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**IDENTIFICATION AND PROTECTION OF SPECIAL AREAS
AND PARTICULARLY SENSITIVE SEA AREAS**

Extension of Existing Great Barrier Reef PSSA to include the Torres Strait Region

Submitted by Australia and Papua New Guinea

SUMMARY

Executive summary: This document sets forth a proposal to designate the Torres Strait as a Particularly Sensitive Sea Area by extending the existing Great Barrier Reef Particularly Sensitive Sea Area. Two associated protective measures are proposed to prevent damage from international shipping activities:

1. Amendment of the existing charting measure in the waters of the Great North East Channel, Torres Strait to a Two-Way Route; and,
2. Extension of the present compulsory pilotage area into Torres Strait.

The Committee is asked to approve this proposal “in principle” at this session, inform the Sub-Committee on Safety of Navigation of this decision and subsequently approve final PSSA designation

Action to be taken: Paragraph 7.1

Related documents: Resolution MEPC.44(30), resolutions A.710(17) and A.927(22), MEPC 46/23 paragraph 6.19 and annex 13, MEPC 48/INF.14

1 Summary of the Proposal

1.1 Australia and Papua New Guinea propose the designation of the Torres Strait as a Particularly Sensitive Sea Area (PSSA) to protect this complex and vulnerable ecosystem. This proposal is consistent with the Guidelines for the Designation of Special Areas under MARPOL 73/78 and Guidelines for the Identification and Designation of Particularly Sensitive Sea Areas (Assembly Resolution A.927(22)).

1.2 The objective of PSSA designation is to address the area’s vulnerability to damage by international shipping, increase marine safety and heighten seafarers’ awareness of the sensitivity of, and risks arising from navigation in, this area.

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1.3 Two associated protective measures are also proposed. The amendment of the existing charting measure in the waters of the Great North East Channel, Torres Strait to a two-way route through the Torres Strait and the extension of the existing Great Barrier Reef region compulsory pilotage area to the Torres Strait will improve the safety of navigation in an area where freedom of movement of shipping is considerably inhibited by restricted sea-room, and where there are obstructions to navigation, limited depths and potentially unfavourable meteorological conditions.

1.4 As indicated in MEPC 48/INF.14, this proposal follows a wide-ranging review of measures to promote ship safety and pollution prevention in the Great Barrier Reef and Torres Strait completed in 2002. This review followed the grounding of a container ship in a sensitive area of the Great Barrier Reef.

2 Description of the Area

2.1 The Torres Strait lies to the north and north east of Cape York and separates Australia and Papua New Guinea. It is about 90 nautical miles wide and 150 nautical miles long although useable routes for larger commercial vessels are limited to the Prince of Wales (PoW) Channel and the Great North East Channel (GNEC). These Channels are only a few hundred metres wide in places. The Strait has biogeographical importance as it represents the meeting of two ocean systems - the Pacific Ocean (Coral Sea) to the east and the Indian Ocean (Arafura Sea) to the west. The Strait was formed between 6000 and 8000 years ago, when the polar ice caps melted and the sea flooded the land bridge joining Australia and New Guinea.

2.2 The area is characterised by fast moving, shallow waters with 150 islands, islets, coral reefs and cays that support a complex array of marine life. The area is home to some 10,000 Indigenous Australian inhabitants, resident on 18 island communities, and some 20,000 Indigenous PNG nationals who live in the coastal villages both within and outside the Protected Zone declared under the terms of the Torres Strait Treaty. All of these people depend on the unique marine environment for subsistence fishing and gathering. Seafood consumption by these people is the highest in the world (Johannes and MacFarlane, 1991).

2.3 The complex and vulnerable ecosystems of the Torres Strait are characterised by extensive seagrass beds, resident dugong and turtle populations, coral reefs, sand cays, mangrove islands, inactive volcanic islands and granite continental islands.

2.4 The area lies within the exclusive economic zones of Australia and Papua New Guinea and includes some areas of the territorial sea and internal waters of both countries. The eastern boundary and part of the western boundary of the proposed PSSA aligns with the "nearest land" definition included in Annexes I, II, IV and V of MARPOL 73/78. The northern and a large part of the western boundary aligns with the Torres Strait Protected Zone (TSPZ) established by the Torres Strait Treaty between Australia and Papua New Guinea. Additional information on the Torres Strait Treaty is provided in Section 6.1 below. The coordinates of the proposed Torres Strait PSSA extension are set out in annex 1 as amendments to the existing Great Barrier Reef PSSA described in resolution MEPC.44(30). Annexes 2 and 3 are chartlets of the area showing the proposed boundaries and details of the new two-way shipping route respectively.

4.3.3 In March 1970, the tanker *Oceanic Grandeur* grounded on an uncharted rock off Wednesday Island in the Torres Strait. Between 1,400 and 4,100 tonnes of oil was released sporadically over several weeks while a ship-to-ship transfer was undertaken to remove the cargo of 55,000 tons of crude oil. While the oil impacted on mangroves on a number of islands in the Strait, favourable weather conditions and use of dispersants minimised the extent of environmental damage. The impact on those mangroves affected by the spill is, however, still evident. A 1997 study found a recovery rate of 75% some 27 years after the oil spill (Duke *et al*, 1997).

4.3.4 The three most recent serious groundings on the Great Barrier Reef (*Bunga Teratai Satu* on Sudbury Cay and both the *Peacock* and *Doric Chariot* on Piper Reef) did not generate any oil spills. However, they each required considerable assistance with refloating and resulted in severe localised damage to the impacted coral communities due to poisoning by antifouling paints abraded from the hulls.

4.3.5 Many minor groundings, where no assistance is required, may go unreported. In September 2002, the coal carrier *Aegean Falcon* ran aground in an area of highly mobile sandbars in Herald Patches near the eastern end of Prince of Wales Channel. The *NOL Amber* ran aground on Larpent Banks in November 1997 while waiting for sufficient depth of water to enter the western approaches to Prince of Wales Channel. The toxicity and persistence of TBT anti-fouling paint in the environment makes any ship grounding a potentially significant environmental issue with a high risk of long-term impact on local biodiversity at the grounding site. The high tidal streams in Torres Strait can readily spread the impact of the abraded anti-fouling paint over a much wider area. TBTs are of such high toxicity that they can have a detrimental impact on marine ecosystems at the level of a single nanogram per litre, that is one gram in a thousand megalitres. Minor groundings can also introduce invasive marine organisms with potentially serious long-term consequences on biodiversity.

5 Associated Protective Measures

5.1 Two associated protective measures have been identified to protect the Torres Strait.

5.2 The first is the amendment of the existing charting measure in the waters of the Great North East Channel, Torres Strait to a two-way route through the Torres Strait. The original charted route through the GNEC was surveyed and selected in 1945. Since that time ships have increased significantly in size, draught and in the range of cargoes that they carry.

5.3 The initiative for a new GNEC route arose during a study of shipping in the area undertaken in 1995, as well as the availability of new surveys conducted by the Royal Australian Navy Hydrographic Service. The initiative sought to utilise the deeper water identified in the surveys on the eastern side of the charted route, to eliminate the “dog leg” through Vigilant Channel and to avoid the shoals at the eastern end of Bet Reef that presented a hazard to deep draught vessels.

5.4 The following is a list of aids to navigation established by the Australian Maritime Safety Authority (AMSA) in order to assist the mariner in conducting a safe transit of the area:

- The proposed new two-way route will be marked by three new navigation aids – two lights and a day mark. Construction of these is expected to commence in October 2003.
- There is complete DGPS coverage of the area by the AMSA DGPS station at Horn Island.
- There are two Ship Reporting System (SRS) reporting points, from where communications with REEFCENTRE via VHF radio is possible.

- An AIS base station is operational at Hammond Island, in the Prince of Wales Channel.
- The entire southern and central section is under radar coverage (SRS radar at Sue Islet).
- Automated Position Reporting via INMARSAT C is being introduced as an alternative to the mandatory reporting by VHF radio in the region.
- Reliable tidal height predictions are available at 8 locations along the route.

5.5 The information supporting the detailed proposal that Australia has submitted to NAV 49 is set out in Annex 3, consistent with the General Provisions on Ships' Routing. The submission includes chartlets showing the proposed recommended shipping route and the key features mentioned above, as well as geographical positions. In accordance with the purposes of the Guidelines for the Identification and Designation of PSSAs, Australia has taken into account the views expressed by both the domestic and foreign shipping industry and the potential for adverse impacts to the marine environment.

5.6 The two-way route will reduce the navigational risk for ships in an area known for its environmental sensitivity and navigational complexity. It will allow deeper draught vessels to navigate more safely, using the southeastern section of the new two-way route. Further, it will eliminate the need for vessels to follow a single track, thereby reducing the risk of vessels meeting head-on.

5.7 The second associated protective measure is the extension of the compulsory pilotage requirements currently applicable in the Great Barrier Reef to apply to vessels when navigating the Torres Strait and the Great North East Channel. This measure would have the same application as the existing IMO-recommended pilotage regime implemented under IMO Assembly Resolution A.710(17) adopted in November 1991. This Resolution applies to vessels of 70 metres in length and over and all loaded oil tankers, chemical tankers or liquefied gas carriers, irrespective of size.

5.8 Resolution A.159 (15S.IV) (27 November 1968) is also significant in this context. It contains a recommendation to governments that they should "*organise pilotage services in those areas where such services would contribute to the safety of navigation in a more effective way than other possible measures and should, where applicable, define the ships or classes of ships for which employment of a pilot would be mandatory.*"

5.9 Compliance with the existing recommended pilotage regime is declining and Resolution A.710(17) no longer provides an acceptable level of protection for Torres Strait. Data from shipping in Torres Strait in 1995 and 2001 showed compliance rates of 70% and 55% respectively. More recently, a detailed examination of data from September 2001 to August 2002 showed 840 transits through both the Prince of Wales and Great North East Channels and that compliance had further declined to 32% (139 out of 432) for vessels on eastbound voyages and 38.5% (157 out of 408) for west bound voyages. This amounts to over 500 unpiloted transits per year. As a consequence the risk of an accident remains unacceptably high and Australia and Papua New Guinea therefore consider that Resolution A.710(17) has proven to be inadequate to protect the Torres Strait.

5.10 The possible impact of the shipping route through the Torres Strait has remained a concern over many years for a number of the Island Community councils constituted under Queensland's Community Services (Torres Strait) Act 1994, including, in particular, Hammond, Warraber, Poruma, Yorke, Ugar, and Erub Councils. These island Councils are located along the Great North East Channel, near both the existing and proposed new two-way route and the communities witness the passage of vessels on a daily basis. The communities regularly highlight

the need for compulsory pilotage within their home waters, which are in an area that Torres Strait Islanders, who are an internationally recognised people, have occupied since time immemorial.

5.11 The carriage of a properly qualified, skilled person with local knowledge as a pilot considerably reduces the risk of a shipping incident throughout Torres Strait. The cost of pilotage is negligible in comparison to the cost, inconvenience and delay that would be incurred by the shipowner in the event of even a minor maritime incident. An analysis conducted by Det Norske Veritas in 2001 indicated that incidents where the influence of a pilot could be expected to improve safety, such as powered groundings and to a lesser extent collisions, are a particular concern in Torres Strait and that compulsory pilotage would reduce the risks by 35%.

5.12 Australia's submission is supported by and consistent with the United Nations Convention on the Law of the Sea (UNCLOS).

5.13 Article 42.1(a) permits Australia to adopt laws and regulations regarding the safety of navigation and the regulation of maritime traffic in straits, in a manner consistent with Article 41. Australia is entitled, therefore, to designate sea lanes and prescribe traffic separation schemes for navigation in the Torres Strait to promote safe passage of ships. Australia agrees that such sea lanes and traffic separation schemes must conform to generally accepted international regulations (Article 41.3) and will require the assistance and approval of IMO member states.

5.14 In the specific circumstances of the Torres Strait, which shares geographical and ecological characteristics with the Great Barrier Reef, a mandatory pilotage scheme is a necessary means by which to ensure the safe passage of ships through such sea lanes and prescribed traffic separation schemes and is therefore vital for the safety of navigation through the Torres Strait. This measure is also consistent with the principle of Article 211.6(a) that provides for the adoption of special mandatory measures in clearly defined areas of the exclusive economic zone for the prevention of pollution from vessels for recognised technical reasons in relation to oceanographical and ecological conditions.

5.15 Further, Article 39.2 of UNCLOS requires compliance with generally accepted international regulations, procedures and practices for safety at sea and for the prevention, reduction and control of pollution from ships. A mandatory pilotage scheme approved by IMO member states would reinforce the necessity of such practice for the prevention, reduction and control of pollution from ships.

5.16 Additionally, Article 194.1 places an obligation upon States to act individually or jointly in order to prevent, reduce and control pollution from any source. Article 194.3(b) requires States to take measures to minimise to the fullest possible extent pollution from vessels, in particular measures for preventing accidents. Article 194.5 specifically places an obligation upon States to take measures necessary to protect and preserve rare or fragile ecosystems.

6 Miscellaneous Issues

6.1 *Summary of Measures*

6.1.1 **Torres Strait Treaty** - The Torres Strait Treaty between Australia and Papua New Guinea came into force on February 15 1985 and defines conservation outcomes for the region. The main purpose of the Treaty is to set out in law:

- the importance of the preservation of the traditional way of life and livelihood of traditional inhabitants;
- the sustainable management of fisheries resources;

- the protection and preservation of the marine environment and indigenous flora and fauna; and
- the regulation of exploration and exploitation of seabed mineral resources.

6.1.2 In recognition of the special environmental vulnerability of the area, the Treaty establishes a Torres Strait Protected Zone (TSPZ), which covers both Australian and Papua New Guinea waters. The Treaty permits freedom of movement within the TSPZ by traditional inhabitants of the TSPZ. It also states that the traditional inhabitants may engage in traditional activities, including traditional fishing, within the TSPZ. The mining or drilling of the seabed or subsoil of the Torres Strait Protected Zone for mineral exploration purposes is currently prohibited by a moratorium under the Treaty.

6.1.3 In addition to the Treaty, there are a number of well-established conservation management tools in existence in the region. These include:

- the Torres Strait Regional Authority;
- the Research Protocol developed by the Island Coordinating Council (ICC) and TSRA;
- the Marine Strategy for the Torres Strait 1998; and
- Indigenous Protected Areas (IPAs) have been established near Mabuiag Island and Deliverance Island.

6.1.4 **Pilotage** - It was the Australian Government's concern for the protection and conservation of the Great Barrier Reef and the Torres Strait region that caused it in 1990 to seek the support of the international maritime community through the IMO in introducing navigational safety protective measures for ships transiting the inner route of the Great Barrier Reef and Hydrographers Passage. Compulsory pilotage covering the northern sector of the inner route and Hydrographers Passage was introduced under Australia's domestic legislation from 1 October 1991. Since that time, the rate of accidents within the Reef has more than halved. Between 1 January 1985 and 1 October 1991 (prior to compulsory pilotage), there were ten incidents in the area, giving an accident rate of 1.667 per year. In the eleven years since compulsory pilotage, there have been eight incidents, giving an accident rate of 0.727 per year.

6.1.5 The Torres Strait, including Prince of Wales Channel and the Great North East Channel, was not included in the compulsory pilotage legislation at that time. However, the risk of a shipping accident causing pollution of the local marine environment is increasing and pilotage by licensed pilots is a recognised method of reducing that risk. Australia therefore requested IMO to recommend pilotage through this area: this was achieved with the adoption of IMO Resolution A.710(17) in November 1991, replacing IMO Resolution A.619(15).

IMO Resolution A.710(17) *"recommends that all ships of 70 m in length and over and all loaded oil tankers, chemical tankers or liquefied gas carriers, irrespective of size, use the pilotage services licensed under Australian Commonwealth, State or Territory law, when navigating the Torres Strait and the Great North East Channel between Booby Island (latitude 10° 36' S, longitude 141° 54' E) and Bramble Cay (latitude 9° 09'S, longitude 143° 53'E)"*.

6.1.6 **MARPOL 73/78** – Annexes I, II, IV and V of MARPOL 73/78 include special provisions in the definition of “nearest land” for protecting the north-eastern coast of Australia, encompassing the Torres Strait and the Great Barrier Reef. No operational discharges are permitted in these areas.

6.1.7 **REEFREP** – The REEFREP ship reporting system (SRS) is designed to enhance the safety of shipping operations and the protection of the marine environment in the Torres Strait

and the Great Barrier Reef regions. REEFREP has been formally adopted by IMO under the terms of regulation V/8-1 of SOLAS and is mandatory for the following categories of ships:

- all ships of 50 metres or greater in over length;
- all oil tankers, liquefied gas carriers, chemical tankers or ships coming within the International Code for the Safe Carriage of Packaged Irradiated Nuclear Fuel, regardless of length; and
- ships engaged in towing or pushing where the towing or pushing ship or the towed or pushed ship(s) is a ship prescribed above or where the length of the tow, measured from the stern of the towing ship to after end of the tow exceed 150 metres.

6.1.8 It has recently been agreed that the Ship Reporting System will be upgraded from an Information Service to a Coastal Vessel Traffic Service (Information Service) in accordance with SOLAS Chapter V, Regulation 12 for the Torres Strait and the Great Barrier Reef Particularly Sensitive Sea Area region, with capacity to extend to the Outer Route when feasible.

6.1.9 **Torresplan** – The Marine Oil Spill Contingency Plan for the Torres Strait Region (Torresplan) was produced in 1994 to provide both a range of options for a spill response and guidance for the spill combat team, should a spill occur in the area. The Plan was revised in 2001 to reflect recent policy and operational changes in the management of oil spills in Australia. Torresplan is an integral part of Australia's National Plan to Combat Pollution of the Sea by Oil and Other Noxious and Hazardous Substances.

6.1.10 **SPREP Convention** – Much of the Torres Strait falls within the area of the Convention for the Protection of the Natural Resources and the Environment of the South Pacific Region (SPREP Convention) to which both Australia and Papua New Guinea are signatory. This Convention places an obligation on Parties to co-operate with competent global, regional and sub-regional organisations to establish and adopt recommended practices, procedures and measures to prevent, reduce and control pollution from all sources and to promote sustained resource management and to ensure the sound development of natural resources.

6.2 *Enforcement*

6.2.1 Consistent with Article 233 of UNCLOS, Australia may enforce measures against the violation of any laws regulating the recommended shipping route through the Torres Strait where the violation causes or threatens major damage to the marine environment. As a necessary adjunct to this traffic separation scheme, the mandatory pilotage scheme may also be enforced as a law regulating the recommended shipping route through the Torres Strait.

6.3 *Joint Proposals*

6.3.1 Co-operation and consultation between Australia and PNG on matters related to Torres Strait is undertaken by mechanisms established to progress the implementation of the Torres Strait Treaty. These are:

- Traditional Inhabitants Meeting (TIM) - a forum for traditional inhabitants of both countries to discuss issues and activity in the region, and report concerns to government through their Treaty Liaison Officer.
- Treaty Liaison Meeting (TLM) - conducted and attended by Australian and PNG agencies involved in the implementation of the Treaty. Meetings are held alternately in Australia and PNG and its main purpose is to address issues raised at the TIM and other Treaty

related matters such as free movement implementation, illegal activity, customs and police matters, health, environment, quarantine and fisheries.

- The Environmental Management Committee (EMC) meets annually and deals with environmental issues relevant to the region, including fisheries management, turtles and dugong, mining and marine pollution and shipping and maritime matters. The EMC is an advisory body to the Joint Advisory Council.
- Joint Advisory Council (JAC) – Peak advisory body of Australian and PNG officials, together with traditional inhabitant representatives. The Council meets annually and reports to the Foreign Ministers of Australia and Papua New Guinea.

6.3.2 In respect of oil spill preparedness and response, co-operation is undertaken in accordance with a Memorandum of Understanding between Australia and PNG developed in accordance with the principles of the International Convention on Oil Pollution Preparedness, Response and Co-operation 1990. This MOU is integral to practical co-operation between Australia and Papua New Guinea at a regional/local level. To ensure quality control of the effectiveness of Torresplan an oil spill response exercise was conducted on Thursday Island in October 2002 which tested policy, operational arrangements and helped raise awareness of a number of cultural, environmental and jurisdictional issues that are of concern to the people of the Torres Strait.

6.4 *Implementation After Designation*

6.4.1 The Australian Hydrographic Office (AHO) will promulgate the new route by an Australian Notice to Mariners. This Notice to Mariners will be repromulgated internationally by other Hydrographic offices including the United Kingdom Admiralty and the United States Hydrographic Office. As the changes will be substantial the AHO will produce new editions of the charts affected and these will incorporate the new route. The new editions will also be reproduced by the UK Admiralty under an extant agreement with the AHO. In due course navigational publications such as Sailing Directions will be up-dated.

6.4.2 Information on the new compulsory pilotage arrangements will be provided to industry through IMO, Australian Marine Notices, as well as press releases and publications such as “Reef Guide”.

7 Action requested of the Committee

7.1 The Committee is invited to approve in principle the proposal to designate the Torres Strait Region as a Particularly Sensitive Sea Area by extending the existing Great Barrier Reef PSSA, inform the Sub-Committee on Safety of Navigation of this decision and subsequently approve final PSSA designation.