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**PROPOSAL FOR THE INCLUSION OF THE
WHITE-SPOTTED WEDGEFISH (*Rhynchobatus australiae*)
IN APPENDIX II OF THE CONVENTION**

Summary:

The Government of the Philippines has submitted the attached proposal* for the inclusion of the White-spotted wedgefish (*Rhynchobatus australiae*) in Appendix II of CMS.

Rev.1 includes amendments submitted by the proponents to make the proposal more precise, in accordance with Rule 21, paragraph 2 of the Rules of Procedure for meetings of the Conference of the Parties (UNEP/CMS/COP12/Doc.4/Rev.1), and taking into account the recommendations of the Second Meeting of the Sessional Committee of the Scientific Council, contained in UNEP/CMS/COP12/Doc.25.1.25/Add.1.

Rev.2 reflects comments received from Australia in the in-session Aquatic Species Working Group.

*The geographical designations employed in this document do not imply the expression of any opinion whatsoever on the part of the CMS Secretariat (or the United Nations Environment Programme) concerning the legal status of any country, territory, or area, or concerning the delimitation of its frontiers or boundaries. The responsibility for the contents of the document rests exclusively with its author.

**PROPOSAL FOR INCLUSION OF THE WHITE-SPOTTED WEDGEFISH
(*Rhynchobatus australiae*) IN APPENDIX II OF THE CONVENTION ON THE
CONSERVATION OF MIGRATORY SPECIES OF WILD ANIMALS**

A. PROPOSAL:

Inclusion of the entire population of white-spotted wedgefish (*Rhynchobatus australiae*) in Appendix II.

B. PROPONENT: Government of the Republic of the Philippines

C. SUPPORTING STATEMENT

1. Taxonomy

- 1.1 Class: Chondrichthyes
- 1.2 Order: Rhinopristiformes
- 1.3 Family: Rhinidae
- 1.4 Genus or Species *Rhynchobatus australiae* (Whitley, 1939)
- 1.5 Scientific synonyms:
- 1.6 Common name(s)
 - English: White-spotted wedgefish, Bottlenose wedgefish
 - French: No common name found
 - Spanish: No common name found

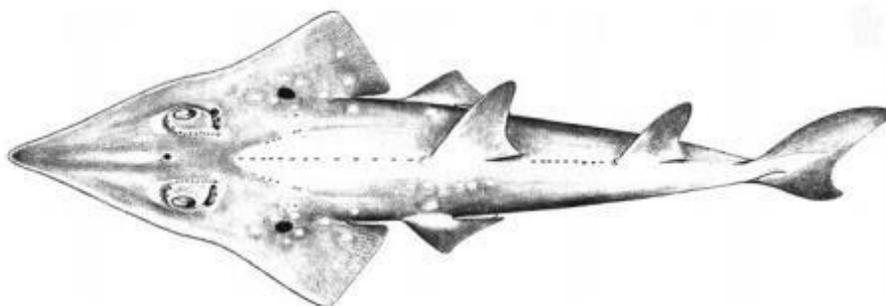


Figure 1: *Rhynchobatus australiae* illustration from Compagno and Last 1999

2. Overview

The white-spotted wedgefish (*Rhynchobatus australiae*) is classified by the IUCN Red List of Threatened Species as Vulnerable globally due to population depletions driven by overfishing in artisanal and commercial fisheries. They are caught as target species and as bycatch primarily for their fins, which are extremely valuable in international trade.

R. australiae are migratory and found in coastal inshore habitats in Southeast Asia and Australia. They are large benthopelagic shark-like batoids that are differentiated from other wedgefish species by their bottle-shaped snout. *Rhynchobatus djiddensis* is also known by the common name white-spotted wedgefish, leading to confusion and possible mis-identification in reporting and catch data. *Rhynchobatidae*¹ is among the most threatened families of chondrichthyans, and *R. australiae* is especially vulnerable because of its use of coastal habitats, susceptibility to multiple gear types, large size, and value in trade.

While species-specific basis for *R. australiae* catch and landings data are lacking, qualitative information for guitarfishes in general indicate severe population declines and localized

¹ Please note the taxonomy has been reclassified to Rhinidae (wedgefishes).

extinctions (Moore, 2017). A recent assessment of the conservation status elasmobranchs in the Arabian Sea and adjacent waters indicates that *R. australiae* (along with two sympatric species, *R. djiddensis* and *R. laevis*) have suffered significant population declines estimated between 50-80% over the last three decades and are considered Endangered due to intensive fishing pressure that is likely to continue into the future (Jabado et al., 2017).

R. australiae is heavily exploited throughout its range, yet the species remains poorly studied and very little is known about its basic ecology. It is clear that coordinated and comprehensive management and conservation measures are urgently needed for this and other guitarfishes to prevent further population declines and localized extinctions throughout their range (Moore, 2017). Given these threats a listing on Appendix II of CMS would provide additional support for introducing collaborative management of this species by Range States, through CMS itself and through possible inclusion of *R. australiae* on the CMS global Memorandum of Understanding (MoU) on the Conservation of Migratory Sharks.

3. Migrations

3.1 Kinds of movement, distance, the cyclical and predictable nature of the migration

R. australiae is considered a highly mobile species (White et al., 2013), yet its migratory behavior is not well documented throughout its range, including use of inshore and offshore habitats, especially at different life stages. However, *R. australiae* is considered migratory by the IUCN Shark Specialist Group based on assessments for sympatric and closely related species, including those in the families Rhinobatidae, Glaucostegidae and Pristidae (Fowler, 2014). Recent data show that there is likely episodic migration of the white-spotted wedgefish between Indonesia and Australia (Giles et al. 2016). Given this evidence, similar migrations are likely occurring throughout this species' range, due to the close proximity of international borders in the region.

Other closely related shark-like batoids that have been studied (e.g., *Glaucostegus typus*, *Rhinobatus productus*, *Rhinobatos horkelii*, *Zapteryx exasperata*) do exhibit site fidelity and undergo seasonal migrations to inshore areas for mating and/or pupping (White et al., 2013; Newell, 2017, Catillo-Paez et al., 2013). There is also qualitative information describing how populations of *Rhinobatos rhinobatos* migrate seasonally into shallow coastal waters. These migrations are suspected to be for parturition and mating, and are said to be so predictable that West African fishers in Mauritania, Senegal, Guinea, Guinea-Bissau, and Sierra Leone synchronize their fishing activities with the arrival of *R. rhinobatos* (Ducrocq & Diop 2006, Newell 2017) and are presumed to occur in other parts of this species range (e.g. Turkey: Başusta et al. 2008).

It is therefore reasonable to presume that *R. australiae* and other shark-like batoids are capable of seasonal migrations at a scale that may allow crossing of national boundaries, at least in some locations where the species range occurs across multiple small countries. This highlights the importance of and urgent need for more dedicated research focusing on ontogenetic shifts in habitat use and potential anthropogenic impacts to better inform management and conservation strategies.

4. Biological data

4.1 Distribution (current and historical)

The white-spotted wedgefish occurs in Southeast Asia and Australia, ranging from Thailand, Taiwan, Philippines, and Indonesia to the Australian sub-tropics (Last et al. 2013). It is the only widespread *Rhynchobatus* species throughout the central Indo-West Pacific and occurs more widely than was previously recorded, with samples located as far east as Fiji and as far west as India (Giles et al. 2016). Additional data shows *R. australiae* can be found throughout the Arabian Sea and adjacent waters both inshore and offshore, but similarities in species have made identification difficult (Jabado et al., 2017).



Figure 2. Distribution of *R. australiae* (Last et al, 2016)

4.2 Population (estimates and trends)

There are no quantitative abundance estimates for *R. australiae* throughout its range. However, based on evidence of exploitation and demand in trade, the IUCN Red List classifies the current population trend as decreasing (White and McAuley 2003). Species specific information has been difficult to collect due to recent taxonomic revisions within the genus and the difficulties identifying morphologically similar species. *Rhynchobatus* occurring in the Indo-West Pacific were all considered *R. djiddensis* prior to the late 1990s when five separate species were either reinstated or newly described (Giles et al. 2016). In Australia, landings are reported as *Rhynchobatus* spp, comprised of a complex of three species: *Rhynchobatus australiae*, *R. laevis* and *R. palpebratus*, which has made assessing the threat to populations for each species a challenge (White et al., 2013).

R. australiae are heavily exploited in Southeast Asia for their fins, which are considered some of the most valuable in trade (Giles et al. 2016, White and McAuley 2003, Chen 1996, Vannuccini 1999, Clarke et al. 2006). Much of their range occurs in areas of high fishing pressure and they are susceptible to capture both as target and bycatch by trawl, net and longline gear (Giles et al. 2016). Data from Indonesia indicates catch rates in the target gillnet fishery for rhinids and rhynchobatids has declined significantly, indicating local population declines. Given its susceptibility to multiple gear types and evidence of local population declines, it is likely populations have been locally reduced throughout its range (White and McAuley 2003).

A recent assessment of the conservation status elasmobranchs in the Arabian Sea and adjacent waters indicates that *R. australiae* (along with two sympatric species, *R. djiddensis* and *R. laevis*) have suffered significant population declines estimated between 50-80% over the last three decades and are considered Endangered due to intensive fishing pressure that is likely to continue into the future (Jabado et al., 2017).

4.3 Habitat (short description and trends)

R. australiae inhabits inshore waters on the continental shelves, specifically enclosed bays, estuaries, and also coral reefs (Compagno and Last 1999). They rarely occur deeper than 60 m.

4.4 Biological Characteristics

R. australiae is a cartilaginous fish within the *Rhynchobatidae* family of wedgefish. There is relatively little known about the biology of *R. australiae*, including basic age and growth parameters. They are ovoviviparous with females maturing at approximately 300 cm TL, and males at 124 cm TL (Last et al. 2016).

It is one of the largest species in the genus, growing up to 2-3 m. *R. australiae* can be identified by its bottlenose-shaped snout, which differentiates it from other smaller sympatric species within its range that have bicolor wedge-shaped snouts – *R. springeri*, *R. immaculatus* and *R. palpebratus*. The species can also be differentiated by its high vertebral count (Last et al. 2016). The dorsal surface is pale grey to yellowish brown with sparse coverage of white spots. There are small thorns on the back and around the eyes. The pectoral fins are triangular and the dorsal fins are falcate with the first dorsal fin being much larger than the second.

As bottom-dwellers they rest on mud, sandy, or rough bottoms and feed on benthic invertebrates, crustaceans and small bottom-dwelling fish (Last et al. 2016).

4.5 Role of the taxon in its ecosystem

The role of white-spotted wedgefish in the ecosystem is not well understood. Little is known regarding the ecosystem function of other wedgefish species as well (White and McAuley 2003).

5. Conservation status and threats

5.1 IUCN Red List Assessment

Status: Vulnerable

5.2 Equivalent information relevant to conservation status assessment

5.3 Threats to the population (factors, intensity)

R. australiae is listed as Vulnerable globally in the IUCN Red List of Threatened Species and *Rhynchobatidae* is considered to be the third most threatened of all chondrichthyan families (White and McAuley 2003, Dulvy et al. 2014). The species is caught by artisanal and commercial fisheries both as a target species and as bycatch in demersal trawl, net, and longline fisheries. They are heavily exploited throughout Southeast Asia for their fins, which are some of the most valuable in the international trade. Their use of inshore habitat and susceptibility to multiple gear types makes them particularly vulnerable considering their range is located in some of the world's most heavily fished coastal regions (Dulvy et al. 2014).

In Indonesia, a rhinid and rhynchobatid gill net fishery peaked in 1987 with 500 boats and declined to only 100 boats by 1996 due to rapidly declining catch rates (White and McAuley 2003). Several demersal gill net fisheries for batoids still exist in Indonesia, specifically in Merauke, where one observed catch weighed close to eight tonnes with *Rhynchobatus* spp. These fisheries also have been found to occasionally fish within Australian waters (Chen 1996; W. White, unpubl. data).

In Southeast Asia *Rhynchobatus* specimens (n=153) were sampled from landing site surveys and in Australia sampled opportunistically from fisheries observer programs (n=54) (Giles et al. 2016). *R. australiae* made up 94% of specimens collected in Southeast Asia and 58% in Australia (Giles et al. 2016). It was recorded in all landing site surveys where any *Rhynchobatus* was present including Thailand, Indonesia, Taiwan, Philippines, Australia, and Fiji. The data indicates *R. australiae* is the only widespread *Rhynchobatus* species throughout the Indo-West Pacific.

In Australia, there are currently no targeted fisheries for *R. australiae* and there has likely been a reduction in catch due to the introduction of Turtle Exclusion Devices (TEDs) in certain trawl fisheries and various shark-finning prohibitions (Brewer et al. 1998). Previously *R. australiae*

was in the top four of the most commonly caught elasmobranchs as bycatch in the trawl fisheries of northern Australia (Stobutzki et al. 2002). Given this species' fins are still highly valued in Australia and the population declines in Southeast Asia, those in Australia likely meet the criteria for Vulnerable as well, but are currently classified as Near Threatened given a lack of detailed catch data.

5.4 Threats connected especially with migrations

5.5 National and international utilization

Globally, there is a large Asian market for shark fins and a growing demand for meat and other shark products including shark liver oil. The fins of wedgefsh, particularly *R. australiae*, are some of the most desired in the trade and sold for extremely high prices (Vannuccini 1999, Clarke 2006). Fins have reportedly sold for up to US \$396 (Chen 1996). Batoids in the trade are found to be primarily wedgefsh (pers. comm. Chapman). Thus, due to species' large fin size and its dominance in catch in Southeast Asia, it is likely *R. australiae* makes up a significant portion of fins from this genus in international trade (Giles et al. 2016).

6. Protection status and species management

6.1 National protection status

There are a limited number of jurisdictions where *R. australiae* occur and as a result limited protection measures are in place. Australia bans shark finning at the national level and also bans the use of wire traces, which often catch sharks, in its longline fisheries.

In the Philippines, the Province of Palawan through the Palawan Council for Sustainable Development Resolution No. 15-521 includes *R. australiae*, among other elasmobranch species, in its official list of threatened terrestrial and marine wildlife.

6.2 International protection status

Currently, there are no international protection measures in place for *R. australiae*. It is distributed throughout areas of high fishing intensity and it is one of the most highly prized species in the international fin trade. Despite its value in trade, *R. australiae* is not listed under the Convention on the International Trade of Endangered Species of Wild Fauna and Flora (CITES). As no protections currently exist, and international trade is unregulated, this species is likely to be pushed closer to extinction until enforceable measures are put in place to protect it from overexploitation.

6.3 Management measures

Currently, there are no management measures in place for *R. australiae* in any range states. Although non-binding, the Philippines has developed a National Plan of Action (NPOA) for sharks, which aims to provide a guide for the sustainable utilization and conservation of sharks in its waters.

6.4 Habitat conservation

6.5 Population monitoring

There are no formal programs dedicated specifically to monitoring of wedgefsh catch and populations. In addition, the lack of species-specific catch and effort data and the difficulties in species identification and clear nomenclature have resulted in difficulties in monitoring the population status.

7. Effects of the proposed amendment

7.1 Anticipated benefits of the amendment

An Appendix II CMS listing would raise the awareness for the need of domestic management for white-spotted wedgefsh in all range states and facilitate cooperation between these states to protect the species, mitigate obstacles to migration, and preserve its habitat.

Adoption of the white-spotted wedgefish to CMS would also ensure that international cooperation is prioritized, which is key to ensuring the species is not overexploited in trade. An Appendix II listing under the Convention on the International Trade in Endangered Species of Wild Fauna and Flora (CITES) would aid in regulating international trade of wedgefish fins - ensuring it is sustainable and legally sourced.

7.2 Potential risks of the amendment

No potential risks to *R. australiae* conservation are foreseen from an Appendix II listing.

7.3 Intention of the proponent concerning development of an Agreement or Concerted Action

The Government of the Philippines encourages Range States to sign the CMS Memorandum of Understanding for the Conservation of Migratory Sharks (Sharks MOU) and will work with other Signatories to propose *R. australiae* for listing, where co-operative domestic and international action to improve its conservation status can be prioritized. To promote coordination and collaboration, the Government of the Philippines suggests organizing a meeting of the Range States, possibly as a conservation group that may be expanded to include not just *R. australiae*, but other wedgefish and guitarfish (to focus initially on 47 species from 3 families: Wedgefishes, Rhinidae; Guitarfishes, Rhinobatidae; Giant guitarfishes, Glaucotegidae). They further note that the “Sawfish: a Global Strategy for Conservation” could be used as a template for identifying priority actions.

The Government of the Philippines proposes working with Range States on developing concerted actions upon listing the white-spotted wedgefish in Appendix II of the Convention and suggests the interim measures outlined in Table 1:

Activity	Outputs/Outcome	Timeframe	Responsibility	Funding
Support the inclusion of the white-spotted wedgefish in the Sharks MOU	White-spotted wedgefish <i>R. australiae</i> proposed for inclusion Sharks MOU at MOS3.	End 2018	Range State Parties who are also Signatories to the Sharks MOU; Cooperating Partners to the Sharks MOU	No funding needed
Encourage Range States to sign the Sharks MOU	Additional Range States support the Sharks MOU Conservation Action Plan	Ongoing	Range States	No funding needed
Bring together Range States to discuss management and conservation priorities, possibly through the establishment of a wedgefish/guitarfish conservation group	Identify, and secure Range State support for specific conservation measures	2018/2019	Range States; Non-Parties from the ASEAN region	Funding may be needed to host the meeting
Improve data collection and promote research, including tagging studies, to improve estimates of abundance	Improved data collection can reduce uncertainty in estimates of abundance, lead to better management	2018/2019	Range State Parties; NGOs	Fundraising may be needed

8. Range States

R. australiae occur in areas beyond national jurisdiction, therefore CMS Article I h) should be considered in determining a Range State:

“A Range State in relation to a particular migratory species means any State [...] that exercises jurisdiction over any part of the range of that migratory species, or a State, flag vessels of which are engaged outside national jurisdictional limits in taking that migratory species.”

Parties to CMS:

Australia, Bangladesh, Djibouti, Egypt, Eritrea, France (New Caledonia), India, Iran, Iraq, Israel, Jordan, Kuwait, Mozambique, New Zealand, Palau, Pakistan, Philippines, Saudi Arabia, Seychelles, Somalia, Sri Lanka, Tanzania, Yemen.

Other Range States:

Bahrain, Brunei Darussalam, Cambodia, China (Taiwan, Province of China), Indonesia, Malaysia, Myanmar, Oman, Papua New Guinea, Qatar, Singapore, Sudan, Thailand, Timor-Leste, Vietnam

9. Consultations

10. Additional remarks

11. References

- Başusta, N., Demirhan, S.A., Çiçek, E., Başusta, A. & Kuleli, T. 2008. Age and growth of the common guitarfish, *Rhinobatos rhinobatos*, in Iskenderun Bay (north-eastern Mediterranean, Turkey). *Journal of the Marine Biological Association of the UK*, 88, 837-842.
- Brewer, D.T., Rawlinson, N., Eayrs, S. and Burrige, C. 1998. An assessment of bycatch reduction devices in a tropical Australian prawn trawl fishery. *Fish Research* 36: 195-215
- Castillo-Paez, A., Sosa-Nishizaki O, Sandoval-Castillo J, Galván-Magaña F, Blanco-Parra MD, Rocha-Olivares A. 2014. Strong Population Structure and Shallow Mitochondrial Phylogeny in the Banded Guitarfish, *Zapteryx exasperate* (Jordan y Gilbert, 1880), from the Northern Mexican Pacific. *Journal of Heredity* 105(1):91-100. doi:10.1093/jhered/est067.
- Chen, H.K. (ed.) 1996. Shark Fisheries and the Trade in Sharks and Shark Products in Southeast Asia. TRAFFIC Southeast Asia Report, Petaling Jaya, Selangor, Malaysia
- Clarke S.C., McAllister, M.K., Milner-Gulland, E.J., Kirkwood G.P., Michielsens, C.G.J., Agnew, D.J., Pikitch, E.K., Nakano, H., and Shivji, MS. 2006b. Global estimates of shark catches using trade records from commercial markets. *Ecology Letters* 9:1115-1126.
- Compagno, L.J.V. and P.R. Last. 1999. Rhinidae (=Rhynchobatidae). Wedgefishes. p. 1418-1422. In K.E. Carpenter and V. Niem (eds.) *FAO identification guide for fishery purposes. The Living Marine Resources of the Western Central Pacific*. FAO, Rome.
- Ducrocq, M. and Diop, M. 2006. Les Requins de la sous région CSRP : biologie, pêche et importance socio- économique : analyse des causes de la surexploitation. Communication à l'atelier CCLME. Dakar, Senegal.
- Dulvy, N.K., Fowler, S.L., Musick, J.A., Cavanagh, R.D., Kyne, P.M., Harrison, L.R., Carlson J.K., Lindsay Davidson, L.N.K. 1,2, Fordham S.V., Francis, M.P., Pollock, C.M., Simpfendorfer, C.A., Burgess, G.H., Carpenter, K.E., Compagno, L.J.V., Ebert, D.A., Gibson C., Heupel, M.R., Livingstone, S.R., Sanciangco, J.C., Stevens, J.D., Valenti, S., White, W.T. 2014. . Extinction risk and conservation of the world's sharks and rays. *eLife* 3, e00590
- Fowler, S. 2014. The Conservation Status of Migratory Sharks. UNEP / CMS Secretariat, Bonn, Germany.
- Giles, J. L., Riginos, C., Naylor, G.J.P., Dharmadi, and Ovenden, J.R. 2016. Genetic and phenotypic diversity in the wedgefish *Rhynchobatus australiae*, a threatened ray of high value in the shark fin trade. *Marine Ecology Progress Series* 548: 165-180. doi: 10.3354/meps11617
- Jabado, R.W., Kyne, P. M., Pollom, R. A., Ebert, D. A., Simpfendorfer, C. A., Ralph, G.M., and Dulvy, N.K. (eds.) 2017. *The Conservation Status of Sharks, Rays, and Chimaeras in the Arabian Sea and Adjacent Waters*. Environment Agency – Abu Dhabi, UAE and IUCN Species Survival Commission Shark Specialist Group, Vancouver, Canada 236 pp
- Last, P.R., White, W.T., and B. Seret, 2016. *Rays of the World*. CSIRO Publishing.
- Moore, A. B.N. 2017. Are guitarfishes the next sawfishes? Extinction risk and an urgent call for conservation action. *Endangered Species Research* 34: 75-88.
- Newell, B.M., 2017. Status Review Report of Two Species of Guitarfish: *Rhinobatos rhinobatos* and *Rhinobatos cemiculus*. Report to National Marine Fisheries Service, Office of Protected Resources. 62 pp.
- Rose, C. and McLoughlin, K. 2001. Review of shark finning in Australian fisheries. Final Report to the Fisheries Resources Research Fund Bureau of Rural Sciences, Canberra
- Stobutzki, I.C., Miller, M.J., Heales, D.S. and Brewer, D.T. 2002. Sustainability of elasmobranchs caught as bycatch in a tropical prawn (shrimp) trawl fishery. *Fishery Bulletin* 100: 800-821.
- Vannuccini, S. 1999. *Shark utilization, marketing and trade*. FAO, Rome.
- White, W.T. and McAuley, R. (SSG Australia & Oceania Regional Workshop, March 2003). 2003. *Rhynchobatus australiae*. The IUCN Red List of Threatened Species 2003: e.T41853A10580429