



Protecting South Australia's Fish, Sharks & Rays

LEGISLATION OVERVIEW

Protection for at-risk fish, sharks and rays and their habitats can be achieved through both Commonwealth and state laws. Once protected in this way, it generally becomes illegal to kill, injure, trade, keep or move those species identified as being at risk from extinction and/or to damage their habitat. Penalties for such actions are set out in the relevant Acts.

This paper provides an overview of the Commonwealth and state legislation that can be utilised to protect SA's fish, sharks and rays from many of the threats they face. It includes information on the types of protection available, the nomination and assessment processes, and the benefits of species and habitat listing under the various Acts.

A brief discussion of: the benefits and processes of having at risk fish, sharks and rays included on non-government organisation's threatened species listings; and relevant international conventions, treaties and protocols is also provided.

A summary of the information provided in this paper is incorporated in another paper in this series: 'Protecting SA's Fish, Sharks and Rays – Through National and State Levels Actions' which is available at www.ccsa.asn.au/fsr or by contacting the Conservation Council of SA at fsr@ccsa.asn.au or on (08) 8223 5155.



Both Commonwealth and state legislation can provide significantly higher levels of protection for South Australia's fish, sharks and rays and their habitats

Pg. 1



The Western Blue Groper
Photo: Vicki Billings

The iconic Western Blue Groper benefits from legislative protection under the SA Fisheries Management Act (2007) including a prohibition on capture in a small part of its range (gulf waters).

This and other legislative processes could also be used to extend protection for the Blue Groper and to protect other SA marine fish species of conservation concern as recently recommended by a coalition of SA conservation groups.

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1 COMMONWEALTH LEGISLATION: THE ENVIRONMENT PROTECTION AND BIODIVERSITY CONSERVATION ACT (1999) – EPBC ACT (1999)

Under the EPBC Act,(1999) fish, sharks and rays can be directly protected in 3 ways:

1. As 'listed marine species' (currently seahorses, sea-dragons and pipefish are the only listed fish species)
2. As 'listed migratory species' (currently White Shark and Whale Shark are the only listed fish species).
3. As 'threatened species' under the categories of:
 - i. Critically endangered,
 - ii. Endangered,
 - iii. Vulnerable,
 - iv. Conservation dependent,
 - v. Extinct,
 - vi. Extinct in the wild

(See Appendix 1 for currently listed threatened fish species)

In addition to individual species listing ecological communities can also be listed under the Act. Ecological community means an assemblage of native species that inhabits a particular area in nature. Ecological communities can be listed as critically endangered, endangered or vulnerable.

Other ways in which the EPBC Act (1999) can help protect at-risk fish species are by protection of critical habitat, listing of areas on the national heritage list, regulation of actions that impact on listed species/communities or protected areas, and the preparation of recovery plans, conservation advices, threat abatement plans and wildlife conservation plans.

1.1 THREATENED SPECIES, ECOLOGICAL COMMUNITY, KEY THREATENING PROCESS AND NATIONAL HERITAGE LIST NOMINATION AND ASSESSMENT

Amendments to the EPBC Act (1999), including changes to the nomination process, were passed by the Australian Parliament in 2007.

The nomination and assessment process for threatened species, threatened ecological communities, key threatening processes and national heritage listing under the EPBC Act (1999) is summarised below. The process applies to both new listings and transferring of listed species from one category to another. While the summary refers to threatened species listing; the process is essentially the same for ecological community, national heritage list and key threatening process listing. Where the summary refers to 'days' this means business days, where the summary refers to 'Minister' this means the Commonwealth Minister for the Environment.

1. The Minister calls for nominations for the upcoming 12 month assessment period. He/ she may declare a 'theme' (e.g. a region, group of species, etc.) for nominations. A minimum of 40 days is allowed for nominations to be received (the cut-off date).

2. Nominations are forwarded to the Scientific Committee within 30 days of the nomination cut-off date. Within 40 days it receives the nominations, the Scientific Committee then prepares a list of species that it believes should be assessed. The Committee must have regard to the theme and its own views regarding priorities when preparing this 'proposed priority assessment list'. The list will include a predicted assessment completion date. Within 20 business days of receiving the Proposed Priority Assessment List, the Minister then decides those species that will be assessed – the 'Finalised Priority Assessment List'. The Minister may remove or add species and make other changes as they see fit.

3. The Scientific Committee publishes the finalised list and invites people to make

comments on the species to be assessed (cut-off for comments is a minimum of 30 days after this call for comments). An assessment of the Finalised Priority Assessment List is then undertaken according to the timeline set out on that list. Extensions up to 5 years after these dates are allowed on request from the Committee.

4. In its assessment the Committee may only consider whether the species is eligible for listing and the effect that including the item on that list could have on the survival of the native species concerned. Comments received after the cut-off dates do not need to be considered. The Committee may seek outside advice/expertise when making assessments.

5. The Minister receives assessments from the Committee and makes a final decision on the species to be listed. Listing should be within 90 days of receiving assessments from the Scientific Committee, though this can be extended indefinitely. Under the Act, the assessment must be completed within 12 months.

A flowchart of the process is available on the Department of the Environment and Water Resources website at:

<http://www.environment.gov.au/biodiversity/threatened/pubs/nomination-flowchart.pdf>

The October, 2007 Finalised Priority Assessment List, is available at:

<http://www.environment.gov.au/biodiversity/threatened/publications/pubs/priority-assessment-list.pdf>

1.2 REQUIREMENTS FOR A THREATENED SPECIES, ECOLOGICAL COMMUNITY OR KEY THREATENING PROCESS NOMINATION

THREATENED SPECIES AND THREATENED ECOLOGICAL COMMUNITY NOMINATIONS - REQUIRED INFORMATION

Nominations for threatened species and threatened ecological communities are very similar and must include the following information:

- The scientific name (if any) of the species; the generally accepted name (if any) of the ecological community;
- Any common name, or names by which the species is known to a person making the nomination. A description of the ecological community that distinguishes it from any other ecological community by reference to: its biological and non-biological components; the processes by which those components interact (if known); and, its known natural distribution, including the bioregions where it occurs.
- The category for which the species is nominated and why a person making the nomination thinks that the species comes within the definition of the category for which it is being nominated. Why a person making the nomination thinks that the ecological community meets the criteria for the nominated category.
- Additional taxonomic information is required if the species is not conventionally accepted.

Source: EPBC Act regulations 2000 - REG 7.04

See Appendix 2 for criteria for listing threatened species under the EPBC Act (1999). See Appendix 3 for criteria for listing threatened ecological communities under the EPBC Act (1999).

KEY THREATENING PROCESS NOMINATION - REQUIRED INFORMATION

A nomination for a key threatening process must include the following information:

- a name for the threatening process;
- a description of the threatening process that distinguishes it from any other threatening process by reference to: its biological and non-biological components; and the processes by which those components interact (if known);
- listed threatened species or ecological communities that are considered by a person making the nomination to be adversely affected by the threatening process;
- any species or ecological community not currently listed but that could become eligible for listing because of the threatening process;
- why a person making the nomination thinks

that the process is eligible to be treated as a key threatening process.

Source: EPBC Act regulations 2000 - REG 7.06

See Appendix 4 for criteria for listing of key threatening processes under the EPBC Act (1999).

1.3 LISTING OF SPECIES OTHER THAN THREATENED SPECIES UNDER THE EPBC ACT (1999)

In addition to threatened species listing, the Act provides for the listing of fish species as listed 'marine species' or 'migratory species'.

MARINE SPECIES LISTING

The Commonwealth Minister for the Environment may add, or remove, a marine species or family of species to the EPBC Act (1999) 'marine species' list at their discretion by instrument published in the Gazette.

When adding or removing a species the Commonwealth Minister for the Environment is required to consult with each other Minister who has an interest in a Commonwealth marine area where the species occurs naturally and to take into account advice from the Scientific Committee.

There is no statutory process for the nomination or assessment of species for inclusion on this list. While members of the public or organisations may suggest species to be added there is no legal requirement for this advice to be considered.

MIGRATORY SPECIES LISTING

Species can only be listed as 'migratory species' under the EPBC Act if they are included in lists of species appended to an international agreement that the

Commonwealth Minister for the Environment has officially approved for this purpose. Currently, the only agreement relevant for fish, sharks and rays is the Bonn Convention on the Conservation of Migratory Species of Wild Animals

The White Shark and the Whale Shark are the only migratory fish species currently listed under the Act.

1.4 WHAT PROTECTION DOES LISTING PROVIDE?

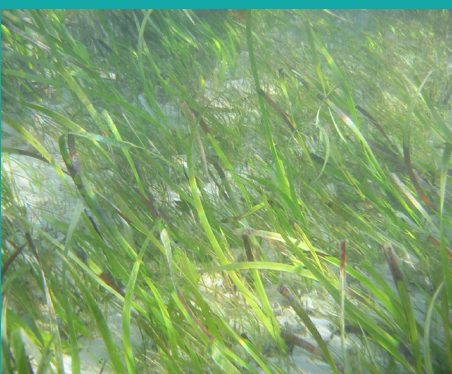
The Act provides for penalties for actions having a 'significant impact' on listed protected species and listed threatened species, ecological communities or heritage places. Causing death or injury, trading, keeping or moving listed species (without a permit) is prohibited under this Act and penalties for such actions are set out. Penalties increase depending on the level of protected status with higher penalties imposed for impacting on critically endangered species and a sliding scale of lesser penalties for offences relating to vulnerable or protected species.

It is important to note that most of these laws and 'triggers' for the Act do not apply to species listed as 'conservation dependant' (e.g. Orange Roughy) and as such the grouping of this category with the Critically Endangered, Endangered and Vulnerable Threatened Species categories could be misleading due to the different practical effects of these listings.

Actions taken as part of an accredited plan are not subject to prosecution under the Act. Just about any plans, regimes or policies regarding fishing can be accredited under the Act by the Commonwealth Minister for the Environment if they are satisfied that "the plan, regime or policy requires persons engaged in fishing under the plan, regime or policy to take all reasonable steps to ensure that members of listed marine



The EPBC Act (1999) can help protect at-risk fish species through their inclusion on threatened, marine and migratory species listings, the listing of their habitat as a threatened ecological community and the regulation of actions that impact on listed species and/or communities or protected areas



Photos (c) J. Coates

species are not killed or injured as a result of the fishing; and the fishery to which the plan, regime or policy relates does not, or is not likely to, adversely affect the conservation status of a listed marine species or a population of that species" [Sect. 280A (f)(g)].

1.5 RECOVERY PLANS, THREAT ABATEMENT PLANS, CONSERVATION ADVICES AND WILDLIFE CONSERVATION PLANS

RECOVERY PLANS AND THREAT ABATEMENT PLANS

Recovery Plans (for threatened species or communities) and Threat Abatement Plans (for key threatening processes) can be prepared for species or communities listed as Critically Endangered, Endangered and Vulnerable. These plans are legally binding and the Commonwealth must implement plans and must not take any action that contravenes a Recovery Plan or a Threat Abatement Plan.

A Recovery Plan "must provide for the research and management actions necessary to stop the decline of, and support the recovery of, the listed threatened species or listed threatened ecological community concerned so that its chances of long term survival in nature are maximised" [Sect. 270]. There are detailed requirements regarding what must be in a recovery plan or threat abatement plan to ensure they are effective.

The recent amendments to the Act remove the legal requirement for Recovery Plans to be developed for all listed threatened species or ecological communities. There is also no legal requirement for the preparation of Threat Abatement plans. The Commonwealth Minister for the Environment may decide within 90 days of listing whether a Recovery/Threat Abatement Plan is required, with regard to the advice of the Scientific Committee.

The Minister may also decide that Recovery Plans are no longer needed for those species that currently have them (there must be a call for public comment in this situation). If the Minister decides that Recovery Plans are required they are to be developed within 3 years (which can be extended for an additional 3 years at the Ministers' discretion).

CONSERVATION ADVICES

A Conservation Advice outlines the reason(s) for the listing and information regarding what could be done to stop the decline of and/or help the recovery of the species/ecological community. There is no legal requirement to take any action and the Minister may change the Conservation Advice at his/her discretion.

WILDLIFE CONSERVATION PLANS

For species listed as conservation dependant or listed species (as distinct from species listed in the three 'threatened' categories) under the Act (e.g. seahorses, sea-dragons and pipefish), Wildlife Conservation Plans may be prepared. These plans are similar in intent to Recovery Plans but lack the legal requirements regarding implementation.

1.6 REGISTER OF CRITICAL HABITAT

A register of critical habitat must be maintained. This register records habitat, identified by the Commonwealth Minister for the Environment in accordance with the regulations, as being critical to the survival of a listed threatened species or listed threatened ecological community. It is an offence to 'significantly damage' such habitat.

When identifying critical habitat the Minister may take into account the following matters:

- whether the habitat is used by threatened species during periods of stress e.g. storms;
- whether the habitat is used to meet essential life cycle requirements e.g. breeding;
- the extent to which the habitat is used by important populations;
- whether the habitat is necessary to maintain genetic diversity and long-term evolutionary development;
- whether the habitat is necessary for use as corridors to allow the species to move freely between sites used to meet essential life cycle requirements;
- whether the habitat is necessary to ensure the long-term future of the species or ecological community through reintroduction or colonisation;

- any other way in which habitat may be critical to the survival of a listed threatened species or a listed threatened ecological community.

Source: [EPBC Act Regulations 2000 Reg 7.09]

1.7 CONTROLLED ACTIONS

The EPBC Act (1999) applies throughout Australia and establishes a referral, impact assessment and approval process for any action(s) that has, will have or is likely to have a significant impact on the environment.

Actions related to at-risk fish species that can trigger the EPBC Act (1999) include those that impact on:

- the world heritage values of declared World Heritage properties;
- the national heritage values of places on the National Heritage List;
- the ecological character of declared Ramsar wetlands;
- threatened species (other than extinct and conservation dependent species) and ecological communities (other than vulnerable ecological communities) listed under the EPBC Act (1999);
- migratory species listed under the EPBC Act (1999); and,
- the Commonwealth marine environment (i.e. Commonwealth waters).

Note that this makes the listing of threatened species and ecological communities under the EPBC Act (1999) crucial for triggering the Act in regard to actions in State waters as the more general provision relates only to Commonwealth waters.

Commonwealth waters are those between the State waters, which generally extend 3 nautical miles (nm) from shore, and the outer boundary of Australia's Exclusive Economic Zone (generally 200nm)

Where the EPBC Act (1999) is triggered, a person must seek Australian Government approval for the activity in addition to any local or State approvals that might be required. If the Minister decides that any action referred to them requires approval under the Act it

becomes a 'controlled action'. For a summary in flow chart form of the referral and assessment process for an action under the EPBC Act (1999) see:

<http://www.environment.gov.au/epbc/assessmentsapprovals/pubs/flow-chart.pdf>

Controlled actions will usually require some sort of assessment to be undertaken. Further details can be obtained from the EPBC Project <http://www.epbc.com.au> (note that this resource has not been updated to reflect the recent amendments to the Act but remains useful). Information regarding the amendments and their effects is available at:

http://www.ccsa.asn.au/files/marine/EPBC_ammendment_background_paper_final.pdf

The Department for the Environment and Water Resources has developed a Protected Matters Search Tool able to generate a report that will help identify whether matters of national environmental significance or other matters protected by the EPBC Act (1999) are likely to occur in your geographical area of interest. This tool may be of limited assistance in protecting fish species as marine waters are not covered. The tool will be of use in assessing land based, near shore or island impacts. See <http://www.deh.gov.au/erin/ert/epbc/index.html>

1.8 NATIONAL, COMMONWEALTH AND WORLD HERITAGE LISTS

Areas listed as 'Heritage' places 'trigger' the EPBC Act (1999) when actions will have a significant impact on them. The Commonwealth Minister for the Environment is responsible only when the impacts occur on Commonwealth land.

An important criterion for inclusion of a place on the National Heritage List (NHL) is that "the place has outstanding heritage value to the nation because of the place's possession of uncommon, rare or endangered aspects of Australia's natural or cultural history" (other criteria may also apply). This criterion could be interpreted to make the habitat of at-risk fish species eligible for NHL listing.

Under the EPBC Act (1999), a World Heritage property is either:

- an Australian property on the World Heritage List kept under the World Heritage Convention; or
- a property declared to be a World Heritage property by the Commonwealth Environment Minister.

World Heritage Convention World Heritage Area nominations are assessed by the World Heritage Committee. Hence the Australian Government does not decide if the nominated property is inscribed on the World Heritage List, but the Commonwealth Minister for the Environment may declare an area to be a World Heritage Area under the EPBC Act (1999) regardless of the World Heritage Committee.

2. STATE LEGISLATION

2.1 FISHERIES MANAGEMENT ACT (2007) – FM ACT (2007)

The FM Act (2007) has as its overriding principle that “proper conservation and management measures are to be implemented to protect the aquatic resources of the State from over-exploitation and ensure that those resources are not endangered” [Sect 7, 1(a)].

Other objects of the Act include:

- “aquatic habitats are to be protected and conserved, and aquatic ecosystems and genetic diversity are to be maintained and enhanced” [Sect 7, 1(c)]. and,
- “the participation of users of the aquatic resources of the State, and of the community more generally, in the management of fisheries is to be encouraged” [Sect 7, 1(e)].

The FM Act (2007) provides for the listing of marine species as protected (see Appendix 5 for currently listed species). Penalties apply to a person if they interfere with, harass or molest a protected species, take a protected species or injure, damage or otherwise harm an ‘aquatic resource’ of a protected species.

Protected species are declared under regulations and no process is currently defined in the Act, or associated regulations, for the nomination or declaration of species as protected. Species to be listed in the regulations as protected are evaluated on an individual species or family and case-by-case

basis with scientific, industry and policy input.

Advice would usually be sought from the South Australian Research and Development Institute (SARDI), Universities, the South Australian Museum and DEH regarding any species under consideration. Recommendations from the State Minister for Fisheries regarding listings would be considered by cabinet prior to inclusion in regulations by act of parliament.

Under the Act, fisheries can be regulated, aquatic reserves declared and fisheries/aquatic reserve management plans developed. As such, the FM Act (2007) is clearly relevant for the protection of at-risk fish, shark and ray species whether listed as protected under the Act or not.

It should be noted that the current regulations relating to the previous Fisheries Act (1982) will be revised with the implementation of the new Fisheries Management Act (2007).

2.2 MARINE PARKS ACT (2007) - MP ACT (2007)

This Act legislates regarding the proclamation and management of marine parks in SA. The current State Government has committed to establishing a system of 19 new Marine Parks in SA by 2010.

“The objects of the MP Act are:

- (a) to protect and conserve marine biological diversity and marine habitats by declaring and providing for the management of a comprehensive, adequate and representative system of marine parks; and
- (b) to assist in—
 - (i) the maintenance of ecological processes in the marine environment; and
 - (ii) the adaptation to the impacts of climate change in the marine environment; and
 - (iii) protecting and conserving features of natural or cultural heritage significance; and
 - (iv) allowing ecologically sustainable development and use of marine environments; and

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The Western Blue Groper (female).
Photo (c) Marine Life Society of SA

South Australia's fish, sharks and rays can be protected under the Fisheries Management Act (2007) through both the listing of at-risk species and the declaration of Aquatic Reserves

(v) providing opportunities for public appreciation, education, understanding and enjoyment of marine environments". [Sect. 8 (1)]

MARINE PARK ZONING

The Act outlines the process for declaring multiple use marine parks. Multiple use refers to the zoning of marine park areas for different uses.

"It is intended that the regulations will make provision for the following types of zones:

- (a) a "general managed use zone"—being a zone primarily established so that an area may be managed to provide protection for habitats and biodiversity within a marine park, while allowing ecologically sustainable development and use;
- (b) a "habitat protection zone"—being a zone primarily established so that an area may be managed to provide protection for habitats and biodiversity within a marine park, while allowing activities and uses that do not harm habitats or the functioning of ecosystems;
- (c) a "sanctuary zone"—being a zone primarily established so that an area may be managed to provide protection and conservation for habitats and biodiversity within a marine park, especially by prohibiting the removal or harm of plants, animals or marine products;
- (d) a "restricted access zone"—being a zone primarily established so that an area may be managed by limiting access to the area."
[Sect 4(2)]

As an Act "to protect and conserve marine biological diversity and marine habitats" [Sect 8 1(a)], the Marine Parks Act (2007) is clearly appropriate for the protection of at-risk fish, sharks and rays and their habitats.

2.3 THE NATIONAL PARKS AND WILDLIFE ACT (1972) – NPW ACT (1972)

The NPW Act (1972) protects native wildlife (with some exceptions) throughout the State. The Act lists South Australian species in the categories of Endangered, Vulnerable and Rare.

THREATENED SPECIES CATEGORIES

"In South Australia, the term 'threatened species' refers to species classified as either rare, endangered or vulnerable on Schedules 7, 8 and 9 respectively of the National Parks and Wildlife (NPW) Act 1972. Endangered species are under the most threat and likely to become extinct in the near future unless the circumstances and factors threatening their survival cease to occur. Vulnerable species are those likely to move into the endangered category in the near future unless the circumstances and factors threatening their survival cease to occur. Rare species are those that are the least threatened, but at some risk due to their low numbers, restricted distribution or observed declines."

Source: http://www.environment.sa.gov.au/soe2003/sup_report/biodiversity/speciesthreats.pdf

Such listing increases the penalties for offences involving these species.

PROCESS FOR THREATENED SPECIES LISTING

The Act provides no formal process for the listing of species. Species are listed at the State Minister for the Environment's discretion. It is likely that the Minister would in making such a decision accept advice from biologists within the SA Department of Environment and Heritage (DEH), State Herbarium and SA Museum, with consideration of IUCN and CITES criteria.

LISTING MARINE FISH SPECIES UNDER THE NPW ACT (1972)

The threatened species lists are reviewed by the Threatened Species Schedules Sub-committee (TSSS), which advises the National Parks and Wildlife Council, which in turn advises the State Minister for the Environment. The TSSS currently has no specific marine expertise but has put forward freshwater fish nominations for listing. In 2002 a Marine Species of Conservation Concern Working Group was formed and provides advice and impetus for marine species protection.

NPW Act (1972) endangered species listings are currently under the categories of mammals, birds, reptiles and amphibians, but unfortunately fish are not considered to be 'native wildlife' under the Act. While protection for marine fish species under this Act is possible, currently threatened non-mammal/plant marine species are listed under the Fisheries Management Act 2006. Penalties are prescribed in the NPW Act (1972) for the taking, molesting or killing of protected species.

2.4 NATURAL RESOURCES MANAGEMENT ACT 2004 – NRM ACT (2004)

The objects of the NRM Act (2004) include: protecting intrinsic values, protecting biodiversity, preventing and controlling pests and providing education.

Principles outlined in the Act include: consideration of conservation of biodiversity and involvement of the public in providing information and contributing to decision making processes.

Under the NRM Act (2004), each of the 8 NRM Boards must prepare a Regional NRM Plan, which must "... include information about the issues surrounding the management of natural resources at the regional and local level, including information as to....(iv) arrangements to ensure proper management of wetlands and estuaries, and marine resources, with particular reference to the relationships between catchment, wetland, estuarine and marine systems...." [Sect. 75 (3)]

Protection for SA's fish, sharks and rays can

therefore be increased through the inclusion of appropriate threat abatement actions in regional NRM Plans.

2.5 NATIVE VEGETATION ACT 1991- NV ACT (1991)

This Act could be relevant to at-risk fish protection in that native marine vegetation, such as seaweeds and seagrasses, are important habitat for a number of at-risk species. Under the Act "native vegetation means a plant or plants of a species indigenous to South Australia including a plant or plants growing in or under waters of the sea" [Sect. 3 (1)].

In addition to this, land clearing can lead to the erosion of topsoil, which flows down the catchment and into the marine environment, increasing turbidity and bringing excess nutrients to marine ecosystems.

The Act prohibits the clearing of native vegetation without consent and prescribes penalties for unauthorised clearing. Clearance of native vegetation under the Act is defined broadly and includes almost anything that can be done to kill or harm native vegetation.

2.6 COAST PROTECTION ACT 1972 - CP ACT (1972)

The CP Act (1972) established a Coastal Protection Board. This Act may be relevant to protecting at-risk fish species in situations when:

- erosion, damage, deterioration, pollution and misuse of coastal environments are a problem; and/or
- rehabilitation of coastal environments is required; and /or
- research regarding these issues is required.

Source: [Sect. 14—General duties of Board]

2.7 THE WILDERNESS PROTECTION ACT 1992 - WP ACT (1992)

The WP Act (1992) enables the creation of wilderness protection areas and wilderness protection zones that represent the highest level of protection offered to natural areas in South Australia. To date the legislation has not been applied to marine areas. However a commitment to assess marine and island areas of SA's far west coast was recently made by the current State Government. Protection of marine environments and connected terrestrial areas under the WP Act (1992) would certainly be of benefit to at-risk fish species.

2.8 ENVIRONMENT PROTECTION ACT 1993 - EP ACT (1993)

The EP Act (1993) is the main State legislation covering pollution and waste. The Environment Protection Authority (EPA) was created under the Act and is a statutory authority responsible for all aspects of pollution and waste. The EPA is run by a Board appointed by the State Government.

The objects of the Act include ensuring that all reasonable and practicable measures are taken to protect, restore and enhance the quality of the environment. The EP Act (1993) is of particular relevance to existing and proposed developments that pollute or have the potential to pollute aquatic environments.

Environment Protection Policies (EPPs) are created under the Act on any subject directed towards securing the objects of the Act. EPPs set out maximum pollution levels and other environmental standards.

2.9 ENVIRONMENT PROTECTION (SEA DUMPING) ACT (1984)

This Act prohibits the dumping of most wastes at sea, but mining operations are exempted. The Act states "where, otherwise than in accordance with a permit, any wastes or other matter are dumped into coastal waters from any vessel, aircraft or platform, the owner and the person in charge of the vessel, aircraft or platform and the owner of the wastes or other matter are each guilty of an offence" [Sect. 6].

3. OTHER THREATENED SPECIES LISTS

3.1 THE IUCN RED LIST

For more than four decades the World Conservation Union (IUCN) has been assessing the conservation status of species threatened with extinction in order to promote their conservation. The main purpose of the IUCN Red List is to catalogue those taxa that are facing a high risk of global extinction.

IUCN lists are considered by Ministers and advisors when assessing threatened species status. Therefore, listing of species in the IUCN Red List will assist efforts to have these species listed as protected by State and Commonwealth Governments.

The IUCN is currently undertaking a Global Marine Species Assessment. This process began in 2005 and will be the first global review of the conservation status of every marine vertebrate species and of selected invertebrates and plants.

The IUCN Red List categories and criteria including information required for assessment are available at <http://intranet.iucn.org/webfiles/doc/SSC/RedList/redlistcatsenglish.pdf> and anyone may submit an assessment for consideration.

3.2 THE AUSTRALIAN SOCIETY FOR FISH BIOLOGY (ISFB) THREATENED FISH SPECIES LIST

This Australia-specific list of threatened fish species carries no legal weight but like the IUCN list is a useful tool in influencing decision makers regarding statutory (legal) listing. Nominations can be made in an established format available at: http://www.asfb.org.au/research/tscr/tf_nom99.htm

Nominations are assessed by the ISFB Threatened Fishes Committee and the conservation status listings are ratified by the society and are published in the newsletter as yearly supplements.

4. INTERNATIONAL CONVENTIONS, TREATIES AND PROTOCOLS

Australia is signatory to a number of international conventions, treaties and protocols of relevance to at-risk species protection. Unfortunately these treaties are not legally binding unless incorporated into legislation.

An excellent summary of these is presented in the document 'Overview of the Conservation of Australian Marine Invertebrates, A Report for Environment Australia July 2002', available at: http://www.austmus.gov.au/invertebrates/marine_overview/chapt8i.html

While this summary table was written regarding marine invertebrate protection it is generally applicable to fish species as well.

Examples of International Conventions, Treaties and Protocols that are recognised in legislation include:

- the Convention on International Trade in Endangered Species of Wild Fauna and Flora 1973 (CITES) that regulates trade in species threatened with extinction; and
- the Convention for the Protection of the World Cultural and Natural Heritage 1972, the most significant aspect of which is the development of the World Heritage List.

Both of these Conventions are given effect under the EPBC Act (1999).

Other agreements to which Australia is a signatory such as the Convention on Biological Diversity 1992 and the United Nations Framework Convention on Climate Change (UNFCCC) 1992 have benefits for at-risk fish species.

APPENDIX 1 - FISH LISTED AS THREATENED UNDER THE EPBC ACT

(Genus, species (subspecies, population, Common Name, Effective)

FISHES THAT ARE EXTINCT IN THE WILD (1 EPBC SPECIES)

Galaxias pedderensis Pedder Galaxias 06 Jun 05

FISHES THAT ARE CRITICALLY ENDANGERED (3 EPBC SPECIES)

Carcharias taurus (east coast population) Grey Nurse Shark (east coast population) 16 Oct 01

Galaxias truttaceus hesperius Western Trout Minnow 18 Aug 06

Glyphis sp. A Speartooth Shark 16 Oct 01

FISHES THAT ARE ENDANGERED (16 EPBC SPECIES)

Brachionichthys hirsutus Spotted Handfish, Spotted-hand Fish 16 Jul 00

Chlamydogobius micropterus Elizabeth Springs Goby 16 Jul 00 P

Galaxias auratus Golden Galaxias 06 Jun 05

Galaxias fontanus Swan Galaxias 16 Jul 00

Galaxias fuscus Barred Galaxias 16 Jul 00

Galaxias johnstoni Clarence Galaxias 16 Jul 00

Glyphis sp. C Northern River Shark 16 Oct 01

Maccullochella ikei Clarence River Cod, Eastern Freshwater Cod 16 Jul 00

Maccullochella macquariensis Trout Cod 16 Jul 00

Maccullochella peelii mariensis Mary River Cod 16 Jul 00

Macquaria australasica Macquarie Perch 16 Jul 00

Melanotaenia eachamensis Lake Eacham Rainbowfish 16 Jul 00

Nannoperca oxleyana Oxleyan Pygmy Perch 16 Jul 00

Paragalaxias mesotes Arthurs Paragalaxias 06 Jun 05

Raja sp. L Maugean Skate, Port Davey Skate 04 Mar 04

Scaturiginichthys vermeilipinnis Redfin Blue-eye 16 Jul 00

FISHES THAT ARE VULNERABLE (24 EPBC SPECIES)

Brachionichthys politus Red Handfish 04 Mar 04

Carcharias taurus (west coast population) Grey Nurse Shark (west coast population) 16 Oct 01

Carcharodon carcharias Great White Shark 16 Jul 00

Chlamydogobius squamigenus Edgbaston Goby 16 Jul 00

Craterocephalus fluviatilis Murray Hardyhead 16 Jul 00

Galaxias parvus Swamp Galaxias 24 Nov 06

Galaxias tanycephalus Saddled Galaxias 16 Jul 00

Galaxiella pusilla Dwarf Galaxias 16 Jul 00

Maccullochella peelii peelii Murray Cod, Cod, Goodoo 03 Jul 03

Milyeringa veritas Blind Gudgeon 16 Jul 00

Mogurnda clivicola Flinders Ranges Gudgeon 16 Jul 00

Nannatherina balstoni Balston's Pygmy Perch 24 Nov 06

Nannoperca obscura Yarra Pygmy Perch 16 Jul 00

Nannoperca variegata Ewens Pygmy Perch, Golden Pygmy Perch, Variegated Pygmy Perch 16 Jul 00

Neoceratodus forsteri Australian Lungfish, Queensland Lungfish 06 Aug 03

Ophisternon candidum Blind Cave Eel 16 Jul 00

Paragalaxias dissimilis Shannon Paragalaxias 24 Nov 06

Paragalaxias electroides Great Lake

Paragalaxias 24 Nov 06

Pristis microdon Freshwater Sawfish 16 Jul 00

Prototroctes maraena Australian Grayling 16 Jul 00

Pseudomugil mellis Honey Blue-eye 16 Jul 00

Rhincodon typus Whale Shark 16 Oct 01

Sympterichthys sp. [CSIRO #T1996.01] Waterfall Bay Handfish 16 Jul 00

Sympterichthys sp. [CSIRO #T6.01] Ziebell's Handfish 16 Jul 00

FISHES THAT ARE CONSERVATION DEPENDENT (1 EPBC SPECIES)

Hoplostethus atlanticus Orange Roughy, Deep-sea Perch, Red Roughy 05 Dec 06

APPENDIX 2 CRITERIA FOR THE LISTING OF THREATENED SPECIES UNDER THE EPBC ACT (1999)

A species qualifies if it meets any of the criteria mentioned in the following table:

ENVIRONMENT PROTECTION AND BIODIVERSITY CONSERVATION REGULATIONS 2000 - REG 7.01

| Item | Criterion | Category | | |
|------|---|------------------------------------|-------------------------------|------------------------------------|
| | | Critically endangered | Endangered | Vulnerable |
| 1 | It has undergone, is suspected to have undergone or is likely to undergo in the immediate future: | a very severe reduction in numbers | a severe reduction in numbers | a substantial reduction in numbers |
| 2 | Its geographic distribution is precarious for the survival of the species and is: | very restricted | restricted | limited |
| 3 | The estimated total number of mature individuals is: and: | very low | low | limited |
| | (a) evidence suggests that the number will continue to decline at: | a very high rate | a high rate | a substantial rate |
| | or | | | |
| | (b) the number is likely to continue to decline and its geographic distribution is: | precarious for its survival | precarious for its survival | precarious for its survival |
| 4 | The estimated total number of mature individuals is: | extremely low | very low | low |
| 5 | The probability of its extinction in the wild is at least: | 50% in the immediate future | 20% in the near future | 10% in the medium-term future |

APPENDIX 3 - CRITERIA FOR LISTING OF THREATENED ECOLOGICAL COMMUNITIES UNDER THE EPBC ACT (1999)

An ecological community is in the critically endangered, endangered or vulnerable category if it meets any of the criteria for the category mentioned in the following table:
ENVIRONMENT PROTECTION AND BIODIVERSITY CONSERVATION REGULATIONS 2000 - REG

| Item | Criterion | Category | | |
|------|--|--------------------------------------|---------------------------------|--|
| | | Critically endangered | Endangered | Vulnerable |
| 1 | Its decline in geographic distribution is: | very severe | severe | substantial |
| 2 | Its geographic distribution is: and the nature of its distribution makes it likely that the action of a threatening process could cause it to be lost in: | very restricted the immediate future | restricted the near future | limited the medium-term future |
| 3 | For a population of a native species that is likely to play a major role in the community, there is a: to the extent that restoration of the community is not likely to be possible in: | very severe decline | severe decline | substantial decline |
| 4 | The reduction in its integrity across most of its geographic distribution is: as indicated by degradation of the community or its habitat, or disruption of important community processes, that is: | very severe | severe | substantial |
| 5 | Its rate of continuing detrimental change is: as indicated by: | very severe | severe | substantial |
| | (a) a rate of continuing decline in its geographic distribution, or a population of a native species that is believed to play a major role in the community, that is: | very severe | severe | serious |
| | or (b) intensification, across most of its geographic distribution, in degradation, or disruption of important community processes, that is: | very severe | severe | serious |
| 6 | A quantitative analysis shows that its probability of extinction, or extreme degradation over all of its geographic distribution, is: | at least 50% in the immediate future | at least 20% in the near future | at least 10% in the medium-term future |

APPENDIX 4 - CRITERIA FOR LISTING OF KEY THREATENING PROCESSES UNDER THE EPBC ACT

A process is a threatening process if it threatens, or may threaten, the survival, abundance or evolutionary development of a native species or ecological community.

A threatening process is eligible to be treated as a key threatening process if:

(a) it could cause a native species or an ecological community to become eligible for listing in any category, other than conservation dependent; or

(b) it could cause a listed threatened species or a listed threatened ecological community to become eligible to be listed in another category representing a higher degree of endangerment; or

(c) it adversely affects 2 or more listed threatened species (other than conservation dependent species) or 2 or more listed threatened ecological communities.

APPENDIX 5 - FISH SPECIES CURRENTLY LISTED AS PROTECTED UNDER THE FISHERIES ACT

For the purposes of section 42 of the Act, the following classes of fish are declared to be protected:

(a) fish of the genus *Ambassis*, *Mogurnda* or *Nannoperca*;

(b) female fish of the following species if carrying external eggs:

Blue crab (*Portunus pelagicus*), Giant crab (*Pseudocarcinus gigas*), Rock lobster (*Jasus edwardsii*), Yabbie (*Cherax destructor*);

(c) fish of the following species:

Freshwater catfish (*Tandanus tandanus*), Murray River crayfish (*Euastacus armatus*), River blackfish (*Gadopsis marmoratus*), Silver perch (*Bidyanus bidyanus*), Trout cod (*Maccullochella macquariensis*), White pointer shark (*Carcharodon carcharias*);

(d) blue groper (*Achoerodus gouldii*) in the

following waters: All of the waters of the ocean north of the geodesic: Commencing at high water mark on the shore at Newland Head, position latitude 35° 39 00 south, and longitude 138° 31 00 east, then in a direction of 238°T, to high water mark on the shore at Cape Willoughby in position latitude 35° 51 10 south, and longitude 138° 07 40 east, then from high water mark on the shore in position latitude 35° 53 10 south and longitude 136° 32 00 east, (West Coast of Kangaroo Island adjacent to West Bay), in a direction of 321°T to high water mark on the shore at Cape Carnot, position latitude 34° 56 45 south, and longitude 135° 37 30 east;

(e) fish of the family Syngnathidae.