species. Seven species (e.g. Australian Blacktip Shark, Grey Nurse Shark) had two or more separate stocks in Australian waters, giving a total of 341 stocks that were assessed. A summary of the assessments for each stock (both the Status of Australian Fish Stocks and IUCN Red List) are given in Appendices E-G, and individual species accounts are available in the Species Compendium (Appendix H).

Table 1. State of Australian Fish Stocks categories used in the Australian Shark and Ray Report Card (from www.fish.gov.au).

Stock status	Description	Potential implications for management of the stock
Sustainable	Biomass (or proxy) is at a level sufficient to ensure that, on average, future levels of recruitment are adequate (recruitment is not impaired) and for which fishing mortality (or proxy) is adequately controlled to avoid the stock becoming recruitment impaired (overfishing is not occurring).	Appropriate management is in place.
Depleting	Biomass (or proxy) is not yet depleted and recruitment is not yet impaired, but fishing mortality (or proxy) is too high (overfishing is occurring) and moving the stock in the direction of becoming recruitment impaired.	Management is needed to reduce fishing mortality and ensure that the biomass does not become depleted.
Recovering	Biomass (or proxy) is depleted and recruitment is impaired, but management measures are in place to promote stock recovery, and recovery is occurring.	Appropriate management is in place, and there is evidence that the biomass is recovering.
Depleted	Biomass (or proxy) has been reduced through catch and/or non-fishing effects, such that recruitment is impaired. Current management is not adequate to recover the stock, or adequate management measures have been put in place but have not yet resulted in measurable improvements.	Management is needed to recover this stock; if adequate management measures are already in place, more time may be required for them to take effect.
Undefined	Not enough information exists to determine stock status.	Data required to assess stock status are needed.
Negligible	Catches are so low as to be considered negligible and inadequate information exists to determine stock status.	Assessment will not be conducted unless catches and information increase.

The status of Australia's sharks and rays

Overall the stocks of Australia's sharks, rays and chimaeras are relatively healthy (Table 2, Figure 1), with 230 stocks (68%) assessed as Sustainable. A further 48 (14%) were assessed as Negligible, meaning they rarely, if ever, interact with Australian fisheries and so there are no concerns about their status. In most cases, species assessed as Negligible are those that occur in deeper waters where fishing rarely occurs (e.g. Blue Skate), are too small to be captured (e.g.

Pygmy Shark) or rarely occur in Australian waters (e.g. Basking Shark). Eighteen species (5%) were assessed as Undefined stocks, meaning there was insufficient information to determine the status of the stock. Some Undefined stocks require urgent attention to better assess their status, including two species of river sharks (Northern River Shark, Speartooth Shark) that are currently listed as Threatened on the EPBC Act, and Colclough's Shark which has been affected by fishing but requires more information to understand the magnitude. Of the remaining Undefined stocks, there was no information to suggest any are under immediate threat from human pressures, including fishing. Further investigation is needed to better understand the status of these mainly deepwater species.

Table 2. Number of stocks assessed in each of the Status of Australian Fish Stocks categories by group and total.

Status	Sharks	Rays	Chimaeras	Total
Sustainable	119	98	13	230
Recovering	8	2	1	11
Depleting	7	8		15
Depleted	11	8		19
Undefined stock	9	9		18
Negligible	39	9		48
Total	**193**	**134**	**14**	**341**

While most Australian species are in a healthy state, 45 stocks (13%) have been affected by fishing and other threats. Of these 19 (6%) are assessed as Depleted, meaning their populations are likely to be below levels that will enable sustainable take. The overfishing of some Depleted species is mostly the result of fishing pressure outside of Australian waters on highly migratory species (e.g. Oceanic Whitetip Shark, Giant Manta Ray). Depleted species are those on which management needs to be focused to rebuild populations. Of the 19 species, all but five have specific management measures in place, either through fisheries management, being protected by national threatened or migratory species listings (i.e. matters of national environmental significance under the EPBC Act) or have rebuilding plans as required by being listed as Conservation Dependent under the EPBC Act (Appendix B). All five species assessed as Depleted that lack specific management are currently being assessed for listing as Threatened under the EPBC Act, or have been previously assessed. Thus, there is a clear focus on efforts to address the declines of species that have been overfished. The success of management efforts to recover overfished species is shown by the 11 stocks (3%) listed as Recovering, meaning that in the past they were considered Depleted, but that populations are now increasing and are above the level at which a stock is considered Depleted. These are mostly species where fisheries management measures have been specifically implemented to improve status (e.g. Dusky Shark (west coast) and Sandbar Shark (west coast)), or marine park zoning has been changed enabling populations to increase (e.g. Grey Reef Shark). Continued management efforts are required to ensure these recoveries continue. Fifteen stocks (4%) were assessed as Depleting, meaning their level is below that which would enable sustainable take, but have not yet reached levels that would see them assessed as Depleted. However, further management is required to address these declines. Many of these Depleting species currently lack specific management, often being bycatch of fisheries targeting other species. There are often general management measures in place, including bycatch management plans, in these fisheries, but additional specific measures should be considered. In some cases (e.g. several species of stingaree) the data demonstrating declines is now quite old, and more recent data will help better understand the status of these species and the management measures required.

Status by group

With the completion of assessments for all species of shark, rays and chimaeras it is now possible to compare status summaries between groups (Figure 1). The chimaeras are the group in healthiest condition, with only one species assessed as Recovering and the remainder being Sustainable. Sharks and rays have similar proportion of species in the Depleted/Depleting/Recovering groups, at about 13%; sharks have a substantially greater proportion of species assessed as Negligible (20% vs 7%), but fewer species assessed as Sustainable (62% vs 73%). Sharks had greater proportions of species assessed as Recovering (4%) than rays (1%), and fewer species Depleting (3%) than rays (6%). These results suggest that management for ray species has lagged behind that of shark, and that greater focus is needed on ray management. In assessing the ray species, it was noted that there are no rays that are target species in commercial fisheries in Australian water, but they are commonly taken as bycatch in a wide range of fisheries. This suggests that management action to reduce bycatch, through action such as bycatch exclusion devices (Campbell et al. 2020), bycatch limits (e.g. those used in the tuna and billfish longline and northern prawn fisheries), and handling and release practices may all provide positive outcomes.

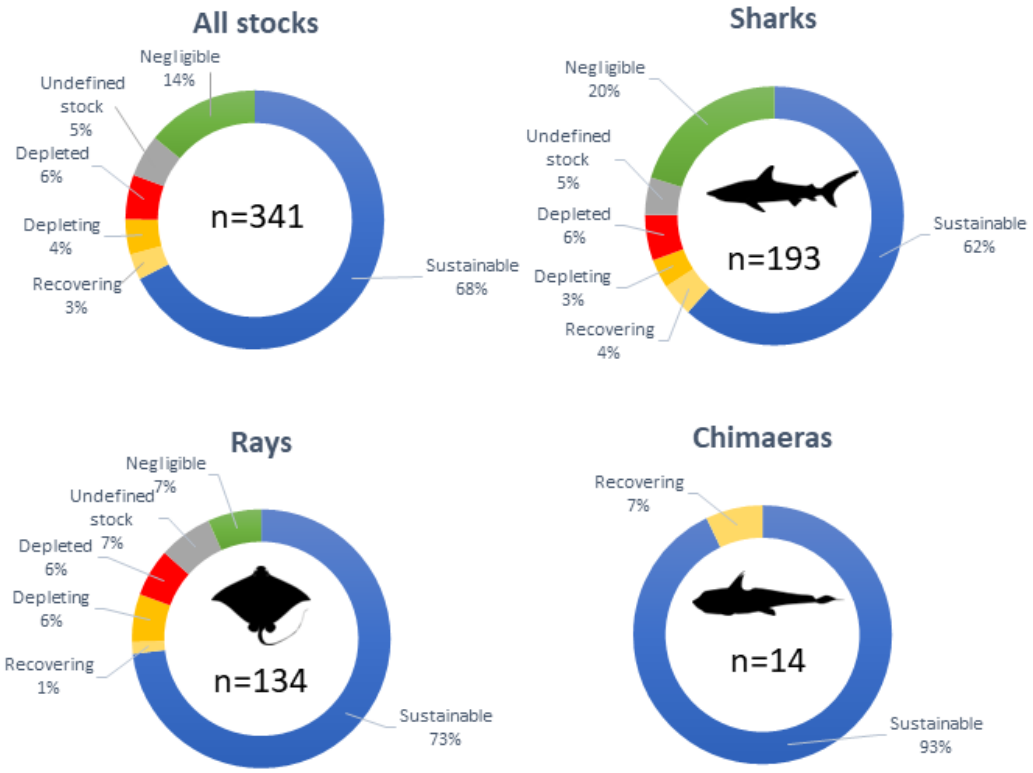

Figure 1. Proportion of stocks by status category for all species, sharks, rays and chimaeras.

Species listed on international environmental conventions

Over the past two decades, there has been an increasing trend of International Environmental Agreements incorporating shark and ray species in a bid to address global conservation concerns. The Convention on Migratory Species (CMS) aims to improve conservation outcomes for species that migrate by promoting coordinated action between signatories (Appendix II listing) or protection by signatories (Appendix I listing). The first shark species was added to the CMS Appendices in 1999 (Whale Shark). At the time of writing there were 30 species that occur in Australian waters listed on the CMS Appendices (Appendix C). Australia has reservations against 10 of the CMS listings on the basis that the status in Australia is better than in other part of the world, and that the EPBC Act requires that species listed on Appendix I or II are fully protected. In addition to the main CMS agreement, there is a subsidiary Sharks

Memorandum of Understanding (Sharks MoU) that has a different group of signatories and is a non-binding agreement that promotes shark and ray conservation. Twenty nine species that occur in Australian waters are currently listed on the Sharks MoU. The second international agreement is the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), which aims to conserve wild populations of listed species by regulating (Appendix II listing) or banning (Appendix I listing) international trade. At the time of writing there were 59 species that occur in Australian waters listed on the CITES Appendices, with all but the sawfish species listed on Appendix II (Appendix D).

Global versus Australian status

It is possible to compare the status of species that occur more broadly than Australian waters by comparing the Australian Red List status to the global Red List status (Figure 2; Appendix E-G). The proportion of species listed in a threatened category (Vulnerable, Endangered or Critically Endangered) in Australia was less than half that for species that occur in Australian waters across their global extent. Of the 331 species assessed, 107 had a better Australian status than global status, and no species had a worse status in Australian than it did globally. Three Australia endemic species had Red List status mismatches, but all were the result of new global assessments being completed after the Action Plan for Australian Sharks and Rays where the most recent national Red List assessments were reported. These results suggest that Australian management of sharks and rays is on average better than the global average. This result is consistent with research that has identified Australia as a global lifeboat for a number of species and groups (Morgan et al. 2011). The high number and proportion of stocks assessed as Sustainable in Australian waters is also consistent with the observation that Australia is one of the few nations that has demonstrated sustainable shark catches on the basis of strong management measures (Simpfendorfer and Dulvy 2017).

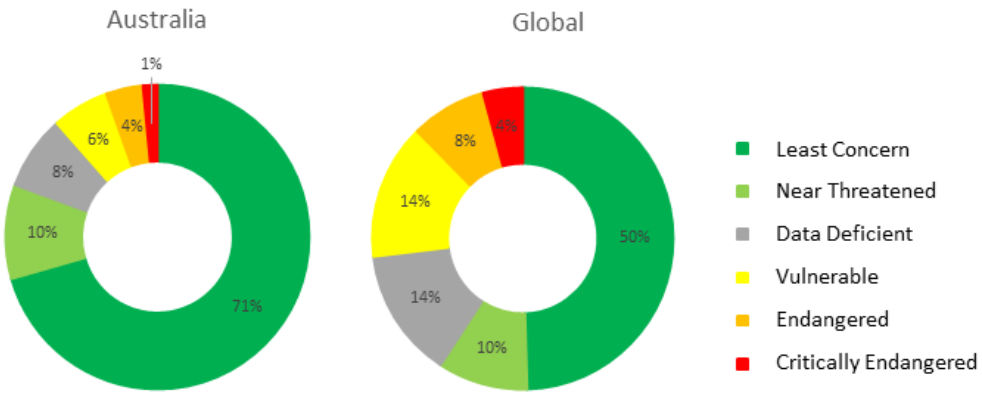

Figure 2. Comparison between Australian Red List status and global Red List status for those shark, ray and chimaera species that occur in Australian waters.

Differences between the 2019 Shark Report Card and the Shark and Ray Report Card

Comparing the outcomes of the Shark Report Card produced in 2019 (Simpfendorfer et al. 2019) with the Shark and Ray Report Card (this report) reveals that 115 of 193 stocks retained the same status, while 78 changed status (Appendix E). Many of these changes were for technical reasons, such as the addition of the Negligible category (37 stocks), non-inclusion in the Shark Report Card (5 species, mostly newly identified species), and separation of a species into multiple stocks (1). New information becoming available to improve assessments was the second most common reason for a difference in status (23 stocks). Greater alignment with regional status was achieved for highly migratory species by incorporating information from regional assessment (4 stocks); and alignment with new Status of Australian Fish Stock assessments changed the status of six stocks.

Australia's capacity to research, monitor, assess and manage sharks

While the results of this assessment demonstrate that Australia has done a good job managing its sharks and rays, it is important that these efforts are maintained. There is a long history of research, monitoring and assessment of sharks and rays in Australia. This has provided a sound base for the management of stocks and is one of the reasons that so few species are Depleted compared to global levels, and nearly all of those have some form of management in place to reverse declines. Ongoing monitoring and research are critical to maintaining the healthy state of Australia's sharks and rays. Without the knowledge of when action is required, managers are unable to act.

Australia's long history of shark research, dates back to the work of Gilbert Whitley (taxonomy), Alan Olsen (fisheries biology), Terry Walker (fisheries biology), John Stevens (fisheries biology, taxonomy), Peter Last (taxonomy) and others. Initially research capacity was focused at CSIRO and state and Territory fisheries agencies. However, as resources for some agencies have declined, and alternative sources of funding have become available, there has been a shift towards research capacity also being located at universities. This trend is best illustrated by the exponential increase in PhD, MPhil and MSc research on Australia's sharks and rays since the 1990s (Figure 3). This changing research landscape has broadened the scope of research. Up until about 2000, most research was focused on the species targeted in Australian fisheries (e.g. Gummy, School, Dusky, Whiskery and Australian Blacktip sharks). Subsequently, research has focused across a wide array of species, many of them not important commercially or important only as bycatch, and important in terms of the broader marine ecosystem and biodiversity. It is this broadening of research that has helped facilitate the production of this Report Card and other similar outputs. This broad base of research has positioned Australia well to continue to be able to address concerns about the status of its shark stocks into the future.

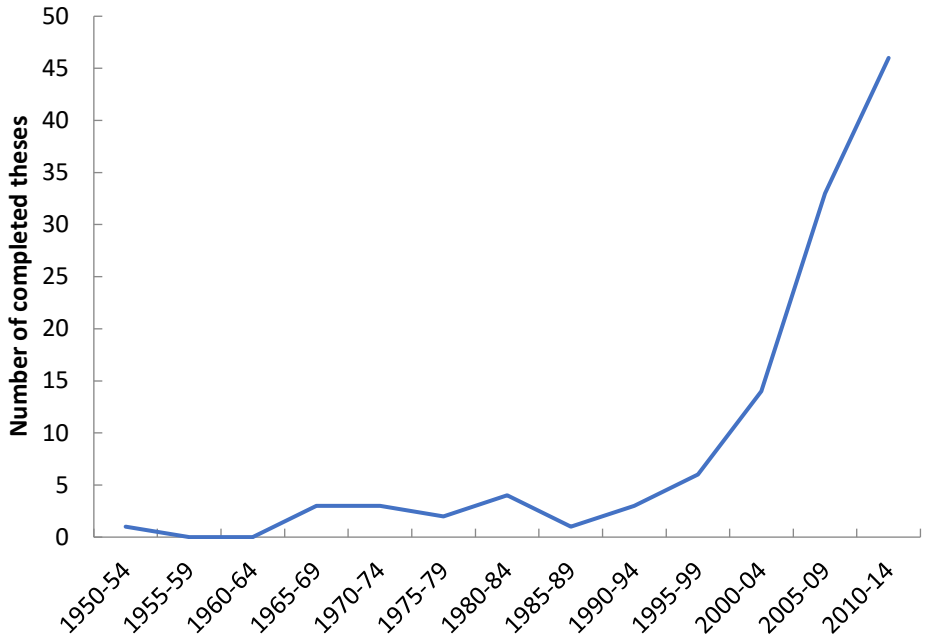

Figure 3. The number of PhD and MSc theses on sharks and rays completed at Australian universities in five year periods from 1950 to 2014.

The monitoring of Australia's shark stocks occurs in a wide variety of ways. For some target species, there are specific monitoring programs that provide data for stocks assessments. This includes many of the species targeted by fisheries, or those that are subject to rebuilding plans under the Commonwealth Harvest Strategy. However, most monitoring occurs via ongoing or one-off fishery observer programs or the collection of catch and effort data by fisheries agencies. Fishery observer programs are essential for ongoing monitoring of species caught incidentally in fisheries and formed the basis of many of the assessments that underpinned this Report Card. Despite the importance of ongoing monitoring for understanding the status of Australia's sharks and rays, the availability, coverage and focus of observer programs varies dramatically among Australian jurisdictions. Ongoing support for monitoring programs that provide data on the status of Australia's sharks and rays will be important for ensuring that the healthy nature of most stocks identified in this Report Card can be maintained. Without such programs, the ability to detect stocks that have become Depleted is more difficult and opportunities to recover stocks are lost.

The assessment of the state of Australia's shark and ray stocks is fundamental to maintaining them in a healthy state. Most species are assessed infrequently, using the IUCN Red List Categories and Criteria. This was first done in 2003 when a selection of Australian species was assessed, and again as part of this Report Card process. These assessments, however, are a measure of extinction risk and cannot be used to set sustainable fishing limits. A much smaller subset of species is subject to quantitative stock assessments that generate measures of stock status and levels of sustainable catch. Assessments of these stocks occur regularly and many are reported in the Status of Australia Fish Stocks reports (see www.fish.gov.au). In addition to full stock assessments, many sharks and rays caught in Australian fisheries have been assessed as part of ecological risk assessments (ERA). These ERAs identify those species that may be at risk from a specific fishery and need to have this risk mitigated via an appropriate mechanism. The ongoing assessment using all of these approaches play an important role in ensuring that Australia's sharks and rays are managed to ensure the vast majority remain in a healthy state and those that are not are recovered.

The culmination of research, monitoring and assessment is the implementation of management. The results of this Report Card demonstrate that Australia's approach to managing its shark and ray stocks has to date been very good. There are few species that are considered Depleted and most of those are subject to species-specific management action. Given the broad ranges and movements of many shark and ray species this management often requires the cooperation of multiple jurisdictions. The primary responsibility for management of fisheries falls to state, Territory and Commonwealth fisheries agencies. However, the Department of Climate Change, Energy, the Environment and Water also plays an important role through the EPBC Act and Wildlife Trade Operation certification processes that ensures fisheries management meets Australia's Ecologically Sustainable Development guidelines. There is also some coordination of the management of sharks and rays through Australia's National Plan of Action for Sharks (Shark Plan) that is currently in its second iteration (http://www.agriculture.gov.au/fisheries/environment/sharks). This is part of the United Nations Food and Agriculture Organisation's International Plan of Action for Sharks which aims to ensure the conservation and management of sharks and rays and their long-term sustainable use (http://www.fao.org/ipoa-sharks/en/). The results of this Report Card should contribute to all of these management processes to enable the best possible management of Australia's sharks and rays.

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Appendix A. Equivalency table between Status of Australian Fish categories and IUCN Red List status as used in the Shark and Ray Report Card.

<table>
<tr><th>IUCN Red List category</th><th>Aligns to SAFS category</th><th>Rationale</th><th>Comments</th></tr>
<tr><td>Extinct</td><td>Not Applicable</td><td>An Extinct species cannot be fished and thus cannot be included in a SAFS report. Thus, there is no corresponding SAFS category.</td><td>There are no sharks^ in this category (globally)</td></tr>
<tr><td>Extinct in the Wild</td><td>Not Applicable</td><td>A species that is Extinct in the Wild cannot be fished and thus cannot be included in a SAFS report. Thus, there is no corresponding SAFS category.</td><td>There are no sharks in this category (globally)</td></tr>
<tr><td>Critically Endangered (CR)</td><td>Depleted</td><td rowspan="4">The VU, EN, and CR categories describe scenarios where significant (>30% to >90%) population reductions have occurred over the last ten years or three generations, may occur in the future or occur over a time period encompassing both the past and the future*. This scenario aligns with Depleted in the SAFS assessment framework which indicates scenarios where recruitment levels are significantly reduced and current management is not adequate to recover the stock#.

However, a VU or EN species may also align with Recovering where management has halted and is reversing previous declines; and also with Depleting where stocks are not yet depleted but overfishing is occurring and moving stocks towards becoming depleted#.

A shark listed as VU, EN or CR may not be subject to targeted fishing pressure. However, VU, EN and CR species may still be incidentally taken as bycatch, and fishing pressure is the causative factor in the VU, EN and CR assessment for almost all sharks. Consequently, Depleted is an appropriate term that could be applied to all three IUCN categories. The exception to this are some species assessed as VU where stocks have been depleted but management measures are now in place to promote stock recovery, and recovery is occurring# (Recovering).</td><td rowspan="4">Using IUCN assessment Criteria A1, A2, A3 and A4 which assess population trends; Criteria B that assess restricted ranges and includes continuing decline in range and/or mature individuals; and Criteria C which assess declines in mature individuals.

Where fishing mortality on these species has demonstrably ceased or decreased, the Report Card Species Assessment Summary will highlight that while stocks are still in a reduced state, overfishing was historical and is no longer occurring.

Population/stock recovery depends on management intervention.</td></tr>
<tr><td>Endangered (EN)</td><td>Depleted</td></tr>
<tr><td rowspan="3">Vulnerable (VU)</td><td>Depleting</td></tr>
<tr><td>Recovering</td></tr>
<tr><td>Sustainable</td></tr>
</table>

Near Threatened (NT)	**Sustainable**	NT indicates that population reduction has occurred over the last ten years or three generations, or may occur in the future, to levels approaching the >30% population reduction threshold (VU category). However, population reductions have not yet, or are not predicted to, reach levels that are likely to threaten the species with extinction. Fishing may also reduce a stock to depleted but *stable* state where further reductions toward extinction is unlikely due to management. This scenario aligns with the SAFS category for sustainable fishing (Sustainable) where a depleted but stable population is being held at Maximum Sustainable Yield; OR categories where fishing pressure is *moving the stock in the direction of becoming recruitment overfished#* (Depleting).	The Report Card *Species Assessment Summary* will specify if the species is considered to be Sustainable, Recovering or Depleting. In Transitional stocks (Recovering or Depleting), new management intervention may be needed to halt and reverse a decline, or existing management needs to be maintained to continue population/stock recovery to target levels.
Least Concern (LC)	**Sustainable**	LC indicates that the species is not at risk of extinction. This category aligns with the SAFS *Sustainable* category which describes scenarios where stock levels are sufficient to ensure adequate levels of future recruitment and where existing management is sufficient to maintain adequate recruitment levels.	Existing management continued to maintain current population/stock levels.
	Negligible	Species can be assessed as least Concern if there is little information on their status, but where it is possible to demonstrate a lack of threats. In the case where a species is assessed as LC (and possibly NT) but where it is known to very rarely interact with Australian fisheries it can be assessed as Negligible	
Data Deficient (DD)	**Undefined Stock**	Both are categories that indicate there is insufficient information to assess the status of the population/stock against the assessment criteria.	Data required to assess populations/stocks.
Data Deficient (DD)	**Negligible**	Both are categories that indicate there is insufficient information to assess the status of the population/stock against the assessment criteria. This category aligns with the SAFS *Negligible* category where in addition, catches of the stock are so low as to be considered negligible.	Data required to assess populations/stocks when catches increase.
Not Evaluated (NE)	**No corresponding category**	The SAFS is a fisheries assessment, so a fished species that is not assessed is not included in the SAFS report. Thus, there is no corresponding SAFS category.	

Appendix B. Australian shark, ray and chimaera stocks with evidence of population declines (Depleted, Depleting, Recovering) and the type of management arrangements in place (if any). Fishery rules – species-specific rules in place in main fisheries; Protected species – protected under Commonwealth/state/Territory legislation; Rebuilding plan – species with a rebuilding plan under the Commonwealth Harvest Strategy Policy or Conservation Dependent (Environment Protection Biodiversity Conservation Act 1999 (EPBC) listing).

Scientific Name	Common Name	Current Australian management
Depleted		
Sharks		
Alopias pelagicus	Pelagic Thresher	Intl. fisheries rules
Carcharhinus longimanus	Oceanic Whitetip Shark	Intl. fisheries rules
Carcharias taurus (East Coast)	Grey Nurse Shark	Protected species
Centrophorus harrissoni	Harrisson's Dogfish	Rebuilding plan
Centrophorus uyato	Southern Dogfish	Rebuilding plan
Cephaloscyllium albipinnum	Whitefin Swellshark	None specific^
Galeorhinus galeus	School Shark	Rebuilding plan
Rhincodon typus	Whale Shark	Protected species (threatened)
Sphyrna lewini	Scalloped Hammerhead	Rebuilding plan^
Sphyrna mokarran	Great Hammerhead	Fishery rules
Squalus chloroculus	Greeneye Spurdog	None specific^
Rays		
Dentiraja confusa	Australian Longnose Skate	None specific^
Dipturus canutus	Grey Skate	None specific^
Mobula birostris	Giant Manta Ray	Protected species (migratory)
Pristis clavata	Dwarf Sawfish	Protected species (threatened)
Pristis pristis	Largetooth Sawfish	Protected species (threatened)
Pristis zijsron	Green Sawfish	Protected species (threatened)
Urolophus orarius	Coastal Stingaree	None specific*
Zearaja maugeana	Maugean Skate	Protected species (threatened)
Depleting		
Sharks		
Alopias superciliosus	Bigeye Thresher	Intl. fisheries rules
Carcharhinus falciformis	Silky Shark	Intl. fisheries rules
Cephaloscyllium variegatum	Saddled Swellshark	None specific
Eusphyra blochii	Winghead Shark	Fishery rules
Galeocerdo cuvier (East Coast)	Tiger Shark	Fishery rules
Isurus oxyrinchus	Shortfin Mako	Intl. fisheries rules
Squatina albipunctata	Eastern Angelshark	None specific^
Rays		
Anoxypristis cuspidata	Narrow Sawfish	Protected species (migratory)*
Dentiraja endeavouri	Endeavour Skate	None specific
Dipturus gudgeri	Bight Skate	None specific
Hemitrygon fluviorum	Estuary Stingray	None specific
Myliobatis hamlyni	Purple Eagle Ray	None specific
Urolophus bucculentus	Sandyback Stingaree	None specific
Urolophus sufflavus	Yellowback Stingaree	None specific

Urolophus viridis	Greenback Stingaree	None specific
Recovering		
Sharks		
Carcharhinus obscurus (Western stock)	Dusky Shark	Fishery rules
Carcharhinus plumbeus (West Coast)	Sandbar Shark	Fishery rules
Carcharodon carcharias	White Shark	Protected species (threatened)
Deania calcea	Brier Shark	Fishery rules
Deania quadrispinosa	Longsnout Dogfish	Fishery rules
Odontaspis ferox	Smalltooth Sandtiger Shark	Protected species (NSW)
Squalus grahami	Eastern Longnose Spurdog	Fishery rules
Squalus montalbani	Philippine Spurdog	Fishery rules
Rays		
Dentiraja australis	Sydney Skate	None specific
Spiniraja whitleyi	Melbourne Skate	None specific
Chimaeran		
Chimaera ogilbyi	Ogilby's Chimaera	None specific

^ at the time of writing these species were on the Department of Climate Change, Energy, the Environment and Water's Finalised Priority Assessment List, meaning that they are currently being assessed for listing under the EPBC Act for threatened status.

* these species have previously been assessed by Department of Climate Change, Energy, the Environment and Water for listing as Threatened and determined to not be eligible.

Appendix C. Shark and ray species that occur in Australian waters listed on the Convention on Trade in Migratory Species of Wild Animals appendices and Shark Memorandum of Understanding.

Common name	Scientific name	Status	Appendix I	Appendix II	Sharks MoU
Thresher sharks	**Alopidae**				
Pelagic thresher	*Alopias pelagicus*	Depleted		2014*	2016
Bigeye thresher	*Alopias superciliosus*	Depleting		2014*	2016
Common thresher	*Alopias vulpinus*	Sustainable		2014*	2016
Mackerel sharks					
White shark	*Carcharodon carcharias*	Recovering	2002	2002	2010
Shortfin mako	*Isurus oxyrinchus*	Depleting		2008^	2010
Longfin mako	*Isurus paucus*	Undefined		2008	2010
Porbeagle	*Lamna nasus*	Sustainable		2008	2010
Requiem sharks					
Silky shark	*Carcharhinus falciformis*	Depleting		2014	2016
Oceanic whitetip shark	*Carcharhinus longimanus*	Depleted	2020		2018
Dusky shark	*Carcharhinus obscurus*	Recovering		2017*	2018
Blue shark	*Prionace glauca*	Sustainable		2017*	
Hammerhead sharks					
Scalloped hammerhead	*Sphyrna lewini*	Depleted		2014*	2016
Great hammerhead	*Sphyrna mokarran*	Depleted		2014*	2016
Smooth hammerhead	*Sphyrna zygaena*	Sustainable		2020*	2018
Other sharks					
School shark	*Galeorhinus galeus*	Depleted		2020*	
Spiny dogfish	*Squalus acanthias*	Sustainable		2008	2010
Whale shark	*Rhincodon typus*	Depleted	2017	1999	2010
Basking shark	*Cetorhinus maximus*	Negligible	2005	2005	2010

Manta and devil rays					
Reef manta	*Mobula alfredi*	Sustainable	2014	2014	2016
Oceanic manta	*Mobula birostris*	Depleted	2011	2011	2016
Pygmy devil ray	*Mobula eregoodoo*	Sustainable	2014	2014	2016
Shortfin devil ray	*Mobula kuhlii*	Sustainable	2014	2014	2016
Giant devil ray	*Mobula mobular*	Sustainable	2014	2014	2016
Chilean devil ray	*Mobula tarapacana*	Sustainable	2014	2014	2016
Bentfin devil ray	*Mobula thurstoni*	Sustainable	2014	2014	2016
Sawfishes					
Narrow sawfish	*Anoxypristis cuspidata*	Depleting	2014	2014	2016
Dwarf sawfish	*Pristis clavata*	Depleted	2014	2014	2016
Largetooth sawfish	*Pristis pristis*	Depleted	2014	2014	2016
Green sawfish	*Pristis zijsron*	Depleted	2014	2014	2016
Wedgefishes					
White-spotted wedgefish	*Rhynchobatus australiae*	Sustainable		2017*	2018

*Australia has a reservation against listing

^Specific Australian legislation dealing with the take of this species

Appendix D. Shark and ray species that occur in Australian waters listed on the Convention on International Trade in Endangered Species appendices.

Common name	Scientific name	Status	Appendix I	Appendix II
Basking shark				
Basking shark	*Cetorhinus maximus*	Negligible		2003
Whale shark				
Whale shark	*Rhincodon typus*	Depleted		2003
Mackerel sharks				
White shark	*Carcharodon carcharias*	Recovering		2005
Shortfin mako	*Isurus oxyrinchus*	Depleting		2020
Longfin mako	*Isurus paucus*	Undefined		2020
Porbeagle	*Lamna nasus*	Sustainable		2014
Thresher sharks				
Pelagic thresher shark	*Alopias pelagicus*	Depleted		2017
Bigeye thresher shark	*Alopias superciliosus*	Depleting		2017
Common thresher shark	*Alopias vulpinus*	Sustainable		2017
Requiem sharks				
Silvertip Shark	*Carcharhinus albimarginatus*	Sustainable		2023
Bignose Shark	*Carcharhinus altimus*	Negligible		2023
Graceful Shark	*Carcharhinus amblyrhynchoides*	Sustainable		2023
Grey Reef Shark	*Carcharhinus amblyrhynchos*	Sustainable		2023
Pigeye Shark	*Carcharhinus amboinensis*	Sustainable		2023
Bronze Whaler	*Carcharhinus brachyurus*	Undefined		2023
Spinner Shark	*Carcharhinus brevipinna*	Sustainable		2023
Nervous Shark	*Carcharhinus cautus*	Sustainable		2023
Australian Blackspot Shark	*Carcharhinus coatesi*	Sustainable		2023

Silky Shark	*Carcharhinus falciformis*	Depleting		2017
Creek Whaler	*Carcharhinus fitzroyensis*	Sustainable		2023
Galapagos Shark	*Carcharhinus galapogensis*	Sustainable		2023
Bull Shark	*Carcharhinus leucas*	Sustainable		2023
Common Blacktip Shark	*Carcharhinus limbatus*	Sustainable		2023
Oceanic Whitetip Shark	*Carcharhinus longimanus*	Depleted		2014
Hardnose Shark	*Carcharhinus macloti*	Sustainable		2023
Blacktip Reef Shark	*Carcharhinus melanopterus*	Sustainable		2023
Dusky Shark	*Carcharhinus obscurus*	Recovering		2023
Sandbar Shark	*Carcharhinus plumbeus*	Recovering		2023
Spot-tail Shark	*Carcharhinus sorrah*	Sustainable		2023
Australian Blacktip Shark	*Carcharhinus tilstoni*	Sustainable		2023
Northern River Shark	*Glyphis garricki*	Undefined		2023
Speartooth Shark	*Glyphis glyphis*	Undefined		2023
Sliteye Shark	*Loxodon macrorhinus*	Sustainable		2023
Sharptooth Lemon shark	*Negaprion acutidens*	Sustainable		2023
Blue Shark	*Prionace glauca*	Sustainable		2023
Milk Shark	*Rhizoprionodon acutus*	Sustainable		2023
Grey Sharpnose Shark	*Rhizoprionodon oligolinx*	Undefined		2023
Australian Sharpnose Shark	*Rhizoprionodon taylori*	Sustainable		2023
Whitetip Reef Shark	*Triaenodon obesus*	Sustainable		2023
Hammerhead sharks				
Winghead shark	*Eusphyra blochii*	Depleting		2023
Scalloped hammerhead	*Sphyrna lewini*	Depleted		2014
Great hammerhead	*Sphyrna mokarran*	Depleted		2014
Smooth hammerhead	*Sphyrna zygaena*	Sustainable		2014

Manta and devil rays				
Reef manta	*Mobula alfredi*	Sustainable		2014
Oceanic manta	*Mobula birostris*	Depleted		2014
Pygmy devil ray	*Mobula eregoodoo*	Sustainable		2017
Shortfin devil ray	*Mobula kuhlii*	Sustainable		2017
Giant devil ray	*Mobula mobular*	Sustainable		2017
Chilean devil ray	*Mobula tarapacana*	Sustainable		2017
Bentfin devil ray	*Mobula thurstoni*	Sustainable		2017
Sawfishes				
Narrow sawfish	*Anoxypristis cuspidata*	Depleting	2007	
Dwarf sawfish	*Pristis clavata*	Depleted	2007	
Largeotooth sawfish	*Pristis pristis*	Depleted	2007	
Green sawfish	*Pristis zijsron*	Depleted	2007	
Giant guitarfish				
Giant guitarfish	*Glaucostegus typus*	Sustainable		2020
Wedgefishes				
Shark ray	*Rhina anclystoma*	Sustainable		
White-spotted wedgefish	*Rhynchobatus australiae*	Sustainable		2020
Eyebrow wedgefish	*Rhynchobatus palpebratus*	Sustainable		2020
Guitarfish				
Goldeneye shovelnose ray	*Rhinobatos sainsburyi*	Sustainable		2023

Appendix E. Summary of status for all Australian sharks, including Report Card status (SAFS; 2023 and 2019)), national Red List (Shark Report Card) and global Red List.

Order	Family	Scientific Name	Common Name	2023 Report Card Status	2021 Shark Action Plan	2023 Global Red List	2019 SAFS Status
Carcharhiniformes	Atelomycteridae	*Atelomycterus macleayi*	Marbled Catshark	Sustainable	LC	LC	Sustainable
Carcharhiniformes	Carcharhinidae	*Carcharhinus albimarginatus*	Silvertip Shark	Sustainable	LC	VU	Sustainable
Carcharhiniformes	Carcharhinidae	*Carcharhinus altimus*	Bignose Shark	Negligible	LC	NT	Sustainable
Carcharhiniformes	Carcharhinidae	*Carcharhinus amblyrhynchoides*	Graceful Shark	Sustainable	LC	VU	Sustainable
Carcharhiniformes	Carcharhinidae	*Carcharhinus amblyrhynchos*	Grey Reef Shark	Sustainable	NT	EN	Recovering
Carcharhiniformes	Carcharhinidae	*Carcharhinus amboinensis*	Pigeye Shark	Sustainable	LC	VU	Sustainable
Carcharhiniformes	Carcharhinidae	*Carcharhinus brachyurus*	Bronze Whaler	Undefined	LC	VU	Sustainable
Carcharhiniformes	Carcharhinidae	*Carcharhinus brevipinna*	Spinner Shark	Sustainable	LC	VU	Sustainable
Carcharhiniformes	Carcharhinidae	*Carcharhinus cautus*	Nervous Shark	Sustainable	LC	LC	Sustainable
Carcharhiniformes	Carcharhinidae	*Carcharhinus coatesi*	Australian Blackspot Shark	Sustainable	LC	LC	Sustainable
Carcharhiniformes	Carcharhinidae	*Carcharhinus falciformis*	Silky Shark	Depleting	VU	VU	Sustainable
Carcharhiniformes	Carcharhinidae	*Carcharhinus fitzroyensis*	Creek Whaler	Sustainable	LC	LC	Sustainable
Carcharhiniformes	Carcharhinidae	*Carcharhinus galapagensis*	Galapagos Shark	Sustainable	LC	LC	Sustainable

Carcharhiniformes	Carcharhinidae	*Carcharhinus leucas*	Bull Shark	Sustainable	LC	VU	Sustainable
Carcharhiniformes	Carcharhinidae	*Carcharhinus limbatus* (Eastern stock)	Common Blacktip Shark	Sustainable	LC	VU	Sustainable
Carcharhiniformes	Carcharhinidae	*Carcharhinus limbatus* (Gulf of Carpentaria stock)	Common Blacktip Shark	Undefined	LC	VU	Sustainable
Carcharhiniformes	Carcharhinidae	*Carcharhinus limbatus* (Northern stock)	Common Blacktip Shark	Sustainable	LC	VU	Sustainable
Carcharhiniformes	Carcharhinidae	*Carcharhinus limbatus* (Western stock)	Common Blacktip Shark	Sustainable	LC	VU	Sustainable
Carcharhiniformes	Carcharhinidae	*Carcharhinus longimanus*	Oceanic Whitetip Shark	Depleted	CR	CR	Depleted
Carcharhiniformes	Carcharhinidae	*Carcharhinus macloti*	Hardnose Shark	Sustainable	LC	NT	Sustainable
Carcharhiniformes	Carcharhinidae	*Carcharhinus melanopterus*	Blacktip Reef Shark	Sustainable	LC	VU	Sustainable
Carcharhiniformes	Carcharhinidae	*Carcharhinus obscurus* (Eastern stock)	Dusky Shark	Sustainable	NT	EN	Recovering
Carcharhiniformes	Carcharhinidae	*Carcharhinus obscurus* (Western stock)	Dusky Shark	Recovering	NT	EN	Recovering
Carcharhiniformes	Carcharhinidae	*Carcharhinus plumbeus* (East Coast)	Sandbar Shark	Sustainable	NT	EN	Recovering
Carcharhiniformes	Carcharhinidae	*Carcharhinus plumbeus* (West Coast)	Sandbar Shark	Recovering	NT	EN	Recovering
Carcharhiniformes	Carcharhinidae	*Carcharhinus sorrah*	Spot-tail Shark	Sustainable	LC	NT	Sustainable
Carcharhiniformes	Carcharhinidae	*Carcharhinus tilstoni* (Eastern stock)	Australian Blacktip Shark	Sustainable	LC	LC	Sustainable

Carcharhiniformes	Carcharhinidae	*Carcharhinus tilstoni* (Gulf of Carpentaria stock)	Australian Blacktip Shark	Undefined	LC	LC	Sustainable
Carcharhiniformes	Carcharhinidae	*Carcharhinus tilstoni* (North and West stock)	Australian Blacktip Shark	Sustainable	LC	LC	Sustainable
Carcharhiniformes	Carcharhinidae	*Glyphis garricki*	Northern River Shark	Undefined	VU	VU	Depleted
Carcharhiniformes	Carcharhinidae	*Glyphis glyphis* (	Speartooth Shark	Undefined	VU	VU	Depleted
Carcharhiniformes	Carcharhinidae	*Loxodon macrorhinus*	Sliteye Shark	Sustainable	LC	NT	Sustainable
Carcharhiniformes	Carcharhinidae	*Negaprion acutidens*	Sharptooth Lemon Shark	Sustainable	LC	NT	Sustainable
Carcharhiniformes	Carcharhinidae	*Prionace glauca*	Blue Shark	Sustainable	NT	NT	Sustainable
Carcharhiniformes	Carcharhinidae	*Rhizoprionodon acutus*	Milk Shark	Sustainable	LC	VU	Sustainable
Carcharhiniformes	Carcharhinidae	*Rhizoprionodon oligolinx*	Grey Sharpnose Shark	Negligible	DD	NT	n/a
Carcharhiniformes	Carcharhinidae	*Rhizoprionodon taylori*	Australian Sharpnose Shark	Sustainable	LC	LC	Sustainable
Carcharhiniformes	Carcharhinidae	*Triaenodon obesus*	Whitetip Reef Shark	Sustainable	NT	VU	Recovering
Carcharhiniformes	Galeocerdidae	*Galeocerdo cuvier* (East Coast)	Tiger Shark	Depleting	NT	NT	Depleting
Carcharhiniformes	Galeocerdidae	*Galeocerdo cuvier* (West Coast)	Tiger Shark	Sustainable	NT	NT	Depleting
Carcharhiniformes	Hemigaleidae	*Hemigaleus australiensis*	Australian Weasel Shark	Sustainable	LC	LC	Sustainable
Carcharhiniformes	Hemigaleidae	*Hemipristis elongata*	Fossil Shark	Sustainable	LC	VU	Sustainable
Carcharhiniformes	Pentanchidae	*Apristurus albisoma*	White-bodied Catshark	Sustainable	LC	LC	Sustainable
Carcharhiniformes	Pentanchidae	*Apristurus ampliceps*	Roughskin Catshark	Sustainable	LC	LC	Sustainable

Carcharhiniformes	Pentanchidae	*Apristurus australis* Sato,	Pinocchio Catshark	Sustainable	LC	LC	Sustainable
Carcharhiniformes	Pentanchidae	*Apristurus bucephalus*	Bighead Catshark	Sustainable	LC	DD	Undefined
Carcharhiniformes	Pentanchidae	*Apristurus longicephalus*	Smoothbelly Catshark	Sustainable	LC	LC	Sustainable
Carcharhiniformes	Pentanchidae	*Apristurus melanoasper*	Fleshynose Catshark	Sustainable	LC	LC	Sustainable
Carcharhiniformes	Pentanchidae	*Apristurus pinguis*	Bulldog Catshark	Sustainable	LC	LC	Sustainable
Carcharhiniformes	Pentanchidae	*Apristurus platyrhynchus*	Bigfin Catshark	Sustainable	LC	LC	Sustainable
Carcharhiniformes	Pentanchidae	*Apristurus sinensis*	Freckled Catshark	Sustainable	LC	DD	Undefined
Carcharhiniformes	Pentanchidae	*Asymbolus analis*	Grey Spotted Catshark	Sustainable	LC	LC	Sustainable
Carcharhiniformes	Pentanchidae	*Asymbolus funebris*	Blotched Catshark	Negligible	DD	DD	Undefined
Carcharhiniformes	Pentanchidae	*Asymbolus occiduus*	Western Spotted Catshark	Sustainable	LC	LC	Sustainable
Carcharhiniformes	Pentanchidae	*Asymbolus pallidus*	Pale Spotted Catshark	Sustainable	LC	LC	Sustainable
Carcharhiniformes	Pentanchidae	*Asymbolus parvus*	Dwarf Catshark	Sustainable	LC	LC	Sustainable
Carcharhiniformes	Pentanchidae	*Asymbolus rubiginosus*	Orange Spotted Catshark	Sustainable	LC	LC	Sustainable
Carcharhiniformes	Pentanchidae	*Asymbolus submaculatus*	Variegated Catshark	Sustainable	LC	LC	Sustainable
Carcharhiniformes	Pentanchidae	*Asymbolus vincenti*	Gulf Catshark	Sustainable	LC	LC	Sustainable
Carcharhiniformes	Pentanchidae	*Bythaelurus incanus*	Dusky Catshark	Negligible	DD	DD	Undefined
Carcharhiniformes	Pentanchidae	*Figaro boardmani*	Sawtail Shark	Sustainable	LC	LC	Sustainable
Carcharhiniformes	Pentanchidae	*Figaro striatus* Gledhill,	Northern Sawtail Shark	Sustainable	LC	DD	Undefined

Carcharhiniformes	Pentanchidae	*Galeus gracilis*	Slender Sawtail Shark	Negligible	DD	DD	Undefined
Carcharhiniformes	Pentanchidae	*Halaelurus sellus*	Speckled Catshark	Sustainable	LC	LC	Sustainable
Carcharhiniformes	Pentanchidae	*Parmaturus bigus*	Short-tail Catshark	Negligible	DD	DD	Undefined
Carcharhiniformes	Pseudotriakidae	*Pseudotriakis microdon*	False Catshark	Negligible	DD	LC	Sustainable
Carcharhiniformes	Scyliorhinidae	*Atelomycterus fasciatus*	Banded Catshark	Sustainable	LC	LC	Sustainable
Carcharhiniformes	Scyliorhinidae	*Atelomycterus marnkalha*	Eastern Banded Catshark	Sustainable	LC	DD	Undefined
Carcharhiniformes	Scyliorhinidae	*Aulohalaelurus labiosus*	Blackspotted Catshark	Sustainable	LC	LC	Sustainable
Carcharhiniformes	Scyliorhinidae	*Cephaloscyllium albipinnum*	Whitefin Swellshark	Depleted	CR	CR	Depleted
Carcharhiniformes	Scyliorhinidae	*Cephaloscyllium cooki*	Cook's Swellshark	Negligible	DD	DD	Undefined
Carcharhiniformes	Scyliorhinidae	*Cephaloscyllium hiscosellum*	Reticulate Swellshark	Sustainable	LC	LC	Sustainable
Carcharhiniformes	Scyliorhinidae	*Cephaloscyllium laticeps*	Draughtboard Shark	Sustainable	LC	LC	Sustainable
Carcharhiniformes	Scyliorhinidae	*Cephaloscyllium signourum*	Flagtail Swellshark	Negligible	LC	DD	Undefined
Carcharhiniformes	Scyliorhinidae	*Cephaloscyllium speccum*	Speckled Swellshark	Negligible	LC	DD	Undefined
Carcharhiniformes	Scyliorhinidae	*Cephaloscyllium variegatum*	Saddled Swellshark	Depleting	NT	NT	Depleting
Carcharhiniformes	Scyliorhinidae	*Cephaloscyllium zebrum*	Narrowbar Swellshark	Negligible	DD	DD	Undefined
Carcharhiniformes	Sphyrnidae	*Eusphyra blochii*	Winghead Shark	Depleting	VU	EN	Sustainable
Carcharhiniformes	Sphyrnidae	*Sphyrna lewini*	Scalloped Hammerhead	Depleted	EN	CR	Depleted
Carcharhiniformes	Sphyrnidae	*Sphyrna mokarran*	Great Hammerhead	Depleted	EN	CR	Depleted

Carcharhiniformes	Sphyrnidae	*Sphyrna zygaena*	Smooth Hammerhead	Sustainable	NT	VU	Sustainable
Carcharhiniformes	Triakidae	*Furgaleus macki*	Whiskery Shark	Sustainable	LC	LC	Sustainable
Carcharhiniformes	Triakidae	*Galeorhinus galeus*	School Shark	Depleted	EN	CR	Recovering
Carcharhiniformes	Triakidae	*Hemitriakis abdita*	Darksnout Houndshark	Negligible	DD	DD	Undefined
Carcharhiniformes	Triakidae	*Hemitriakis falcata*	Sicklefin Houndshark	Negligible	LC	LC	Sustainable
Carcharhiniformes	Triakidae	*Hypogaleus hyugaensis*	Pencil Shark	Sustainable	LC	LC	Sustainable
Carcharhiniformes	Triakidae	*Iago garricki*	Longnose Houndshark	Sustainable	LC	LC	Sustainable
Carcharhiniformes	Triakidae	*Mustelus antarcticus* (Southern stock)	Gummy Shark	Sustainable	LC	LC	Sustainable
Carcharhiniformes	Triakidae	*Mustelus antarcticus* (Eastern stock)	Gummy Shark	Undefined	LC	LC	n/a
Carcharhiniformes	Triakidae	*Mustelus ravidus*	Grey Gummy Shark	Sustainable	LC	LC	Sustainable
Carcharhiniformes	Triakidae	*Mustelus stevensi*	Western Spotted Gummy Shark	Sustainable	LC	LC	Sustainable
Echinorhiniformes	Echinorhinidae	*Echinorhinus brucus*	Bramble Shark	Negligible	DD	EN	Undefined
Echinorhiniformes	Echinorhinidae	*Echinorhinus cookei*	Prickly Shark	Negligible	DD	DD	Sustainable
Heterodontiformes	Heterodontidae	*Heterodontus galeatus*	Crested Hornshark	Sustainable	LC	LC	Sustainable
Heterodontiformes	Heterodontidae	*Heterodontus portusjacksoni*	Port Jackson Shark	Sustainable	LC	LC	Sustainable
Heterodontiformes	Heterodontidae	*Heterodontus zebra*	Zebra Hornshark	Negligible	DD	LC	Sustainable
Hexanchiformes	Chlamydoselachidae	*Chlamydoselachus anguineus*	Frill Shark	Negligible	LC	LC	Sustainable

Hexanchiformes	Hexanchidae	*Heptranchias perlo*	Sharpnose Sevengill Shark	Sustainable	LC	NT	Sustainable
Hexanchiformes	Hexanchidae	*Hexanchus griseus*	Bluntnose Sixgill Shark	Sustainable	LC	NT	Sustainable
Hexanchiformes	Hexanchidae	*Hexanchus nakamurai*	Bigeye Sixgill Shark	Negligible	LC	NT	Undefined
Hexanchiformes	Hexanchidae	*Notorynchus cepedianus*	Broadnose Sevengill Shark	Sustainable	LC	VU	Sustainable
Lamniformes	Alopiidae	*Alopias pelagicus*	Pelagic Thresher	Depleted	EN	EN	Sustainable
Lamniformes	Alopiidae	*Alopias superciliosus*	Bigeye Thresher	Depleting	VU	VU	Sustainable
Lamniformes	Alopiidae	*Alopias vulpinus*	Common Thresher	Sustainable	NT	VU	Sustainable
Lamniformes	Carchariidae	*Carcharias taurus* (East Coast)	Grey Nurse Shark	Depleted	VU	CR	Depleted
Lamniformes	Carchariidae	*Carcharias taurus* (West Coast)	Grey Nurse Shark	Sustainable	VU	CR	Sustainable
Lamniformes	Cetorhinidae	*Cetorhinus maximus*	Basking Shark	Negligible	NT	EN	Undefined
Lamniformes	Lamnidae	*Carcharodon carcharias*	White Shark	Recovering	VU	VU	Recovering
Lamniformes	Lamnidae	*Isurus oxyrinchus*	Shortfin Mako	Depleting	VU	EN	Depleting
Lamniformes	Lamnidae	*Isurus paucus*	Longfin Mako	Undefined	VU	EN	Undefined
Lamniformes	Lamnidae	*Lamna nasus*	Porbeagle	Sustainable	LC	VU	Sustainable
Lamniformes	Megachasmidae	*Megachasma pelagios*	Megamouth Shark	Negligible	DD	LC	Sustainable
Lamniformes	Mitsukurinidae	*Mitsukurina owstoni*	Goblin Shark	Negligible	LC	LC	Sustainable
Lamniformes	Odontaspididae	*Odontaspis ferox*	Smalltooth Sandtiger Shark	Recovering	NT	VU	Depleted

Lamniformes	Pseudocarchariidae	*Pseudocarcharias kamoharai*	Crocodile Shark	Sustainable	LC	LC	Sustainable
Orectolobiformes	Brachaeluridae	*Brachaelurus colcloughi*	Colclough's Shark	Undefined	VU	VU	Depleted
Orectolobiformes	Brachaeluridae	*Brachaelurus waddi*	Blind Shark	Sustainable	LC	LC	Sustainable
Orectolobiformes	Ginglymostomatidae	*Nebrius ferrugineus*	Tawny Shark	Sustainable	LC	VU	Sustainable
Orectolobiformes	Hemiscylliidae	*Chiloscyllium punctatum*	Brownbanded Bamboo Shark	Sustainable	LC	NT	Sustainable
Orectolobiformes	Hemiscylliidae	*Hemiscyllium hallstromi*	Papuan Epaulette Shark	Negligible	LC	VU	n/a
Orectolobiformes	Hemiscylliidae	*Hemiscyllium ocellatum*	Epaulette Shark	Sustainable	LC	LC	Sustainable
Orectolobiformes	Hemiscylliidae	*Hemiscyllium trispeculare*	Speckled Carpetshark	Sustainable	LC	LC	Sustainable
Orectolobiformes	Orectolobidae	*Eucrossorhinus dasypogon*	Tasselled Wobbegong	Sustainable	LC	LC	Sustainable
Orectolobiformes	Orectolobidae	*Orectolobus floridus*	Floral Banded Wobbegong	Sustainable	LC	LC	Sustainable
Orectolobiformes	Orectolobidae	*Orectolobus halei*	Gulf Wobbegong	Sustainable	LC	LC	Sustainable
Orectolobiformes	Orectolobidae	*Orectolobus hutchinsi*	Western Wobbegong	Sustainable	LC	LC	Sustainable
Orectolobiformes	Orectolobidae	*Orectolobus maculatus*	Spotted Wobbegong	Sustainable	LC	LC	Sustainable
Orectolobiformes	Orectolobidae	*Orectolobus ornatus*	Ornate Wobbegong	Sustainable	LC	LC	Sustainable
Orectolobiformes	Orectolobidae	*Orectolobus parvimaculatus*	Dwarf Spotted Wobbegong	Sustainable	LC	LC	Sustainable
Orectolobiformes	Orectolobidae	*Orectolobus reticulatus*	Network Wobbegong	Negligible	DD	DD	Undefined
Orectolobiformes	Orectolobidae	*Orectolobus wardi*	Northern Wobbegong	Negligible	LC	LC	Sustainable

Orectolobiformes	Orectolobidae	*Sutorectus tentaculatus*	Cobbler Wobbegong	Sustainable	LC	LC	Sustainable
Orectolobiformes	Parascylliidae	*Parascyllium collare*	Collared Carpetshark	Sustainable	LC	LC	Sustainable
Orectolobiformes	Parascylliidae	*Parascyllium elongatum*	Elongate Carpetshark	Negligible	DD	DD	Undefined
Orectolobiformes	Parascylliidae	*Parascyllium ferrugineum*	Rusty Carpetshark	Sustainable	LC	LC	Sustainable
Orectolobiformes	Parascylliidae	*Parascyllium sparsimaculatum*	Ginger Carpetshark	Negligible	DD	DD	Undefined
Orectolobiformes	Parascylliidae	*Parascyllium variolatum*	Varied Carpetshark	Sustainable	LC	LC	Sustainable
Orectolobiformes	Rhincodontidae	*Rhincodon typus*	Whale Shark	Depleted	EN	EN	Depleted
Orectolobiformes	Stegostomidae	*Stegostoma tigrinum*	Zebra Shark	Sustainable	LC	EN	Sustainable
Pristiophoriformes	Pristiophoridae	*Pristiophorus cirratus*	Common Sawshark	Sustainable	LC	LC	Sustainable
Pristiophoriformes	Pristiophoridae	*Pristiophorus delicatus*	Tropical Sawshark	Sustainable	LC	LC	Sustainable
Pristiophoriformes	Pristiophoridae	*Pristiophorus nudipinnis*	Southern Sawshark	Sustainable	LC	LC	Sustainable
Squaliformes	Centrophoridae	*Centrophorus*	Gulper Shark	Sustainable	LC	EN	Depleted
Squaliformes	Centrophoridae	*Centrophorus harrissoni*	Harrisson's Dogfish	Depleted	EN	EN	Depleted
Squaliformes	Centrophoridae	*Centrophorus moluccensis*	Endeavour Dogfish	Sustainable	LC	VU	Sustainable
Squaliformes	Centrophoridae	*Centrophorus squamosus*	Leafscale Gulper Shark	Sustainable	LC	EN	Undefined
Squaliformes	Centrophoridae	*Centrophorus westraliensis*	Western Gulper Shark	Sustainable	LC	DD	Undefined
Squaliformes	Centrophoridae	*Centrophorus zeehaani*	Southern Dogfish	Depleted	EN		n/a
Squaliformes	Centrophoridae	*Deania calcea*	Brier Shark	Recovering	NT	NT	Sustainable
Squaliformes	Centrophoridae	*Deania quadrispinosa*	Longsnout Dogfish	Recovering	NT	VU	Recovering

Squaliformes	Dalatiidae	*Dalatias licha*	Black Shark	Sustainable	NT	VU	Sustainable
Squaliformes	Dalatiidae	*Euprotomicrus bispinatus*	Pygmy Shark	Negligible	LC	LC	Sustainable
Squaliformes	Dalatiidae	*Isistius brasiliensis*	Smalltooth Cookiecutter Shark	Negligible	LC	LC	Sustainable
Squaliformes	Dalatiidae	*Isistius plutodus*	Largetooth Cookie-cutter Shark	Negligible	LC	LC	Sustainable
Squaliformes	Dalatiidae	*Squaliolus aliae*	Smalleye Pygmy Shark	Negligible	LC	LC	Sustainable
Squaliformes	Etmopteridae	*Centroscyllium kamoharai*	Bareskin Dogfish	Sustainable	LC	LC	Undefined
Squaliformes	Etmopteridae	*Etmopterus granulosus*	Southern Lanternshark	Sustainable	LC	LC	Sustainable
Squaliformes	Etmopteridae	*Etmopterus bigelowi*	Blurred Smooth Lanternshark	Sustainable	LC	LC	Sustainable
Squaliformes	Etmopteridae	*Etmopterus brachyurus*	Short-tail Lanternshark	Sustainable	LC	DD	Undefined
Squaliformes	Etmopteridae	*Etmopterus dianthus*	Pink Lanternshark	Negligible	LC	LC	Sustainable
Squaliformes	Etmopteridae	*Etmopterus dislineatus*	Lined Lanternshark	Negligible	LC	LC	Sustainable
Squaliformes	Etmopteridae	*Etmopterus evansi*	Blackmouth Lanternshark	Negligible	LC	LC	Sustainable
Squaliformes	Etmopteridae	*Etmopterus fusus*	Pygmy Lanternshark	Negligible	LC	LC	Sustainable
Squaliformes	Etmopteridae	*Etmopterus lucifer*	Blackbelly Lanternshark	Sustainable	LC	LC	Sustainable
Squaliformes	Etmopteridae	*Etmopterus molleri*	Moller’s Lanternshark	Sustainable	LC	DD	Undefined
Squaliformes	Etmopteridae	*Etmopterus pusillus*	Smooth Lanternshark	Sustainable	LC	LC	Sustainable
Squaliformes	Etmopteridae	*Etmopterus unicolor*	Bristled Lanternshark	Sustainable	LC	DD	Undefined

Squaliformes	Etmopteridae	*Etmopterus viator*	Traveller Lanternshark	Sustainable	n/a	LC	n/a
Squaliformes	Oxynotidae	*Oxynotus bruniensis*	Prickly Dogfish	Sustainable	NT	NT	Undefined
Squaliformes	Somniosidae	*Centroscymnus coelolepis*	Portuguese Dogfish	Sustainable	LC	NT	Sustainable
Squaliformes	Somniosidae	*Centroscymnus owstonii*	Owston's Dogfish	Sustainable	NT	VU	Sustainable
Squaliformes	Somniosidae	*Centroselachus crepidater*	Golden Dogfish	Sustainable	LC	NT	Sustainable
Squaliformes	Somniosidae	*Scymnodon macracanthus*	Largespine Velvet Dogfish	Sustainable	NT	VU	Sustainable
Squaliformes	Somniosidae	*Scymnodalatias albicauda*	Whitetail Dogfish	Negligible	DD	DD	Undefined
Squaliformes	Somniosidae	*Scymnodalatias sherwoodi*	Sherwood's Dogfish	Negligible	DD	DD	Undefined
Squaliformes	Somniosidae	*Somniosus antarcticus*	Southern Sleeper Shark	Sustainable	LC	LC	Undefined
Squaliformes	Somniosidae	*Zameus squamulosus*	Velvet Dogfish	Sustainable	LC	LC	Undefined
Squaliformes	Squalidae	*Cirrhigaleus australis*	Southern Mandarin Shark	Undefined	DD	DD	Undefined
Squaliformes	Squalidae	*Squalus acanthias*	Whitespotted Spurdog	Sustainable	LC	VU	Sustainable
Squaliformes	Squalidae	*Squalus albifrons*	Eastern Highfin Spurdog	Sustainable	LC	LC	Undefined
Squaliformes	Squalidae	*Squalus altipinnis*	Western Highfin Spurdog	Negligible	LC	DD	Undefined
Squaliformes	Squalidae	*Squalus chloroculus*	Greeneye Spurdog	Depleted	EN	EN	Recovering
Squaliformes	Squalidae	*Squalus crassispinus*	Fatspine Spurdog	Negligible	LC	LC	Undefined
Squaliformes	Squalidae	*Squalus edmundsi*	Edmunds' Spurdog	Sustainable	LC	NT	Sustainable

Squaliformes	Squalidae	*Squalus grahami*	Eastern Longnose Spurdog	Recovering	NT	NT	Recovering
Squaliformes	Squalidae	*Squalus megalops*	Piked Spurdog	Sustainable	LC	LC	Sustainable
Squaliformes	Squalidae	*Squalus montalbani*	Philippine Spurdog	Recovering	NT	VU	Recovering
Squaliformes	Squalidae	*Squalus nasutus*	Western Longnose Spurdog	Sustainable	LC	NT	Undefined
Squaliformes	Squalidae	*Squalus notocaudatus*	Bartail Spurdog	Negligible	LC	LC	Undefined
Squatiniformes	Squatinidae	*Squatina albipunctata*	Eastern Angelshark	Depleting	VU	VU	Depleting
Squatiniformes	Squatinidae	*Squatina australis*	Australian Angelshark	Sustainable	LC	LC	Sustainable
Squatiniformes	Squatinidae	*Squatina pseudocellata*	Western Angelshark	Sustainable	LC	LC	Sustainable
Squatiniformes	Squatinidae	*Squatina tergocellata*	Ornate Angelshark	Sustainable	LC	LC	Sustainable

Appendix F. Summary of status for all Australian rays, including Report Card status (SAFS; 2023), national Red List (Shark Report Card) and global Red List.

Order	Family	Scientific Name	Common Name	2023 Report Card Status	2021 Shark Action Plan	2023 Global Red List
Myliobatiformes	Aetobatidae	*Aetobatus ocellatus*	Spotted Eagle Ray	Sustainable	LC	VU
Myliobatiformes	Dasyatidae	*Bathytoshia brevicaudata*	Smooth Stingray	Sustainable	LC	LC
Myliobatiformes	Dasyatidae	*Bathytoshia lata*	Brown Stingray	Sustainable	LC	VU
Myliobatiformes	Dasyatidae	*Hemitrygon fluviorum*	Estuary Stingray	Depleting	VU	NT
Myliobatiformes	Dasyatidae	*Hemitrygon parvonigra*	Dwarf Black Stingray	Undefined	DD	DD
Myliobatiformes	Dasyatidae	*Himantura australis*	Australian Whipray	Sustainable	LC	LC
Myliobatiformes	Dasyatidae	*Himantura leoparda*	Leopard Whipray	Sustainable	LC	VU
Myliobatiformes	Dasyatidae	*Maculabatis astra*	Blackspotted Whipray	Sustainable	LC	LC
Myliobatiformes	Dasyatidae	*Maculabatis toshi*	Brown Whipray	Sustainable	LC	LC
Myliobatiformes	Dasyatidae	*Megatrygon microps*	Smalleye Stingray	Undefined	DD	DD
Myliobatiformes	Dasyatidae	*Neotrygon annotata*	Plain Maskray	Sustainable	NT	NT
Myliobatiformes	Dasyatidae	*Neotrygon australiae*	Australian Bluespotted Maskray	Sustainable	LC	NT
Myliobatiformes	Dasyatidae	*Neotrygon leylandi*	Painted Maskray	Sustainable	LC	LC
Myliobatiformes	Dasyatidae	*Neotrygon ningalooensis*	Ningaloo Maskray	Sustainable	LC	DD
Myliobatiformes	Dasyatidae	*Neotrygon picta*	Speckled Maskray	Sustainable	LC	LC

Myliobatiformes	Dasyatidae	*Neotrygon trigonoides*	Coral Sea Maskray	Sustainable	LC	LC
Myliobatiformes	Dasyatidae	*Pastinachus ater*	Broad Cowtail Ray	Sustainable	LC	VU
Myliobatiformes	Dasyatidae	*Pateobatis fai*	Pink Whipray	Sustainable	LC	VU
Myliobatiformes	Dasyatidae	*Pateobatis hortlei*	Hortle’s Whipray	Undefined	DD	NT
Myliobatiformes	Dasyatidae	*Pateobatis jenkinsii*	Jenkin's Whipray	Sustainable	LC	VU
Myliobatiformes	Dasyatidae	*Pteroplatytrygon violacea*	Pelagic Stingray	Sustainable	LC	LC
Myliobatiformes	Dasyatidae	*Taeniura lymma*	Bluespotted Fantail Ray	Sustainable	LC	LC
Myliobatiformes	Dasyatidae	*Taeniurops meyeni*	Blotched Fantail Ray	Sustainable	LC	VU
Myliobatiformes	Dasyatidae	*Urogymnus acanthobothrium*	Mumburarr Whipray	Undefined	DD	DD
Myliobatiformes	Dasyatidae	*Urogymnus asperrimus*	Porcupine Ray	Sustainable	LC	VU
Myliobatiformes	Dasyatidae	*Urogymnus dalyensis*	Freshwater Whipray	Sustainable	LC	LC
Myliobatiformes	Dasyatidae	*Urogymnus granulatus*	Mangrove Whipray	Sustainable	LC	VU
Myliobatiformes	Gymnuridae	*Gymnura australis*	Australian Butterfly Ray	Sustainable	LC	LC
Myliobatiformes	Hexatrgonidae	*Hexatrygon bickelli*	Sixgill Stingray	Sustainable	LC	DD
Myliobatiformes	Mobulidae	*Mobula alfredi*	Reef Manta Ray	Sustainable	LC	VU
Myliobatiformes	Mobulidae	*Mobula birostris*	Giant Manta Ray	Depleted	EN	EN
Myliobatiformes	Mobulidae	*Mobula eregoodoo*	Long-horned Pygmy Devilray	Sustainable	LC	EN
Myliobatiformes	Mobulidae	*Mobula kuhlii*	Kuhl’s Devilray	Sustainable	LC	EN

Myliobatiformes	Mobulidae	*Mobula mobular*	Giant Devilray	Sustainable	NT	EN
Myliobatiformes	Mobulidae	*Mobula tarapacana*	Chilean Devilray	Sustainable	NT	EN
Myliobatiformes	Mobulidae	*Mobula thurstoni*	Bentfin Devilray	Sustainable	NT	EN
Myliobatiformes	Myliobatidae	*Aetomylaeus caeruleofasciatus*	Bluebanded Eagle Ray	Sustainable	LC	LC
Myliobatiformes	Myliobatidae	*Aetomylaeus vespertilio*	Ornate Eagle Ray	Sustainable	NT	EN
Myliobatiformes	Myliobatidae	*Myliobatis hamlyni*	Purple Eagle Ray	Depleting	VU	NT
Myliobatiformes	Myliobatidae	*Myliobatis tenuicaudatus*	Southern Eagle Ray	Sustainable	LC	LC
Myliobatiformes	Plesiobatidae	*Plesiobatis daviesi*	Giant Stingaree	Sustainable	LC	LC
Myliobatiformes	Rhinopteridae	*Rhinoptera neglecta*	Australian Cownose Ray	Sustainable	LC	DD
Myliobatiformes	Urolophidae	*Trygonoptera galba*	Yellow Shovelnose Stingaree	Sustainable	LC	LC
Myliobatiformes	Urolophidae	*Trygonoptera imitata*	Eastern Shovelnose Stingaree	Sustainable	LC	LC
Myliobatiformes	Urolophidae	*Trygonoptera mucosa*	Western Shovelnose Stingaree	Sustainable	LC	LC
Myliobatiformes	Urolophidae	*Trygonoptera ovalis*	Striped Stingaree	Sustainable	LC	LC
Myliobatiformes	Urolophidae	*Trygonoptera personata*	Masked Stingaree	Sustainable	LC	LC
Myliobatiformes	Urolophidae	*Trygonoptera testacea*	Common Stingaree	Sustainable	NT	NT
Myliobatiformes	Urolophidae	*Urolophus bucculentus*	Sandyback Stingaree	Depleting	VU	VU
Myliobatiformes	Urolophidae	*Urolophus circularis*	Circular Stingaree	Sustainable	LC	LC
Myliobatiformes	Urolophidae	*Urolophus cruciatus*	Banded Stingaree	Sustainable	LC	LC

Myliobatiformes	Urolophidae	*Urolophus expansus*	Wide Stingaree	Sustainable	LC	LC
Myliobatiformes	Urolophidae	*Urolophus flavomosaicus*	Patchwork Stingaree	Sustainable	LC	LC
Myliobatiformes	Urolophidae	*Urolophus gigas*	Spotted Stingaree	Sustainable	LC	LC
Myliobatiformes	Urolophidae	*Urolophus kapalensis*	Kapala Stingaree	Sustainable	NT	NT
Myliobatiformes	Urolophidae	*Urolophus lobatus*	Lobed Stingaree	Sustainable	LC	LC
Myliobatiformes	Urolophidae	*Urolophus mitosis*	Mitotic Stingaree	Sustainable	LC	LC
Myliobatiformes	Urolophidae	*Urolophus orarius*	Coastal Stingaree	Depleted	EN	EN
Myliobatiformes	Urolophidae	*Urolophus paucimaculatus*	Sparsely-spotted Stingaree	Sustainable	LC	LC
Myliobatiformes	Urolophidae	*Urolophus piperatus*	Coral Sea Stingaree	Sustainable	LC	LC
Myliobatiformes	Urolophidae	*Urolophus sufflavus*	Yellowback Stingaree	Depleting	VU	VU
Myliobatiformes	Urolophidae	*Urolophus viridis*	Greenback Stingaree	Depleting	VU	VU
Myliobatiformes	Urolophidae	*Urolophus westraliensis*	Brown Stingaree	Sustainable	LC	LC
Rajiformes	Anacanthobatidae	*Sinobatis bulbicauda*	West Australian Legskate	Sustainable	LC	LC
Rajiformes	Anacanthobatidae	*Sinobatis caerulea*	Indigo Legskate	Sustainable	LC	DD
Rajiformes	Anacanthobatidae	*Sinobatis filicauda*	East Australian Legskate	Negligible	LC	DD
Rajiformes	Arhynchobatidae	*Bathyraja eatonii*	Eaton’s Skate	Sustainable	LC	LC
Rajiformes	Arhynchobatidae	*Bathyraja irrasa*	Kerguelen Skate	Undefined	LC	VU
Rajiformes	Arhynchobatidae	*Bathyraja ishiharai*	Abyssal Skate	Negligible	LC	DD
Rajiformes	Arhynchobatidae	*Bathyraja maccaini*	McCain’s Skate	Undefined	DD	LC

Rajiformes	Arhynchobatidae	*Bathyraja murrayi*	Murray's Skate	Sustainable	LC	LC
Rajiformes	Arhynchobatidae	*Bathyraja richardsoni*	Richardson's Skate	Negligible	LC	LC
Rajiformes	Arhynchobatidae	*Insentiraja laxipella*	Eastern Looseskin Skate	Sustainable	LC	DD
Rajiformes	Arhynchobatidae	*Insentiraja subtilispinosa*	Western Looseskin Skate	Sustainable	LC	LC
Rajiformes	Arhynchobatidae	*Irolita waitii*	Southern Round Skate	Sustainable	LC	LC
Rajiformes	Arhynchobatidae	*Irolita westraliensis*	Western Round Skate	Sustainable	LC	DD
Rajiformes	Arhynchobatidae	*Notoraja azurea*	Blue Skate	Negligible	LC	LC
Rajiformes	Arhynchobatidae	*Notoraja hirticauda*	Ghost Skate	Sustainable	LC	DD
Rajiformes	Arhynchobatidae	*Notoraja ochroderma*	Pale Skate	Negligible	LC	DD
Rajiformes	Arhynchobatidae	*Notoraja sticta*	Blotched Skate	Negligible	LC	LC
Rajiformes	Arhynchobatidae	*Pavoraja alleni*	Allen's Skate	Sustainable	LC	LC
Rajiformes	Arhynchobatidae	*Pavoraja arenaria*	Sandy Skate	Undefined	DD	DD
Rajiformes	Arhynchobatidae	*Pavoraja mosaica*	Mosaic Skate	Sustainable	LC	LC
Rajiformes	Arhynchobatidae	*Pavoraja nitida*	Peacock Skate	Sustainable	LC	LC
Rajiformes	Arhynchobatidae	*Pavoraja pseudonitida*	False Peacock Skate	Sustainable	LC	LC
Rajiformes	Arhynchobatidae	*Pavoraja umbrosa*	Dusky Skate	Sustainable	LC	LC
Rajiformes	Rajidae	*Amblyraja georgiana*	Antarctic Starry Skate	Undefined	Not included	DD
Rajiformes	Rajidae	*Amblyraja hyperborea*	Boreal Skate	Sustainable	LC	LC

Rajiformes	Rajidae	*Amblyraja taaf*	Whiteleg Skate	Sustainable	Not included	DD
Rajiformes	Rajidae	*Dentiraja australis*	Sydney Skate	Recovering	VU	NT
Rajiformes	Rajidae	*Dentiraja cerva*	Whitespotted Skate	Sustainable	NT	NT
Rajiformes	Rajidae	*Dentiraja confusa*	Australian Longnose Skate	Depleted	CR	CR
Rajiformes	Rajidae	*Dentiraja endeavouri*	Endeavour Skate	Depleting	NT	NT
Rajiformes	Rajidae	*Dentiraja falloarga*	False Argus Skate	Sustainable	LC	DD
Rajiformes	Rajidae	*Dentiraja flindersi*	Pygmy Thornback Skate	Undefined	DD	DD
Rajiformes	Rajidae	*Dentiraja healdi*	Heald's Skate	Sustainable	LC	LC
Rajiformes	Rajidae	*Dentiraja lemprieri*	Australian Thornback Skate	Sustainable	LC	LC
Rajiformes	Rajidae	*Dentiraja oculus*	Australian Ocellate Skate	Sustainable	LC	LC
Rajiformes	Rajidae	*Dentiraja polyommata*	Argus Skate	Sustainable	LC	LC
Rajiformes	Rajidae	*Dipturus acrobelus*	Australian Deepwater Skate	Sustainable	LC	LC
Rajiformes	Rajidae	*Dipturus apricus*	Pale Tropical Skate	Sustainable	LC	LC
Rajiformes	Rajidae	*Dipturus canutus*	Grey Skate	Depleted	EN	EN
Rajiformes	Rajidae	*Dipturus grahamorum*	Graham's Skate	Sustainable	LC	LC
Rajiformes	Rajidae	*Dipturus gudgeri*	Bight Skate	Depleting	NT	NT
Rajiformes	Rajidae	*Dipturus melanospilus*	Blacktip Skate	Sustainable	LC	DD
Rajiformes	Rajidae	*Dipturus queenslandicus*	Queensland Deepwater Skate	Negligible	LC	DD

Rajiformes	Rajidae	*Dipturus wengi*	Weng's Skate	Sustainable	LC	LC
Rajiformes	Rajidae	*Leucoraja pristispina*	Sawback Skate	Sustainable	LC	LC
Rajiformes	Rajidae	*Okamejei arafurensis*	Arafura Skate	Sustainable	LC	LC
Rajiformes	Rajidae	*Okamejei leptoura*	Australian Thintail Skate	Sustainable	LC	LC
Rajiformes	Rajidae	*Rajella challengeri*	Challenger Skate	Negligible	LC	LC
Rajiformes	Rajidae	*Spiniraja whitleyi*	Melbourne Skate	Recovering	VU	VU
Rajiformes	Rajidae	*Zearaja maugeana*	Maugean Skate	Depleted	EN	EN
Rhinopristiformes	Glaucostegidae	*Glaucostegus typus*	Giant Guitarfish	Sustainable	LC	CR
Rhinopristiformes	Pristidae	*Anoxypristis cuspidata*	Narrow Sawfish	Depleting	VU	CR
Rhinopristiformes	Pristidae	*Pristis clavata*	Dwarf Sawfish	Depleted	EN	CR
Rhinopristiformes	Pristidae	*Pristis pristis*	Largetooth Sawfish	Depleted	CR	CR
Rhinopristiformes	Pristidae	*Pristis zijsron*	Green Sawfish	Depleted	CR	CR
Rhinopristiformes	Rhinidae	*Rhina ancylostomus*	Shark Ray	Sustainable	NT	CR
Rhinopristiformes	Rhinidae	*Rhynchobatus australiae*	Bottlenose Wedgefish	Sustainable	NT	CR
Rhinopristiformes	Rhinidae	*Rhynchobatus palpebratus*	Eyebrow Wedgefish	Sustainable	NT	NT
Rhinopristiformes	Rhinobatidae	*Rhinobatos sainsburyi*	Goldeneye Shovelnose Ray	Sustainable	LC	LC
Rhinopristiformes	Trygonorrhinidae	*Aptychotrema rostrata*	Eastern Shovelnose Ray	Sustainable	LC	LC
Rhinopristiformes	Trygonorrhinidae	*Aptychotrema timorensis*	Spotted Shovelnose Ray	Negligible	VU	VU
Rhinopristiformes	Trygonorrhinidae	*Aptychotrema vincentiana*	Western Shovelnose Ray	Sustainable	LC	LC

Rhinopristiformes	Trygonorrhinidae	*Trygonorrhina dumerilii*	Southern Fiddler Ray	Sustainable	LC	LC
Rhinopristiformes	Trygonorrhinidae	*Trygonorrhina fasciata*	Eastern Fiddler Ray	Sustainable	LC	LC
Torpediniformes	Hypnidae	*Hypnos monopterygius*	Coffin Ray	Sustainable	LC	LC
Torpediniformes	Narcinidae	*Narcinops lasti*	Western Numbfish	Sustainable	LC	LC
Torpediniformes	Narcinidae	*Narcinops nelsoni*	Eastern Numbfish	Sustainable	LC	LC
Torpediniformes	Narcinidae	*Narcinops ornata*	Ornate Numbfish	Sustainable	LC	LC
Torpediniformes	Narcinidae	*Narcinops tasmaniensis*	Tasmanian Numbfish	Sustainable	LC	LC
Torpediniformes	Narcinidae	*Narcinops westraliensis*	Banded Numbfish	Sustainable	LC	LC
Torpediniformes	Torpedinidae	*Tetronarce nobiliana*	Great Torpedo	Sustainable	LC	LC

Appendix G. Summary of status for all Australian chimaeras, including Report Card status (SAFS; 2023), national Red List (Shark Report Card) and global Red List.

Order	Family	Scientific Name	Common Name	2023 Report Card Status	2021 Shark Action Plan	2023 Global Red List
Chimaeriformes	Callorhinchidae	*Callorhinchus milii*	Elephant Fish	Sustainable	LC	LC
Chimaeriformes	Chimaeridae	*Chimaera argiloba*	Whitefin Chimaera	Sustainable	LC	LC
Chimaeriformes	Chimaeridae	*Chimaera fulva*	Southern Chimaera	Sustainable	LC	LC
Chimaeriformes	Chimaeridae	*Chimaera lignaria*	Giant Chimaera	Sustainable	LC	LC
Chimaeriformes	Chimaeridae	*Chimaera macrospina*	Longspine Chimaera	Sustainable	LC	LC
Chimaeriformes	Chimaeridae	*Chimaera obscura*	Shortspine Chimaera	Sustainable	LC	LC
Chimaeriformes	Chimaeridae	*Chimaera ogilbyi*	Ogilby's Chimaera	Recovering	NT	NT
Chimaeriformes	Chimaeridae	*Hydrolagus homonycteris*	Black Ghostshark	Sustainable	LC	LC
Chimaeriformes	Chimaeridae	*Hydrolagus marmoratus*	Marbled Ghostshark	Sustainable	LC	LC
Chimaeriformes	Chimaeridae	*Hydrolagus trolli*	Abyssal Ghostshark	Sustainable	LC	LC
Chimaeriformes	Rhinochimaeridae	*Harriotta haeckeli*	Smallspine Spookfish	Sustainable	LC	LC
Chimaeriformes	Rhinochimaeridae	*Harriotta raleighana*	Bigspine Spookfish	Sustainable	LC	LC
Chimaeriformes	Rhinochimaeridae	*Rhinochimaera africana*	Paddlenose Spookfish	Sustainable	LC	DD
Chimaeriformes	Rhinochimaeridae	*Rhinochimaera pacifica*	Pacific Spookfish	Sustainable	LC	LC