Dalhousie Law Journal

Volume 26 | Issue 1 Article 8

4-1-2003

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Michael White*

Liability for Damage to the Marine Environment from Ships

Marine pollution damage from ships is not a major problem in Australian jurisdictions, but there are regular incidents. The Australian law relating to marine pollution from ships closely follows the international conventions. Australia is a party to almost all of the relevant IMO conventions and, as is required for common law countries, the domestic legislation to give effect to them needs to be put in place. This has been done for the most part by the Commonwealth, the states and the Northern Territory, as Australia is a federation. The Commonwealth and the states have established adequate enforcement resources for the law to be fairly effectively enforced

This article discusses and describes the Australian legislation that prevails in each jurisdiction. The legislation provides both civil remedies for any oil spills, such as the compulsory insurance regimes under the CLC, Fund and the Bunkers Conventions, and powers to the government to prosecute for breach of regulatory laws, such as MARPOL. The article also describes the laws applicable in special areas, such as the Great Barrier Reef, the Torres Strait and the Antarctic Region. The author concludes that the overlapping laws and jurisdictions amongst the Commonwealth, the states and the Northern Territory make for an extensive and confusing system of laws that needs to be rationalized.

Les dommages causés par la pollution des navires ne constituent pas un grand problème pour les autorités australiennes, mais des incidents se produisent régulièrement. Les lois australiennes sur la pollution par les navires sont très proches des conventions internationales. L'Australie est signataire de presque toutes les conventions de l'Organisation maritime internationale (OMI) et, conformément à ce qui est exigé dans les pays de common law, elle doit adopter des lois relativement à la mise en œuvre de ces conventions. Cela a été fait pour la plus grande partie du Commonwealth, des États et du Territoire du Nord, puisque l'Australie est une fédération. Le Commonwealth et les États ont mis en place des ressources adéquates pour assurer l'application efficace et équitable des lois.

L'auteur de cet article décrit et explique les mesures législatives en vigueur dans chaque compétence australienne. Les lois prévoient des recours civils pour les déversements d'hydrocarbures, par exemple les régimes d'assurance obligatoires en vertu de CLC, Fund et les Bunkers Conventions et autorisent le gouvernement à intenter des poursuites pour les infractions aux lois de nature réglementaire, par exemple la Convention internationale de 1973 pour la prévention de la pollution par les navires (MARPOL). L'auteur aborde en outre les lois applicables dans certaines régions comme la Grande Barrière, le détroit de Torres et l'Antarctique. Il tire la conclusion que le chevauchement des lois et des compétences du Commonwealth, des États et du Territoire du Nord crée un système légal complexe et confus qui doit être simplifié.

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Introduction

Liability for damage to the marine environment under Australian jurisdiction is a combination of international conventions, as applied under Australian legislation, and a matrix of constitutional and regional issues. This article covers not only civil liability but also prosecutions for damage to the marine environment which raise criminal liability issues and also concern aspects of damages, costs and restitution. It is difficult to separate the civil from the criminal so this article adopts a broader perspective. Before the topic is developed in the following sections, it is appropriate to mention some of the physical characteristics relevant to the jurisdiction.

Australia is a large island located between the Pacific, Indian and Southern Oceans and the Timor Sea. The coastline is some 61,700 kms¹ long and its beaches and coastal seas include many varieties of marine flora and fauna. Under the *United Nations Convention on the Law of the Sea*, 1982² (UNCLOS) Australia has rights and responsibilities in the Exclusive Economic Zone (EEZ) over some 16.5 million square kilometres of ocean,³ which is much larger than the Australian land mass itself. Its fishing zone, which is the same as the EEZ for the most part, covers some 8.94 million square kilometres⁴ and it extends over some 60 degrees of latitude and 72 degrees in longitude.⁵

Australia's Oceans Policy (Oceans Policy) was introduced in 1998.6 Under this policy the Commonwealth Government established a National Oceans Ministerial Board, a National Advisory Group, Regional Marine

^{1.} Austl., Commonwealth, Environment Australia, Australia's Oceans Policy: Caring, Understanding, Using Wisely (Vol. 1) (Canberra: Environment Australia, 1998) at 6 [Australia's Ocean Policy].

United Nations Convention on the Law of the Sea, with Annexes (I to IX), 10 December 1982,
 Doc. A./CONF.62/122 (entered into force 16 November 1994) [UNCLOS].

^{3.} Australia's Ocean Policy, supra note 1 at 7. This figure of 16.5 million square kilometers is made up of 11.1 m of the EEZ, of which 2.5 m is off Antartica, the claimable legal Continental Shelf beyond the EEZ is 5.4 m, and is known as 'Australia's Maritime Jurisdiction'; see Austl., Commonwealth, Department of Industry, Sciences Resources, Release of Offshore Petroleum Exploration Areas Australia 2000 Department of Industry, Science & Resources, online: Department of Industry, Science & Resources < www.isr gov.au resources/petr_exploration/ releases-2000/zones.html>.

^{4.} The Australian Fishing Zone (AFZ) excludes the EEZ off the Australian Antarctic Territory and the Torres Strait and is still the world's third largest, see Austl., Commonwealth, Australian Department of Environment, Sport and Territories, Our Sea, Our Future: Major Findings of the State of the Marine Environment Report for Australia compiled by Leon P. Zann (Canberra: Department of the Environment, Sport and Territories, 1995) at 2 [SOMER].

^{5.} Ibid.; see also Austl., Commonwealth, Department of Agriculture, Fisheries and Forestry, The Australian Fishing Zone & Economic Exclusion Zone, online: Department of Agriculture, Fisheries and Forestry <www.affa.gov.au/content/output.cfm?objectid=d2c48f86-bala-11a1-a2200060b0a00877>.

^{6.} Supra note 1.

Plan Steering Committees and a National Oceans Office.⁷ Coordination is planned amongst the Commonwealth and the states, and also with New Zealand, for the management and protection of the marine environment, development of marine protected areas, support for water quality, development of a national ballast water management system, treatment of acid sulfate soil problems, a moorings program and a program for withdrawal of anti-fouling paints.

The major initiatives under the Oceans Policy are the development of a regional marine plan and seafloor mapping for the southeastern region of Australia's EEZ, the mapping of which is already well advanced.* The next areas for attention, in order, are the seas off northern Australia and the Torres Strait. The National Oceans Office (NOO) has been established in Hobart, Tasmania, from which the Oceans Policy initiatives are being directed.* However, the resources available to the Director seem to be less than those required to fully implement the initiatives in the Oceans Policy.

Australia is a federation of six states and two self-governing territories, so a total of nine parliaments are available to pass legislation. (These jurisdictions will be referred to collectively as "the States"). The question of jurisdiction offshore between the States and the Commonwealth lay dormant for many years after federation in 1901 as the question of sovereignty over the coastal seas did not fully arise! until the Commonwealth gave legislative effect to the 1958 international conventions. 12

The States objected to the passage of the Seas and Submerged Lands Act 1973 (Cth.), which claimed Commonwealth sovereignty over the

^{7.} Ibid. at 2 (Executive Summary).

⁸ Austl., Commonwealth, National Oceans Office, South-east Regional Plan, online: National Oceans Office http://www.oceans.gov.au.regional_se_marine_plan.jsp

^{9.} See generally Dr. Edward Eadie, "Evaluation of Australia's Oceans Policy as an Example of Public Policy-making in Australia" (2001) 120 Maritime Studies 1.

¹⁰ The eight Parliaments are those of the Commonwealth of Australia, six states (Queensland, New South Wales, Victoria, Tasmania, South Australia and Western Australia), and two territories (Australian Capital Territory and the Northern Territory). The Australian Capital Territory (ACT) has part of Jervis Bay in its legislative responsibility, but the ACT Parliament passes little marine environment legislation.

¹¹ The Commonwealth and the States had earlier arrived at a cooperative agreement over exploration and exploitation of offshore oil and gas. This was reflected in the 1967 Australian Offshore Petroleum Settlement and in the Petroleum (Submerged Lands) Act 1967 (Cth.) and the other supporting legislation by the Commonwealth and the states. For a short outline of the constitutional issues relating to the coastal seas, see Michael White, Marine Pollution Laws of the Australiasian Regium (Annandale, NSW: Federation Press, 1994) at part 7.1 [White (1994)].

^{12.} The particular convention was the Convention on the Territorial Sea and the Contiguous Zone, 29 April 1958, 516 U.N.T.S. 205 (entered into force 10 September 1964). This convention provided for the territorial sea to extend from the low water mark, or some other basis for the base lines, as appropriate

territorial sea. The Commonwealth won the subsequent case in the High Court of Australia. However, the States and the Commonwealth later agreed on the Offshore Constitutional Settlement, 1979¹⁴ under which the States were given sovereignty and title out to the three-mile limit (which was then the limit of the territorial sea). This settlement includes a "roll-back" provision, which allows the Commonwealth to legislate unless the States passes similar legislation. The enactment of state legislation rolls back Commonwealth legislation to the three-mile limit or other limit of the state legislation. One part of the "Offshore Constitutional Settlement, 1979" was that the Commonwealth would continue to control ship-sourced marine pollution. One of the effects of this was that the Commonwealth became the lead agency in this field.

Before looking at the Commonwealth legislation it is convenient to look at the sources of marine pollution and see how much shipping contributes to the overall problem of pollution of coastal seas.

Worldwide, it is estimated that land-based sources make up 70% of marine pollution, while maritime transport and dumping-at-sea activities each make up 10%. It is important to note that the extent of pollution varies tremendously in different seas and oceans. Secondly, most land-sourced pollution comes from high population density areas. Thirdly, the extent of land-sourced pollution of the seas and oceans varies inversely with the distance offshore. Finally, although pollution from oil spills is certainly the most spectacular of the various forms of marine pollution, it is not the most lasting or the most damaging over the longer period. However, because of the emphasis on oil, it is worth a little more scrutiny.

The ever-increasing world demand for energy has meant that the amount of oil that is transported by sea has steadily increased. Oil spills are the price that the world pays for this nearly insatiable demand for energy. Fortunately, 99.9% of oil carried by sea arrives safely and without

^{13.} New South Wales v Commonwealth (The Seas and Submerged Lands Act Case) (1975), 135 C.L.R. 337 (H.C.A.).

^{14.} For greater detail on all of these points, see White (1994), supra note 11 part 7.1.

^{15.} Australia extended the outer limit of its Territorial Sea to 12 miles from the base line in 1990, but under the Offshore Constitutional Agreement the powers of the States remained at the limit of the three-mile limit, where it still remains.

^{16.} See White (1994), supra note 11 part 7.1.

^{17.} White (1994), supra note 11 at 176.

^{18.} The Commonwealth would always be the lead agency in relation to international law, but the Offshore Constitutional Agreement gave it that undisputed status in relation to ship-sourced pollution even though the ships may be in state waters. The Australian Maritime Safety Authority (AMSA) has been given the task of acting as the responsible agency for the Commonwealth.

^{19.} UNCED Agreements done at Rio de Janeiro, 1992, Agenda 21, Chapter 17, Article 17, para. 17.18.

incident.20 making sea transport of oil one of the safest means of transport in the world. Of course, even the smallest amount of oil spilled from ships into the sea is regrettable, but at least the drive to reduce this amount has been successful, as may be seen from the statistics of oil spills kept by the International Tanker Owners Oil Pollution Federation (ITOPF).21 Worldwide, not only has the number of oil spills fallen substantially, but, importantly, so has the total quantity of oil spilled. The small spills result mainly from operational accidents and, as might be expected, the large ones result from shipping disasters (collisions, groundings, explosions, hull failures).²² The facts are difficult to establish for Australian waters. The Australian Maritime Safety Authority (AMSA) used to collect and publish them but has ceased to do so.23 In 2001-2002 AMSA estimated that there were 345 oil discharge sightings, one-third of which were from ships. Many oil spills into rivers and bays are only reported to the land environmental protection authorities and so are difficult to collate.

1. Australian Commonwealth Legislation

1. Early Legislation

In the Commonwealth jurisdiction the legislators have been vigorous, for the most part, in passing the domestic legislation needed to give effect to relevant international conventions. Responsibility for the legislation falls mainly on the Commonwealth Department of Transport, while AMSA bears the responsibility for implementation and enforcement.

The Commonwealth Parliament gave effect to the International Convention for the Prevention of Pollution of the Sea by Oil, 1954 (OILPOL 54)24 in the Pollution of Waters by Oil Act 1960 (Cth.). This Act was repealed to give legislative effect to the International Convention for the

^{20. &}quot;In 1997 some 99 99998 per cent of oil shipped by sea to the US arrived safely and without incident," see "Tanker Spills on Downward Spiral" 3 The Tanker Ven sletter (January 2000) at 1 (a publication of INTERTANKO). This figure can be extrapolated to worldwide figures with some degree of confidence due to the international aspects of carriage of oil by sea.

^{21.} Those statistics on oil spills are to be found, online: International Tanker Owners Oil Pollution Federation, "Historical Data: Statistics" http://www.itopf.com/stats.html.

^{22.} Ihid

^{23.} The AMSA Annual Report 2001-2002 contains the most recent figures, Austl., Commonwealth, Australian Maritime Safety Authority, Twelfth Annual Report 2001-2002 (Canberra City ACT: AMSA, 2002), online: AMSA http://www.amsa.gov.au/About_AMSA/ Corporate_information/ Annual_reports/2001_2002/index/asp>.

International Convention for the Prevention of Pollution of the Sea by Oil, 1954, with Annexes (A and B) 12 May 1954, 327 U.N.T.S. 3 (entered into force 26 July 1955) [OILPOL 54], Some background to OILPOL 54 is given in White (1994), supra note 11 at part 4 1.1.

Prevention of Pollution from Ships, 1973²⁸ (as modified by the Protocol of 1978 relating thereto MARPOL 73/78). It is not necessary to address these Acts in this article but the reader should be aware that the legislation in many cases was not the first act on the topic or, if it was, the early versions of the Act were often much less intrusive and regulatory. The current Acts are set out below, but readers should bear in mind that frequent amendments are made to keep pace with the evolution of International Marine Organization (IMO) conventions.

2. Protection of the Sea (Prevention of Pollution from Ships) Act 1983
The Commonwealth legislation that gives effect to MARPOL 73/78²⁶ is the Protection of the Sea (Prevention of Pollution from Ships) Act 1983 (Cth.).²⁷ This is the main legislation that controls the various aspects of MARPOL. For a brief discussion of the liability under each of the Annexes see below. It is unfortunate that the Australian legislators continue to depart from the provisions of MARPOL as the purpose of an international scheme for shipping is to provide uniformity and allow for international comity amongst international regulatory systems and the courts that enforce them. To depart from this structure of an agreed international system is not commendable.

The Protection of the Sea (Prevention of Pollution from Ships). Act 1983 (Cth.) (Prevention of Pollution from Ships. Act 1983) has wide application as it binds the Crown in right of the Commonwealth, each of the states and Norfolk Island, has application within and outside Australia and extends to the outer limits of the EEZ. It applies to Australian-flagged ships wherever they may be and to foreign-flagged ships in Australian ports or the territorial sea. The AMSA inspectors are assiduous in checking whether ships comply with MARPOL in the port state control regime. Ships that do not comply are liable to be detained until the defect is remedied. The Act, reflecting the provisions of MARPOL 73/78, is a regulatory one with detention or a prosecution as part of the enforcement regime. It should be noted that the Act gives effect to the provisions of the Offshore Constitutional Settlement 1979 in providing for a "roll-back" provision so that the Commonwealth Act only applies if there is no law of that state or territory

^{25.} International Convention for the Prevention of Pollution from Ships, 1973, 2 November 1973, 1340 U.N.T.S. 184 as am. by the Protocol of 1978 (MARPOL 73/78) 17 February 1978, 1340 U.N.T.S. 61, 62 (entered into force 2 October 1983) [MARPOL 73/78].

Ibid.

^{27.} There had been an interregnum act, which was the Protection of the Sea (Discharge of Oil from Ships) Act 1981 (Cth.) and before that another act had given effect to OILPOL 54.

^{28.} AMSA makes regular reports on its web site as to its actions in 'port state control'.

that makes provision giving effect to the relevant Convention within the state or Territory jurisdiction.²⁹

a. MARPOL Annex 1 — Oil Pollution

Part II of the Prevention of Pollution from Ships Act 1983 gives effect to MARPOL Annex 1 (oil pollution). The Act provides that "a person" commits an offence if the person engages in conduct that causes a discharge of oil or an oily mixture from a ship into the relevant sea, including to the outer limits of the EEZ,30 if the person is "reckless or negligent."31 The provisions are different for a "ship" as, so the Act provides, it is "strict liability" but then, in unusual drafting, it provides that the relevant sub-section does not apply in certain cases.³² These provisions are based on, but differ somewhat, from Regulation 11 of MARPOL Annex 1. One of the situations where the Act does not apply, i.e. the defences in the Act as in MARPOL, is where the oil escaped due to "damage." 33 The Act differs from MARPOL Regulation 11 in two main particulars. First, it restricts the "damage" to "non-intentional damage," and secondly, it defines "damage" as not including "(a) deterioration resulting from failure to maintain the ship or its equipment, or (b) defects that develop during the normal operations of the ship or equipment."34

Whether the definition of "damage" under MARPOL includes wear and tear became something of a cause célèbre in Australia as a result of the case of the Sitka II. In December 1996 this vessel was unloading cargo at a jetty on Lord Howe Island, off the east coast of Australia, when a hydraulic hose on the crane ruptured and some oil escaped, of which a mere five litres ran into the sea. The turning of the crane as it worked over a long period had caused the hose to become worn and subsequently to

²⁹ Protection of the Sea (Prevention of Pollution from Ships) Act 1983 (Cth.), s. 9(1) [Prevention of Pollution from Ships Act]. In this example it refers to oil discharges and similar provisions apply to the other Parts of the Act. It is noted that the Act refers to the state or Territory giving effect to Reg. 9 and 11 of Annex 1, but the Act, as amended in 2001, does not do so as it departs substantially from the MARPOL provisions.

³⁰ Ibid., s. 9(1).

^{31.} Ibid., s. 9(1).

^{32.} Ibid., s. 9(2). The defences are for securing safety at sea, escape in the event of non-intentional damage or to combat pollution incidents etc.

^{33.} *Ibid.*, s. 9(2), which has a passing familiarity with MARPOL Annex 1 Regulation 11, is: '(2) Subsection (1B) does not apply to the discharge of oil or of an oily mixture from a ship: (c) for the purpose of securing the safety of a ship or saving life at sea: or (b) if the oil or oily mixture, as the case may be, escaped from the ship in consequence of non-intentional damage to the ship or its equipment, and all reasonable precautions were taken after the occurrence .. etc'. Note: The Act does not have sub-paragraphs (a) or (b).

^{34.} Ibid., s. 9(3), (3A).

rupture. The prosecution was taken in the New South Wales (NSW) Land and Environment Court, under the NSW legislation that gave effect to MARPOL. The owners pleaded a defence of damage under that legislation and Regulation 11 of MARPOL. The question was whether the unexpected rupture of the hose was damage within the meaning of the word as used in the legislation and MARPOL. The court stated a case for the NSW Court of Criminal Appeal, which held that wear and tear of the hose could amount to damage, so the defence was good.³⁵ On appeal to the High Court³⁶ it was held that the meaning of damage in the NSW Act should be the same as in MARPOL and that it meant "where oil escapes through some sudden change in the condition of the ship that could not be foreseen and avoided"37 caused by "a sudden change in the condition of the ship or its equipment that was the instantaneous consequence of some event, whether the event was external or internal to the ship or its equipment."36 The result was that the owner and master regarded the defence as not sustainable and entered a plea of guilt before the Land and Environment Court.39 In the light of the cooperation of the defendant at every stage, including clean up, the court ordered that the charge be dismissed i.e. that no conviction actually be recorded, as allowed under the Act, with no order being made as to costs. 40

As far as the author is aware, this case is the first court decision in the world on this point. Further legal development in this area must await other decisions and, perhaps, amendments to MARPOL or enacting legislation. The Commonwealth Act, having been amended, could not give rise to a similar case and the States are also in the process of amending their Acts.

Liability for discharge of an "oily mixture" or of "oil residues" into the sea in breach of the Act results in a "person" committing an offence punishable on conviction by a fine not exceeding 2,000 penalty units (AUD 220,000). Liability by the master and the owner for an offence, if the ship

^{35.} Marrison v Peacock & Roslyndale Shipping co. Pty. Limited (2000), 50 N.S.W.L.R. 178 (C.C.A.).

^{36.} Morrison v Peacock (2002), 76 A.L.J.R. 1545 (H.C.A.).

^{37.} Ihid. at para. 35.

^{38.} Ibid. at para. 36.

^{39.} It was a condition of the appeal to both higher courts that the prosecutor (the government) pay the costs of the accused. The legal costs incurred over the five litres of spilled oil were impressive.

^{40.} Morrison v Peacock and Roslyndale Shipping Pty Ltd, [2003] N.S.W.L.E.C. 68 at para 15. S.10(1) of the Crimes (Sentencing Procedure) Act 1999 (N.S.W.) allows for a charge to be dismissed without the court proceeding to conviction despite the defendant pleading guilty. See Case Note by Michael White, "Morrison v Peacock (The Sitka II) (2002) 76 ALJR 1545" (2003) 17 MLAANZ Journal 135.

^{41.} Ibid., s. 9(1), 10(1). The Act provides that the penalty is not exceeding 2,000 penalty units. A "penalty unit" is defined in the Crimes Act 1914 (Cth.), s. 4AA as AUD 110.

commits an offence, is a fine up to a maximum of 500 penalty units (AUD 55,000).⁴² Liability also attaches if a master or owner fails to report a discharge, to have onboard an oil pollution emergency plan, to keep an accurate oil record book or to obey a direction to discharge oil or an oily mixture ashore to a reception facility. These penalties range from a maximum of AUD 50,000 down to AUD 20,000.⁴³ An important aspect of the liability for penalties is that a corporation is liable to a fine of up to five times the penalty that an individual incurs for the same offence.⁴⁴

b. MARPOL Annex II - Noxious Liquid Substances in Bulk

MARPOL Annex II (noxious liquid substances) is given effect by Part III of the *Prevention of Pollution from Ships Act 1983*. The Act is consistent in Part III with the departures from MARPOL in Part II of the Act, in that section 21 of the Act departs from the wording of MARPOL Annex II Regulation 5 in a similar manner to that discussed above. The definition of damage in section 21(3A) is similar to that in Part (2)(a) of this paper above and presumably does not include deterioration resulting from failure to maintain or normal wear or tear.

The main liability for breach of the Act is that if a person engages in conduct that causes a discharge, that person commits an offence punishable on conviction by a fine not exceeding 2,000 penalty units (AUD 220,000). The Act places an obligation on the master and owner to report relevant incidents and to keep a cargo book, and there is power to require the ship to discharge certain substances to a reception facility, in default of which liability falls on the master or the owner or both. The Act places is a person engages in conduct that causes a discharge that person engages in conduct that is a person engages in conduct that is a person engages in conduct that is a person engages in conduct that causes a discharge, that person commits an offence punishable on conviction by a fine not exceeding 2,000 penalty units (AUD 220,000). The Act places an obligation on the master and owner to report relevant incidents and to keep a cargo book, and there is power to require the ship to discharge certain substances to a reception facility, in default of which liability falls on the master or the owner or both.

c. MARPOL Annex III - Packaged Harmful Substances

Part IIIA of the Act follows MARPOL Annex III in the main, regarding packaged harmful substances. Its provisions include liability for the jettisoning of harmful substances by a person or a ship, and in the latter case, it is strict liability unless exempted under limited circumstances. The penalty on conviction of a person for unlawfully jettisoning a packaged harmful substance is a fine not exceeding 2,000 penalty units (AUD 220,000). There is a duty on the master to report relevant incidents, breach

⁴² *Ibid.*, ss. 9(1B), 10(3).

^{43.} Ibid., ss. 11-14A.

⁴⁴ Crimes let 1914 (Cth.), s. 4B(3).

⁴⁵ Prevention of Pollution from Ships Act, supra note 29, s. 21(1).

^{46.} Ibid , ss. 22-26AA.

^{47.} Ibid , s. 26AB.

⁴⁸ Ibid , s. 26AB(1).

of which is punishable by a penalty of up to AUD 50,000.49

d. MARPOL Annex IV — Sewage

Part IIIB of the Act follows MARPOL Annex IV, regarding sewage, but it again departs from the wording of Annex IV in a manner similar to that by which Parts II and IIA of the Act depart from their relevant annexes. ⁵⁰ Part IIIB, Division 1 relates to discharge of sewage into the Antarctic Area. Discharge of untreated sewage from a ship into the sea in the Antarctic Area carries a maximum fine of 2,000 penalty units (AUD 220,000), reduced to 500 penalty units (AUD 55,000) for a master or owner.⁵¹

Discharge of sewage in other seas is the subject of MARPOL Annex IV which finally came into force internationally on 27 September 2003. As a result, Part IIIB Division 2 of the Act came into force on 27 May 2004.⁵²

e. MARPOL Annex V — Garbage

Part IIIC of the Act follows MARPOL Annex V, regarding garbage, again in the main. The liability for pollution from garbage falls on the person or the owner and master if there is a discharge from a ship in the same manner as for Part II. Ships over 400 gross tons, or certified to carry 15 persons or more, are required to keep a garbage record book and to have a waste management plan.⁵³

The structure of the provisions of the Act is similar to the earlier Parts of the Act in that a person who commits an offence is liable to a penalty not exceeding 2,000 units (AUD 220,000) and the master and owner to a penalty not exceeding 500 units (AUD 55,000).⁵⁴ Liability is attracted if the requirements to keep an accurate garbage book are not met, a ship management plan is not kept, placards relating to disposal of garbage are not displayed or a direction to discharge ashore to reception facilities is not carried out.⁵⁵

The present Act does not make provision to implement Annex VI of MARPOL, the prevention of air pollution from ships, but it will likely be amended to do so when Annex VI comes into force internationally.

^{49.} Ihid., s. 26B.

^{50.} Ibid., s. 26BC for the Antarctic Area and < 26D for other areas of the sea.

^{51.} More detail on the Antarctic Area may be found below in Part III(3) of this article.

^{52.} The author is indebted to Mr Robert Alchin, Commonwealth Department of Transport and Regional Services, for assistance in relation to details of government proposals for changes to the *Prevention of Pollution from Ships Act, supra* note 29.

^{53.} Prevention of Pollution from Ships Act, ibid., s. 26FA, 26FB, 26FC.

^{54.} Ihid., s. 26F.

^{55.} Ibid. ss. 26FA-26FE

Attention is now turned to other relevant Commonwealth legislation that relates to liability for marine pollution from ships.

3. Navigation Act 1912

Many provisions under MARPOL 73/78 have particular construction requirements for ships, especially tankers, including the obligation of ships to carry particular equipment (e.g., oily water separators). These provisions are given force by the Navigation Act 1912 (Cth.). This is a sensible division of the requirements between the Prevention of Pollution from Ships Act 1983 and the Navigation Act 1912 as the provisions about construction and equipment are best contained wholly in the later Act. ⁵⁶ Part 4, Division 12 gives effect to the requirements of MARPOL Annex 1, and Divisions 12A, 12B and 12C give effect, respectively, to MARPOL Annexes II, III and IV. There are penalties so owners and masters are liable for not complying with the provisions of this Act.

This concludes discussion of these Acts, which are all related to liability that falls on the offending person or corporation. There are two Acts, however, that provide for strict liability and compensation for oil spill cleanup costs and damages for oil spills from tankers in what may be called indemnity insurance. These two Acts, which will now be discussed, give effect to the two relevant IMO conventions that relate to oil spills from tankers: the Civil Liability Convention⁵⁷ (CLC) and the International Convention on the Establishment of an International Fund for Compensation for Oil Pollution.⁵⁸

4. Protection of the Sea (Civil Liability) Act 1981

The provisions of the Civil Liability Convention, (CLC) were given the force of domestic Australian law by the Protection of the Sea (Civil Liability) Act 1981 (Cth.), although the Act does deal with some matters beyond

The Navigation 4ct 1912 (Cth.) was the subject of a major review in 2001 but the Commonwealth Government has not acted on the Final Report to date. If it is acted upon, new legislation will be passed that much reduces the provisions of the Act, which will then be repealed. For the final report, see Austl., Commonwealth, Department of Transport and Regional Services, Review of the Navigation Act 1912: Final Report (Canberra: Department of Transport and Regional Services, 2000), online: Transport and Infrastructure Policy http://www.dotras.gov.au/transinfra/review_navact_downloads_aspx.

^{57.} International Convention on Civil Liability for Oil Protection Damage 1969 as am. by the 1992 Protocol, 27 November 1992, B.T.S. (1996) (entered into force 30 May 1996) [Civil Liability Convention].

^{58.} International Convention on the Establishment of an International Fund for Compensation for Oil Pollution 18 December 1971, 1110 U.N.T.S. 57, 58 (entered into force 16 October 1978) as amby the 1992 Protocol 27 November 1992, B.T.S. 86 (1996) (entered into force 30 May 1996).

the provisions of the CLC. Part 1 of the Act sets out general matters and provides, amongst other things, for the gazettal of the countries that have agreed to the provisions of the Convention. Part II gives the force of domestic law to most of the CLC and contains the liability provisions. There is the usual reservation about the Act not applying to a ship where a State or Territory Act gives effect to the CLC⁵⁰ and the Supreme Courts of the States and the Territories are given jurisdiction to determine disputes, including whether the owner is able to limit liability.60 Pursuant to Part III, Australian ships and foreign flagged ships visiting Australian ports are bound to carry the requisite proof of insurance required by the convention. The Administrative Appeals Tribunal is given jurisdiction to hear matters relating to issuance or cancellation of insurance certificates.⁶¹ Part IIIA deals with proof of possession of insurance cover by relevant tankers and makes the owner or master liable for a fine for the offence of entering or leaving a port without the requisite certificate. 62 It should be noted that it is the 1992 Protocol to Amend the International Convention on Civil Liability for Oil Pollution Damage of 29 November 1969 that is currently given the force of law by the Act.

Under Parts IV and IVA of the Act, which deal with topics other than the CLC, the relevant government Minister is given power to recover any expenses which are incurred in relation to the *Protection of the Sea (Powers of Intervention) Act 1981* (Cth.). AMSA is given the authority to recover expenses incurred in cleaning up oil spills from tankers or in taking precautions in case a spill should occur. By Part V and the Regulations under the Act, provision is made for prosecution of offences and for governance of the Act. Schedule 2 is the *1992 Protocol*. The Act is administered by the Department of Transport and Regional Services. 63

In relation to claims for compensation under the CLC¹⁴ relevant tanker owners are liable for "any pollution damage" which is caused by oil or other toxic substances that have escaped or been discharged from the vessel, although no liability attaches if the owner proves the discharge was a result of an act of war, was wholly caused by an act or omission done with intent by a third party, or was caused by the negligence or wrongful act of any government responsible for navigation aids.⁶⁵ Also, if the

^{59.} Protection of the Sea (Civil Liability) Act 1981 (Cth.), s 7(1) [Civil Liability Act].

^{60.} Ibid., ss. 9, 10

^{61.} Ibid . s. 19.

^{62.} Ibid., s. 19C.

^{63.} Department of Transport and Regional Services (DOTARS), online: <www.dotrs.gov.au>.

^{64.} Civil Liability Act, supra note 59. s. 8 implements much of the Civil Liability Convention (CLC) by so stating.

^{65.} Civil Liability Convention, supra note 57, as am. by the 1992 Protocol., Art. III at paras. 1, 2.

person who suffered damage caused that damage through his own intentional act or omission, the owner may be exonerated in whole or in part. In the usual way the 1992 Protocol and the Act give effect to the ability of the owner to limit liability, provided the damage does not result from the owner's "personal act or omission, committed with the intent to cause such damage, or recklessly and with knowledge that such damage would probably result." Liability is incurred if the usual certificates of financial responsibility, evidencing compliance with the terms of the CLC and the Act, are not carried and available. Jurisdiction is given to the state Supreme Courts and the Commonwealth Federal Court to deal with matters arising under the Act or the CLC.

In short, the Act faithfully gives effect to the 1992 Protocol to amend the CLC.

5. Protection of the Sea (Oil Pollution Compensation Fund) Act 1993
The second of these two conventions is the International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage, 1971, as amended by the 1992 Protocol (Fund Convention), 68 which is given effect by the Protection of the Sea (Oil Pollution Compensation Fund) Act 1993 (Cth.). No claim has yet been made on the Fund as a result of a spill in Australian seas. The Protection of the Sea (Oil Pollution Compensation Fund) Act 1993 (Cth.) (Oil Pollution Compensation Fund Act 1993) is supported by three Acts which give effect to the levies which are imposed by the Fund from year to year.

Under this Act the participating oil companies are obligated to keep records, make reports and to pay the levies imposed by the Fund. AMSA is empowered to enforce these provisions. A major part of the Act gives the right to compensation to persons who have suffered damage or have been put to expense in cleaning up oil spills and, if necessary, the right to sue to enforce their claims. In effect, the Oil Pollution Compensation Fund Act 1993 (Cth.) provides that the Fund shall pay compensation to any person suffering pollution damage if such person has been unable to obtain full

⁶⁶ Ibid at para 3.

^{67.} Ibid, Art.6 at para 2.

^{68.} International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage 1971, as am, by the 1992 Protocol, 18 December 1971, 1110 U.N.T.S. 57, 58 (entered into force 16 October 1978) [Fund Convention].

⁶⁹ The supporting Acts are; the Protection of the Sea (Imposition of Contributions to Oil Pollution Compensation Fund - Customs) Act 1993 (Cth.), the Protection of the Sea (Imposition of Contributions to Oil Pollution Compensation Fund - Excise) Act 1993 (Cth.) and the Protection of the Sea (Imposition of Contributions to Oil Pollution Compensation Fund - General) Act 1993 (Cth.),

and adequate compensation for the damages, or costs of cleaning up the oil, under the CLC.

The Act gives effect to the 1992 Fund⁷⁰ and the Fund itself has the right to appear and be heard in Australian courts. The oil companies are required to make the relevant payments to the "Consolidated Revenue Fund" and then an equivalent amount is to be forwarded to the Fund in London. Record keeping is required and there are the usual powers of enforcement. The liability for oil spills from tankers falls in two groups under this law. The Fund is liable to pay the proven damages and also the costs of cleaning up, mitigating damage, or standing by to clean up.⁷¹ The participating oil companies are liable to make their due contributions to the Fund.

6. Protection of the Sca (Shipping Levy) Act 1981

The Protection of the Sea (Shipping Levy) Act 1981 (Cth.) aims to raise revenue from ships using Australian ports. Ships liable to be levied are those over 24 metres in tonnage length⁷² in an Australian port in any quarter. Masters and owners are jointly and severally liable to pay a quarterly levy in respect of the ship, provided the ship has over 10 tonnes of oil on board.⁷³ A complementary Act is the Protection of the Sea (Shipping Levy Collection) Act 1981 (Cth.), which provides for the collection of the levy. A ship is not liable for the levy if it is only in port for some non-commercial reason, including mere watering, fuelling, provisioning, changing crew or passengers, or emergency purposes.⁷⁴

The funds raised from the levy are administered by AMSA, some of which are expended on the National Plan to Combat Pollution of the Sea by Oil and Other Noxious and Hazardous Substances.⁷⁵ The rate of the levy is regularly reviewed and over recent years the rate has been steadily reduced. This levy is an indirect impost on ships that pollute the marine environment.

^{70.} The 1971 Fund resulting from the Fund Convention was also given legal status, but it was wound up in 2001 and no further reference will be made to it.

^{71.} The Protection of the Sea (Oil Pollution Compensation Fund) Act 1993 (Cth.) parts 3.5, 3.6.

^{72.} Tonnage length is as measured in the Shipping Registration Act 1981 (Cth.), s. 10.

^{73.} See the Protection of the Sea (Shipping Levy) Act 1981 (Cth.), s. 5 provides: "Where, at any time during a quarter when a ship to which this Act applies was in an Australian port, there was on board the ship a quantity of oil in bulk weighing not less than 10 tonnes, levy is imposed in respect of the ship for the quarter."

^{74.} See the Protection of the Sea (Shipping Levy Collection) 4ct 1981 (Cth.), s. 6.

^{75.} For further detail see White (1994), supra note 11 at part 7.2.5 and 7.2.6.

7. Protection of the Sea (Powers of Intervention) Act 1981

The Intervention Convention is given domestic force in Australia by the Protection of the Sea (Powers of Intervention) Act 1981 (Cth.). Provided there is "a grave and imminent danger to the coastline or Australia, or to the related interests of Australia, from pollution or threat of pollution of the sea" then there could be intervention on the high seas.⁷⁷ It is noteworthy that these provisions relate to ships on the high seas. Of course, pollution in the EEZ can be dealt with under the UNCLOS.78 The Act also gives the same powers, in the same circumstances, to deal with any ship in Australian internal waters or coastal seas and to deal with any Australian ship on the high seas.⁷⁹ The substances that may pose a marine pollution threat are listed, with frequent amendments to the list.80 Under the Act, AMSA may direct the owner, master or salvor to move the ship or cargo, or sink or destroy the ship or cargo and, if the master or salvor fails to comply, to do so itself.*1 Contravention of a direction validly given under the Act could give rise to a prosecution with a fine ranging from AUD 2,000 up to AUD 50,000 for a corporation, depending on the circumstances.⁸² As mentioned above, the power to recover expenses incurred in dealing with the vessel or its cargo is contained in Part IV of the Protection of the Sea (Civil Liability) Act 1981 (Cth.).

In summary, liability for marine pollution may fall on the owner or the master as the Powers of Intervention Act 1981 (Cth.) gives wide powers to government officers, through AMSA and the Minister, to direct and otherwise intervene with the management of a shipping casualty off the Australian coast. Further in default, the owner, master or salvor may be prosecuted and fined. The liability, therefore, in cases of maritime casualties

^{76.} International Convention relating to Intervention on the High Seas in Cases of Oil Pollution Canadities 29 November 1969, 970 U.N.T.S. 211 (entered into force 6 May 1975), as am, by the Protocol Relating to Intervention on the High Seas in Cases of Pollution by Substances other than Oil 1973, 2 November 1973, 1313 U.N.T.S 3, 4 (entered into force 30 March 1983), Amendments were adopted by MEPC by MEPC Resolution 49(31), 14 July 1991, UN Stat. 1992;395 and MEPC Resolution 72(38), 1996.

^{77.} Protection of the Sea (Powers of Intervention) Act 1981 (Cth.), s. 8 for oil and s. 9 for other substances [Powers of Intervention Act].

^{78.} United Nations Convention on the Law of the Sea with Annexes (Lto IX), 10 December 1982. U.N. Doc. A/CONF. 62-122 (entered into force 16 November 1994)

^{79.} Powers of Intervention Act, supra note 77, s. 10.

^{80.} Ibid., Schedule 4. The list of substances is amended by Marine Environment Protection Committee (MEPC) resolutions from time to time.

^{81.} If the ship of cargo is to be sunk or destroyed it requires the Minister's approval. In other cases it is sufficient for AMSA to give the direction or take the action; see the Powers of Intervention Act. supra note 77, ss. 8, 9.

⁸² Powers of Intervention Act, ibid., s. 19.

which pollute or threaten to pollute Australia's maritime environment may give rise to extensive costs, fines and damages.

8. Environment Protection (Sca Dumping) Act 1981

The Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter 1972, as amended by the 1996 Protocol (London Convention), is given effect by the Environment Protection (Sea Dumping) Act 1981 (Cth.).84 This Act faithfully reproduces the provisions of the convention as amended by the 1996 Protocol to the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter 1972. The long title of the Act reflects its provisions: An Act providing for the protection of the environment by regulating dumping into the sea, incineration at sea and artificial reef placements, and for related purposes. Controls and regulations are imposed on materials which fall within the definitions of substances that are to be banned from dumping or that are strictly controlled as to the amount, place and manner of dumping at sea. It is not only dumping that is made an offence, but also incineration and loading wastes or other matter with the intention of dumping or incinerating that matter at sea, 55 placement of artificial reefs in the sea 86 and loading and export of "controlled material."x7

Owners are liable for the costs and expenses of applications for permits, compliance with conditions under which permits may be issued, and for breaches of the Act. "[E]ach person who is a responsible person in relation to the offending craft or offending material" may be guilty of an offence if the person knew or was reckless and did not take reasonable steps to prevent the offending use." Persons are not liable if there was a permit or if the conduct was necessary in saving life. The Minister has power to restore the marine environment and a person convicted of an offence may be liable to pay the amount of such expenses and liabilities.*

^{83.} Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter 1972, as am. by the 1996 Protocol, 29 December 1972, 1046 U.N.T.S. 120, 129 (entered into force 30 August 1975).

^{84 1996} Protocol to the Convention on the Prevention of Marine Pollution by Dumping Wastes and Other Matter of 29 December 1972, 7 November 1996, [1997] A.T.N.I.A. 39 [The London Convention] is Schedule 1 to the Act.

^{85.} Environment Protection (See Dumping) Act 1981 (Cth.), ss. 10A, 10B. S. 4 defines "seriously harmful material" to include nuclear wastes as well as the others - S. 24 allows applications for review of decisions about permits etc. may be taken to the Administrative Appeals Tribunal.

^{86.} Ibid., s. 10E.

^{87.} Ibid., ss. 10C, 10D. Section 4 of the Act defines "controlled material."

^{88.} Ibid., 10F.

^{89.} Ibid., ss. 10F, 15, 16, 17

The penalty for conviction for unlawfully dumping, incineration, importing, exporting or laying artificial reefs varies in severity with the type of substance involved.

Penalties range from imprisonment for up to 10 years and a fine of up to 2,000 penalty units (AUD 220,000) down to imprisonment of up to 1 year or a fine of up to 250 penalty units (AUD 27,500).**

9. Hazardous Waste (Regulation of Exports and Imports) Act 1989
Australia gave effect to the Basel Convention⁹¹ in the Hazardous Waste (Regulation of Exports and Imports) Act 1989 (Cth.). Under the Act persons wishing to import or export "hazardous waste", or have some other proposal concerning it, must apply for a permit. "Hazardous waste" is defined in the several annexes to the Basel Convention, a definition expanded in the Act to include "household waste" and residues from incineration of household waste.⁹²

The basic structure of the Act is to create an offence if a person imports, exports, causes a transit through or sells hazardous waste except in accordance with a permit and conditions attached to the permit.⁹³ A person who "intentionally, reckless or negligently contravenes" the Act is guilty of an offence and is liable to a fine or imprisonment.⁹⁴ If a body corporate contravenes the relevant sections and an "executive officer of the body knew that, or was reckless or negligent" as to the contravention and was in a position to influence the conduct and failed to "take reasonable steps" that person is guilty of an offence punishable by imprisonment.⁹⁵ Where hazardous waste is dealt with in contravention of the Act the Minister may order that the waste be dealt with as directed and failing that, take steps to do so. The Commonwealth is entitled to recover its expenses from the offending person as a debt.⁹⁶

The Act sets out strict guidelines under which the Minister is to make a decision on applications for permits, or "Basel Permits" as they are called

^{90.} Ibid., s. 10A-10F.

^{91.} Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposals, 22 March 1989, U.N. Doc. UNEP/WG.1904 (entered into force 2 May 1992).

⁹² Hazardow Waste (Regulation of Exports and Imports) Act 1989 (Cth.), ss. 4, 4A [Regulation of Exports and Imports Act].

^{93.} Ibid., Part 4

⁹⁴ Ibid, ss. 39, 40, 40A.

⁹⁵ Ihid, s. 40B.

^{96.} Ibid , Part 3.

in the Act. 97 Appropriate insurance is compulsory. 98 The powers given to the Minister are wide 99 but may be appealed to the Administrative Appeals Tribunal, an independent legal tribunal.

Liability is imposed, therefore, not strictly for polluting the marine environment but for contravention of the system of regulation that has been erected to limit pollution of the marine environment by restrictions on handling, dumping or incinerating hazardous waste.

A person who is convicted may be imprisoned for up to two years and a corporation may be fined up to 2,500 penalty units (AUD 275,000). ¹⁰⁰ A more severe penalty applies if the conduct injures or damages, or is likely to injure or damage, human beings or the environment. This penalty may be as high as 10,000 penalty units (AUD 1,100,000) for a corporation and five years imprisonment for an individual. ¹⁰¹ Executive officers of offending corporations may also be personally liable and the penalty is up to two years imprisonment. ¹⁰²

10. Environment Protection and Biodiversity Conservation Act 1999
A major review and revision of the Commonwealth environmental legislation resulted in the passage of the Environment Protection and Biodiversity Conservation Act 1999 (Cth.) (EPBC), which consolidated a number of acts dealing with the regulation of activities that may affect the environment. The Act is massive (over 600 pages) and covers all aspects of administration for the process of approvals, prosecutions for offences and the conservation of the environment, and protection of biodiversity. Although its major application is to land activities, it also applies to the marine environment out to the limits of the EEZ. The Act's regulatory provisions were not drafted from the point of view of protecting the marine environment from shipping offences. After the grounding of the

^{97.} Ibid., Part 2, division 3.

^{98.} Ibid., ss. 17,18

^{99.} Ibid. Two new offences were created by amendments to the Regulation of Exports and Imports Act (Cth.) in Schedule 1 of the Environmental Legislation Amendment Act 2001 (Cth.). The offences address not complying with an order to deal with waste in a specified way (ibid., s. 38B) and in selling hazardous waste to a body corporate incorporated outside Australia (ibid., s. 40AA).

^{100.} Ibid., s. 39(3), 40(3).

^{101.} Ibid., s. 39(5), 40(5).

^{102.} Ibid., s. 40B(1).

Bunga Teratai Satu in the Great Barrier Reef on 2 November 2000,¹⁰³ a review of the Commonwealth legislation was undertaken as the EPBC was seen as ineffective. As a result the Great Barrier Reef Marine Park Act 1975 (Cth.) was amended to make the Act more effective in groundings where no oil is spilled. The EPBC, however, could also be improved for applications outside the Great Barrier Reef.

Liability in relation to all persons and corporations under the EPBC arises from conduct in a "Commonwealth marine area" that offends against the Act. A Commonwealth marine area is defined as: (a) waters in the EEZ or over the continental shelf, except State waters; (b) the seabed and the airspace over the waters mentioned in (a) above. ¹⁰⁴ Liability for Australians may arise outside the EEZ or over the continental shelf. ¹⁰⁵

The offences in the marine areas under the Act are structured so that they vary depending on whether they occur inside or outside a Commonwealth marine area and whether the action impacts on the "marine environment," or occurs in a marine area. ¹⁰⁶ It is an offence to take "action that has, will have or is likely to have a significant impact on the environment," unless it is approved in some way. ¹⁰⁷ A similar offence occurs if the action is taken outside the said area but the impact occurs, or is likely to occur inside it. ¹⁰⁸ There is extensive provision for the listing and protection of certain endangered marine species, ¹⁰⁹ including cetaceans. ¹¹⁰

¹⁰³ On 2 November 2000 Mashkoor Hussain Khan pleaded guilty in the Cairns Magistrates Court. before KJD McFadden, Acting Magistrate, to an offence against s. 38A of the Great Barrier Reef Marine Park Act 1975 (Cth.) (GBRMPA) in that he did "negligently enter a Marine Habitat Protection Zone ..., through the navigation of a ship, . . other than [for] a purpose permitted under the zoning plan," for which he was fined A\$15,000 and ordered to pay costs. He also pleaded guilty on the same occasion to an offence against s. 113 of the GBRMPA Regulations in that he "did damage coral in the Cairns Area Plan of Management", for which he was fined A\$1,000. The First Officer was then allowed to leave the country. The Queensland EPA then laid charges which became the case of Williams v Maluysia International Shipping Corporation Berhad and Syed Nacem Jafar, Cairns Magistrates Court, Schemioneck SM, 6 February 2001, Numbers MAG-214641 and 214607 of 2000(0). The charges were for offences against s. 119 of the Environmental Protection Act 1994 (Qld.) in unlawfully causing serious environmental harm. The master pled guilty to this charge and the other charges were withdrawn. The submissions as to penalty and the Magistrate relied heavily on the decision of the New South Wales courts and, in particular, the Laura d'Anuto Case (Filipowski v Fratelli D'Amato [2000] NSWLEC 50). These charges arising from the grounding of the Bunga were new regulatory enforcements as the ship had not spilled any oil and the only damage, apart from that to the ship, was TBT scraped from the ship's bottom onto the coral reefs.

^{104.} See the Environment Protection and Biodiversity Conservation Act 1999 (Cth.), ss. 5, 24 [EPBC].

^{105.} Ibid., s. 5

^{106.} Ibid., Part 3, division 1, subdivision F.

^{107.} Ibid., s. 23.

^{108.} Ibid., ss. 23, 24A

^{109.} Ibid., Chapter 5, Part 13, division 4

^{110.} Marine mammals, including whales, dolphins, porpoises etc.

Regulation of international trade in wildlife is provided,¹¹¹ as is management of World Heritage Area and Commonwealth Reserves, including marine reserves. One object of the Act is to promote ecologically sustainable development.¹¹² The precautionary principle is a requirement of decision-making under the Act¹¹³ and there are extensive enforcement provisions. Liability arises from contravening a conservation order and injunctions may be sought from the court restraining offensive conduct.¹¹⁴

More specifically, an order may be sought from the Federal Court for an offender to pay a "civil penalty" in such amount as the court may order. A person who has been ordered to pay a civil penalty may also be charged, convicted and penalized for a criminal offence arising from the same or similar conduct. If a body corporate commits any of a number of offences an "executive officer" may be liable as well, in the circumstances set out in the Act, for a civil penalty (fine) or even a criminal penalty (imprisonment). Further, the Minister has power, in certain circumstances, to take steps to prevent, mitigate or repair environmental damage and recover that amount from the wrongdoer.

Under an unusual provision of the Act, if the Minister "suspects" that an act or omission constitutes a contravention of the Act or the regulations, whether it is an offence or not, the Minister may repair, remove, mitigate or prevent damage. The EPBC also covers the area of civil liability. Its provisions include that the "wrongdoer" may be liable to pay to an "affected party" who suffers loss or damage an amount equal to that loss or damage. This section applies whether or not there was an offence or a civil penalty provision. There is no requirement of any of the elements of any civil cause of action here, but it is, in effect, strict liability.

Under the EPBC liability for environmental damage, or even the risk or likelihood thereof, may give rise to substantial civil and criminal penalties as well as the costs for mitigating or repairing the damage.

The discussions, above, all relate to liability for damage to the marine environment from ships and breaches of the regulatory structure. On the other hand, it is a principle long accepted in maritime law that a shipowner

^{111.} Ihid., Chapter 5, Part 13A

^{112.} Ibid., s. 5

^{113.} Ibid., s. 391

^{114.} Ihid., Chapter 6, Part 17

^{115.} Ihid, Chapter 6, Part 17, division 15.

^{116.} Ibid., ss. 481-486.

^{117.} Ibid., Chapter 6, Part 17, division 18.

^{118.} Ibid., Chapter 6, Part 18.

^{119.} Ibid., s. 499.

^{120.} Ibid., s. 500.

may limit liability. This policy was adopted throughout Europe in the eighteenth and nineteenth centuries to encourage commerce in shipping and international trade.¹²¹ The modern Australian version is enacted in appropriate legislation, which will now be discussed.

11. Limitation of Liability for Maritime Claims Act 1989

The 1976 Limitation of Liability Convention (1976 Convention)¹²² is given effect in Australia by the Limitation of Liability for Maritime Claims Act 1989 (Cth.) (1989 Act). The 1976 Convention only applies where a person referred to in Article 1 (see below), seeks to limit liability before the court of a State Party, or seeks release of its vessel or other property, or the discharge of any security given within the jurisdiction of a State Party. ¹²³

It is convenient first to mention those areas where limitation is not available: 124

- (a) the 1976 Convention does not apply to air-cushion vehicles or to floating platforms constructed for the purpose of exploring or exploiting the natural resources of the sea-bed or the subsoil thereof.¹²⁵ The result is that there are no Australian limitation provisions applicable to hover-craft or to offshore drilling ships¹²⁶ that are actually engaged in drilling;¹²⁷
- (b) the Convention does not apply to Salvage claims or to General Average, claims under MARPOL 73/78, nuclear damage or claims by the servants (employees) of a relevant shipowner or salvor or their heirs or dependants.¹²⁸ It should be noted that the *Navigation Act 1912* (Cth.) also provides that the owner of a ship is not entitled to limit liability in respect of loss of life, personal injury or damage to property against any servant of the owner or the owners' heirs or dependants;¹²⁹

^{121.} See Michael White, "Limitation of Liability" in Michael White, ed., Australian Maritime Law (Annandale, NSW The Federation Press, 2000) at 295

^{122.} Convention on Limitation of Liability for Maritime Claims, 1976, 19 November 1976, 1456 U.N.T.S. 221 (entered into force 1 December 1986) [Limitation of Liability Convention].

^{123.} Ihid., Art. 15(1).

¹²⁴ There are quite a few areas of exclusion where a State Party is entitled to pass legislation to make exclusions, or to modify the effect of the provisions of the Convention. Except the exclusions expressly mentioned, Australia has not taken advantage of them, see *ibid.*, Art. 15(1)-(4).

^{125.} Ibid , Art. 15(6).

^{126.} Note that the Convention only applies to "ships", so offshore oil and gas rigs that are not ships are not included.

^{127.} Ihid., Art. 15(5).

^{128.} Ibid., Art. 3.

^{129.} Navigation Act 1912 (Cth.), s. 59B.

- (c) the right to limit liability is lost if the loss resulted from the personal act or omission of the person liable, committed with intent or recklessly and with knowledge that such loss would result;¹³⁰
- (d) the provisions of the 1976 Convention which allow limitation for claims relating to removal or destruction of wrecks or cargo that are sunk or abandoned do not have the force of law;¹³¹
- (e) further, the 1976 Convention does not apply in relation to the naval, military or air forces of a foreign country;¹³²
- (f) claims for damage to harbour works, basins, waterways or aids to navigation are given priority over other claims that are not for death or personal injury.¹³³

The Act does not apply to the extent to which a law of a state or the Northern Territory makes provision giving effect to the Convention in relation to that ship.¹³⁴ This is the "roll-back" provision which gives effect to the Offshore Constitutional Settlement, 1979.¹³⁵

The 1989 Act provides for a party to apply to the court for a limitation decree. Where a claim has been made in a Supreme Court, the application can be made in that court, by way of counter or cross-claim. Where no claim has been made, the applicant can bring the action to claim limitation in the Supreme Court of any State or Territory. 136 This provision does not limit the operation of section 25 of the Admiralty Act 1988 (Cth.), 137 which provides that an applicant for limitation may proceed in the Federal Court. The 1989 Act also makes provision for a court to transfer limitation proceedings to another suitable court, either on application of a party or of its own motion. The file is then transferred and the other court has jurisdiction to proceed. 138

^{130.} Limitation of Liability Convention, supra note 122, Art. 4.

^{131.} Limitation of Liability for Maritime Claims Act 1989 (Cth.), s. 6 [Limitation of Liability Act] excludes Art.2 (1) (d) & (e) of the Limitation of Liability Convention.

^{132.} Limitation of Liability Act, ibid., s. 7.

^{133.} Ibid , s. 8.

^{134.} Ibid., s. 5.

^{135.} For further discussion, see White (1994), supra note 11, at part 7.1.

^{136.} Limitation of Liability Act, supra note 131, s. 9(1).

^{137.} Ibid., s. 9(5).

^{138.} Ibid., s. 9(3), 9(4).

a. Persons Entitled to Limit Liability

As mentioned above, it is only the persons set out in Article 1 of the 1976 Convention who may limit liability.¹³⁹ It may be seen from Article 1 that a shipowner is defined to include the owner, charterer, manager and operator of a sea-going ship, and that the liability of the owner includes the liability for any action against the vessel. Note that it must be a "seagoing" ship to be covered by the limitation provisions.¹⁴⁰ Because the 1989 Act does not deal with non-seagoing ships, these ships are not entitled to limit under Australian law.¹⁴¹

What, then, amounts to a ship? There is no definition of "ship" in the 1976 Convention or in the 1989 Act. Some information may be drawn, therefore, from dictionaries, the common law and other legislation to assist with the determination of the meaning. In the Navigation Act 1912 (Cth.), "ship" is defined in section 6 of the Act to mean "any kind of vessel used in navigation by water, however propelled or moved...." This presumably includes a vessel under construction that is able to move. The definition of "ship" in the Admiralty Act 1988 (Cth.) should also be taken into account. There, vessels under construction that have not been launched are specifically excluded from the definition. 143 It is conceivable that some

139 Article I provides:

Persons entitled to limit liability

^{1.} Shipowners and salvors, as hereinafter defined, may limit their liability in accordance with the rules of this Convention for claims set out in Article 2.

^{2.} The term "shipowner" shall mean the owner, charterer, manager and operator of a seagoing ship.

^{3.} Salvor shall mean any person rendering services in direct connection with salvage operations. Salvage operations shall also include operations referred to in Article 2, paragraph 1(d), (e) and (f).

⁴ If any claims set out in Article 2 are made against any person for whose act, neglect or default the shipowner or salvor is responsible, such person shall be entitled to avail himself of the limitation of liability provided for in this Convention.

⁵ In this Convention the liability of a shipowner shall include liability in an action brought against the vessel herself.

^{6.} An insurer of liability for claims subject to limitation in accordance with the rules of this Convention shall be entitled to the benefits of this Convention to the same extent as the assured himself.

The act of invoking limitation of liability shall not constitute an admission of liability.

^{140.} The earlier, now repealed, provision under the Navigation Act 1912 (Cth.), Part VIII, was that s. 334 designated certain non-seagoing ships to be seagoing ships.

¹⁴¹ Western Australia had provided for limitation of liability for non-seagoing ships in the *Marine Act* (W.A.), Part IV, Division 4, proclaimed to commence 21 June 1983, but which has since been repealed.

^{142.} See Navigation Act 1912 (Cth.), s. 6. Section 6 goes on to include a barge, lighter or other floating vessel, an air-cushion vehicle or similar craft used in navigation and an off-shore industry mobile unit, and also has some exclusions.

^{143.} Admiralty Act 1988 (Cth.), s. 3.

owners may be able to limit liability in respect of their vessels, under the 1976 Convention and the 1989 Act, and also be exempt from arrest under the Admirally Act 1988 (Cth.). Such circumstances, however, would be unusual.

b. Salvors

As mentioned above, the 1976 Convention provides that "salvors" may limit liability for claims against them. A salvor is defined as "any person rendering services in direct connexion with salvage operations," which shall "include operations referred to in Article 2, paragraph (1) (d), (e) and (f)" (the wreck removal provisions). However, also as noted above, these wreck removal provisions are expressly removed from having the force of law in Australia. So, on one construction, a salvor may not claim the benefit of limitation in "raising, removal, destruction or the rendering harmless" of a ship which is "sunk, wrecked, stranded or abandoned;" or in respect of the "removal, destruction or the rendering harmless of the cargo" of such a ship.

These are very wide words when applied to salvage as there are many operations that involve aspects that come within their meaning. It seems that the court would have to read the words down and may even have to decide if some of the salvage operations can be severable from other parts of the operations. For instance, a salvor will often, in ordinary salvage operations, raise and remove a ship that has been sunk, wrecked or stranded. This is the whole purpose of salvage operations in many cases. Further, a salvor is encouraged under Article 14 of the International Convention on Salvage, 1989 (1989 Salvage Convention)¹⁴ to protect and preserve the marine environment, and is entitled to a salvage claim for the property even if there is no success. Therefore, there is an argument under public policy that the fact that a ship has been sunk, wrecked, stranded or abandoned should be no bar to salvage operations giving rise to a right to a limitation decree.

On the other hand, public policy would indicate that while the shipowner and others may not be able to limit in relation to removing a wreck or its cargo from a navigational channel of a harbour, 14x the salvor should

^{144.} Limitation of Liability Convention, supra note 122, Art. 1. However, Art. 3(a) indicates that salvors may not have their own claims limited.

^{145.} Ibid., Art. 1(3).

^{146.} Limitation of Liability Act, supra note 131, s. 6.

^{147.} International Convention on Salvage, 1989, With Final Act, 28 April 1989, B.T.S. 93 (1996) (entered into force 14 July 1996).

^{148.} The policy is that the government or harbour authority should be able to recover the full cost of having to remove the wreck if the owner does not.

be able to do so. This may be covered, at least to some extent, by the provisions of Article 2(2) of the 1976 Limitation of Liability Convention (1976 Convention), which provide that claims for such wreck or cargo shall not be subject to limitation if they relate to remuneration under a contract with the person liable. This would seem to contemplate a salvor contracting with the owner of a wreck and the owner not being able to limit liability against paying the full remuneration payable under that salvage contract. Since Articles 2(1)(d) and (e) have no effect in Australia, no limitation is available to an owner for wrecks and cargo salvage claims. 149

Before turning generally to discuss the amount of limitation, it should be mentioned that when the salvor is not working from a ship there is no tonnage calculation from which to calculate the upper limit. In this case the 1976 Convention provides that the limit of liability shall be based on 1.500 tons. 150

c. Amount of Limitation

The 1989 Act gives effect to the provisions of the 1976 Convention and, although those provisions are well known, it may be useful to mention the maximum amount of limitation. Article 6 covers this aspect. Claims for loss of life or personal injury are 333,000 Special Drawing Rights (SRDs)¹⁵¹ up to 500 tons¹⁵² with a rising scale as the vessel tonnage increases, with no maximum.¹⁵³

For claims not relating to loss of life or personal injury there is a lower amount, which is 167,000 SRDs up to 500 tons and rising thereafter with tonnage. 154 Where there are mixed loss of life and personal injury claims along with other claims, the former claims have priority to payment up to the limits for those claims and then they share pro rata with the other claims up to the final upper limit of liability. 155 There is a separate calculation for

¹⁴⁹ It would seem that the effect of *Barameda Enterprises Pty Ltd v O'Connor* [1988] 1 Qd.R. 359 (C.A.), which was decided under the previous Act and Convention, is still good law in Australia.

^{150.} Limitation of Liability Convention, supra note 122. Art. 6(4) provides: "The limits of liability for any salvor not operating from any ship or for any salvor operating solely on the ship to, or in respect of which he is rendering salvage services, shall be calculated according to a tonnage of 1,500 tons."

¹⁵¹ SRDs are the unit of account in the 1976 Convention, see ibid., Art.8.

¹⁵² Tonnage is calculated in accordance with the *International Convention on Tonnage Measurements of Ships, 1969, with Annexes (I & II),* 23 June 1969, 1291 U.N.T.S. 3, 4 (entered into force 18 July 1982), Annex I..

^{153.} The Australian dollar fluctuates, of course, in relation to SRDs but if an exchange rate of 60 cents is taken then this makes the limit rising from AUD 200,000 for up to 500 tons to about AUD 6.3 million for a 30,000 ton ship.

¹⁵⁴ With a 60 cents exchange rate this makes the limit of about AUD 100,000 for up to 500 tons to about AUD 3 million for a 30,000 ton ship.

^{155.} Limitation of Liability Convention, supra note 122, Art. 6(2).

claims by passengers, which is 46,666 SRDs multiplied by the number of passengers that the ship is authorized to carry up to a limit of 25 million SRDs. 156

d. The 1996 Limitation Convention Protocol

- On 2 May 1996 an IMO conference adopted the 1996 Protocol¹⁵⁷ to provide for enhanced compensation and to establish a simplified procedure to update future limitation amounts. The major changes made by the 1996 Protocol were:
- (a) claims in respect of loss of life or personal injury were to become 2 million Units of Account for up to 2,000 tons, increasing in steps with the tonnage of the ship, with no upper limit;
- (b) in respect of other claims as for (a), but 1 million Units of Account up to 2,000 tons and the amount for the increase per ton thereafter were less than that for loss of life or personal injury;
 - (c) an increase in the upper limit amounts for passenger claims;
- (d) a right of exclusion of the International Convention on Liability and Compensation for Damage in Connection with the Carriage of Hazardous and Noxious Substances (HNS Convention) was reserved to the State Parties to the 1996 Protocol:
- (e) future proposals to amend limits would be decided by a two-thirds majority vote in the IMO Legal Convention;
- (f) the 1996 Protocol was to enter into force 90 days following ratification by ten states.

The 1996 *Protocol* entered into force on 13 May 2004. According to the IMO, as of 31 August 2005, there were 17 contacting states to the 1996 *Protocol*, representing 13.87% of world tonnage. Australia acceded to the 1996 *Protocol* in late 2002, and it entered into force for Australia on 13 May 2004.¹⁵⁸

^{156.} For 1,000 passengers this makes the limit, at an exchange rate of 60 cents, of about AUD 28 million.

^{157.} Protocol of 1996 to Amend the Convention on Limitation of Liability for Maritime Claims of 19 November 1976, 2 May 1996, [2004] A.T.S. 16 (entered into force 13 May 2004).

^{158.} See IMO web site http://www.imo.org/conventions.

II. State and Territory Legislation

As the Australian legal system is a federation of states, and as the Commonwealth and the States agreed in the Offshore Constitutional Settlement 1979 to a sharing of powers out to the three mile limit, then the state and Northern Territory Parliaments (the State Parliaments) are entitled to pass their own legislation giving effect to the international conventions. They have all done so, with differing degrees of success. A brief mention of the relevant main legislation in each of the Australian states and the Northern Territory would have been appropriate in earlier times. However, over the past decade the various state parliaments have been driven by local political issues to pass legislation that is not in conformity with the international conventions, with the Commonwealth legislation or with each other.

There was considerable uniformity in the 1980s in the states giving effect to MARPOL, partly because a draft Act was produced and all of the State Parliaments were encouraged to follow it. 159 But during the 1990s the uniformity was left behind and the States now have legislation that only reflects the provisions of the relevant international convention to the extent that the parliaments of the day were informed of the need for conformity with those provisions and, if informed, were prepared to abide by them. 160

Not only is there a diversity of acts, and courts for enforcement, but the acts are being rapidly amended and appealed. One of the main forces behind this rapid change is the need for the protection and preservation of the marine environments. Every state and the two Territories with parliaments have marine parks, special areas or areas of particular sensitivity to marine pollution and the local parliaments are keen that they should be preserved.

The result is that there is a matrix of Australian legislation relating to the offshore area, especially within the three-mile limit where the State and the Commonwealth jurisdictions overlap. There is a need for an Australian national approach to legislation and general regulation of shipping and protection and preservation of the marine environment. The Commonwealth is the entity that is capable of change in this direction and it has made efforts from time to time¹⁶¹ but with little success in achieving

^{159.} See state and Northern Territory Legislation: Pollution of Waters by Oil and Noxious Substances Acts of 1986 & 1987.

^{160.} The Northern Territory Parliament had an act that still gave effect to OILPOL 54 many years after MARPOL 73/78 had, in effect, repealed OILPOL.

^{161.} The Commonwealth governments from time to time have introduced national regulatory advisory boards and an *Australian Oceans Policy* and taken other initiatives. Some of the States, too, have taken initiatives from time to time but an overarching national legislative umbrella still is required.

any uniformity. This matrix is too voluminous to describe but readers should be aware that maritime legislation usually involves State as well as Commonwealth issues.

Mention has been made of particular areas and issues and it is now appropriate to touch on three of them.

III. Particular Areas

The Australian coastline has, like many countries, a number of offshore areas and issues that are of particular quality or importance, or both. In Australia's case there are three areas and one issue that are all worthy of mention from the point of view of marine pollution from ships. The first area is the Great Barrier Reef, which is one of the marine wonders of the world and which has its own special regime concerning its protection and preservation. The second area is the Torres Strait, which is also a major tropical reef area that is subject to its own special regime, including a treaty concerning the area with Papua New Guinea. The third area is Australia Antarctic Territory. Each of these areas gives rise to different regimes for liability for pollution of the marine environment.

These three special areas and the nuclear damage issue will be dealt with below.

1. Great Barrier Reef

The Great Barrier Reef (GBR), situated off the State of Queensland in the northeast of the country, stretches for 2,340 kilometres, covers approximately 345,000 square kilometres, and contains 2,900 reefs, some 300 coral cays and about 600 islands. It has significance for the economy in tourism and fishing and, for good or bad, encompasses the major shipping channel that passes up the east coast of Australia (the inner route).

The importance of the GBR has long been recognized, as has its vulnerability to pollution and the need for its protection and preservation. The GBR has been declared a World Heritage Area and the GBR World Heritage Area is about 97.7% within the Great Barrier Reef Marine Park, about 1.7% in Queensland waters, and about 0.6% in Queensland-owned islands. Because of constitutional provisions, Commonwealth legisla-

^{162.} Austl., Commonwealth Great Barrier Reef Marine Park Authority, Annual Report 1999-2000 (Townsville, Old: Reef HQ, 2000) at iv. The latest Annual Reports are available online: http://www.gbrmpa.gov.au.

tion covers the 97.7% and Queensland legislation the balance of the area. 163

The vulnerability of the GBR to ship pollution, particularly to oil and chemical spills, resulted in action by the IMO. Instead of being a "Special Area" the issue was dealt with in MARPOL 73-78 in the definition of "nearest land." In Annex 1 this is defined generally as meaning from the baseline of the territorial sea, but for the northeast coast of Australia it was given a special definition. In effect the definition drew a line, by reference to latitude and longitudinal points, which was outside the outer reef of the GBR. ¹⁶⁴ This gave protection to the GBR area by severely restricting the discharge activities of ships in the reef area. For most activities there is no discharge of oil or other waste from ships in the GBR and conduct which does so is liable to prosecution and severe, and increasing, penalties.

There has always been a system of pilotage through the GBR since gazettal of Queensland Governmental Regulations in 1884¹⁶⁵ and this system has provided an invaluable service for over 100 years. Regulation of the pilotage service was transferred from the Queensland Government to the Commonwealth, under which it was administered by the Australian Maritime Safety Service (AMSA). The service has been privatised and there are now three main companies ¹⁶⁶ which provide pilotage service through the inner route to ships requiring pilots. Compulsory pilotage was implemented in 1991. All vessels of 70 metres or more in length and all loaded oil tankers, chemical carriers and gas carriers of any length, must use the services of a pilot licensed by AMSA.

Not only is there international regulation of the GBR, there is detailed Australian legislation to enforce and extend it. The *Great Barrier Reef Marine Park Act 1975* (Cth.) provides for the establishment, management, care and development of a marine park within the GBR region.¹⁶⁷ Under the Act the Great Barrier Reef Marine Park Authority (GBRMPA) is charged

^{163.} A more detailed discussion of the GBR and marine pollution from ships can be found in Michael White, "Navigational Rights in Sensitive Marine Environments: The Great Barrier Reef" in Donald R. Rothwell and Sam Bateman, eds., Navigation Rights and Freedoms, and the New Law of the Sea (The Hague: Martinus Nijhoff Publishers, 2000).

^{164.} For the definition of "nearest land" see MARPOL 73/78, *supra* note 25, Annex 1, Reg. 1(9), "Special Area" is defined in Reg. 1(10). Annexes II, IV and V adopt the definition of "nearest land" used in Annex 1.

^{165.} A sound history of pilotage in the Torres Strait and the GBR is in Captain John Foley, Reef Pilots (Sydney Banks Bros & Street, 1982)

¹⁶⁶ The three main pilotage companies are Queensland Coastal Pilotage Services Pty Ltd (Coastal Pilots), Australian Reel Pilots (Reef Pilots), formerly Queensland Coast and Torres Strait Pilots Association; and Hydro Pilots (Australia) Pty Ltd (Hydro Pilots).

^{167.} GBRMPA has many publications on its website setting out its structure and activities, see online: http://www.gbrmpa.gov.au.

with these obligations. A marine park has been established and, under a zoning system, various activities, particularly fishing, boating and tourism, are regulated. In some zones no such activities are allowed and in others they are given considerable freedom. The National Plan is the organisation for clean up of any oil or other pollution spills, and there is a contingency plan for the GBR area called REEFPLAN.¹⁶⁸

The GBR has a compulsory reporting system of ships in the Inner Route, known as REEFREP. Under REEFREP all ships over 50 metres long, all oil tankers, liquefied gas carriers, chemicals tankers or ships coming within the Code for the Safe Carriage of Irradiated Nuclear Fuel, Plutonium and High-level Radioactive Wastes in Flasks on Board Ships (INF Code), regardless of length, and ships engaged in towing over a required dimension, are to report by radio at designated reporting points and when entering or leaving ports. Information is passed back to other ships in the area to assist with their safe passage. 169 Liability can arise for breaches of the regulations requiring reporting.

The provisions of the UNCLOS also apply to the GBR. It needs to be kept in mind that the zoning system, which operates from the baselines, is quite complex in the GBR region. The baselines run through the GBR from, generally, the seaward side of the inner shipping route. This has the effect that waters to the landward side of the baselines are internal waters to the State of Queensland, with the exception that the whole of the Great Barrier Reef marine park is managed under Commonwealth jurisdiction under the Great Barrier Reef Marine Park Authority. As most of the east coast of Queensland to the north of Fraser Island is in the GBR marine park, the Commonwealth jurisdiction applies to most of it. Thus relevant provisions of the UNCLOS can be given effect under the Commonwealth legislation not the state legislation. The effect on liability is that, in most cases, it falls for determination under the Commonwealth legislation, rather than that of the State of Oueensland.

2. Torres Strait

The Torres Strait, between the north of Cape York and Papua New Guinea (PNG), has long been a special area, as the Queensland Colony made its maritime boundaries close to the Papuan coast in the late nineteenth Century. After Australian federation in 1901 the sea boundary for Austra-

^{168.} For details of the Australian National Plan on oil spills, see White (1994), supra note 11 at part 10.2. For details of REEFPLAN see, ibid., at part 9.4.2.

^{169.} Austl., Qld., Queensland and Transport & Australian Maritime Safety Authority, Reef Guide: A Shipmaster's Handbook to the Torres Strait and the Great Barrier Recf, 5th ed. (May 2003).

lia, therefore, was established close to the coast of what later became PNG (in 1975). To make special provision for the peoples of the Torres Strait, who have particular ties with the people of PNG and with the sea, Australia and PNG entered into the 1978 *Torres Strait Treaty*. ¹⁷⁰

Under the *Torres Strait Treaty*, doubts as to sovereignty and sea boundaries were settled and provision was made for a protected zone where the customary traditional rights of the inhabitants were preserved. Mining or drilling in the Strait was banned for an initial period of ten years, which has since been extended. A Torres Strait Joint Advisory Council was established and an administrative commission provided the regulatory and administrative structure.¹⁷¹ The provisions of the Treaty have worked well over the years since it came into force, but the area now needs greater protection and regulation than is possible under the present regime. The governing regime should be reformed and improved. However, in 2005 the Australian government, in combination with the IMO, has introduced a Pilotage scheme for the Strait, which is a step forward and should improve the safety aspects in this difficult navigational area.

3. Antarctic Area

The main area of Australian responsibility in the Antarctic region is the Australian Antarctic Territory ("the Territory"). The Territory is defined as being "that part of the Territory in the Antarctic seas which comprises all the islands and territories, other than Adelie Land, situated south of the 60th degree south latitude and lying between the 160th degree east longitude and the 45th degree east longitude." Although the Territory was originally claimed by the United Kingdom in 1933, sovereignty over the

^{170.} Treaty between Australia and the Independent State of Papua New Guinea Concerning Sovercignty and Maritime Boundaries in the Area Between the Two Countries, Including the Area Known
as the Torres Strait, and Related Matters, 18 December 1978, A.T.S. 1985 No. 4 (entered into force
15 February 1985) [1978 Torres Strait Treaty]. For more complete discussion, see Stuart Kaye, The
Torres Strait. International Straits of the World Series, Vol. 12 (The Hague & Boston: Martinus
Nijhoff Publishers, 1997), White (1994), supra, note 11 at part 9.5. Stuart Kaye, Australia's Maritime Boundaries (Wollongong, Austl.: Centre for Maritime Policy, University of Wollongong, 1995),
171. To give effect to the proxisions of the 1978 Torres Strait Treaty the Commonwealth passed the
Torres Strait Treaty (Miscellaneous Amendments) Act 1984 (Cth.) and Queensland passed the Torres
Strait Fisheries Act 1984 (Qld.).

¹⁷² More detailed information on the international legal regimes applicable to the environment in the Antarctic region may be found in Donald R. Rothwell & Ruth Davis, Antarctic Environmental Protection—4 Collection of Australian and International Instruments (Leichhardt, NSW: Federation Press, 1997); Francesco Francioni, "Liability for Damage to the Antarctic Environment" in Francesco Francioni & Tullio Scovazzi, eds., International Law for Antarctica (The Hague & Boston: Kluwer Law International, 1996)

^{173.} Australian Antarctic Territory Act 1954 (Cth.), s. 4. Acknowledgement is made of the assistance of Mr Jonathan Ketcheson, Research Assistant, Centre for Maritime Law, in this part, during 2002

area was soon transferred to the Commonwealth of Australia.¹⁷⁴ It was this territorial interest in Antarctica that led Australia to become a founding party to the *Antarctic Treaty*.¹⁷⁵ in 1959.¹⁷⁶

There is currently no international convention detailing which parties will be held liable in the event that environmental damage is caused within the area governed by the Antarctic Treaty. Provision has been made for the adoption of an additional annex to the *Protocol on Environmental Protection to the Antarctic Treaty* (Madrid Protocol)¹⁷⁷ which will "elaborate rules and procedures relating to liability for damage arising from activities taking place in the Antarctic Treaty area and covered by this Protocol."¹⁷⁸ However, this has still not taken place. Various draft annexes have been circulated but a consensus between the Treaty parties has proven difficult to reach. The first committee of the UN General Assembly has identified the delay in reaching agreement on a liability annex as an issue of concern that will have to be addressed by the parties to the Treaty as a matter of urgency.¹⁷⁹ The issue will be raised once again at the 26th Antarctic Treaty Consultative Meeting in 2003.¹⁸⁰

The Madrid Protocol prohibits the discharge of oil except in the circumstances provided for under Annex I of MARPOL 73'78.¹⁸¹ The discharge of sewage is prohibited within 12 nautical miles of land or ice shelves.¹⁸² Furthermore, the discharge of noxious liquid substances is prohibited where this discharge is of a quantity or concentration that would be harmful to the marine environment.¹⁸³ The Madrid Protocol requires

¹⁷⁴ Australia accepted the transfer from the United Kingdom, and named the area the Australian Antarctic Territory under s. 2 of the Australian Antarctic Territory Acceptance Act 1933 (Cth.).

^{175.} The Antarctic Treaty, 1 December 1959, 402 UNITS 71 (entered into force 23 June 1961) [Antarctic Treaty].

^{176.} The Antarctic Treaty was given force of Australian law under the Antarctic Treaty Act 1960 (Cth.).

^{177.} Protocol on Environmental Protection to the Antarctic Treaty 4 October 1991, A.T.S. 1998 No. 6 (entered into force 14 January 1998) [Madrid Protocol]. The Madrid Protocol was concluded on 4 October 1991, ratified by Australia on 6 April 1994 and entered into force on 14 January 1998.

^{178.} Mudrid Protocol, thid., Art. 16.

^{179.} United Nations, Press Release, GA DIS 3243 "Disarmament Committee Begins Discussion on Antarctica" (30 October 2002), online: United Nations http://www.un.org/News/Press/docs/2002/gadis3243.doc.htm. One writer has suggested that the strict liability standard adopted in Article VIII of the Convention for the Regulation of Antarctic Mineral Resource Activities, 1988 might provide a guide as to the kind of standard that might be adopted under the Madrid Protocol, see Donald R. Rothwell, "Environmental Regulation of the Southern Ocean" in James Crawford & Donald R. Rothwell, eds., The Law of the Sea in the Asian Pacific Region (Dordrecht & Boston: Martinus Nijhoff Publishers, 1995) at 110

^{180.} XXV Antarctic Treaty Consultative Meeting Antarctic Treaty: Final Report of the Twenty-Fifth Antarctic Treaty: Consultative Meeting (Warsaw, Poland, 10-20 September 2002), online: XXV Antarctic Treaty Consultative Meeting http://www.ats.org.ar/25atcm/25atcmfe.doc, at 18.

^{181.} Madrid Protocol, supra note 177, Annex IV Art. 3.

^{182.} Ihid., Art. 6.

^{183.} Ibid., Art. 4.

Australia to enact "rules and procedures relating to the liability for damage arising from activities taking place in the Antarctic Treaty area and covered by the Protocol." The Antarctic Treaty area is defined as the area south of 60° south latitude. 185

Australian legislation to give effect to these laws in the Antarctic region are contained in the *Protection of the Sea (Prevention of Pollution from Ships) Act 1983* (Cth.). The Act has force for all aspects of pollution (e.g., oil, packages, garbage) in Australian jurisdiction but it has also applied sewage restrictions in the Antarctic area before the sewage regime under MARPOL had force. ¹⁸⁶ If a person recklessly or negligently discharges untreated sewage into the Antarctic area then this offence attracts a penalty of up to 2,000 penalty units (AUD 220,000). ¹⁸⁷ Furthermore, ships discharging some substances in the Antarctic area cannot avail themselves of some defences otherwise available. ¹⁸⁸

In summary, in the Antarctic region there is liability for marine pollution regimes similar to other Australian maritime regions and there is a keen awareness that the Antarctic seas should be kept uncontaminated and free of pollution.

4. Nuclear Damage 189

a. Major Statutory Scheme

The main Australian civil liability legislation for damage to the environment caused by nuclear materials is found in the *Environment Protection* and *Biodiversity Conservation Act 1999* (Cth.) (EPBC). The Act prohibits individual persons in the pursuit of trade or commerce, ¹⁹⁰ persons in a Territory, ¹⁹¹ and constitutional corporations and Commonwealth authorities ¹⁹² from undertaking a nuclear action that has, will have, or is likely to have a significant impact on the environment. Contravention of this prohibition will result in a civil penalty of 5,000 penalty units for an individual

¹⁸⁴ Ibid , Art. 16.

^{185.} Antarctic Treaty, supra note 175, Art. VI.

¹⁸⁶ Prevention of Pollution from Ships Act, supra note 29, Part IIIB; see generally White (1994), supra note 11 at part 4-1-4, Michael White, "Marine Pollution from Ships: International Conventions and Australian Laws" in Zada Lipman & Gerry Bates, eds., Pollution Law in Australia (Australia: LexisNexis Butterworths, 2002).

^{187.} Prevention of Pollution from Ships Act, ibid., s. 26BC.

^{188.} Ibid., s. 21(14).

^{189.} Acknowledgement is made of the extensive assistance received from Raphael Touze, *The Ocean Shipment of Japanese Irradiative Nuclear Fuel. The Legal Issues* (LLM Dissertation University of Queensland, 2002) [unpublished] and of Stephen Knight, Research Assistant, Centre for Maritime Law during 2003, in the preparation of this part.

^{190.} EPBC, supra note 104, s. 21(2)

^{191.} Ibid., s. 21(3).

¹⁹² Ibid., s. 21(1).

or 50,000 penalty units¹⁹³ for a corporation.¹⁹⁴ There is also provision for criminal charges to be laid with a possible penalty of up to seven years jail or a fine of up to 420 penalty units or both.¹⁹⁵ The provisions of this Act are relevant to the issue of liability for nuclear damage caused at sea because one of the definitions of a "nuclear action" is the transporting of spent nuclear fuel or radioactive waste products arising from reprocessing.¹⁹⁶ While transport by ship is not specifically mentioned, there appears to be no reason why transport of nuclear materials via ship would not come within the scope of the Act. It should be noted that there are a number of statutory exceptions that allow for the penalty provisions of the Act to be overridden if approval is gained under the Act or there is a declaration from the relevant Minister.¹⁹⁷

The strength and simplicity of the scheme that Australia has under the EPBC for apportioning liability for pollution caused by the accidental or intentional misuse of radioactive materials may explain why Australia is not presently a party to any of the international conventions currently in force relating to how liability is generally to be apportioned in the event of a nuclear accident. The existing conventions place a number of barriers in the way of a party seeking to use their provisions to gain compensation for damage to the natural environment as a consequence of nuclear pollution. The A careful analysis of the definition of "damage" under the existing conventions reveals that damage to the natural environment, as opposed to persons and property, is not clearly included. Australia is a signatory to the Convention on Supplementary Compensation for Nuclear Damage ("SupComp"). The aim of this Convention is to establish a new world-

^{193.} EPBC, supra note 104. x 21.

^{194.} Crimes Act 1914 (Cth.), s. 4AA

^{195.} See generally, ibid., s. 22A

^{196.} Ibid., s. 22(1)(b).

^{197.} The list of exceptions to penalty provisions is contained in the EPBC, supra note 104, s. 23(4).

^{198.} These conventions being the Convention on Third Party Liability in the Field of Nuclear Energy with Annexes (I and II), 29 July 1960, 956 U.N.T.S. 251 (entered into force 1 April 1968) (the Paris Convention), the Vienna Convention on Civil Liability for Nuclear Damage, 21 May 1963, 1063 U.N.T.S. 265 (entered into force 12 November 1977) (the Vienna Convention) and the Convention Relating to Civil Liability in the Field of Maritime Carriage of Nuclear Material, 17 December 1971, 974 U.N.T.S. 255, 256 (entered into force 15 July 1975) (the Brussels Convention).

^{199.} See generally the analysis of the provisions of the currently in force conventions by Patrick Blanchard, "Responsibility for Environmental Damage under Nuclear and Environmental Instruments: A Legal Benchmarking" (2000) 18(3) Journal of Energy & Natural Resources Law 233 at 235-237.

^{200.} Jon M. Van Dyke, "The Legal Regime Governing Sea Transport of Ultrahazardous Radioactive Materials" (2001) 8 Tropical Coasts 4 at 8.

^{201.} Convention on Supplementary Compensation for Nuclear Damage, 12 September 1997, 36 I.L.M. 1473 (not yet in force). Australia became a signatory to the convention on 1 October 1997.

wide liability apportionment scheme supplanting previous conventions and providing new guidelines for national legislation.²⁰² This Convention is unlikely to come into effect for some considerable time.²⁰³

b. Related Obligations under Multilateral Treaties

While not a party to the major international conventions regarding liability regimes for nuclear damage, Australia is a party to a number of other multilateral treaties that have imposed obligations in relation to the regulation of the carriage of nuclear materials.

The most general multilateral treaty instrument to which Australia is a party that has some application to the maritime carriage of nuclear material is the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal (Basel Convention).304 At first glance it appears that this convention fails to cover nuclear waste because, according to Article 1(3) of the Convention, "wastes which, as a result of being radioactive, are subject to other international control systems, including international instruments, applying specifically to radioactive materials, are excluded from the scope of this convention."205 Radioactive wastes may be covered by the convention in the event they are not subject to other international control systems. A report on the Basel Convention issued in May 1993 by U.S. Deputy Secretary of State Lawrence Eagleburger noted that "the Convention does not regulate movements of low-level radioactive wastes that are covered by other international control systems, such as the Code of Practice of the International Atomic Energy Agency..." Further, the International Atomic Energy Agency (IAEA) has stated that some categories of radioactive wastes are not covered by the IAEA control system because the level of the waste's radio-

^{202.} A copy of the text of the SupComp Comention may be found online: International Atlantic Energy Agency (http://www.iaea.or.at/Publications Documents Infeires 1998 infeire567.shtml>, 203. The SupComp Convention, pursuant to Article XX 1, "shall come into force on the ninetieth day following the date on which at least 5 States with a minimum of 400,000 units of installed

day following the date on which at least 5 States with a minimum of 400,000 units of installed nuclear capacity have deposited an instrument referred to in Article XVIII." Currently, only 16 nations have become signatories to the Convention and of those only Argentina, Morocco and Romania have deposited an instrument of the type referred to in Article XVIII of the Convention.

²⁰⁴ Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposals, 22 March 1989, U.N. Doc. UNEP/WG 190.4 (entered into force 2 May 1992) [Basel Convention]. For the general application of the Basel Convention to marine pollution and Australian jurisdiction see White (1994), supra note 11 at part 4-1.4.

^{205.} Busel Convention, ihid., Art. 1(3). The UNEP Secretariat, in the first draft of the Busel Convention, proposed the exclusion of all radioactive wastes. Such proposal was however criticized by some States parties to the conference and the wording of Article 1(3) was finally adopted.

^{206.} Leich M. Nash, "Contemporary Practice of the United States Relating to International Law" 85 Am. J. Int'l L. 668 at 674, 675.

activity is too low to bring it within the IAEA's purview. Australia has incorporated the key tenets of the Basel Convention into legislation through the permit system instituted in Part 2 of the Hazardous Waste (Regulation of Exports and Imports) Act 1989 (Cth.).

More specifically concerned with the carriage of nuclear materials by sea is the Convention on the Prevention of Marine Pollution by Dumping of Waste and Other Matter (London Convention).207 The 1993 amendments to the London Convention prohibit the dumping of radioactive waste or any other radioactive matter. Radioactive materials are defined as a type of "controlled material" for the purposes of the Environment Protection (Sea Dumping) Act 1981 (Cth.). 2018 This brings radioactive materials within the penalty regime established under that Act²⁰⁹ which has already been discussed above in Part I(8) of this article. Radioactive material is by definition a "seriously harmful material."210 This is an aggravating factor when a penalty is imposed under the Act.211

A multilateral treaty to which Australia is a party of particular relevance to the handling of nuclear waste in the Pacific region is the Convention to Ban the Importation into Forum Island Countries of Hazardous and Radioactive Wastes and to Control the Transboundary Movement and Management of Hazardous Wastes within the South Pacific Region (Waigani Convention).²¹² Obligations Australia has taken on by ratifying this convention include, inter alia, ensuring that no radioactive material is exported to any of the other parties to the convention,²¹³ providing assistance in the event of any accident involving radioactive material that may occur in the area under the aggs of the convention²¹⁴ and the acceptance of the need to provide prior notification and receive written consent from

^{207.} Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter, 29 December 1972, 1046 U.N.T.S 120 (entered into force 30 August 1975) [London Convention]. Australia became a signatory to the convention on 10 October 1973 and ratified the convention on 21 August 1985. The convention entered into force for Australia on 20 September 1985.

^{208.} Environment Protection (Sea Dumping) Act 1981 (Cth.), s. 4 and Schedule 1, Arts. 4-6 and Annex 1(3) [Sea Dumping Act]; see generally White (2002), supra note 188.

^{209.} Sea Dumping Act, thid., ss. 10A-10D.

^{210.} Ibid., s. 4.

^{211.} See generally, ibid., ss.10A-10D.

²¹² Convention to Ban the Importation into Forum Island Countries of Hazardous and Radioactive Wastes and to Control the Transboundary Movement and Management of Hazardous Wastes Within the South Pacific Region, 16 September 1995, A.T.S. 2001 No. 17 (entered into force 21 October 2001) [Waigani Convention]. Australia became a signatory to this convention on 16 September 1995 and ratified it on 17 August 1998. See also White, (1994), supra note 11 at part 3.3.7. 213. Waigani Convention, ibid., Art. 4(1)(b).

^{214.} Ibid., Art. 4(4).

every State through which hazardous waste will be transported.²¹⁵ As a so-called "shipping state" for nuclear material, even if only a minor player in comparison to countries such as the United Kingdom and Japan, Australia has broken ranks to some extent by agreeing to these notification and consent provisions. Australia has put into place a number of legislative regulations which reflect its implementation requirements.²¹⁶ This convention is merely the latest in a number of agreements involving South Pacific nations concerning pollution in general, and nuclear weapons and radioactive waste in particular, to which Australia has been a party.²¹⁷

c. Global Regulatory Codes and Standards

Both the International Maritime Organisation (IMO) and the International Atomic Energy Agency (IAEA) have produced global regulatory instruments applicable to the maritime carriage of irradiative nuclear fuel.

d. IMO Instruments

It is one of the key responsibilities of the IMO to establish codes and standards for the maritime transportation of packaged hazardous materials. Two such codes produced by the IMO that have direct relevance to the carriage of irradiative materials are the *International Maritime Dangerous Goods Code* (IMDG Code)²¹⁸ and the *Code for the Safe Carriage of Irradiated Nuclear Fuel, Plutonium and High-level Radioactive Wastes in Flasks on Board Ships* (INF Code).²¹⁹

The IMDG Code was developed as an international code for the transport of dangerous cargoes at sea. It covers matters such as the packing, stowage, and segregation of incompatible substances. ²²⁰ The IMDG Code

^{215.} Ibid., Art. 6.

^{216.} See, for example, Customs (Prohibited Exports) Amendment Regulations 1999 (No 1) (SR 1999 No 9), Hazardous Wastes (Regulation of Export and Imports) (Fees) Amendment Regulations 1999 (No 1) (SR 1999 No 6); Hazardous Wastes Regulations of Exports and Imports (Waigani Convention) Regulations 1999 (SR 1999 No 7).

^{217.} Other conventions include the Convention for the Protection of the Natural Resources and Environment of the South Pacific Region, 24 November 1986, A.T.S. 1990 No. 32 (entered into force 22 August 1990), the Protocol concerning Cooperation in Combating Pollution Emergencies in the South Pacific Region, 25 November 1986, 26 I.L.M. 59 (1987) and the South Pacific Nuclear Free Zone Treaty, 6 August 1985, 1445 U.N.T.S. 177, 178 (entered into force 11 December 1986).

^{218.} International Maritime Organization, *International Maritime Dangerous Goods Code* (London: Intergovernmental Maritime Consultative Organization Publications, 1972).

^{219.} International Maritime Organization, Code for the Safe Carriage of Irradiated Nuclear Fuel, Plutonium and High-Level Radioactive Wastes in Flasks on Board Ships. See online: International Maritime Organization, 18th Assembly, IMO Resolution A.748(18) (2001) (4 November 1995) [INF Code], 220. IMO website, International Maritime Dangerous Goods Code (IMDG) Code http://www.imo.org/Safety/mainframe.asp/topic_id=158.

includes provisions for the transportation of all categories of hazardous materials including radioactive materials (known as class 7 materials under the Code).²²¹ The IMDG Code refers to the IAEA's Regulations for the Safe Transport of Radioactive Material. It became mandatory from September 2003²²² under Chapter VII of the International Convention for the Safety of Life at Sea (SOLAS).²²³

The INF Code was developed and adopted by the IMO Assembly in November 1993 as a voluntary code for IMO Member States.²²⁴ It was developed to complement the provisions of the IMDG Code. The INF Code regulates the construction, equipment and operation of the ships engaged in the carriage of irradiative nuclear fuel, either spent fuel, reprocessed fuel or nuclear wastes. On 27 May 1999, the Marine Safety Committee (MSC)²²⁵ decided to incorporate the INF Code into SOLAS and by so doing make the provisions of the Code mandatory for States who are contracting parties to the SOLAS Convention.²²⁶ Amendments making the INF Code mandatory under SOLAS Article VII (Carriage of Dangerous Goods) entered into force on 1 January 2003.²²⁷

e. IAEA Instruments

The International Atomic Energy Agency (IAEA) is an autonomous organization under the United Nations created in 1957.²²⁸ Among its numerous missions, the IAEA develops and promotes the achievement of

^{221.} U.S., Department of Transportation, United States Coast Guard, Navigation and Vessel Inspection Circular No. 3-94 (NVIC 3-94) (26 May 1994), online: U.S. Department of Transportation http://www.uscg.mil/hg/g-m/nvic-3-94-n3-94-htm.

^{222.} See IMO statement, online: International Maritime Organization http://www.imo.org/conventions/contents.asp?topic_id=257&doc_id647--.

^{223.} International Convention for the Safety of Life at Sea, 1 November 1974, 1184 U.N.T.S. 2 (entered into force 25 May 1980) [SOLAS]. Australia acceded to the convention on 17 August 1983 224. INF Code, supra note 219. The Assembly of the IMO stated in Resolution A. 748(18) that the IMDG Code, which generally implements the International Atomic Energy Agency (IAEA) Regulations for the Safe Transport of Radioactive Material, contains no specific requirements for the design and equipment of ships engaged in the carriage of irradiated nuclear fuel, plutonium and high level radioactive waste.

^{225.} The Maritime Safety Committee is the most senior of the IMO committees. It has nine sub-committees. The MSC specialises in various aspects of the safe design, equipment and operation of merchant ships.

^{226.} Marine Safety Committee, International Code for the Safe Carriage of Packaged Irradiated Nuclear Fuel, Plutonium and High-Level Radioactive Wastes on Board Ships (INF Code) under the International Convention for the Safety of Life at Sea of 1 November 1974, 71st session: 19-28 May 1999.

^{227.} See IMO statement, supra note 222.

^{228.} International Atomic Energy Agency, *Profile of the IAEA*, online: IAEA http://www.iaea.org/worldatom/About/Profile/>.

safety standards in the area of nuclear energy.²²⁹ There are two IAEA instruments that are of particular interest in the context of the maritime transport of nuclear materials.

The first of these instruments is the Code of Practice on the International Transboundary Movement of Radioactive Waste (IAEA Code of Practice). The General Conference of the IAEA adopted this code by a resolution dated 21 September 1990.230 This instrument only applies to radioactive wastes²³¹ and does not apply to spent or reprocessed nuclear fuel. The IAEA Code of Practice provides a number of recommendations that every state involved in the carriage of nuclear waste are advised to follow. These recommendations are not binding and the Code does not seek to hide the fact that it is only advisory in nature.232

The second IAEA instrument of note comprises the Regulations for the Safe Transport of Radioactive Material (IAEA Regulations). These regulations establish standards associated with the transport of radioactive materials. These regulations are considered by the UN Committee on the Transport of Dangerous Goods as the standards to be followed for the international transportation of nuclear materials.²³³ Australian legislation currently allows for codes of practice for nuclear activities to be formulated and given the status of a federal statutory regulation.²³⁴ The codes of practice currently in force are set out in section 36 of the Australian Radiation Protection and Nuclear Safety Regulations 1999 (Cth.).

As may be seen, liability for pollution of the marine environment from ships carrying radioactive materials in waters under Australian jurisdiction is imposed by international conventions as well as Australian legislation and regulations. Ship owners and masters are liable to substantial penalties for breaches of these instruments

^{229.} International Atomic Energy Agency. IAEA Mission Statement, online: IAEA .

^{230.} IAEA, Resolution GC (XXXIV)/RES 530, 34" Regular Session General Conference Resolution of the International Atomic Energy Agency (IAEA), 21 September 1990, 30 ILM 556 (1991).

^{231.} Ibid. The Code of Practice defines "radioactive waste" as "any material that contains or is contaminated with radionuclides at concentrations or radioactivity levels greater than the 'exempt quantities," established by the competent authorities and for which no use is foreseen."

^{232.} Ibid., Art. 1 at para. 2: "Furthermore, this Code, which is advisory, does not affect in any way existing and future arrangements among states...."

^{233.} U.S., U.S. Environmental Protection Agency, International Radioactive Material Transportation Standards, (11 April 1995) online: EPA http://www.epa.gov/docs/fedrgstr/EPA-GENERAL/ 1995/April/Day-11-pr-405.html>.

^{234.} See generally, Australian Radiation Protection and Nuclear Safety Act 1998 (Cth.), s. 85.

Conclusion

It may be seen from the above that the protection and preservation of the marine environment is the subject of an extensive array of international conventions and an almost equal array of Australian legislation to give effect to them. As well as the legislation, there is a vast body of rules, regulations, codes, guidelines and shipping and marine practices. The whole makes for an extensive, and expensive, system.

Liability for damage to the marine environment from ships is given effect by this array and there is considerable overlap between the civil and the criminal liability. This is partly because the criminal liability includes provisions for recompense for damage caused and also for the costs of cleaning up and restoring the marine environment. The Australian government departments and agencies have been particularly diligent in ratifying and implementing the various conventions that relate to the protection and preservation of the marine environment from ships and they should be given due recognition for it.

There are, however, some reasons for concern. One weakness in the Australian public sector is the lack of expertise of public servants who have knowledge of maritime law. There is a strong and well-informed cohort on law of the sea and other aspects of public international law. When it comes to shipping law, however, that strength is not present. This is a major shortcoming and ought to be addressed.

Another weakness is that the Commonwealth and the States' public services and parliamentary members fail to observe that comity amongst nations requires that international treaties be given effect as they stand. There are serious departures by Commonwealth government legislation from the actual terms of some of the IMO conventions. Unilateral action such as this is best avoided

Finally, a serious problem is the failure to address the confused and confusing law on overlapping jurisdiction of the Commonwealth and the States in coastal waters. Fortunately, the regulators and the operators adopt a pragmatic approach and ignore the problem. It will need to be addressed and the way to do this is to have a further offshore constitutional settlement under which all jurisdiction beyond the baselines is vested in the Commonwealth, but the States have input into what relevant laws are to be passed. Unfortunately, it seems that it will take a major shipping crisis for the national will to demand of the politicians that this political problem be addressed.

Overall, however the Australian regulatory framework and law concerning liability for damage to the marine environment from ships works reasonably fairly and efficiently.