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Regulatory arrangements for the management of diffuse coastal marine pollution in Australia

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***REGULATORY ARRANGEMENTS FOR THE
MANAGEMENT OF DIFFUSE
COASTAL MARINE POLLUTION IN AUSTRALIA***

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Diffuse coastal pollution is a major concern to governments and management authorities not only throughout Australia, but also globally. These effects on the coastal environments are widespread causing significant impacts within the Australian coastal zone. This report outlines the problems associated with diffuse land-based marine pollution and Australia and its States' obligations to protect the coastal zone ecosystems.

Australia is a signatory to a number of international documents relating to land-based marine pollution, including the Montreal Guidelines, the Global Programme of Action and the Washington Declaration. Australia and its States' implementation of international obligations at a domestic level has primarily been focused at point-source land-based pollution, and has not addressed diffuse land-based pollution. A number of pieces of environmental legislation have been enacted both nationally and by individual states that address coastal marine environment. However, these along with numerous non-statutory regimes predominantly deal with point source pollution, and provide little guidance to the prevention, reduction and/or control of coastal pollution from diffuse land-based sources.

Australia and its states have been slow to implement controls for protection of the coastal environment, although Victoria has made an attempt to control diffuse land-based pollution thorough legislative powers to control the actions of landholders. This paper recommends that the current mechanisms being utilised by both the Commonwealth and States are ineffective and Australia should increase/strengthen

its regulatory mechanisms despite the lack of political will. Australia should also play a significant role as a leader in the South Pacific region and implement legislation, policy and programs to prevent, reduce and control diffuse pollution of the coastal marine environment.

Contents

Introduction	6
Coastal Marine Pollution.....	7
International Law and Diffuse Land-based Coastal Marine Pollution	10
The United Nations Convention on the Law of the Sea	12
Agenda 21 – Chapter 17: Rio Declaration on Environment and Development.....	15
Global Programme of Action for the Protection of the Marine Environment from Land-Based Activities (GPA)	17
Convention for the Protection of the Natural Resources and Environment of the South Pacific Region 1986	19
The Torres Strait Treaty between Australia and Papua New Guinea (Torres Strait Treaty)	22
The Commonwealth of Australia’s ability to legislate over environmental matters (with specific reference to Coastal Marine Environments)	23
The External Affairs power.....	25
Cooperative Federalism	29
Commonwealth Legislation relevant to diffuse land-based coastal marine pollution	30
<i>Environment Protection and Biodiversity Conservation Act 1999 (Cth)</i>	31
<i>National Environment Protection Council Act 1994 (Cth)</i>	34
Commonwealth policy on environmental regulation.....	35
Intergovernmental Agreement on the Environment	35
Commonwealth policy addressing diffuse land-based coastal marine pollution.....	37
Coastal Catchments Initiative.....	39
National Water Quality Strategy 1994	40
Reef Water Quality Protection Pan	41
<i>National Action Plan for Salinity and Water Quality</i>	42
State Regulatory and Institutional Arrangements with respect to diffuse land-based coastal marine pollution	43
Queensland - Regulation of land-based coastal marine pollution under Catchment Management and Coastal Legislation.....	44
<i>Environmental Protection Act 1994 (Qld)</i>	45
Environmentally relevant activities under the <i>Environmental Protection Act 1994 (Qld)</i>	47
Codes of Practice under the <i>Environmental Protection Act 1994 (Qld)</i>	49

<i>Environmental Protection Policy (Water) 1997</i>	50
<i>Water Act 2000 (Qld)</i>	53
<i>Coastal Protection and Management Act 1995 (Qld)</i>	56
Queensland Policy with respect to diffuse land-based coastal pollution	58
New South Wales - Regulation of land-sourced coastal marine pollution under Catchment Management and Coastal legislation	60
<i>Catchment Management Authorities Act 2003 (NSW)</i>	61
<i>Protection of the Environment Administration Act 1991 (NSW) and Protection of the Environment Operations Act 1997 (NSW)</i>	62
New South Wales' Policy with respect to diffuse land-based coastal pollution.....	64
<i>State Environmental Planning Policy 71 (Coastal Protection)</i>	64
Victoria - Regulation of land-based coastal marine pollution under Catchment Management and Coastal legislation.....	66
<i>Catchment and Land Protection Act 1994 (Vic)</i>	67
<i>Environment Protection Act 1970 (Vic)</i>	68
Victorian Policy with respect to diffuse land-based coastal pollution.....	69
<i>Coastal Management Act 1995 (Vic) and Victorian Coastal Strategy</i>	69
Tasmania - Regulation of land-based coastal marine pollution under Catchment Management and Coastal legislation.....	70
<i>Water Management Act 1999 (Tas)</i>	70
<i>Environmental Management and Pollution Control Act 1994 (Tas)</i>	71
<i>Land Use Planning and Approvals Act 1993 (Tas)</i>	73
Tasmanian Policy with respect to diffuse land-based coastal pollution	74
South Australia - Regulation of land-based coastal marine pollution under Catchment Management and Coastal legislation	75
<i>Environmental Protection Act 1993 (SA)</i>	75
<i>Coast Protection Act 1972 (SA)</i>	77
South Australian Policy with respect to diffuse land-based coastal pollution.....	77
Draft Estuaries Policy and Action Plan.....	78
Western Australia - Regulation of land-based coastal marine pollution under Catchment Management and Coastal legislation	80
<i>Environmental Protection Act 1986 (WA)</i>	80
<i>Waterways Conservation Act 1976 (WA)</i>	81
Western Australia Policy with respect to diffuse land-based coastal pollution.....	82
Recommendations for an integrated model for diffuse land-based coastal marine pollution.....	84

Conclusion 90

Introduction

By far the greatest source of coastal marine pollution is from land-based activities, and this pollution of the marine environment poses a major global environmental challenge for the 21st century.¹ It was estimated in 2000 that 75% of the world's population lived within 60 kilometres of the coast.² In Australia, the percentage of coastal residents is already over 80% and it is increasing every year.³ As a result, our urban, agricultural and industrial pollution sources are concentrated on our coasts and adjacent to our waterways.⁴ This represents a growing burden on our coastal marine ecosystems.

There are many factors contributing to the degradation of Australia's 36,000 km long coastline and coastal waters including but not limited to:

- Political factors such as the piecemeal approach of Commonwealth, State and local laws and regulations governing land use, planning and development, pollution controls and waste management;
- Social factors such as traditional recreational and indigenous activities conducted along the coastline; and
- Economic factors such as the burgeoning tourism industry, coastal urban development and Australia's maritime trade.⁵

Consequently, Australians have a coastline which they (and many foreign visitors) all love to use in their own individual way, yet which also requires a concerted cooperative approach to its management to ensure its long term sustainability for future generations.

¹ United Nations Department of Economic and Social Affairs (Division of Sustainable Development), 1992, Agenda 21 - Rio Declaration on Environment and Development. *Proceedings of United Nations Conference on Environment and Development* (Ed United Nations), Rio De Janeiro Brazil, 3 - 14 June 1992

² United Nations Department of Economic and Social Affairs (Division of Sustainable Development), 1992, Agenda 21 - Rio Declaration on Environment and Development. *Proceedings of United Nations Conference on Environment and Development* (Ed United Nations), Rio De Janeiro Brazil, 3 - 14 June 1992

³ State of the Environment Advisory Council, 2001, *Australia: State of the Environment 2001*, CSIRO Publishing, Melbourne, pp 4-8 Available at <http://www.deh.gov.au/soe/2001/coasts/coasts03-1.html#keypollutants> Accessed 7 June 2006

⁴ Natural Resource Management Ministerial Council, *Framework for a National Cooperative Approach to Integrated Coastal zone Management*, October 2003, 8; *National Cooperative Approach to Integrated Coastal Zone Management, Framework and Implementation Plan*, 2006, 17

⁵ These factors are acknowledged in the National Cooperative Approach to Integrated Coastal Zone Management, see generally *National Cooperative Approach to Integrated Coastal Zone Management, Framework and Implementation Plan*, 2006, 17

Coastal Marine Pollution

Pollution originating from land (“land-sourced” or “land-based” coastal marine pollution), rather than pollution from ships and off-shore installations, has been identified to account for 70 per cent to 80 per cent of pollution of the coastal and marine environment globally,⁶ while maritime transport and dumping-at-sea activities contribute only 10 per cent each.⁷ M’Gonigle notes that:

*“Land-based pollution not only occurs on a larger scale than vessel source pollution, it is also more hazardous than pollution which enters the marine environment on the high seas. The coastal area is ecologically by far the richest, most productive and most sensitive to disturbance.”*⁸

Degradation of the coastal marine environment can result from a wide range of sources. Land-based pollution is a global problem, though the severity and type of pollution vary from country to country and region to region.⁹ Despite the importance of land-based pollution, Qing-nan notes:

*“We have had one global convention, namely the 1982 Law of the Sea Convention, several regional framework conventions and four regional agreements that contain provisions relevant to land-based marine pollution. There has not been a single case relating to land-based marine pollution heard by an international tribunal and not one incident of transfrontier land-based marine pollution has been reported. There is little evidence of state practice or of incontestable rules of customary international law specifically on land-based marine pollution. At this stage, specific rules in this field exist only in the form of conventional law.”*¹⁰

⁶ United Nations Department of Economic and Social Affairs (Division of Sustainable Development), 1992, n 1; see also Robinson N.A., 1993, *Agenda 21 & The UNCED Proceedings*, Oceana Publications Inc, New York, Volume IV, p 314

⁷ Qing-nan M., *Land-based Marine Pollution*, Graham & Trotman Ltd, London, 1987; Baird R. J., 1998, ‘Ocean Dumping – an Overview of the International and Domestic Regulatory System’ *Environment and Planning Law Journal* 15 174

⁸ M’Gonigle R. M., ““Developing Sustainability” and the Emerging Norms of International Environmental Law: The Case of Land-Based Marine Pollution Control’, *The Canadian Yearbook of International Law* 1990 28 pp 169 at p 173

⁹ Claussen, E., 1995, Special Assistant to the President of the United States and Senior Director for Global Environmental Affairs of the United States National Security Council - *Global Programme of Action for the Protection of the Marine Environment from Land-Based Activities* 1996 Available at <http://www.un.org/News/Press/docs/1995/19951108.he915.html> Accessed on 5 June 2006

¹⁰ Qing-nan M., *Land-based Marine Pollution*, Graham & Trotman Ltd, London, 1987 at p 63

Sources of coastal marine pollution from land-based human activities include not only point sources, such as discharges from industrial and sewerage pipelines and aquaculture, but also non-point (diffuse) sources, such as urban storm water, run-off of agricultural chemicals, fertilisers and soil erosion.¹¹ Many of the polluting substances originating from land-based sources are of particular concern to the coastal and marine environment since they exhibit toxicity, persistence and bioaccumulation in the food chain.¹² The contaminants that pose the greatest threat to the coastal and marine environment are, in variable order of importance and depending on differing national or regional situations, sewage, nutrients, synthetic organic compounds, sediments, litter and plastics, metals, radionuclides, oil/hydrocarbons and polycyclic aromatic hydrocarbons (PAHs).¹³ It is estimated that over 150 000 types of chemicals are dumped in our oceans every year.¹⁴ Also many impacts on coastal and marine environments are indirect and are predominantly cumulative, and often difficult to distinguish.¹⁵ In Australia, poor water quality is the most serious known pollution issue affecting Australia's coastal marine environments.¹⁶ Changes in coastal hydrology mobilising latent contaminants such as acidic soils, nutrients and heavy metals have been recognised as a major issue for coastal development and land-based coastal marine pollution.¹⁷

The need to properly manage point and diffuse land-based coastal marine pollution is now well recognised worldwide and in particular, due to initiatives in international marine pollution law during the past three decades.¹⁸ The initiatives at an international level have spurred the development of improved regulatory systems in many countries including Australia, although the authors submitted that it has been far from satisfactory with respect to diffuse land-based

¹¹ State of the Environment Advisory Council, 2001, *Australia: State of the Environment 2001*, CSIRO Publishing, Melbourne at pp 8-7 and 8-18 Available at <http://www.deh.gov.au/soe/2001/coasts/coasts03-1.html#keypollutants> Accessed 7 June 2006

¹² United Nations Department of Economic and Social Affairs (Division of Sustainable Development), 1992, Agenda 21 - Rio Declaration on Environment and Development. *Proceedings of United Nations Conference on Environment and Development* (Ed United Nations), Rio De Janeiro Brazil, 3 - 14 June 1992

¹³ *Global Programme of Action for the Protection of the Marine Environment from Land-based Activities* and the *Washington Declaration on Protection of Marine Resources from Land-based Sources*

¹⁴ Hunter, D., Salzman, J., and Zaelke, D., *International Environmental Law and Policy*, Chapter 10, Foundation Press, New York 2002

¹⁵ Greiner, R., Young, M.D., McDonald, A.D. and Brooks, M., 2000 "Incentive instruments for the sustainable use of marine resources" *Oceans and Coastal Management*, Vol. 43, pp. 29 - 50

¹⁶ State of the Environment Advisory Council, 2001, *Australia: State of the Environment 2001*, CSIRO Publishing, Melbourne, Available at <http://www.deh.gov.au/soe/2001/coasts/coasts03-1.html#keypollutants> Accessed 7 June 2006

¹⁷ Environmental Protection Agency, *State of the Environment Queensland 1999*, Environmental Protection Agency, Brisbane, 1999, p5.14

¹⁸ Williams, C., 1996, "Combating marine pollution from land-based activities: Australian initiatives" *Oceans and Coastal Management*, Vol. 33, No. 1 - 3, pp. 87 - 112

pollution.¹⁹ It is this problem, the indirect, diffuse and cumulative impacts that can at times be the major problem for the marine environment.

This report considers one facet of coastal zone pollution management, that being land-based coastal marine pollution predominantly from land use sources rather than from storm water as this is an almost impossible to regulate and/or manage effectively. More particularly, this report examines diffuse source land-based coastal marine pollution,²⁰ and the current Commonwealth and State legislative and the relevant policy with particular reference to Queensland and its proximity to the Great Barrier Reef World Heritage Area. Using this example, the report will identify States that have been more successful in implementing regulatory mechanisms that prevent, reduce and control land-based coastal pollution (for example, Victoria). Further, the report makes recommendations for an integrated management model. In preparing this report it was necessary to set specific parameters. First the review considers laws and regulations applicable only as far as the breadth of the Territorial Sea (12 miles) as defined under Article 3 of the *1982 United Nations Convention on the Law of the Sea*.²¹ Further, the report concentrates on the two primary constituents which account for the majority of the pollutants of the coastal marine environment through diffuse land-based coastal marine pollution. These have been identified in the Commonwealth Government “*Framework for Marine and Estuarine Water Quality Protection 2002*” as nutrients and sediments.²² Nutrients may enter the coastal marine environment from diffuse (agriculture and urban run-off) and point sources (waste water treatment plants) whilst sediments are generally from diffuse sources (soil erosion from land clearing, and poor management of cultivation and urban development).

¹⁹ Hunter, D., Salzman, J., and Zaelke, D., *International Environmental Law and Policy*, Chapter 10, Foundation Press, New York 2002

²⁰ As distinct from point sourced land-based coastal marine pollution such as sewage and storm water outfalls.

²¹ *United Nations Convention on the Law of the Sea*, United Nations, Montego Bay Jamaica, 10 December 1982 (herein called UNCLOS), United Nations Division for Ocean Affairs and the Law of the Sea (1982)

²² Nutrients - Agricultural and urban runoff, wastewater treatment plants and septic tanks, are the major sources of nutrients to Australia's rivers, estuaries and coastal waters. Elevated loads of nutrients - nitrogen and phosphorus – alter ecosystem dynamics and can result in algal blooms, which in turn may adversely impact coastal waters by preventing light reaching benthic plants, and by producing toxins detrimental to animal and human health. Further, the death and decay of algal blooms can reduce the amount of dissolved oxygen available to aquatic life, sometimes causing extensive fish kills.

Sediments - The discharge of sediments to coastal waters is significantly increased through land clearing, poor cultivation practices and poorly managed urban development. Soil erosion is considered the major common contributing factor. Excessive sediment loads have many undesirable effects on receiving waters, such as siltation and smothering of aquatic ecosystems, excessive visible turbidity, and reduced light penetration causing changes to primary production. In many instances, sediments may also transport significant loads of nutrients, heavy metals and organochlorines, as these materials are commonly attached to sediment particles.

Given these parameters, the primary research has investigated the institutional arrangements, and specifically, regulatory and policy mechanisms that address these sources of diffuse land-based coastal marine pollution. Consequently, legislation such as the Commonwealth and State *Sea Dumping Acts*²³ has not been included in this report as although they do apply within the marine coastal waters controlled by the individual states of Australia out to three (3) nautical miles,²⁴ the said Acts do not seek to regulate diffuse source pollution.

International Law and Diffuse Land-based Coastal Marine Pollution

The development of international law and programs relating to the coastal and offshore marine environment has been extensive over the last 30 years.²⁵ Coastal marine pollution is a threat to the global environment and can have substantial impacts within territorial waters. The dumping of waste in the oceans has been recognised as an international problem since at least 1926 when an international conference in the United States elaborated provisions for an unsuccessful treaty to limit the discharge of oil and gas into the sea.²⁶ It was not until 1954, however, that the international community agreed on its first convention to protect the marine environment.²⁷ A heightened environmental awareness, coupled with the 1967 *Torrey Canyon* tanker accident, led to measures to protect the sea from coastal and marine pollution. The International Maritime Organisation (IMO) drafted two conventions for this purpose in 1969. The dumping of wastes in the coastal marine environment was again recognised as an international problem, and in 1972 the *Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter 1972* (“the London Convention”)²⁸ and subsequently *the Convention for the Prevention of Pollution from Ships 1973* and *the Protocol of 1978 Relating to the International Convention for the Prevention of Pollution from Ships 1973* (“MARPOL 73/78”) were signed by Australia 17 February 1978, entered into

²³ See generally the *Environment Protection (Sea Dumping) Act 1981* (Cth)

²⁴ The Commonwealth legislation may have application in the coastal waters if the state legislation is inadequate.

²⁵ Williams, C., 1996, "Combating marine pollution from land-based activities: Australian initiatives" *Oceans and Coastal Management*, Vol. 33, No. 1 - 3, pp. 87 - 112

²⁶ A draft convention was drawn up at an international conference held in Washington in June 1926, but it was not opened for signature. A further attempt to convene an international conference in 1935 was not successful. See also M'Gonigle, R. & Zacher, M., 1979, *Pollution, Politics and International Law* pp 81-83

²⁷ *The 1954 International Convention on the Prevention of Pollution of the Sea by Oil*

²⁸ *Convention on the Prevention of Marine Pollution by Dumping of Waste and Other Matter, 1972* Available at <http://www.londonconvention.org/documents/lc72/lc1972.doc> Accessed on 20 June 2006; see also Australian Department of Foreign Affairs and Trade, Canberra, Australian Treaty Service 1985 No. 16; see generally Baird R. J., 1998, 'Ocean Dumping – an Overview of the International and Domestic Regulatory System' *Environment and Planning Law Journal* 15 174; see generally Wulf, P.L. (2004) Diffuse Land-Based Pollution and the Great Barrier Reef World Heritage Area: The Commonwealth's Responsibilities and Implications for the Queensland Sugar Industry. *Environmental and Planning Law Journal*, 21 (6), 424 – 444

force generally on 2 October 1983 and specifically entered into force in Australia on 14 January 1988.²⁹

The purpose of the *London Convention* is to;

*"promote the effective control of all sources of pollution of the marine environment"*³⁰

Additionally, the Convention seeks to:

*"prevent the pollution of the sea by the dumping of waste and other matter that is liable to create hazards to human health, to harm living resources and marine life, to damage amenities or to interfere with other legitimate uses of the sea."*³¹

The *London Convention* accomplishes this by providing nation states with the authority to regulate the deliberate ocean dumping of marine wastes, and provided a regulatory framework for sea dumping by establishing different categories of wastes: those that cannot be dumped in any circumstances (eg radioactive waste), those that can be dumped with a special permit, and those that can be dumped with a general permit. Permits can be granted by the state in which the waste is loaded or by the flag state of the vessel in which the waste is carried.³² The *London Convention* also prohibits the deliberate disposal of dangerous wastes, including plastics and other persistent synthetic materials that float or remain suspended in marine waters. For less harmful substances, a license must be obtained.³³ The London Convention is given domestic effect in Australia through the *Environment Protection (Sea Dumping) Act 1981* (Cth). It has however been recognised that

²⁹ Australian Department of Foreign Affairs and Trade, Canberra, Australian Treaty Service 1988 No. 29 (Annexes I and II); Australian Department of Foreign Affairs and Trade, Canberra, Australian Treaty Service 1990 No. 34 (Annex V); Australian Department of Foreign Affairs and Trade, Canberra, Australian Treaty Service 1995 No. 4 (Annex III); incorporated into Australian domestic law by the *Protection of the Sea (Prevention of Pollution from Ships) Act 1983* (Cth) and associated State laws; see also Mosley J., (1998) 'Oil Spills – State and Federal Legislative Conundrums' *Environment and Planning Law Journal* 15 212

³⁰ Article I: *Convention on the Prevention of Marine Pollution by Dumping of Waste and Other Matter*, 1972 Available at <http://www.londonconvention.org/documents/lc72/lc1972.doc> Accessed on 20 June 2006

³¹ Article I: *Convention on the Prevention of Marine Pollution by Dumping of Waste and Other Matter*, 1972 Available at <http://www.londonconvention.org/documents/lc72/lc1972.doc> Accessed on 20 June 2006

³² Article IV and VI: *Convention on the Prevention of Marine Pollution by Dumping of Waste and Other Matter*, 1972 Available at <http://www.londonconvention.org/documents/lc72/lc1972.doc> Accessed on 20 June 2006; see also Juda, L., 1996, *International Law and Ocean Use Management: The Evolution of Ocean Governance* Routledge New York pp 224

³³ Article IV and VI: *Convention on the Prevention of Marine Pollution by Dumping of Waste and Other Matter*, 1972 Available at <http://www.londonconvention.org/documents/lc72/lc1972.doc> Accessed on 20 June 2006; see generally Hunter, D., Salzman, J., and Zaelke, D., *International Environmental Law and Policy*, Chapter 10, Foundation Press, New York 2002

these Conventions do not apply to the dumping of wastes from land-based sources, and therefore is of limited use to control diffuse land-based pollution of the marine environment.³⁴

The Preamble of *the Protocol of 1978 Relating to the International Convention for the Prevention of Pollution from Ships 1973* (Marpol 1973/1978) suggests that the Protocol desires:

"to achieve the complete elimination of intentional pollution of the marine environment by oil and other harmful substances and the minimization of accidental discharge of such substances."³⁵

There are numerous other Conventions that relate specifically to the topic of land-based pollution.³⁶ Unfortunately, none of these are relevant to Australia. However there are a number of Conventions and programs that Australia is a signatory to that relate to land-based pollution but few that specifically address diffuse land-based pollution of the marine environment. These however will be discussed later in this paper.

The United Nations Convention on the Law of the Sea

The 1982 *United Nations Convention on the Law of the Sea*³⁷ (UNCLOS) was the first attempt at devising a regulatory framework for all types of marine pollution. Australia is a signatory to the UNCLOS, which was ratified in by Australia in 1994.³⁸ Australia is required to fulfil obligations to global framework agreements.³⁹ UNCLOS obligates parties to protect and preserve the marine environment (including the coastal zone) by cooperating regionally and globally, and to adopt laws and regulations to deal with sources of marine pollution and also laws that take measures to prevent,

³⁴ Brunton, N., 2002, "Land-based sources of marine pollution": in Lipman, Z. and Bates, G. (Eds.) *Pollution Law in Australia*. LexisNexis Butterworths, Chatswood, Chapter 9 pp. 348 - 381

³⁵ Preamble *Protocol of 1978 Relating to the International Convention for the Prevention of Pollution from Ships 1973* Available at <http://www.austlii.edu.au/au/other/dfat/treaties/1988/29.html> Accessed 3 July 2006

³⁶ Examples being the *Convention for the Prevention of Marine Pollution from Land-based Sources 1974* ("The Paris Convention 1974"), the *Convention on the Protection of the Marine Environment of the Baltic Sea* (the Helsinki Convention), the *Athens Protocol for the Protection of the Mediterranean Sea against Pollution from Land-Based Sources 1980*, and also to the Atlantic and Caribbean with the *Convention for the Protection of the Marine Environment of the North-East Atlantic* ("OSPAR Convention") and *Protocol Concerning Pollution from Land-Based Sources and Activities to the Convention for the Protection and Development of the Marine Environment in the Wider Caribbean Region* (Cartagena Agreement, 1983 and 1999).

³⁷ *United Nations Convention on the Law of the Sea*, United Nations, Montego Bay Jamaica, 10 December 1982

³⁸ Australian Department of Foreign Affairs and Trade, Canberra, Australian Treaty Service 1994 No 31, Available at <http://www.austlii.edu.au/au/other/dfat/treaties/1994/31.html> Accessed 5 July 2006

³⁹ Fisher, D.E., 1995, Land-Sourced Pollution of the Marine Environment. *Environmental and Planning Law Journal*, Vol. 12, No. 2, April 1995, pp. 116 - 139; Williams, C., 1996, "Combating marine pollution from land-based activities: Australian initiatives" *Oceans and Coastal Management*, Vol. 33, No. 1 - 3, pp. 87 - 112

reduce and control pollution from land-based sources.⁴⁰ Pursuant to Article 1 (4) of UNCLOS, pollution of the marine environment is defined as

“the introduction by man, directly or indirectly, of substances or energy into the marine environment, including estuaries, which results or is likely to result in such deleterious effects as harm to living resources and marine life, hazards to human health, hindrance to marine activities, including fishing and other legitimate uses of the sea, impairment of quality for use of sea water and reduction of amenities”.⁴¹

Australia has a number of other obligations under UNCLOS. Part XII of UNCLOS relates specifically to land-based pollution; however it does not distinguish between point source and diffuse land-based pollution. Articles within Part XII include the general obligation pursuant to Article 192,⁴² to protect and preserve the marine environment. Article 194⁴³ introduces measures to prevent, reduce and control pollution of the marine environment. More importantly in respect of legislation enactment, Articles 207⁴⁴ and 213,⁴⁵ both relate specifically to land-based pollution are highly relevant to this discussion.

⁴⁰ UNCLOS - Article 213 - *Enforcement with respect to pollution from land-based sources*

⁴¹ UNCLOS - Article 1 (4) - *Use of terms and Scope*

⁴² UNCLOS - Article 192: *General obligation - States have the obligation to protect and preserve the marine environment*

⁴³ UNCLOS - Article 194 - *Measures to prevent, reduce and control pollution of the marine environment*

1. *States shall take, individually or jointly as appropriate, all measures consistent with this Convention that are necessary to prevent, reduce and control pollution of the marine environment from any source, using for this purpose the best practicable means at their disposal and in accordance with their capabilities, and they shall endeavour to harmonize their policies in this connection.* 2. *States shall take all measures necessary to ensure that activities under their jurisdiction or control are so conducted as not to cause damage by pollution to other States and their environment, and that pollution arising from incidents or activities under their jurisdiction or control does not spread beyond the areas where they exercise sovereign rights in accordance with this Convention.* 3. *The measures taken pursuant to this Part shall deal with all sources of pollution of the marine environment. These measures shall include, inter alia, those designed to minimize to the fullest possible extent: (a) the release of toxic, harmful or noxious substances, especially those which are persistent, from land-based sources, from or through the atmosphere or by dumping; (b) pollution from vessels, in particular measures for preventing accidents and dealing with emergencies, ensuring the safety of operations at sea, preventing intentional and unintentional discharges, and regulating the design, construction, equipment, operation and manning of vessels; (c) pollution from installations and devices used in exploration or exploitation of the natural resources of the seabed and subsoil, in particular measures for preventing accidents and dealing with emergencies, ensuring the safety of operations at sea, and regulating the design, construction, equipment, operation and manning of such installations or devices; (d) pollution from other installations and devices operating in the marine environment, in particular measures for preventing accidents and dealing with emergencies, ensuring the safety of operations at sea, and regulating the design, construction, equipment, operation and manning of such installations or devices.* 4. *In taking measures to prevent, reduce or control pollution of the marine environment, States shall refrain from unjustifiable interference with activities carried out by other States in the exercise of their rights and in pursuance of their duties in conformity with this Convention.* 5. *The measures taken in accordance with this Part shall include those necessary to protect and preserve rare or fragile ecosystems as well as the habitat of depleted, threatened or endangered species and other forms of marine life.*

⁴⁴ UNCLOS - Article 207- *Pollution from land-based sources*

1. *States shall adopt laws and regulations to prevent, reduce and control pollution of the marine environment from land-based sources, including rivers, estuaries, pipelines and outfall structures, taking into account internationally agreed rules, standards and recommended practices and procedures.* 2. *States shall take other measures as may be*

Under Article 207 States are to adopt laws and regulations to prevent, reduce and control pollution of the marine environment from land-based sources, including rivers, estuaries, pipelines and outfall structures, taking into account internationally agreed rules, standards and recommended practices and procedures. Article 213 deals with the enforcement of the State's laws with respect to Article 207. Article 207 does not require States to conform to any specific protocol nor does it require State's laws and regulations to comply with existing international law, but rather to take account of international law.⁴⁶ However despite the general form of a number of articles in Part XII, Article 207 establishes a duty to prevent, reduce and control land-based pollution. This is important as it provides a stimulus for national legislation, it encourages cooperation with neighbouring States and it also requires relevant institutional arrangements for coastal areas.

UNCLOS does not provide a consistent framework for the control of marine pollution, but rather emphasises flexibility rather than uniformity. States therefore are able to use discretion to ensure compliance with the requirements of Part XII.⁴⁷ The *London Convention* and *MARPOL* both established specific rules for shipping and dumping of wastes. However during negotiations and drafting of UNCLOS in respect to land-based pollution, there was considerable resistance to an equivalent obligation, largely due to the needs of States and regions in relation to economic factors.⁴⁸ During negotiations it became evident that many states were unwilling to adopt onerous and specific obligations relating to land-based pollution in Part XII of the Convention.⁴⁹

necessary to prevent, reduce and control such pollution. 3. States shall endeavour to harmonize their policies in this connection at the appropriate regional level. 4. States, acting especially through competent international organizations or diplomatic conference, shall endeavour to establish global and regional rules, standards and recommended practices and procedures to prevent, reduce and control pollution of the marine environment from land-based sources, taking into account characteristic regional features, the economic capacity of developing States and their need for economic development. Such rules, standards and recommended practices and procedures shall be re-examined from time to time as necessary. 5. Laws, regulations, measures, rules, standards and recommended practices and procedures referred to in paragraphs 1, 2 and 4 shall include those designed to minimize, to the fullest extent possible, the release of toxic, harmful or noxious substances, especially those which are persistent, into the marine environment.

⁴⁵ UNCLOS - Article 213 - Enforcement with respect to pollution from land-based sources –

States shall enforce their laws and regulations adopted in accordance with article 207 and shall adopt laws and regulations and take other measures necessary to implement applicable international rules and standards established through competent international organizations or diplomatic conference to prevent, reduce and control pollution of the marine environment from land-based sources.

⁴⁶ Brunton, N., 2002, "Land-based sources of marine pollution": in Lipman, Z. and Bates, G. (Eds.) *Pollution Law in Australia*. LexisNexis Butterworths, Chatswood, Chapter 9 pp. 348 - 381; Nandan, S. N., 2002, Oceans and the Law of the Sea. *Environmental Policy and Law*, 32, No. 1, pp. 54 - 56

⁴⁷ Boyle, A. E., 1992, Land-based Sources of Marine Pollution *Marine Policy* 16 (1) 20

⁴⁸ Brunton, N., 2002, "Land-based sources of marine pollution": in Lipman, Z. and Bates, G. (Eds.) *Pollution Law in Australia*. LexisNexis Butterworths, Chatswood, Chapter 9 pp. 348 - 381

⁴⁹ Juda, L., 1996, *International Law and Ocean Use Management: The Evolution of Ocean Governance* Routledge New York pp 224

Agenda 21 – Chapter 17: Rio Declaration on Environment and Development

The United Nations Environment Programme (UNEP) took the initiative to develop advice to Governments on addressing impacts on the marine environment from land-based activities.⁵⁰ This initiative resulted in the 1985 preparation of the *Montreal Guidelines for the Protection of the Marine Environment against Pollution from Land-based Sources*, which sought to translate the UNCLOS treatment of land-based pollution into an action program. However, it has been suggested that the original guidelines were useless as they were not enforceable.⁵¹ As a result, the United Nations Conference on Environment and Development in 1992 also placed the protection the marine environment from land-based activities squarely in the context of sustainable development.⁵² The Commonwealth on behalf of Australia became a signatory to the programs.

Agenda 21, Chapter 17⁵³ set an ambitious work program for the international community to pursue an objective of sustainable development with respect to the ocean. It promoted new approaches to managing human uses of ocean resources, including the application of environmental impact assessment procedures and natural resource accounting techniques; economic incentives to encourage industrial and agricultural practices that avoid degradation of the marine environment; and protection of the ecosystems and habitats of marine species.⁵⁴ Particular emphasis was given to coastal areas, the land/sea interface that are critical to the life cycles of most marine species and in

⁵⁰ United Nations Department of Economic and Social Affairs (Division of Sustainable Development), 1992, Agenda 21 - Rio Declaration on Environment and Development. *Proceedings of United Nations Conference on Environment and Development* (Ed United Nations), Rio De Janeiro Brazil, 3 - 14 June 1992

⁵¹ Hunter, D., Salzman, J., and Zaelke, D., *International Environmental Law and Policy*, Chapter 10, Foundation Press, New York 2002 at p 753

⁵² United Nations Department of Economic and Social Affairs (Division of Sustainable Development), 1992, Agenda 21 - Rio Declaration on Environment and Development. *Proceedings of United Nations Conference on Environment and Development* (Ed United Nations), Rio De Janeiro Brazil, 3 - 14 June 1992; Working Group on Marine Environment Assessment (2002) *Global Programme of Action for the Protection of the Marine Environment from Land-based Activities (GPA): UNEP Handbook on the Development and Implementation of a National Programme of Action for the Protection of the Marine Environment from Land-based Activities*, Joint Group of Experts on the Scientific Aspects of Marine Environmental Protection (GESAMP - United Nations Environmental Programme), The Hague, 2002, 44 pp

⁵³ Agenda 21 (Chapter 17) – Protection of the Oceans, all kinds of Seas, Including Enclosed and Semi Enclosed Seas and Coastal Area and the Protection Rational Use and Development of their Living Resources - United Nations Department of Economic and Social Affairs (Division of Sustainable Development), (1992) Agenda 21 - Rio Declaration on Environment and Development. *Proceedings of United Nations Conference on Environment and Development* (Ed United Nations), Rio De Janeiro Brazil, 3 - 14 June 1992

⁵⁴ Agenda 21 (Chapter 17) – Protection of the Oceans, all kinds of Seas, Including Enclosed and Semi Enclosed Seas and Coastal Area and the Protection Rational Use and Development of their Living Resources - United Nations Department of Economic and Social Affairs (Division of Sustainable Development), (1992) Agenda 21 - Rio Declaration on Environment and Development. *Proceedings of United Nations Conference on Environment and Development* (Ed United Nations), Rio De Janeiro Brazil, 3 - 14 June 1992

which human population is increasingly concentrated.⁵⁵ Agenda 21 also recommended updating the *Montreal Guidelines for the Protection of the Marine Environment against Pollution from Land-based Sources*, assessment of the effectiveness of regional agreements on land-based sources, guidance on technologies, and policy guidelines for relevant global funding mechanisms. Priority actions identified in Agenda 21 for control of land-based sources include elimination of the discharge of organohalide compounds that threaten to accumulate to dangerous levels in the marine environment, reduction of the discharge of other synthetic organic compounds, and the promotion of controls over human inputs of nitrogen and phosphorus which may cause eutrophication.⁵⁶

These regimes were established under a number of sub-headings within Chapter 17.⁵⁷ Chapter 17.19 states that degradation of the marine environment can occur from a wide range of activities on land. Management-related activities are then set out, including the prevention, reduction and control of degradation of the marine environment from land-based activities. It should be noted that this wording is very similar to that of the UNCLOS. Under 17.24, States should take action at the national level and, where appropriate, at the regional/subregional levels, and should take account and consider strengthening⁵⁸ the *Montreal Guidelines for the Protection of the Marine Environment from Land-Based Sources*. Australia, although a party, has not established a framework pursuant to Chapter 17 to specifically control land-based pollution.

⁵⁵ Agenda 21 (Chapter 17) – Protection of the Oceans, all kinds of Seas, Including Enclosed and Semi Enclosed Seas and Coastal Area and the Protection Rational Use and Development of their Living Resources - United Nations Department of Economic and Social Affairs (Division of Sustainable Development), (1992) Agenda 21 - Rio Declaration on Environment and Development. *Proceedings of United Nations Conference on Environment and Development* (Ed United Nations), Rio De Janeiro Brazil, 3 - 14 June 1992

⁵⁶ Robinson N.A. (ed), *Agenda 21 & The UNCED Proceedings*, Oceana Publications Inc, New York, 1993, Volume IV, p 314 (Agenda 21, Chapter 17).

⁵⁷ Agenda 21 (Chapter 17) – Protection of the Oceans, all kinds of Seas, Including Enclosed and Semi Enclosed Seas and Coastal Area and the Protection Rational Use and Development of their Living Resources - United Nations Department of Economic and Social Affairs (Division of Sustainable Development), (1992) Agenda 21 - Rio Declaration on Environment and Development. *Proceedings of United Nations Conference on Environment and Development* (Ed United Nations), Rio De Janeiro Brazil, 3 - 14 June 1992

⁵⁸ Agenda 21 (Chapter 17) – Protection of the Oceans, all kinds of Seas, Including Enclosed and Semi Enclosed Seas and Coastal Area and the Protection Rational Use and Development of their Living Resources - United Nations Department of Economic and Social Affairs (Division of Sustainable Development), (1992) Agenda 21 - Rio Declaration on Environment and Development. *Proceedings of United Nations Conference on Environment and Development* (Ed United Nations), Rio De Janeiro Brazil, 3 - 14 June 1992, Chapter 17.25 (a) - Consider updating, strengthening and extending the Montreal Guidelines, as appropriate

Global Programme of Action for the Protection of the Marine Environment from Land-Based Activities (GPA)

To both promote Agenda 21, Chapter 17 which called upon the United Nations Conference on Environment and Development to sponsor an intergovernmental meeting on land-based pollution and remedy the failures of the *Montreal Guidelines for the Protection of the Marine Environment against Pollution from Land-based Sources*, a meeting was held in November 1995 in Washington, D.C. which resulted in the adoption of the *Global Programme of Action for the Protection of the Marine Environment from Land-based Activities* and the *Washington Declaration on Protection of Marine Resources from Land-based Sources*. These documents were signed by 109 governments, including Australia.⁵⁹

The *Global Programme of Action for the Protection of the Marine Environment from Land-based Activities* seeks to prevent the degradation of the marine environment from land-based activities by helping States Parties realise the duty to preserve and protect the marine environment.⁶⁰ It was designed to assist States in taking actions individually or jointly according to their respective policies, priorities, and resources.⁶¹ It constitutes a practical source of guidance for action that must take place at the national and regional level; identifies steps for making available knowledge and experience about effective measures to combat land-based sources of marine pollution; and offers instruction on how to involve the relevant United Nations institutions in the implementation effort.⁶² *The Washington Declaration and Global Programme of Action for the Protection of the Marine Environment from Land-Based Activities* is a non-legally binding instrument, aimed at preventing the degradation of the marine environment from land-based activities by facilitating the realisation of the duty of States to preserve and protect the marine environment.

The aims of the *Global Programme of Action for the Protection of the Marine Environment from Land-Based Activities* are:

...preventing the degradation of the marine environment from land-based activities by facilitating the realisation of the duty of States to preserve and protect the marine

⁵⁹ *Global Programme of Action for the Protection of the Marine Environment from Land-Based Activities* 1996

⁶⁰ Hunter, D., Salzman, J., and Zaelke, D., *International Environmental Law and Policy*, Chapter 10, Foundation Press, New York 2002

⁶¹ Brunton, N., 2002, "Land-based sources of marine pollution": in Lipman, Z. and Bates, G. (Eds.) *Pollution Law in Australia*. LexisNexis Butterworths, Chatswood, Chapter 9 pp. 348 - 381

⁶² Hunter, D., Salzman, J., and Zaelke, D., *International Environmental Law and Policy*, Chapter 10, Foundation Press, New York 2002

*environment. Global Programme of Action is designed to assist States in taking actions individually or jointly within their respective policies priorities and resources, which will lead to the prevention, reduction, control and /or elimination of degradation of the marine environment, as well as to its recovery from the impacts of land-based activities. Achievement of the aims of the Programme of Action will contribute to maintaining and, where appropriate, ensuring the protection of human health, as well as promoting the conservation and sustainable use of marine living resources.*⁶³

The sources of marine pollution the *Global Programme of Action for the Protection of the Marine Environment from Land-Based Activities* targets include sewage, persistent organic pollutants, radioactivity, metals, oils, nutrients, sediment mobilisation, litter and habitat destruction. It proposes action at primarily the national and regional levels with some coordination tasks at the global level.

The *Global Programme of Action for the Protection of the Marine Environment from Land-Based Activities* is evidence of an international agreement on rules, standards, practices and procedures in relation to land-based pollution.⁶⁴ The *Global Programme of Action for the Protection of the Marine Environment from Land-Based Activities* identifies practical steps to implement the legal obligations set forth in UNCLOS to prevent, reduce and control land-based marine pollution and serves as a practical source of guidance for action at the national and regional levels. The *Global Programme of Action for the Protection of the Marine Environment from Land-Based Activities* also initiates a long-term effort to identify and make available knowledge and experience about 'what works' in dealing with land-based marine pollution. As such, the *Global Programme of Action for the Protection of the Marine Environment from Land-Based Activities* provides a solid framework with which to reverse the trend of continuing marine degradation from land-based activities.⁶⁵

⁶³ Claussen, E., 1995, Special Assistant to the President of the United States and Senior Director for Global Environmental Affairs of the United States National Security Council - *Global Programme of Action for the Protection of the Marine Environment from Land-Based Activities* 1996 Available at <http://www.un.org/News/Press/docs/1995/19951108.he915.html> Accessed on 5 June 2006

⁶⁴ Hunter, D., Salzman, J., and Zaelke, D., *International Environmental Law and Policy*, Chapter 10, Foundation Press, New York 2002

⁶⁵ Claussen, E., 1995, Special Assistant to the President of the United States and Senior Director for Global Environmental Affairs of the United States National Security Council - *Global Programme of Action for the Protection of the Marine Environment from Land-Based Activities* 1996 Available at <http://www.un.org/News/Press/docs/1995/19951108.he915.html> Accessed on 5 June 2006

At the meeting, the Australian delegate made a statement supporting the Conference decision on persistent organic pollutants. The Australian Government, in a statement by Cochrane,⁶⁶ welcomed the activities of the *Global Programme of Action for the Protection of the Marine Environment from Land-Based Activities* for the Protection of the Marine Environment from Land-Based Activities, and encouraged states to adopt and apply the measures within the Programme. Better scientific understanding and access to information was also suggested as essential to improve our management of the marine environment.⁶⁷ Cochrane went on to state that Australia is committed to an ecosystem-based and integrated approach to managing human activities in the oceans. Cochrane suggested that Australia has adopted this approach in our national Oceans Policy, and also stated that a similar approach has been taken in the Pacific region. Cochrane congratulated our Pacific neighbours on their new regional oceans policy.⁶⁸

Convention for the Protection of the Natural Resources and Environment of the South Pacific Region 1986

Australia is also a party to the *Convention for the Protection of the Natural Resources and Environment of the South Pacific Region 1986* (SPREP), which applies to the 100 nautical mile zone off the coast of its parties and to the high seas enclosed by those areas.⁶⁹ The SPREP seeks to control the sources of pollution including ship-based, land-based, seabed exploration, dumping, mining and coastal erosion and is a comprehensive umbrella agreement for the protection, management and development of the marine and coastal environment of the South Pacific region.⁷⁰ The Convention contains provisions relating to the regulation of land-based sources, pollution from seabed activities and airborne pollution and the storage of toxic and hazardous chemicals.⁷¹ Article 2 (f) of the SPREP relates to "pollution" which means:

⁶⁶ Opening Statement by Mr Peter Cochrane - Head of the Australian Delegation to the Fourth Meeting of the United Nations Open-ended Informal Consultative Process on Oceans and the Law of the Sea, United Nations General Assembly, 2 June 2003

⁶⁷ Opening Statement by Mr Peter Cochrane - Head of the Australian Delegation to the Fourth Meeting of the United Nations Open-ended Informal Consultative Process on Oceans and the Law of the Sea, United Nations General Assembly, 2 June 2003

⁶⁸ Opening Statement by Mr Peter Cochrane - Head of the Australian Delegation to the Fourth Meeting of the United Nations Open-ended Informal Consultative Process on Oceans and the Law of the Sea, United Nations General Assembly, 2 June 2003

⁶⁹ Entry into force for Australia and generally: 22 August 1990 - Australian Department of Foreign Affairs and Trade, Canberra, Australian Treaty Service 1990 No. 31

⁷⁰ *Convention for the Protection of the Natural Resources and Environment of the South Pacific Region 1986*

⁷¹ Brunton, N., 2002, "Land-based sources of marine pollution": in Lipman, Z. and Bates, G. (Eds.) *Pollution Law in Australia*. LexisNexis Butterworths, Chatswood, Chapter 9 pp. 348 - 381

“the introduction by man, directly or indirectly, of substances or energy into the marine environment (including estuaries) which results or is likely to result in such deleterious effects as harm to living resources and marine life, hazards to human health, hindrance to marine activities, including fishing and other legitimate uses of the sea, impairment of quality for use of sea water and reduction of amenities.”

Article 5 of the SPREP⁷² stipulates that the Parties shall endeavour, either individually or jointly, to take all appropriate measures in conformity with international law and in accordance with this SPREP and those Protocols in force to which they are party to prevent, reduce and control pollution of the SPREP Area, from any source. Once again, the words are similar to that of the UNCLOS. Specifically with respect to Article 5(5), the parties to the SPREP are obliged to establish laws and regulations to discharge their responsibilities, this being a general obligation similar to UNCLOS, to prevent reduce and control pollution from any source.⁷³ This obligation has important ramifications for the Commonwealth, as this provision would support a law regulating any activity causing land-based pollution,⁷⁴ and once again it would appear that the Commonwealth is not fulfilling its international responsibilities.

⁷² *Convention for the Protection of the Natural Resources and Environment of the South Pacific Region 1986 - Article 5 - General obligations*

1. The Parties shall endeavour, either individually or jointly, to take all appropriate measures in conformity with international law and in accordance with this Convention and those Protocols in force to which they are party to prevent, reduce and control pollution of the Convention Area, from any source, and to ensure sound environmental management and development of natural resources, using for this purpose the best practicable means at their disposal, and in accordance with their capabilities. In doing so the Parties shall endeavour to harmonise their policies at the regional level. 2. The Parties shall use their best endeavours to ensure that the implementation of this Convention shall not result in an increase in pollution in the marine environment outside the Convention Area. 3. In addition to the Protocol for the Prevention of Pollution of the South Pacific Region by Dumping and the Protocol Concerning Co-operation in Combating Pollution Emergencies in the South Pacific Region, the Parties shall co-operate in the formulation and adoption of other Protocols prescribing agreed measures, procedures and standards to prevent, reduce and control pollution from all sources or in promoting environmental management in conformity with the objectives of this Convention. 4. The Parties shall, taking into account existing internationally recognised rules, standards, practices and procedures, co-operate with competent global, regional and sub-regional organisations to establish and adopt recommended practices, procedures and measures to prevent, reduce and control pollution from all sources and to promote sustained resource management and to ensure the sound development of natural resources in conformity with the objectives of this Convention and its Protocols, and to assist each other in fulfilling their obligations under this Convention and its Protocols. 5. The Parties shall endeavour to establish laws and regulations for the effective discharge of the obligations prescribed in this Convention. Such laws and regulations shall be no less effective than international rules, standards and recommended practices and procedures.

⁷³ Article 5 (1) of *Convention for the Protection of the Natural Resources and Environment of the South Pacific Region*

⁷⁴ Brunton, N., 2002, "Land-based sources of marine pollution": in Lipman, Z. and Bates, G. (Eds.) *Pollution Law in Australia*. LexisNexis Butterworths, Chatswood, Chapter 9 pp. 348 - 381

Specifically under the SPREP, Article 7⁷⁵ relates to pollution from land-based sources. Australia as a party shall take all appropriate measures to prevent, reduce and control pollution in the Convention Area caused by coastal disposal or by discharges emanating from rivers, estuaries, coastal establishments, outfall structures, or any other sources in their territory. This article as stated, specifically relates to land-based pollution, and as any source of land-based pollution that impacts within the 100 nautical mile zones off the coast and to the high seas enclosed by those areas would suggest that Australia is not fulfilling its international obligations to prevent, reduce and control this pollution.

Article 13⁷⁶ makes reference to an obligation to all parties to prevent, reduce and control environmental damage and in particular from mining activities. It could be argued that this provision would also support Commonwealth legislation relating to land-based pollution from these sources.⁷⁷ Unfortunately however, the SPREP makes no mention of many activities that causes diffuse land-based pollution, e.g. nutrient pollution from agricultural industries. Once again, the provisions of the SPREP would allow the Commonwealth to enact mandatory pollution reduction targets.⁷⁸ Arguably, because of the obligation on States to reduce pollution from rivers/estuaries or from any other source, the provision would support any legislation relating to the management and use of land in the coastal zone or even inland where the activity on the land is causing land-based pollution.⁷⁹

As important as the SPREP, the *Action Plan For Managing the Environment of the South Pacific Region*, adopted in 1986 and revised in 1991, also provides significant measures for environmental protection in the region. The Plan is particularly important in the region as it provides for a variety of measures to promote environmental protection outside any legal framework. This is important to

⁷⁵ Article 7 of *Convention for the Protection of the Natural Resources and Environment of the South Pacific Region - The Parties shall take all appropriate measures to prevent, reduce and control pollution in the Convention Area caused by coastal disposal or by discharges emanating from rivers, estuaries, coastal establishments, outfall structures, or any other sources in their territory*

⁷⁶ Article 13 of *Convention for the Protection of the Natural Resources and Environment of the South Pacific Region - Mining and coastal erosion - The Parties shall take all appropriate measures to prevent, reduce and control environmental damage in the Convention Area, in particular coastal erosion caused by coastal engineering, mining activities, sand removal, land reclamation and dredging.*

⁷⁷ Brunton, N., 2002, "Land-based sources of marine pollution": in Lipman, Z. and Bates, G. (Eds.) *Pollution Law in Australia*. LexisNexis Butterworths, Chatswood, Chapter 9 pp. 348 - 381

⁷⁸ Brunton, N., 2002, "Land-based sources of marine pollution": in Lipman, Z. and Bates, G. (Eds.) *Pollution Law in Australia*. LexisNexis Butterworths, Chatswood, Chapter 9 pp. 348 - 381

⁷⁹ Brunton, N., 2002, "Land-based sources of marine pollution": in Lipman, Z. and Bates, G. (Eds.) *Pollution Law in Australia*. LexisNexis Butterworths, Chatswood, Chapter 9 pp. 348 - 381

international environmental protection because many South Pacific countries lack the resources and hence the inclination to enter into legally binding obligations.⁸⁰

The Torres Strait Treaty between Australia and Papua New Guinea (Torres Strait Treaty)

*The Torres Strait Treaty*⁸¹ was signed in December 1978 after six years of negotiation, and entered into force on 15 February 1985.⁸² The Treaty primarily concerns matters of sovereignty and maritime boundaries in the Torres Strait.⁸³ It defines the border between Australia and Papua New Guinea and provides a framework for the management of the common border area. As well as defining boundaries, the Torres Strait Treaty protects the traditional way of life of the inhabitants and is one of the earliest international agreements to reflect a greater environmental awareness.⁸⁴ Within the Treaty, Parties have an obligation under Article 13⁸⁵ to protect the marine environment.

⁸⁰ Brunton, N., 2002, "Land-based sources of marine pollution": in Lipman, Z. and Bates, G. (Eds.) *Pollution Law in Australia*. LexisNexis Butterworths, Chatswood, Chapter 9 pp. 348 - 381

⁸¹ *Treaty between Australia and the Independent State of Papua New Guinea concerning Sovereignty and Maritime Boundaries in the area between the two Countries, including the area known as Torres Strait, and Related Matters*

⁸² Australian Department of Foreign Affairs and Trade, Canberra, Australian Treaty Service 1985 No 4

⁸³ Australian Department of Foreign Affairs and Trade, Canberra, Australian Treaty Service 1985 No 4; see also Williams, C., 1996, "Combating marine pollution from land-based activities: Australian initiatives" *Oceans and Coastal Management*, Vol. 33, No. 1 - 3, pp. 87 - 112

⁸⁴ Australian Department of Foreign Affairs and Trade, Canberra, Australian Treaty Service 1985 No 4

⁸⁵ *Treaty between Australia and the Independent State of Papua New Guinea concerning Sovereignty and Maritime Boundaries in the area between the two Countries, including the area known as Torres Strait, and Related Matters* - Article 13 - Protection of the marine environment

1. Each Party shall take legislative and other measures necessary to protect and preserve the marine environment in and in the vicinity of the Protected Zone. In formulating those measures each Party shall take into account internationally agreed rules, standards and recommended practices, which have been adopted by diplomatic conferences or by relevant international organisations. 2. The measures that each Party shall take in accordance with paragraph 1 of this Article shall include measures for the prevention and control of pollution or other damage to the marine environment from all sources and activities under its jurisdiction or control and shall include, in particular, measures to minimise to the fullest practicable extent - the release of toxic, harmful or noxious substances from land-based sources, from rivers, from or through the atmosphere, or by dumping at sea; pollution or other damage from vessels; and pollution or other damage from installations and devices used in the exploration and exploitation of the natural resources of the seabed and subsoil thereof. 3. The measures taken by each Party in accordance with paragraph 1 of this Article shall be consistent with its obligations under international law, including obligations not to prejudice the rights of foreign ships and aircraft, and shall be subject to the provisions of Article 7 of this Treaty. 4. The Parties shall consult, at the request of either, for the purpose of harmonising their policies with respect to the measures that each shall take pursuant to this Article; and ensuring the effective and coordinated implementation of those measures. 5. If either Party has reasonable grounds for believing that any planned activity under its jurisdiction or control may cause pollution or other damage to the marine environment in or in the vicinity of the Protected Zone, that Party shall, after due investigation, communicate to the other Party its assessment of the potential impact of that activity on the marine environment. 6. If either Party has reasonable grounds for believing that any existing or planned activity under the jurisdiction or control of the other Party is causing or may cause pollution or other damage to the marine environment in or in the vicinity of the Protected Zone, it may request consultations with the other Party, and the Parties shall then consult as soon as possible with a view to adopting measures to prevent or control any pollution or other damage to that environment from that activity.

Specifically under Article 13 (1) and (2)(a), there is the requirement of Parties to take legislative and other measures necessary to minimise to the fullest practical extent, all sources and activities of marine pollution including the release of toxic, harmful or noxious substances from land-based sources. It would again appear that Australia is not fulfilling its international obligations under this treaty as Australia has not introduced specific legislation in relations to this Treaty and this specific Article.

Additionally, Australia is a party to the *ASEAN Agreement on the Conservation of Nature and Natural Resources* (ASEAN Agreement).⁸⁶ The ASEAN Agreement sets up a framework by which the stated parties undertake to adopt national measures for the conservation of species, ecosystems and ecological processes. The contracting parties agree to take necessary measures to ensure the integration of natural resources conservation into the land use planning process and to establish ecologically significant protected areas.

Protection of the marine environment should therefore be a key priority for Australian waters under the national jurisdiction, and in the region.⁸⁷

The Commonwealth of Australia's ability to legislate over environmental matters (with specific reference to Coastal Marine Environments)

The Commonwealth government does not have a direct head of power under the *Constitution of Australia Act* 1901, to enact legislation with respect to environmental matters. This is not surprising given that at the time of drafting the Constitution, the national focus was on “nation building” rather than on the current highly relevant issues relating to environmental management. On this basis, it would appear, at first glance, that the responsibility for the regulation of diffuse land-based coastal marine pollution (as with all other environmental matters except those relevant to section 100⁸⁸ of

⁸⁶ *Australian State of the Forests Report 2003*, Department of Agriculture, Fisheries and Forestry

⁸⁷ Secretary-General's report on Oceans and Law of the Sea of March 2001, A/56/58 Available at http://www.australiaun.org/unWeb/content/statements/internationalLaw/11.27.2001_LAW.pdf and <http://www.un.int/chile/Statements/speech20011128> Accessed 20 October 2004

⁸⁸ *Commonwealth of Australia Constitution Act 1901* (Cth); Section 100 - Nor abridge right to use water: *The Commonwealth shall not, by any law or regulation of trade or commerce, abridge the right of a State or of the residents therein to the reasonable use of the waters of rivers for conservation or irrigation*

the *Constitution of Australia Act 1901*) would fall primarily to the individual States and territories.⁸⁹ However such a conclusion does not accurately reflect the true extent to which the Commonwealth possesses legislative power over environmental matters.

There are a number of federal powers which may be exercised with respect to the environment. The rejection of the “reserve powers” doctrine in the *Engineers Case*⁹⁰ suggested that that section 51 powers were no longer read down with implied prohibitions. One of the basic principles of the interpretation of the Constitution now established is that each grant is to be interpreted liberally.⁹¹ This would suggest that each grant of power under section 51 carries with it an implication that all powers necessary to carry out that power are also granted.⁹² Further, Commonwealth legislation does not need to be exclusively related to a head of power to be constitutionally valid.⁹³ This latter principle was enunciated in the *Murphyores*⁹⁴ where a mining company applied for export approvals for mineral concentrates removed from mineral sands on Fraser Island. *Murphyores* argued that the responsible Minister could not take into account environmental considerations relating to the mining operation when determining whether to grant export permits. The High Court of Australia unanimously rejected this argument⁹⁵ and it is now settled that the Commonwealth may, with respect to any activity for which it can legislate, also legislate to address the associated environmental issues.⁹⁶

The Commonwealth Government has no direct formal responsibility under the *Constitution* for issues related to managing the activities that typically produce diffuse land-based marine pollution or the environmental impacts, and it controls virtually no lands that may produce diffuse land-based coastal pollution. However, the Constitution contains five very important heads of power that could be utilised to establish water quality standards for agricultural production or land development.

⁸⁹ See generally, Crommelin, M. ‘Commonwealth Involvement in Environmental Policy: Past, Present and Future’ (1987) 4 *Environmental and Planning Law Journal* 101.

⁹⁰ *The Amalgamated Society of Engineers v Adelaide Steamship Co Ltd* (1920) 28 CLR 129

⁹¹ Crawford, J. ‘The Constitution and the Environment’ (1991) 13(1) *Sydney Law Review*, 11, 13-14

⁹² Crawford, J. ‘The Constitution and the Environment’ (1991) 13(1) *Sydney Law Review*, 11, 13-14

⁹³ Crawford, J. ‘The Constitution and the Environment’ (1991) 13(1) *Sydney Law Review*, 11, 13-14 - Crawford suggests: ‘*The fact that there is no specific...power of the environment ...in no way prevents the Commonwealth from legislating with respect to those matters, provided the law is also, in a formal sense, a law with respect to on of the granted head of power.*’

⁹⁴ *Murphyores Incorporated Pty Ltd v the Commonwealth* (1976) 136 CLR 1

⁹⁵ Per Barwick CJ, McTiernan, Gibbs, Stephen, Mason, Jacobs and Murphy JJ

⁹⁶ Crawford, J. ‘The Constitution and the Environment’ (1991) 13(1) *Sydney Law Review*, 11, 13-14

These powers are trade and commerce,⁹⁷ corporations' power,⁹⁸ external affairs,⁹⁹ the incidental power¹⁰⁰ and s 96,¹⁰¹ financial assistance to the states.¹⁰² Further, the *Constitution* also allows to Commonwealth to validly pass environmental legislation with respect to Commonwealth territories under section 122¹⁰³, the Commonwealth's Financial Powers under sections 51(ii),¹⁰⁴ 81,¹⁰⁵ 82,¹⁰⁶ 83¹⁰⁷ and 90.¹⁰⁸

Much of the Commonwealth legislation that addresses the use of agricultural resources is long standing, and is largely contingent on the Commonwealth's "trade and commerce" powers¹⁰⁹ covering international and interstate trade. This is a significant power as most natural resource development, including agriculture, is carried on for the purposes of overseas and interstate trade. Taking sugar cane for example, a large proportion of Queensland's sugar and cotton production is for export purposes. However, at present, it would be difficult to legislate for clean water standards aimed at discharge, since production processes are not considered commerce.¹¹⁰

The External Affairs power

The most important head of power, in terms of legislative output, is the external affairs power.¹¹¹ This assertion is based upon the evidence of the considerable reliance by the Commonwealth in the

⁹⁷ *Commonwealth of Australia Constitution Act 1901* (Cth); section 51- the Parliament shall, subject to this Constitution, have power to make laws for the peace, order, and good government of the Commonwealth with respect to: (i) trade and commerce with other countries, and among the States

⁹⁸ *Commonwealth of Australia Constitution Act 1901* (Cth); section 51(xx) - foreign corporations, and trading or financial corporations formed within the limits of the Commonwealth

⁹⁹ *Commonwealth of Australia Constitution Act 1901* (Cth); section 51(xxix) - external affairs

¹⁰⁰ *Commonwealth of Australia Constitution Act 1901* (Cth); section 51(xxxix) - matters incidental to the execution of any power vested by this Constitution in the Parliament or in either House thereof, or in the Government of the Commonwealth, or in the Federal Judicature, or in any department or officer of the Commonwealth.

¹⁰¹ *Commonwealth of Australia Constitution Act 1901* (Cth); section 96 - Financial assistance to States - During a period of ten years after the establishment of the Commonwealth and thereafter until the Parliament otherwise provides, the Parliament may grant financial assistance to any State on such terms and conditions as the Parliament thinks fit.

¹⁰² See generally Crawford, J. 'The Constitution and the Environment' (1991) 13(1) *Sydney Law Review*, 11, 13-14; Bates, G. *Environmental law in Australia* (2002, 5th ed), 55 - 73

¹⁰³ *Commonwealth of Australia Constitution Act 1901* (Cth); section 122 - Government of territories

¹⁰⁴ *Commonwealth of Australia Constitution Act 1901* (Cth); section 51(ii) - taxation; but so as not to discriminate between States or parts of States

¹⁰⁵ *Commonwealth of Australia Constitution Act 1901* (Cth); section 81 - Consolidated Revenue Fund

¹⁰⁶ *Commonwealth of Australia Constitution Act 1901* (Cth); section 82 - Expenditure charged thereon

¹⁰⁷ *Commonwealth of Australia Constitution Act 1901* (Cth); section 83 - Money to be appropriated by law

¹⁰⁸ *Commonwealth of Australia Constitution Act 1901* (Cth); section 90 - Exclusive power over customs, excise, and bounties

¹⁰⁹ *Commonwealth of Australia Constitution Act 1901* (Cth); section 51(i) - trade and commerce.

¹¹⁰ Moeller, A. and McKay, J. (2000) Is there Power in the Australian Constitution to make Federal Laws for Water Quality. *Environmental and Planning Law Journal*, Vol. 17, No. 4, August 2000, 294 - 307

¹¹¹ *Commonwealth of Australia Constitution Act 1901* (Cth); section 51(xxix) – External Affairs

past. Section 51 (xxix) for example, has been used to pass legislation to give effect to international treaty obligations. It is now established that the existence of bona fide international legal obligations for Australia provides the Commonwealth Government with the constitutional competence under s 51 (xxix) to enact legislation that is reasonably and appropriately adapted to fulfil those obligations.¹¹²

The existence of the Commonwealth's constitutional power under section 51(xxix) to undertake Australia's international obligations with respect to particular areas was confirmed by a majority of the High Court in the *Tasmanian Dams Case*.¹¹³ In the *Tasmanian Dams* case, the High Court upheld¹¹⁴ the validity of the *World Heritage Properties Conservation Act 1983* (Cth) which made it unlawful for the Tasmanian government to proceed with its plans to dam the Gordon River. There were political sensitivities involved in the case, not the least that the Tasmanian government objected to the Commonwealth government's interference with its own land use and planning matters. The Commonwealth Act was passed in pursuance of the Commonwealth's obligations¹¹⁵ under the *Convention for the Protection of the World Cultural and Natural Heritage 1972*.

Following the *Tasmanian Dams* case, the powers of the Commonwealth in relation to world heritage matters as an example of an international obligation (for example, an obligation under UNCLOS) were further tested in two cases before the High Court; *Lemonthyme and Southern Forests Case*¹¹⁶ and the *Wet Tropics Case* 167 CLR 232¹¹⁷ where the High Court in a unanimous majority reaffirmed the Commonwealth's constitutional power to protect matters of international importance and fulfil their international obligations. The unanimous view of the High Court in the *Wet Tropics Case* was that listing of a property as world heritage by the World Heritage Committee was sufficient and conclusive to establish the Commonwealth legislation in relation to its international duty to protect and conserve that property. In each case the High Court reaffirmed that

¹¹² *Commonwealth of Australia Constitution Act 1901* (Cth); section 51(xxix); *R v Burgess; Ex parte Henry* (1936) 55 CLR 608; *Koowarta v Bjelke-Peterson* (1982) 153 CLR 168; *Tasmania v Commonwealth* (1983) (the *Tasmanian Dams Case*) 158 CLR 1; *Richardson v Forestry Commission* (1988) 164 CLR 261; *Queensland v Commonwealth* (1989) (the *Wet Tropics Case*) 167 CLR 232; *Victoria v Commonwealth* (1996) 187 CLR 416 (the *Industrial Relations Act Case*); see generally Hanks P, *Constitutional Law in Australia*, (2nd ed, Butterworths, Sydney, 1996) p 414.

¹¹³ *Commonwealth v Tasmania* (1983) 158 CLR 1

¹¹⁴ Note the minority in *Commonwealth v Tasmania* (1983) 158 CLR 1, Gibbs CJ, Wilson and Dawson JJ did not form the opinion that there was any obligation cast on Australia under the World Heritage Convention, nor did they form the view that the preservation of the environment was a matter of international concern such that the external affairs power would be triggered.

¹¹⁵ Though note that in *Commonwealth v Tasmania* (1983) 158 CLR 1 the majority did not accept that an expressly stated obligation was required to support Commonwealth action under the external affairs power.

¹¹⁶ *Richardson v Forestry Commission* (1988) 164 CLR 261

¹¹⁷ *Queensland v Commonwealth* (1989) 167 CLR 232

the Convention created duties on Australia that could be carried out by the Commonwealth pursuant to the s 51 (xxix) (external affairs powers) of the Constitution.

Article 34(a) of the *Convention for the Protection of the World Cultural and Natural Heritage* 1972,¹¹⁸ together with the *Constitution*, provides that the responsibility for ensuring that the Convention is implemented in Australia rests with the Commonwealth, regardless of whatever domestic arrangements are put in place for the implementation of the Convention. It does not preclude a role for the States. With respect to this matter, in the *Tasmanian Dams Case*, it was suggested that the relevant obligation arising under Articles 4 and 5 imposed upon Australia but, so far as the performance of the obligation calls for legislative or executive action with respect to a property in a State, the obligation may be performed by the Commonwealth or by the State or partly by each of them.

In the case of marine pollution, treaty obligations are the major source of international law. With respect to diffuse land-based coastal marine pollution, the obligations need to be inferred from the provisions of the various treaties and Conventions outlined above. UNCLOS for example, obligates parties to adopt laws to regulate marine pollution. Article 213 specifically refers to the obligation to take measures to *prevent, reduce and control* land-based marine pollution and although no distinction is made between the varying sources of land-based marine pollution, the source of the authority to legislate, with respect to diffuse land-based coastal marine pollution, under the external affairs power is evident. Further, the SPREP provides an alternate source of international obligation and one could argue, given its regional focus, a compelling argument for doing enacting legislative measures to prevent, reduce and control diffuse land-based coastal marine pollution. There are several ways in which a matter might be judged to relate to external affairs¹¹⁹ and in relation to the environment; the most common link is in passing legislation which implements a treaty.¹²⁰ The view that the Commonwealth has power to enact legislation which in itself has no ‘international concern’¹²¹ has received sustained support from the High Court.¹²²

¹¹⁸ United Nations Education Scientific and Cultural Organisation (UNESCO), *Convention Concerning the Protection of the World Cultural and Natural Heritage. Proceedings of General Conference - 17th Session* (United Nations Education Scientific and Cultural Organisation, United Nations, Paris, November, 1972)

¹¹⁹ Crawford, J. ‘The Constitution and the Environment’ (1991) 13(1) *Sydney Law Review*, 11, 13-14

¹²⁰ For more on the impact international law has had on the development of environmental law in Australia see generally Fisher, D. ‘The Impact of International Law upon the Australian Environmental System’ (1999) 16 *Environmental and Planning Law Journal* 47

¹²¹ Fisher, D. ‘The Impact of International Law upon the Australian Environmental System’ (1999) 16 *Environmental and Planning Law Journal* 47.

¹²² See generally eg, *Commonwealth v Tasmania* (1983) 18 CLR, 1; *Richardson v Forestry Commissioner* (1988) 164 CLR 262 and *Queensland V Commonwealth* (1989) 167 CLR 232.

It was predicted in 1991 that:

*[i]t cannot be denied that the external affairs power is likely to continue to be a major source of power with respect to environmental management. This is especially so given the growth of treaty making and other international activity, on such matters as global warming, deforestation, acid rain and the depletion of the ozone layer.*¹²³

The reality has been that there has not been a rush of Commonwealth legislation since the “favourable” High Court decisions of the 1980s.¹²⁴ Further, when the Commonwealth is implementing a treaty, the content of the implementing Act must conform to the treaty. The High Court has held that where the Act seeks to regulate or prohibit activities, the regulation or prohibition of which is unnecessary to achieve the objects of the treaty, the Act is invalid.¹²⁵

With respect to coastal waters where the major impact from land-based marine pollution occurs and Australia’s international obligations, subsequent to the *Seas and Submerged Lands Case*,¹²⁶ the Commonwealth and States came to a series of arrangements in 1979 known as the Offshore Constitutional Settlement. The Offshore Constitutional Settlement gave the States a greater legal and administrative role in offshore areas to three (3) nautical miles except for the Great Barrier Reef World Heritage Area which is also managed by the cooperative arrangements formulated in the *Emerald Agreement*. The principle legislation implementing the Offshore Constitutional Settlement was the *Coastal Water States, Power and Title Act* 1982. It commenced in February 1983. The two fundamental elements underpinning the Offshore Constitutional Settlement arrangements are that the States and the Northern Territory were given title to an area called “coastal waters” consisting of all waters landward of the three (3) nautical mile limit but not including internal waters that are within the constitutional limits of a State. Secondly, the States and the Northern Territory were given concurrent legislative power over coastal waters; that is, they were given the same power to legislate over coastal waters, as they would have over their land territory.

¹²³ Crawford, J. ‘The Constitution and the Environment’ (1991) 13(1) Sydney Law Review, 11, 13-14

¹²⁴ Other cases include *Koowarta V Bjelke-Peterson* (1982) 153 CLR 168 and *Queensland v Commonwealth* (1989) 167 CLR 232.

¹²⁵ *Commonwealth v Tasmania* (1983) 158 CLR 1 at 232.

¹²⁶ *New South Wales v The Commonwealth; Victoria v The Commonwealth; Queensland v The Commonwealth; South Australia v The Commonwealth; Western Australia v The Commonwealth; Tasmania v The Commonwealth* (1975) 135 CLR 337

Cooperative Federalism

It has been suggested that the:

*[r]ecognition ...that Commonwealth powers in respect of the environment may well be more extensive than previously realised has led the federal government to suggest and the states to acknowledge, that a cooperative approach to environmental issues might be more politically acceptable.*¹²⁷

Subsequently, there is a piecemeal approach of Commonwealth and State and local laws relating to environmental management in Australia. This approach has been defined as “*cooperative federalism*” in action. The risk of such a structure is that there is no one coordinating entity to ensure uniformity of laws or indeed minimum standards that are required to comply with Australia’s international obligations. It is also difficult to determine exactly what is being done and the best method for addressing those areas where legislation (Commonwealth and/or State) is lacking.¹²⁸ Many policies overlap with the result that precious funding dollars may not be put to the best use.

It should be noted that cooperative federalism is not a new phenomenon¹²⁹ and nor is it limited to environmental matters. One definition that has been given to cooperative federalism is:

*[t]he ability of parties to the federal compact to exercise their respective legislative powers to produce a result which one of them alone would not have been able to produce”.*¹³⁰

This definition bespeaks of cooperative outcomes and results. The reality with respect to diffuse land-based coastal marine pollution indicates that the brand of cooperative federalism being currently utilised is not producing any expected outcomes.

In 1988, the Constitutional Commission recommended against amendment to the Constitution by adding an express provision to empower the Commonwealth government to enact laws relating to the environment. Amongst the reasons for not seeking an environmental head of power were:

- (a) the Commonwealth lacked the detailed expertise in environmental control matters and this expertise has been developed within the various States;

¹²⁷ Bates, G. *Environmental law in Australia* (2002, 5th ed), 55 - 73

¹²⁸ See generally Ramsay, R. and Rowe, R. *Environmental Law and Policy in Australia* (1995), 286

¹²⁹ See generally Ramsay, R. and Rowe, R. *Environmental Law and Policy in Australia* (1995), 286

¹³⁰ *BP Australia Ltd v Amann Aviation* (1996) 62 FCR 451 at 493 (Lindgren J.).

- (b) most decisions are best made (and actions undertaken) at the State or local level where the particular facts are known, resources are available and community consultation possible; and
- (c) The environment is broad and the risk of intruding upon traditional State areas of responsibility (particularly land use) should be avoided.¹³¹

Whilst the reasons are valid and defensible, the result has been, with respect to diffuse land-based coastal marine pollution, a loosely co-ordinated approach led by State and local governments.¹³² As noted in later in this report, some States are doing a far better job than others of controlling diffuse land-based coastal marine pollution.

Commonwealth Legislation relevant to diffuse land-based coastal marine pollution

The 1990s saw a shift in the manner in which environmental management was pursued in Australia.¹³³ As evidenced in the Offshore Constitutional Settlement, the Commonwealth, having successfully defended its sovereignty over maritime areas to the low water mark,¹³⁴ was willing to hand back the day to day management for the offshore areas to three nautical miles. This Settlement was as much a political solution as anything else for the Commonwealth lacked the infrastructure to manage what had hitherto been 36,000km of State owned and managed coastline. The Commonwealth has adopted a similar position with respect to the environment. Whilst there is scope to validly legislate over wide range environmental matters to achieve the objects of various multilateral and bilateral environmental treaties, the Commonwealth has evinced a reluctance to do so. Whilst a number of Acts relating to the environment have been passed, the only significant piece of legislation since the 1980s is the *Environment Protection and Biodiversity Conservation Act 1999* (Cth). In the main, existing Commonwealth environmental legislation applies to offshore areas

¹³¹ See generally *Final Report of the Constitutional Commission 1988*, Volume 2, para 10, 605 - These are the practical limitations which mitigate against blanket Commonwealth regulation of environment matters.

¹³² See generally Hassan, D. 'Regional Frameworks for land-based sources of marine pollution control: A legal analysis on the North East Atlantic and the Baltic Sea regions' *Queensland University of Technology Law and Justice Journal*, (2004) 1 who suggest: "Although there are some arguments against land-based marine pollution control at the regional level at present they have lost their retentive power. The regional approach has proven to be enormously attractive and, to a certain extent, successful for land-based marine pollution since the late 1960s. This is because the nature and scope of land-based pollutants differ from one region to another according to 'their special hydrographical and ecological characteristics, as well as the predominant patterns of industrial and economic development'".

¹³³ Some authors observe that notwithstanding the High Court decisions of the 1980s which gave the Commonwealth authority to legislate over environmental matters in so far as the legislation was in relation to external affairs, the Howard Liberal Government elected to office in the 1996 has taken a less interventionist approach and followed the model of cooperative federalism which is used in the United States of America.

¹³⁴ *New South Wales v The Commonwealth; Victoria v The Commonwealth; Queensland v The Commonwealth; South Australia v The Commonwealth; Western Australia v The Commonwealth; Tasmania v. The Commonwealth* (1975) 135 CLR 337

outside three (3) nautical miles that is the areas beyond the territorial jurisdiction of the States which avoids interference with traditional State matters such as land use and development.¹³⁵ The relevance of the *Environment Protection and Biodiversity Conservation Act 1999* (Cth) to land-based coastal marine pollution is discussed below.

Environment Protection and Biodiversity Conservation Act 1999 (Cth)

With respect to territorial waters outside the jurisdiction of the states (three (3) nautical miles), the *Environment Protection and Biodiversity Conservation Act 1999* (Cth) is a potentially a powerful legislative instrument. The *Environment Protection and Biodiversity Conservation Act 1999* (Cth) was enacted to regulate environmental issues that are of national significance to Australia, rather than those which are only of state and local significance. The *Environment Protection and Biodiversity Conservation Act 1999* (Cth) was also enacted to amongst other things, implement Australia's international obligations under for example, the *Convention for the Protection of the World Cultural and Natural Heritage 1972*, and the UNCLOS. The objects of the *Environment Protection and Biodiversity Conservation Act 1999* (Cth) are defined in s 3, particularly s 3 (1)(a).¹³⁶ The *Environment Protection and Biodiversity Conservation Act 1999* (Cth) provides protection for matters of national environmental significance and prohibits actions that have, or are likely to have, a significant impact on the environmental values associated with Commonwealth land, and/or on a matter of national environmental significance. This allows the Commonwealth to regulate many land decisions that have previously been regulated by States, in whole or in part where a matter of national environmental significance is affected including for example coastal marine waters outside the jurisdiction of the States.¹³⁷ These are world heritage properties, (for example the Great Barrier Reef World Heritage Area and Wet Tropics World Heritage Area); RAMSAR wetlands; migratory species protected under international agreements; nationally threatened species and communities; Commonwealth marine areas; nuclear actions; greenhouse gases; and any additional matter specified by regulation¹³⁸.

¹³⁵ See generally the *Historic Shipwrecks Act 1976* (Cth), *Antarctic Treaty (Environment Protection) Act 1980* (Cth), *Protection of the Sea (Civil Liability) Act 1981* (Cth), *Environmental Protection (Sea Dumping) Act 1981* (Cth), *Wildlife Protection (Regulation of Exports and Imports) Act 1982* (Cth), *Ozone Protection Act 1989*, *Antarctic Mining Prohibition Act 1991* (Cth)

¹³⁶ *Environment Protection and Biodiversity Conservation Act 1999* (Cth); section s 3(1)(a) - to provide for the protection of the environment, especially those aspects of the environment that are matters of national environmental significance, *Environment Protection and Biodiversity Conservation Act 1999* (Cth).

¹³⁷ Branson, JC, "The *Environment Protection and Biodiversity Conservation Act 1999* – Some Key Constitutional and Administrative Issues" (1999) 6 (1) *The Australasian Journal of Natural Resource Law and Policy*, Vol. 33 – 45.

¹³⁸ *Environment Protection and Biodiversity Conservation Act 1999* (Cth)

The *Environment Protection and Biodiversity Conservation Act 1999* (Cth) provides for Commonwealth regulation with respect to ‘matters of national significance’. In relation to diffuse land-based coastal marine pollution, the most relevant of the listed matters of national significance is marine waters.¹³⁹ Section 23 of the *Environment Protection and Biodiversity Conservation Act 1999* (Cth) prohibits a person from taking “in a Commonwealth marine area an action that has, will have or is likely to have a significant impact on the environment.”¹⁴⁰ More importantly however, section 23 (2) states that “a person must not take outside a Commonwealth marine area but in the Australian jurisdiction an action that has or will have a significant impact on the environment in a Commonwealth marine area; or is likely to have a significant impact on the environment in a Commonwealth marine area.”¹⁴¹ This is an extremely important subsection with respect to land-based coastal marine pollution, whether diffuse or point source. However, it is important to note that many activities along the coastal fringe which cause diffuse land-based coastal marine pollution may be on a small scale, such that they may not trigger the ‘significant impact’ threshold test as defined in *Booth v Bosworth*.¹⁴² The Commonwealth has chosen not to define “significant” in the EPBC. However, in *Booth v Bosworth*, Branson J defined “significant impact” as an impact that is “important, notable or of consequence having regard to its context or intensity.”

The Commonwealth also released new Administrative Guidelines in 2005 to guide proponents, government agencies and the community in determining how the Minister will exercise the discretion granted under s 75 of the *Environment Protection and Biodiversity Conservation Act 1999* (Cth) to determine whether a proposed action will have, or is likely to have, a significant impact on a matter of national environmental significance. However the cumulative effect of nutrient and sediment run off from land-based activities and land clearing in commonwealth marine environments can be very significant but was not addressed.¹⁴³

¹³⁹ *Environment Protection and Biodiversity Conservation Act 1999* (Cth); sections 23 - 24A - It is acknowledged that depending on the particular facts of a development proposal other matters may trigger the *Environment Protection and Biodiversity Conservation Act 1999* (Cth) and have relevance to diffuse land-based coastal marine pollution. For example RAMSAR wetlands or listed threatened species may be affected by diffuse land-based coastal marine pollution

¹⁴⁰ *Environment Protection and Biodiversity Conservation Act 1999* (Cth); section 23(1)

¹⁴¹ *Environment Protection and Biodiversity Conservation Act 1999* (Cth); section 23(2)

¹⁴² *Booth v Bosworth* (2001) 114 FCR 39

¹⁴³ *Environment Protection and Biodiversity Conservation Act 1999* (Cth); section 23 - “Requirement for approval of activities involving the marine environment”, and section 24 - “What is a ‘Commonwealth marine area’”; Department of Environment and Heritage, 2005 “EPBC Act - Principal Significant Impact Guidelines 1.1 (Matters of National Environmental Significance)” Available at <http://www.deh.gov.au/epbc> Accessed 4 June 2006 (for determining whether an action has, will have, or is likely to have a significant impact on a matter of national environmental significance under the *Environmental Protection and Biodiversity Conservation Act 1999* (Cth) and supplementary guidelines on particular topics.

In *Booth v Bosworth*¹⁴⁴, the applicant successfully gained a prohibitory injunction against the respondents, a cane and lychee farmers, from killing Spectacled Flying Foxes (*Pteropus conspicillatus*) on or near their lychee orchard through the use of an electric grid. This activity was held by Branson J to have a detrimental effect on the heritage values of the Wet Tropics World Heritage Area.¹⁴⁵ It is possible that an individual polluter may be subject to an injunction to prevent an “activity or series of activities” that may be damaging the Commonwealth marine environment.¹⁴⁶ Judgments of the decisions in both *Booth v Bosworth* and *Minister for the Environment & Heritage v Greentree*¹⁴⁷ suggest that if it could be proven that specific individuals were impacting on Commonwealth marine environment, that they may be stopped from undertaking these activities. Pursuant to s 475,¹⁴⁸ if a person has engaged, engages or proposes to engage in conduct that constitutes an offence of the *Environment Protection and Biodiversity Conservation Act 1999* (Cth), the Federal Court may restrain them.

In December 2003, the Federal Court heard the matter of *Queensland Conservation Council Inc v Minister for the Environment and Heritage* [2003] FCA 1463 and subsequent appeal (*Minister for the Environment and Heritage v Queensland Conservation Council Inc* [2004] FCAFC 190). This decision could have major repercussions for the land-based industries that cause land-based pollution of coastal marine environments. The decision overturned a decision by the Federal Environment Minister for not fully considering the impacts of associated practices on the Great Barrier Reef World Heritage Area. These impacts included agricultural development that was to be irrigated from a proposed dam and chemicals associated with these agricultural practices that may impact on the marine environment. The decision has very important impacts for the future of environmental law in Australia. Firstly, when assessing a proposal’s impacts pursuant to s 75¹⁴⁹, the Minister must undertake a wide enquiry and consider the whole, cumulative and continuing effects of the action, including the actions and impacts of associated third parties. The Minister must also consider when assessing a proposal, all adverse impacts the proposal is likely to have, with the broadest considerations given and only limited by the likelihood of the impact occurring. As such,

¹⁴⁴ *Booth v Bosworth* (2001) 114 FCR 39

¹⁴⁵ *Environment Protection and Biodiversity Conservation Act 1999* (Cth).

¹⁴⁶ McGrath C, “The Flying Fox Case” (2002/2003) 37(8) *Queensland Environmental Practice Reporter* 64

¹⁴⁷ *Minister for the Environment & Heritage v Greentree* [2003] FCA 857

¹⁴⁸ *Environment Protection and Biodiversity Conservation Act 1999* (Cth); section 475 - Injunctions for contravention of the Act

¹⁴⁹ *Environment Protection and Biodiversity Conservation Act 1999* (Cth); section 75 - Does the proposed action need approval?

McGrath suggests that this interpretation indicates the Australian Environment Minister should exclude from further consideration those possible impacts that lie in the realms of speculation¹⁵⁰.

In order to persuade the Court to grant such an injunction against an individual polluter, a party seeking an order would need to prove that the individual had been discharging pollutants into a river system that fed into a Commonwealth marine environment. Furthermore, evidence would need to be adduced that the individual was responsible beyond a reasonable doubt, a standard of proof that would require careful monitoring of the alleged site of discharge in a manner that was impossible for the defendant to show that could have possibly come from another source. It has been suggested that at present it is more likely that a prosecution would be successfully brought against a processing facility, such as a mill, rather than an individual landholder.¹⁵¹ However, in the event that a successful prosecution was taken against an individual landholder, the ramifications for the industry would be significant.¹⁵²

It is suggested that the role of the Commonwealth in managing the impact of diffuse land-based coastal marine pollution outside the jurisdiction of the states through the *Environment Protection and Biodiversity Conservation Act 1999 (Cth)* is *ad hoc* in that application is restricted to matters of national significance and does not address the causes of diffuse land-based coastal marine pollution nor seek to regulate activities that produce diffuse land-based coastal marine pollution.

National Environment Protection Council Act 1994 (Cth)

The *National Environment Protection Council Act 1994 (Cth)* established the National Environmental Protection Council to make National Environmental Protection Measures (NEPMs) for the protection of various aspects of the environment. Section 14(1) of the *National Environment Protection Council Act 1994 (Cth)* lists matters with respect to which NEPMs may be formulated. With respect to land-based coastal marine pollution, the *National Environment Protection Council*

¹⁵⁰ McGrath, C, "Key concepts of the *Environment Protection and Biodiversity Conservation Act 1999 (Cth)*", *Environment and Planning Law Journal*, (2005) 22 (1) 20 - 39

¹⁵¹ Bjornsson KT, Brodie A, Dyer, B, Lukacs G, Karen V, Walker D. and Werren G. (2002) *Riparian Areas and On-farm Wetlands in the Australian Sugar Industry: A Review for the CRC of Sustainable Sugar Production* (CRC of Sustainable Sugar Production, Townsville, 10 May 2002) p 168

¹⁵² Haynes D and Michalek-Wagner K, "Water Quality and the Great Barrier Reef World Heritage Area: Past Perspectives, Current Issues and New Research Directions" (2000) *Marine Pollution Bulletin* Vol 428; Yorkston H (2002) *Submission to the Productivity Commission on Industries in the Great Barrier Reef Catchment and measures to address declining water quality*, (Great Barrier Reef Marine Park Authority, Townsville, 13 September, 2002) p 35; See generally <http://www.gbrmpa.gov.au>.

Act 1994 (Cth) lists ‘*ambient marine, estuarine and fresh water quality*’ as a matter which may be addressed by a NEPM.¹⁵³ To date, no draft NEPM addressing water quality has been written.

Commonwealth policy on environmental regulation

Intergovernmental Agreement on the Environment

The Intergovernmental Agreement on the Environment was adopted in 1992 following a special Premiers Conference in 1990 held to address the need to adopt a national integrated approach to environmental management.¹⁵⁴ The Intergovernmental Agreement on the Environment adopted to provide a mechanism to facilitate:

- a cooperative national approach to the environment;
- a better definition of the roles of the respective governments;
- a reduction in the number of disputes between the Commonwealth and the States and Territories on environment issues;
- greater certainty of Government and business decision making; and
- better environment protection.

Although the Intergovernmental Agreement on the Environment recognises the primary role the States play in environmental management and protection, the Commonwealth’ role is also acknowledged in section 2.¹⁵⁵ The Intergovernmental Agreement on the Environment also addresses the interest of the various levels of government in Australia.¹⁵⁶ The authors’ suggest that the

¹⁵³ *National Environment Protection Council Act 1994 (Cth)*; section 14 (1)(b) - Council may make national environment protection measures - The Council may, by instrument in writing, make a measure, to be known as a national environment protection measure, that relates to any one or more of the following: (b) ambient marine, estuarine and fresh water quality

¹⁵⁴ At the Premiers’ Conference a national approach was identified for environmental impact assessment, air and water quality, the control of Genetically Modified Organisms.

¹⁵⁵ *Intergovernmental Agreement on the Environment (1992)*; Section 2 - Responsibilities and Interests of the Commonwealth

2.2.1 The responsibilities and interests of the Commonwealth in safeguarding and accommodating national environmental matters include: matters of foreign policy relating to the environment and, in particular, negotiating and entering into international agreements relating to the environment and ensuring that international obligations relating to the environment are met by Australia; (i) ensuring that the policies or practices of a State do not result in significant adverse external effects in relation to the environment of another State or the lands or territories of the Commonwealth or maritime areas within Australia’s jurisdiction (subject to any existing Commonwealth legislative arrangements in relation to maritime areas); (ii) facilitating the co-operative development of national environmental standards and guidelines as agreed in Schedules to this Agreement.

¹⁵⁶ *Intergovernmental Agreement on the Environment (1992)*; Section 2 - Accommodation of Interests - 2.5.1 Between the States and the Commonwealth - 2.5.1.1 Where there is a Commonwealth interest in an environmental matter which involves one or more States, that interest will be accommodated as follows: (i) the Commonwealth and the affected

accommodation of interests is reactive, applying to specific situations. The authors' further note that the specific roles of the various levels of government are not addressed. Further, the competence of the Commonwealth government to enter multilateral or bilateral treaties concerning international environmental matters was addressed pursuant to the Commonwealth's constitutional powers under the *External Affairs* power. Notwithstanding the provisions within the Intergovernmental Agreement on the Environment, it is suggested that it may be seen as a win for individual state sovereignty and a loss for the environment, as the Intergovernmental Agreement on the Environment requires the Commonwealth to consult with the States prior to entering any "international agreements."¹⁵⁷

With respect to diffuse land-based coastal marine pollution, there is only one (1) reference in the Intergovernmental Agreement on the Environment that could in some way be considered relevant. Schedule 2 (Resources Assessment, Land Use Decisions and Approval Processes) provides that:

2. *The parties agree that it is the role of government to establish the policy, legislative and administrative framework to determine the permissibility of any land use, resource use or development proposal having regard to the appropriate, efficient and ecologically sustainable use of natural resources (including land, coastal and marine resources);*

and further provides for

States will cooperatively set outcomes or standards and periodically review progress in meeting those standards or achieving those outcomes; or (ii) where outcomes or standards are impractical or inappropriate, the Commonwealth may approve or accredit a State's practices, procedures, and processes; or (iii) where the Commonwealth does not agree that State practices, procedures or processes are appropriate, the Commonwealth and the States concerned will endeavour to agree to modification of those practices, procedures and processes to meet the needs of both the Commonwealth and the States concerned; (iv) where agreement is reached between the Commonwealth and a State under (iii) the Commonwealth will approve or accredit that State practice, procedure or process.

¹⁵⁷ Intergovernmental Agreement on the Environment (1992); Section 2 - International Agreements: 2.5.2.1 - The parties recognise that the Commonwealth has responsibility for negotiating and entering into international agreements concerning the environment. The Commonwealth agrees to exercise that responsibility having regard to this Agreement and the Principles and Procedures for the Commonwealth-State Consultation on Treaties as agreed from time to time. In particular, the Commonwealth will consult with the States in accordance with the Principles and Procedures, prior to entering into any such international agreements.

2.5.2.2 The Commonwealth will, where a State interest has become apparent pursuant to the Principles and Procedures and subject to the following provisions not being allowed to result in unreasonable delays in the negotiation, joining or implementation of international agreements: (1) notify and consult with the States at the earliest opportunity on any proposals for the development or revision of international agreements which are relevant to Australia and which relate to the environment and will take into account the views of the States in formulating Australian policy, including consultation on issues relating to roles, responsibilities and costs; (ii) when requested, include in appropriate cases, a representative or representatives of the States on Australian delegations negotiating international agreements related to the environment. Any such representation will be subject to the approval of the Minister for Foreign Affairs and Trade, and will, unless otherwise agreed, be at the expense of the States; (iii) prior to ratifying or acceding to, approving or accepting any international agreement with environmental significance, consult the States in an effort to secure agreement on the manner in which the obligations incurred should be implemented in Australia, consistent with the roles and responsibilities established pursuant to this Agreement.

4. *The development and administration of the policy and legislative framework will remain the responsibility of the States and Local Government. The Commonwealth has an interest in ensuring that these frameworks meet its responsibilities and interests as set out in this Agreement. The Commonwealth will continue to co-operate with the States in agreed programs.*¹⁵⁸

It is suggested that the indirect reference to land use and development is insignificant particularly as it contributes to the great majority of diffuse land-based coastal marine pollution. Responsibility for the overall policy and legislative framework in relation to and use and development remains predominantly with the States and through specific planning legislation within each State's jurisdiction, the local governments.

Commonwealth policy addressing diffuse land-based coastal marine pollution

With the emergence of worldwide environmental consciousness in the early 1970s, Australia began to assume numerous international obligations with respect to land-based pollution as discussed previously. There are now more than one thousand treaties that serve as a source for international environmental obligations.¹⁵⁹ Although Australia is not party to all of them, it has sizeable international commitments through treaties it has signed or implemented.¹⁶⁰ In the 1970s, the Commonwealth began to explore ways to meet its international obligations under domestic Commonwealth law and to exercise some influence over environmental matters and land use generally within both its jurisdiction and the jurisdictions of the individual states. As previously discussed, it is well established that the existence of international legal obligations for Australia provides the Commonwealth Government with the constitutional competence under Section 51(xxix) to enact legislation that is reasonably and appropriately adapted to fulfil those obligations.¹⁶¹

¹⁵⁸ Intergovernmental Agreement on the Environment (1992); Schedule 2

¹⁵⁹ Australian Department of Foreign Affairs and Trade, Canberra, Australian Treaty Service

¹⁶⁰ Australian Department of Foreign Affairs and Trade, Canberra, Australian Treaty Service

¹⁶¹ *Commonwealth of Australia Constitution Act 1901* (Cth); section 51(xxix) - the External Affairs power; See generally *R v Burgess; Ex parte Henry* (1936) 55 CLR 608; *Koowarta v Bjelke-Peterson* (1982) 153 CLR 168; *Tasmania v Commonwealth* (1983) 158 CLR 1 (the Tasmanian Dams case); *Richardson v Forestry Commission* (1988) 164 CLR 261; *Queensland v Commonwealth* (1989) 167 CLR 232 (the Wet Tropics case); *Victoria v Commonwealth* (1996) 187 CLR 416 (the Industrial Relations Act case); see generally Hanks P., *Constitutional Law in Australia*, 2nd ed, Butterworths, Sydney, 1996, p 414

Although Australia has instigated a number of legislative regimes to deal predominantly with sea dumping and marine pollution from vessels,¹⁶² and has also ratified UNCLOS in relation to our EEZ, Australia has done little to protect the marine environment under its international obligations from sources of land-based pollution. An illustration of various programs that have been suggested by the Commonwealth that could assist in the prevention, reduction and control of land-based coastal marine pollution could include the Coastal Catchments Initiative *Clean Seas Program*, *Oceans Policy*,¹⁶³ *Coastcare*,¹⁶⁴ *Coasts and Clean Seas Initiative*,¹⁶⁵ the *National Action Plan for Salinity and Water Quality*,¹⁶⁶ and the *National Water Quality Management Strategy*¹⁶⁷ and the *Reef Water Quality Protection Plan* that specifically relates to land-based sources of marine pollution within the Great Barrier Reef World Heritage Area catchment.¹⁶⁸ Although all may in some way attempt to protect the marine environment, none of these is legislatively enforceable and also except for the *Reef Water Quality Protection Plan*, none are specifically relevant to diffuse land-based coastal marine pollution, nor predominantly point source land-based pollution.

The *Clean Seas Program* is a program predominantly designed to address and support sustainable wastewater management in coastal areas.¹⁶⁹ Through a coordinated approach, the Clean Seas Program aims to tackle coastal pollution by encouraging wastewater reuse and promoting ecologically sustainable development. The *Clean Seas Program* aims to reduce pollution of coastal, marine and estuarine environments by wastewater, including stormwater, from coastal cities and

¹⁶² *Environment Protection (Sea Dumping) Act 1981 (Cth)*; *Protection of the Sea (Discharge of Oil from Ships) Act 1981 (Cth)*; *Protection of the Sea (Powers of Intervention) Act 1981 (Cth)*; *Protection of the Sea (Civil Liability) Act 1981 (Cth)*; *Historic Shipwrecks Act Amendment Act 1980 (Cth)* - The *Environment Protection and Biodiversity Conservation Act 1999 (Cth)* largely respects this settlement

¹⁶³ National Oceans Office, Commonwealth Department of the Environment and Heritage, *National Oceans Policy* Available at <http://www.oceans.gov.au/> Accessed 10 June 2006

¹⁶⁴ Natural Heritage Trust (Australian Government departments of Agriculture, Fisheries and Forestry and the Environment and Heritage), 2004, *Coastcare* Available at <http://www.nht.gov.au/publications/coastcare-brochure.html> Accessed 10 June 2006

¹⁶⁵ National Oceans Office, Commonwealth Department of the Environment and Heritage, *National Oceans Policy2 – Coasts and Clean Seas* Available at http://www.oceans.gov.au/content_policy_v1/page_008.jsp Accessed 10 June 2006

¹⁶⁶ (Australian Government Departments of Agriculture, Fisheries and Forestry and the Environment and Heritage), 2004, *National Action Plan for Salinity and Water Quality* Available at <http://www.napswq.gov.au/> Accessed 10 June 2006

¹⁶⁷ Commonwealth Department of the Environment and Heritage, 2004, *National Water Quality Management Strategy* Available at <http://www.deh.gov.au/water/quality/nwqms/> Accessed 10 June 2006

¹⁶⁸ Commonwealth Department of the Environment and Heritage, 2003 *Reef Water Quality Protection Plan* Available at <http://www.deh.gov.au/coasts/pollution/reef/> Accessed 10 June 2006

¹⁶⁹ Natural Heritage Trust (Australian Government Departments of Agriculture, Fisheries and Forestry and the Environment and Heritage), 2004, *Programs of the first phase of the Natural Heritage Trust: Clean Seas Program* Available at <http://www.nht.gov.au/nht1/programs/ccs/index.html> Accessed 10 June 2006

towns and other sources such as maritime and industrial activities.¹⁷⁰ However, there is an obvious lack of information with respect to the impacts and the subsequent prevention, reduction and control of diffuse land-based pollution.

Coastal Catchments Initiative

The *Coastal Catchment Initiative* is aimed at achieving significant reductions in the discharge of pollutants in agreed coastal water “hotspots.”¹⁷¹ The *Coastal Catchment Initiative* operates through the 2002 *Framework for Marine and Estuarine Water Quality Protection* to target these hotspots and set management action targets. The minimum stated aims of the *Framework for Marine and Estuarine Water Quality Protection* do indirectly touch upon diffuse land-based coastal marine pollution. They are particularly with respect to diffuse land-based coastal marine pollution:

- to set out the water quality issues, pollutants of concern, and water quality objectives for those waters, and:
 - the estimated *total maximum pollutant loads* to achieve and maintain the water quality objectives, and how this differs from the current estimated pollutant loads;
 - the estimated constituent point and *diffuse source allocations* of the total maximum pollutant loads;
 - the estimated point source allocations to each licensed point source, and the *allocations to non-point sources of contaminants, including atmospheric deposition or natural background sources*;
 - the margin of safety used in establishing the total maximum pollutant load which accounts for uncertainty, including that associated with estimating pollutant loads, water quality monitoring, ecosystem processes and modelling;
 - how decision support systems will be developed and applied to appraise the likelihood of success of the plan, and the degree and timeliness of reductions in pollutant loads, including provision for future growth which accounts for reasonably foreseeable increases in pollutant loads; and

¹⁷⁰ *Natural Heritage Trust Annual Report 2001-02*, Department of Environment and Heritage, Available at <http://www.nht.gov.au/publications/annrpt0102/> Accessed 11 June 2006

¹⁷¹ Eg, the Parramatta River, the Cooks and Georges Rivers, Moreton Bay, Port Adelaide, the Derwent Estuary, Swan/Canning Rivers and Port Phillip Bay.

- seasonal variation in pollutant load inputs, such that the water quality objectives will be met all year round.¹⁷²

A number of localised initiatives have been implemented such as \$560,000 committed to improving the water quality of the Derwent River, one of the most heavily polluted rivers in Australia. Funds were contributed from the federal and state government and industry fostering increased cooperation in tackling the problem of metal contamination through land-based sources.

In 2005 the Commonwealth and Queensland governments, together with participation from government agencies, local governments, industry bodies, regional bodies, scientists, landholders and community groups¹⁷³ committed to four separate projects aimed at improving water quality in the GBRMP. The significance of these projects is that they build upon previous experiences and foster cooperation along the coastline. Furthermore because the GBRMP is an easily identifiable object, visualising what is being protected should assist in communicating the need to take action to prevent diffuse land-based marine pollution. Action undertaken under these projects can then be replicated along the Australian coasts.

For example, the Mackey Whitsunday region has received over \$1.2 million to work with industry and landholders to identify and evaluate best management practices including irrigation efficiency, effective fertiliser use and protecting river edges.¹⁷⁴

National Water Quality Strategy 1994

The *National Water Quality Strategy 1994* is linked to the *Framework for Marine and Estuarine Water Quality Protection*. The *National Water Quality Strategy 1994* addresses all of Australia's water resources and provides some reference to coastal marine pollution through the guidelines for aquatic systems. The key features addressed in the *National Water Quality Strategy 1994* are:

- the environmental values of the coastal water;
- catchments that discharges to coastal water;

¹⁷² Commonwealth Department of Environment and Heritage, (2002) *The Framework for Marine and Estuarine Water Quality Protection*, Available at <http://www.deh.gov.au/coasts/pollution/cci/framework> Accessed 12 July 2006

¹⁷³ Campbell Senator, Hon I, (2005) *\$4.8 million to improve Great Barrier Reef water quality* Available at <http://www.deh.gov.au/minister/env/2005/mr28nov205.html> Accessed 29 September 2006

¹⁷⁴ Campbell Senator, Hon I, (2005) *\$4.8 million to improve Great Barrier Reef water quality* Available at <http://www.deh.gov.au/minister/env/2005/mr28nov205.html> Accessed 29 September 2006

- water quality issues (eg algal blooms, sedimentation, high coliform concentrations causing beach closures) and subsequent water quality objectives;
- load reductions of pollutant/s to be achieved to attain and maintain water quality objectives;
- setting of the maximum load of pollutant/s against diffuse and point sources of pollution;
- river flow objectives to protect identified environmental values, having regard for matters such as natural low flows, flow variability, floodplain inundation, interactions with water quality and the maintenance of estuarine processes and habitats;
- management measures, timelines and costs in implementing the plan; and
- grounds for a "reasonable assurance" from jurisdictions to provide security for investments to achieve and maintain the specified pollutant load reduction and environmental flow targets.¹⁷⁵

Reef Water Quality Protection Plan

The *Reef Water Quality Protection Plan* specifically relates to diffuse land-based coastal marine pollution of the Great Barrier Reef World Heritage Area.¹⁷⁶ The *Reef Water Quality Protection Plan* was launched in December 2003 with a focus on actions to address pollutants from diffuse sources through an integrated natural resource management approach.¹⁷⁷ The *Reef Water Quality Protection Plan* is cooperative arrangement between the Commonwealth of Australia and Queensland State Government with involvement from industry and community groups.

In formulating the *Reef Water Quality Protection Plan*, it was acknowledged that human activity within the catchments of the Great Barrier Reef World Heritage Area “*has led to significant increases in pollutants (sediments, nutrients and chemicals) in waterways entering the Reef.*”¹⁷⁸ It is also acknowledged that “*single issue-based actions or policies by individual organisations are no*

¹⁷⁵ Council of Australian Governments (1994) National Water Quality Management Strategy, Canberra, Available at <http://www.deh.gov.au/water/quality/nwqms/> Accessed 12 July 2006

¹⁷⁶ Commonwealth Department of the Environment and Heritage, 2003 *Reef Water Quality Protection Plan* Available at <http://www.deh.gov.au/coasts/pollution/reef/> Accessed 11 June 2006

¹⁷⁷ Department of the Environment and Heritage (2005) “Great Barrier Reef Water Quality Protection Plan Annual Report 2004-2005”, Available at <http://www.deh.gov.au/coasts/publications/annual-report/04-05/index.html> Accessed 23 June 2006

¹⁷⁸ Department of the Environment and Heritage (2005) “Great Barrier Reef Water Quality Protection Plan Annual Report 2004-2005”, Available at <http://www.deh.gov.au/coasts/publications/annual-report/04-05/index.html> Accessed 23 June 2006

longer an effective way to protect the Reef' from the threat of diffuse land-based coastal marine pollution.¹⁷⁹

The 2004-2005 Annual Report for the *Reef Water Quality Protection Plan*¹⁸⁰ lists a number of achievements in relation to the reduction of diffuse land-based coastal marine pollution. These include the approval of funding under the *Coastal Catchment Initiative* for the development and implementation of water quality improvement plans in a number of catchments. However, the authors suggest to date, that there has been very little improvement in the water quality from coastal catchments draining into the Great Barrier Reef World Heritage Area, nor any regulatory action by either the Commonwealth or the State of Queensland to address the impacts of diffuse land-based coastal marine pollution entering the Great Barrier Reef World Heritage Area, particularly when it would appear the current non-regulatory approach are specifically for a long term approach, when the matter needs to be addressed urgently.¹⁸¹ However, it should be noted that it could take considerable time to actually notice a significant change in water quality within the Great Barrier Reef World Heritage Area as a result of land-based pollution.

National Action Plan for Salinity and Water Quality

The *National Action Plan for Salinity and Water Quality* was adopted on 3 November 2000 and is implemented through bilateral agreements between the States/Territory governments and the Commonwealth government. The aim through the framework established by the Intergovernmental Agreement on the Environment is to target the worst affected rivers and catchments in Australia to combat increased salinity and deteriorating water quality.¹⁸² The identified 21 priority regions concentrate on catchments rather than the coastal area¹⁸³ and thus any improvement on marine water quality will be incidental. The *National Action Plan for Salinity and Water Quality* does

¹⁷⁹ Department of the Environment and Heritage (2005) "Great Barrier Reef Water Quality Protection Plan Annual Report 2004-2005", Available at <http://www.deh.gov.au/coasts/publications/annual-report/04-05/index.html> Accessed 23 June 2006

¹⁸⁰ Released in September 2005 by the Commonwealth Department of Environment and Heritage.

¹⁸¹ See generally Wulf, P.L. (2004) Diffuse Land-Based Pollution and the Great Barrier Reef World Heritage Area: The Commonwealth's Responsibilities and Implications for the Queensland Sugar Industry. *Environmental and Planning Law Journal*, 21 (6), 424 – 444; Wulf, P.L. (2004/2005) Diffuse Land-based Water Pollution in Sugar Cane Catchments: Queensland State Government Responsibilities and Legal Implications for the Queensland Sugar Industry. *Queensland Environmental Practice Reporter*, 10 (48), 130 - 147

¹⁸² Commonwealth of Australia and Council of Australian Governments, (2000) *National Action Plan for Salinity and Water Quality* Available at <http://www.napswq.gov.au/> Accessed on 8 July 2006

¹⁸³ Commonwealth of Australia and Council of Australian Governments, (2000) *National Action Plan for Salinity and Water Quality* Available at <http://www.napswq.gov.au/> Accessed on 8 July 2006

address factors contributing to diffuse land-based marine pollution; however its scope would need to be broadened to specifically cover marine waters. The framework upon which the *National Action Plan for Salinity and Water Quality* is predicated, that targets for water quality, salinity and water flow, do provide a good platform for extending the *National Action Plan for Salinity and Water Quality* to marine waters.

State Regulatory and Institutional Arrangements with respect to diffuse land-based coastal marine pollution

Under Commonwealth law in respect to water quality in Australian rivers, the *Commonwealth Constitution* 1901 is silent over water resources and environmental issues as previously stated. Therefore according to common law principles about sovereign legislative power, this power remained with the States. The only explicit reference to water resources is found in section 100 that reads:

*The Commonwealth shall not, by any law or regulation of trade or commerce, abridge the right of a State or the residents therein to the reasonable use of the waters of rivers for conservation or irrigation.*¹⁸⁴

Therefore, the management of catchment and coastal pollution sources within three (3) nautical miles is under the control of the States pursuant to the Offshore Constitutional Settlement.

There have been rapid and frequent changes in the arrangements and structures surrounding catchment and coastal management bodies in Australia, including changes in the legislative powers of catchment management bodies, coastal management bodies, their responsibilities, their names, their reporting channels through government, and the names and structures of government agencies with which they must work. The rapidity of change can be gauged by the fact that a book chapter published in 2003 documenting catchment management institutional arrangements state by state¹⁸⁵ was substantially out of date before the end of the year. Most states and territories in Australia are currently reviewing or have recently reviewed statutory and administrative arrangements for natural

¹⁸⁴ *Commonwealth of Australia Constitution Act 1901* (Cth); Section 100 - Nor abridge right to use water: *The Commonwealth shall not, by any law or regulation of trade or commerce, abridge the right of a State or of the residents therein to the reasonable use of the waters of rivers for conservation or irrigation*

¹⁸⁵ Ewing, S., 2003, 'Catchment management arrangements' In Dovers, S., and Wild River, S., (eds) *Managing Australia's Environment* Federation Press, Sydney pp 393 - 412

resource management. The details of arrangements vary considerably between states from institutional models with high levels of community empowerment to those where State Government agencies retain full responsibility for all legislative functions. For the majority of the states, water pollution is usually specifically directed to point source pollution. For the purpose of this report, an extensive example of the legislative mechanisms used in Queensland that are normally used by most States will be emphasised to provide an example of how governments manage diffuse land-based coastal marine pollution.

Queensland - Regulation of land-based coastal marine pollution under Catchment Management and Coastal Legislation

The Queensland Government has established a broad-based system of legislation and associated regulatory bodies to preserve resources and ensure compliance with the nation's international legal obligations, and to fulfil its responsibility to conserve the environment for future generations. Queensland's environmental legal system recognises sectoral environmental issues like freshwater resources,¹⁸⁶ coastal and marine ecosystems,¹⁸⁷ soils,¹⁸⁸ forests,¹⁸⁹ biological diversity and nature conservation,¹⁹⁰ erosion and land clearing,¹⁹¹ pollution prevention and control,¹⁹² waste management¹⁹³ and mining.¹⁹⁴ The Department of Natural Resources, Mines and Energy has coordinated a community-based, integrated catchment management approach since its introduction in 1991. Catchment committees were established to take an integrated approach to water; soil and vegetation resources within specific river catchments that could cause diffuse land-based coastal marine pollution. Queensland has no direct legislative base for the integrated catchment management framework.¹⁹⁵ However, this report will address a number of specific Acts that could be used to prevent, reduce and control diffuse land-based coastal marine pollution, including, but not limited to, the *Environmental Protection Act 1994 (Qld)*, the *Environmental Protection (Water)*

¹⁸⁶ *Water Act 2000 (Qld)*.

¹⁸⁷ *Marine Parks Act 1982 (Qld)*; *Coastal Protection and Management Act 1995 (Qld)*; *Fisheries Act 1994 (Qld)*.

¹⁸⁸ *Soil Conservation Act 1986 (Qld)*.

¹⁸⁹ *Forestry Act 1959 (Qld)*.

¹⁹⁰ *Nature Conservation Act 1992 (Qld)*.

¹⁹¹ *Vegetation Management Act 1999 (Qld)*.

¹⁹² *Environmental Protection Act 1994 (Qld)*.

¹⁹³ *Environmental Protection Act 1994 (Qld)*; *Environmental Protection (Waste Management) Policy 2000*.

¹⁹⁴ *Environmental Protection Act 1994 (Qld)*; *Environmental Protection (Waste Management) Policy 2000*; *Mineral Resources Act 1989 (Qld)*.

¹⁹⁵ See generally Wulf, P.L. (2004) Diffuse Land-Based Pollution and the Great Barrier Reef World Heritage Area: The Commonwealth's Responsibilities and Implications for the Queensland Sugar Industry. *Environmental and Planning Law Journal*, 21 (6), 424 – 444; Wulf, P.L. (2004/2005) Diffuse Land-based Water Pollution in Sugar Cane Catchments: Queensland State Government Responsibilities and Legal Implications for the Queensland Sugar Industry

Policy 1997 (Qld), the *Water Act 2000* (Qld), and the *Coastal Protection and Management Act 1995* (Qld).

Environmental Protection Act 1994 (Qld)

The principal legislation regulating land-sourced coastal marine pollution in Queensland is the *Environmental Protection Act 1994* (Qld). Queensland has approached the management of water quality with regard to point source and non-point source pollution primarily through regulation, and planning/assessment instruments such as those mentioned above. The Queensland Government is also utilising the Regional Bodies as a mechanism for reducing the impacts of land-based marine pollution, however the authors suggest this has presently been less than effective. The object of the *Environmental Protection Act 1994* (Qld) is environmental protection within the context of ecologically sustainable development.¹⁹⁶ The *Environmental Protection Act 1994* (Qld) provides a framework for protecting the environment by:

- creating an environmental duty of care;¹⁹⁷
- providing a process for dealing with and minimising environmental harm;
- creating an authorisation/licensing system for dealing with “environmentally relevant activities”¹⁹⁸ and
- providing for the development of Environmental Protection Policies such as the *Environmental Protection Policy (Water) 1997*.¹⁹⁹

The principal mechanisms by which the Environmental Protection Agency regulates land-sourced coastal marine pollution is by licensing environmentally relevant activities; developing codes of practice (both of which are proactive rather than reactive measures) and by establishing an offence system for unlawfully causing material or serious environmental harm²⁰⁰ Among other things, the

¹⁹⁶ *Environmental Protection Act 1994* (Qld); section 3 - “The object of this Act is to protect Queensland’s environment while allowing for development that improves the total quality of life, both now and in the future, in a way that maintains the ecological processes on which life depends (*ecologically sustainable development*).”

¹⁹⁷ *Environmental Protection Act 1994* (Qld); section 319 “General Environmental Duty (1) A person must not carry out any activity that causes, or is likely to cause, environmental harm unless the person takes all reasonable and practicable measures to prevent or minimise the harm.”

¹⁹⁸ *Environmental Protection Act 1994* (Qld); section 18 “Meaning of ‘environmentally relevant activity’. An ‘environmentally relevant activity’ means – (a) a mining activity;1 or (b) another activity prescribed under section 19 as an environmentally relevant activity.”

¹⁹⁹ *Environmental Protection Act 1994* (Qld), Ch 2

²⁰⁰ *Environmental Protection Act 1994* (Qld), Sections 14, 15, 16, 17,

Environmental Protection Act 1994 (Qld) defines “environmental harm”,²⁰¹ “environmental nuisance”²⁰² and “material environmental harm”²⁰³ and prescribes the penalties that may be imposed for causing such harm.²⁰⁴ Environmental harm is a general term used to describe the adverse environmental impacts that result from the release or discharge of pollutants or other hazardous substances. “Environmental harm” refers to any adverse effect or potential adverse effect (whether temporary or permanent and of whatever magnitude) on the environment or, in Queensland, on an environmental value.²⁰⁵ An environmental value is a quality or physical characteristic of the environment that is conducive to ecological health or public amenity or safety or as declared under an environment protection policy or regulation.²⁰⁶ The environment²⁰⁷ includes natural resources, which by definition includes water. Contaminants are defined to include gas, liquids, odours, organisms and energy, including noise.²⁰⁸ Under the *Environmental Protection Act* 1994 (Qld), any person engaged in environmentally relevant activities must be licensed. Consequently, many industries are required to obtain a licence in order to discharge waste-water to waterways.²⁰⁹ Water quality is mainly addressed through the licensing of point source discharges (eg dredging, sewage treatment, and aquaculture).²¹⁰ Therefore, any activity that will release a contaminant into the water may, at the Minister’s discretion, be listed as an environmentally relevant activity, consequently

²⁰¹ *Environmental Protection Act* 1994 (Qld); section 14 - “Environmental harm is any adverse effect, or potential adverse effect (whether temporary or permanent and of whatever magnitude, duration or frequency) on an environmental value, and includes environmental nuisance, and may be caused by an activity whether the harm is a direct or indirect result of the activity; or whether the harm results from the activity alone or from the combined effects of the activity and other activities or factors.”

²⁰² *Environmental Protection Act* 1994 (Qld); section 15 - “Environmental nuisance is unreasonable interference or likely interference with an environmental value caused by; (a) noise, dust, odour, light; or (b) an unhealthy, offensive or unsightly condition because of contamination; or (c) another way prescribed by regulation.”

²⁰³ *Environmental Protection Act* 1994 (Qld); section 16 - “Material environmental harm is environmental harm (other than environmental nuisance); (a) that is not trivial or negligible in nature, extent or context; or (b) that causes actual or potential loss or damage to property of an amount of, or amounts totalling, more than the threshold amount but less than the maximum amount; or (c) that results in costs of more than the threshold amount but less than the maximum amount being incurred in taking appropriate action to – (i) prevent or minimise the harm; and (ii) rehabilitate or restore the environment to its condition before the harm.

²⁰⁴ *Environmental Protection Act* 1994 (Qld), Ch 8, Pt 3

²⁰⁵ *Environmental Protection Act* 1994 (Qld), s 14

²⁰⁶ *Environmental Protection Act* 1994 (Qld); section 9

²⁰⁷ *Environmental Protection Act* 1994 (Qld); section 8 - “‘Environment’ includes – (a) ecosystems and their constituent parts, including people and communities; and (b) all natural and physical resources; and (c) the qualities and characteristics of locations, places and areas, however large or small, that contribute to their biological diversity and integrity, intrinsic or attributed scientific value or interest, amenity, harmony and sense of community; and (d) the social, economic, aesthetic and cultural conditions that affect, or are affected by, things mentioned in paragraphs (a) to (c).”

²⁰⁸ *Environmental Protection Act* 1994 (Qld); section 11 - “A ‘contaminant’ can be – (a) a gas, liquid or solid; or (b) an odour; or (c) an organism (whether alive or dead), including a virus; or (d) energy, including noise, heat, radioactivity and electromagnetic radiation; or (e) a combination of contaminants”.

²⁰⁹ Environmental Protection Authority (Environmental Planning Division), “Discussion Paper on a Review of Queensland Marine Prawn Aquaculture Licensing under the Environmental Protection Act” (Queensland Environmental Protection Authority, Brisbane, May 2000) 50 pp.

²¹⁰ *Environmental Protection Regulations* 1998 (Qld), Schedule 1.

requiring the person carrying out an activity to hold an environmental authority.²¹¹ These will be discussed later in this report. “Pollution” however is the often more popularly used term. Pollution is been defined as any change in the physical, chemical or biological characteristics of air, water or soil that can affect the health or survival of forms of life in an undesirable way or which may alter the environment to its detriment or degradation. Queensland has adopted an all-encompassing definition of “pollutant” that includes gas, liquid, solid, an organism, or energy.²¹²

There is one basic defence to a charge of unlawfully causing environmental harm, namely, proof that (a) the harm happened while an activity was being carried out; and (b) the defendant complied with the general environmental duty.

Environmentally relevant activities under the *Environmental Protection Act 1994* (Qld)

The *Environmental Protection Act 1994* (Qld) also provides for a licensing system for certain activities referred to as “environmentally relevant activities”.²¹³ While the licensing system for environmentally relevant activities under the *Environmental Protection Act 1994* (Qld) is an important component of the Queensland system for controlling environmental harm including land-based pollution of the coastal marine environment, it is by no means comprehensive or exclusive. Environmentally relevant activities are activities that will, or have the potential to, release contaminants into the environment. If it is established that those contaminants may cause environmental harm (eg chemical storage facilities, milk processing, piggery, sugar milling and refining, and mineral processing); a permit is required.²¹⁴ Schedule 1 of the *Environmental Protection Regulation 1998* (Qld) lists 85 environmentally relevant activities including aquaculture, chemical manufacture, dredging, extractive industry and sewage treatment that can all impact on the coastal zone. Applications to conduct these activities can be approved, refused or approved subject to conditions such as the amount or concentrations of contaminants that may be released.

²¹¹ *Environmental Protection Act 1994* (Qld); section 19 - “Environmentally relevant activity may be prescribed. A regulation may prescribe an activity, other than a mining activity, as an environmentally relevant activity if the Governor in Council is satisfied – (a) a contaminant will or may be released into the environment when the activity is carried out; and (b) the release of the contaminant will or may cause environmental harm.”

²¹² *Environmental Protection Act 1994* (Qld); section 11 – “Contaminant”

²¹³ *Environmental Protection Act 1994* (Qld); sections 38 - 70A. Strong criticism has been made of the integration of the licensing system under the EPA into the *Integrated Planning Act 1997* (Qld) and the complexity of the new ‘integrated’ planning and environmental licensing system; see generally Homel B., 1999, ‘Just a Process Change? The Impact of IDAS on Environmental Protection in Queensland’ *Environmental and Planning Law Journal* 16 (1) 75

²¹⁴ *Environmental Protection Regulations 1998* (Qld); Schedule 1.

The 85 listed environmentally relevant activities are largely silent for instance regarding land development and agricultural activities,²¹⁵ although it does make reference to a number of specific point source primary industries. The *Environmental Protection Act 1994* (Qld) ensures that point source discharges have specific discharge limits taking into account the waterway uses, the quantity, type, frequency and place of discharge. The operation of sewage treatment plants for example (greater than 21 equivalent person's capacity) is regulated by the Act. Agricultural activities, however, are largely exempted from the Queensland environmental protection legislation and associated regulatory provisions. Queensland legislative, policy and planning arrangements pertaining to environmental management do not generally consider agriculture as an environmentally relevant activity. Controls over pollution emanating from agricultural industries are not included except in the context of intensive animal husbandry (eg aquaculture, piggery etc). As a result, most of the mechanisms available for regulating pollution do not apply to agricultural activity or development. The control of impacts on the environment from agricultural activities that often produce diffuse land-based coastal marine pollution is a particularly weak area, or more appropriately a non-existent component of the Queensland environmental legal system.

The implementation of the *Environmental Protection Act 1994* (Qld) has resulted in effective control and minimisation of pollution from secondary industry and substantial progress in controlling urban sewage discharges through section 18.²¹⁶ The regime for environmental protection is governed by an extensive set of enforcement and compliance mechanisms.²¹⁷ It includes powers of investigation, an extensive range of administrative remedies and civil remedies, and the ultimate sanction of criminal liability. The rules supporting criminal liability are expanded and modified to meet the policy objectives of environmental law. The enforcement regime itself incorporates auditing and monitoring processes designed not only to ensure compliance with the law, but also to keep environmental managers in touch with contemporary best practice.²¹⁸

However, strong controls over pollution emanating from agricultural industries are not included in the *Environmental Protection Act 1994* (Qld). In place of the "command and control" philosophy of

²¹⁵ The environmentally relevant activity for land development (ERA 38) was never commenced and it has been suggested by McGrath, 2003 (*personal communication*) that it will not be commenced in the future due to the enactment of the *Vegetation Management Act 1999* (Qld)

²¹⁶ *Environmental Protection Act 1994* (Qld); section 18

²¹⁷ Fisher DE, *Australian Environmental Law* (Lawbook Co., 2003), p 432.

²¹⁸ Fisher DE, "Environmental Law in Queensland" (2003/2004) 9 (43) *Queensland Environmental Law Reporter* 104–122.

the *Environmental Protection Act 1994 (Qld)* with respect to secondary industries and point sources in general, a “duty of care” provision was incorporated for agriculture. The *Environmental Protection Act 1994 (Qld)* gave every Queenslanders a legal responsibility to take “all reasonable and practical measures to minimise risk of harm to the environment”,²¹⁹ and obviously this would include water quality. The expression of the general environmental duty is reminiscent of the extraordinarily recurrent “reasonable care” principle espoused in *Donoghue v Stevenson* [1932] AC 562. It could therefore be suggested that sections of the *Environmental Protection Act 1994 (Qld)* could be used to prove that the input of nutrients, pesticides and other inputs that affect water quality under the *Environmental Protection Act 1994 (Qld)* would constitute a breach of this general duty. If it can be shown that runoff for example from a banana plantation causes environmental harm, then that runoff, if carried out without a permit under the *Environmental Protection Act 1994 (Qld)*, would constitute a breach of this general duty.

Codes of Practice under the *Environmental Protection Act 1994 (Qld)*

Like most states in Australia, the *Environmental Protection Act 1994 (Qld)* also provides for the preparation of industry “codes of practice” to address industry-wide voluntary (and potentially statutory) environment protection mechanisms.²²⁰ The Minister has the power to approve codes of environmental compliance and associated standard environmental conditions. The active component of the duty of care was the requirement that a “Code of Best Practice” system be introduced for agriculture. Adoption of a Code was to be voluntary for farmers but if implemented, could be used as a defence against prosecution for environmental harm.²²¹ However, activities that are subject to a code must comply with the standard environmental conditions set out in the code; failure to do so will be an offence under the *Environmental Protection Act 1994 (Qld)*. A project completed by the Coastal CRC suggested that use of and compliance with codes was poor in many agricultural

²¹⁹ *Environmental Protection Act 1994 (Qld)*; section 319 - General Environmental Duty

²²⁰ *Environmental Protection Act 1994 (Qld)*; section 548 - “Codes of Practice. (1) The Minister may, by gazette notice, approve codes of practice stating ways of achieving compliance with the general environmental duty for any activity that causes, or is likely to cause, environmental harm. (2) The Minister must keep copies of approved codes of practice open for inspection by members of the public during office hours on business days at – (a) the department’s head office; and (b) the other places the Minister considers appropriate.”

²²¹ *Environmental Protection Act 1994 (Qld)*; section 436 - “Unlawful environmental harm ... (2) However, it is a defence to a charge of unlawfully causing environmental harm to prove (a) the harm happened while an activity (that is lawful apart from this Act) was being carried out; and (b) the defendant complied with the general environmental duty. (3) The defendant is taken to have complied with the duty if the defendant proves – (a) an approved code of practice or a code of environmental compliance applies to the causing of the environmental harm; and (b) to the extent it is relevant, the defendant complied with the code.”

industries and many of the codes are considered to be outdated and have been partly abandoned in favour of property management planning and farm management systems.²²²

An example of a code of conduct is the *Code of Practice for Sustainable Cane Growing in Queensland*²²³ which defines what are reasonable measures for environmental protection and practical measures to minimise risk of harm to the environment when growing cane. Although compliance with the Code is voluntary, demonstrated adoption of the recommendations of the Code may be viewed as a good first line defence should legal action arise as a result of farming activities.²²⁴ Implementation of the Code will also provide benefits for both the environment and farm management and would also comply with the requirements pursuant to section 21 of the *Environmental Protection Act 1994 (Qld)*.²²⁵

Environmental Protection Policy (Water) 1997

The *Environmental Protection Act 1994 (Qld)* also allows for the development of Environment Protection Policies, dealing with noise, air or water quality, and so could therefore be used to control water quality from diffuse sources. Environment Protection Policies may be extremely broad in scope, and may be made about anything that affects, or may affect, the environment, including a contaminant, an industry or activity, a technology or process, an environmental value, waste management, contamination control practice, land, air or water quality, noise and litter.

The *Environmental Protection (Water) Policy 1997* was recently amended and is concerned with determining indicators and water quality guidelines for environmental values. It includes a definition of “water quality guidelines”, being numerical concentration levels or statements for indicators that protect the environmental value. The Policy regulation provides for the management

²²² Low Choy, D. C., Fearon, R., Worrall, R. H., Robinson, J., Sargeant, B., Ryan, S., and Bennett, J., (2002) “Chapter 6: Managing Impacts on waterways from rural areas” in *Environmental Planning Project: Volume III – Incorporating Science into Planning* CRC for Coastal Zone Estuary and Waterways Management Technical Report 4: 280pp

²²³ CANEGROWERS, *Code of Practice for Sustainable Cane Growing in Queensland* (Canegrowers Queensland Organisation, Brisbane, (1998) 28 pp.

²²⁴ *Environmental Protection Act 1994 (Qld)*; section 436 - “Unlawful environmental harm ... (2) However, it is a defence to a charge of unlawfully causing environmental harm to prove – (a) the harm happened while an activity (that is lawful apart from this Act) was being carried out; and (b) the defendant complied with the general environmental duty. (3) The defendant is taken to have complied with the duty if the defendant proves – (a) an approved code of practice or a code of environmental compliance applies to the causing of the environmental harm; and (b) to the extent it is relevant, the defendant complied with the code.”

²²⁵ *Environmental Protection Act 1994 (Qld)*; section 21 - “The ‘best practice environmental management’ of an activity is the management of the activity to achieve an ongoing minimisation of the activity’s environmental harm through cost-effective measures assessed against the measures currently used nationally and internationally for the activity.”

of local government wastewater and storm water discharges and the setting of environmental values and water quality objectives for specific water resources in accordance with the National Water Quality Management Strategy, and consistent with *Australian and New Zealand Guidelines for Fresh and Marine Water Quality*.

The *Environmental Protection (Water) Policy 1997* provides a framework for:

- identifying environmental values for Queensland waters;²²⁶
- deciding water quality guidelines and objectives to enhance the environmental values;²²⁷
- making decisions to promote efficient use of resources and best practice environmental management; and
- involving the community through consultation and education and promoting community responsibility.²²⁸

The *Environmental Protection (Water) Policy 1997* also provides a process for setting and formalising water quality objectives for a specific waterway. This includes developing and implementing local government stormwater, sewage and trade waste, and water conservation plans. In making an environmental management decision about an activity involving the release of waste water (other than contaminated stormwater) to surface water, the administering authority must consider the following:

- whether the size of the initial mixing zone will adversely affect an environmental value, especially biological integrity and suitability for recreational use;
- whether concentrations of contaminants in the initial mixing zone are acutely toxic to the biota;

²²⁶ *Environmental Protection (Water) Policy 1997*; section 7 - Environmental values are defined by the policy as a list of qualities including suitability of the water for recreational use, agricultural use, and industrial use or for supply as drinking water. If the water has not been subject to human interference, values relate to the biological integrity of a pristine aquatic ecosystem. If the waters have been subject to human interference, the values relate to the biological integrity of a modified aquatic ecosystem.

²²⁷ *Environmental Protection (Water) Policy 1997*; section 9 - "Water quality guidelines for indicators for environmental values. (1) 'Water quality guidelines' are numerical concentration levels or statements for indicators that protect a stated environmental value. (2) The following documents are used to decide the water quality guidelines for an environmental value for a water – (a) site specific documents; (b) the AWQ guidelines; (c) documents published by a recognised entity. (3) To the extent of any inconsistency between the documents for a particular water quality guideline, the documents are to be used in the order in which they are listed in subsection (2).

²²⁸ *Environmental Protection (Water) Policy 1997*; section 6 - "How purpose of policy is to be achieved. The purpose of this policy is to be achieved by providing a framework for – (a) identifying environmental values for Queensland waters; and (b) deciding and stating water quality guidelines and objectives to enhance or protect the environmental values; and (c) making consistent and equitable decisions about Queensland waters that promote efficient use of resources and best practice environmental management; and (d) involving the community through consultation and education, and promoting community responsibility."

- the existing quality of the surface water;
- the cumulative effect of the release concerned and any other releases of contaminants known to the administering authority;
- future releases to the surface water known to the administering authority; and
- the water quality objectives for waters outside the initial mixing zone.²²⁹

Under the *Environmental Protection (Water) Policy 1997*, if an authority is to be issued in relation to waste entering/affecting any water, waste prevention options must be evaluated and implemented, and if that is not possible, waste recycling, treatment or disposal to surface water/groundwater options must also be evaluated. Should an authority be issued for wastewater recycling, the water quality objectives for water affected must be considered along with the possible health risks. If an authority involves releasing of waste water to surface water, the integrity and quality of the surface water and the possible cumulative effect of the release must be considered in the determining of an application. Similar considerations must be had if assessing an application for the release of contaminated storm water.

Individuals cannot escape liability merely because they are not carrying out an environmentally relevant activity. Under the *Environmental Protection (Water) Policy 1997*, it is an offence to allow any type of contaminant, rubbish or sediment to be deposited into water or in a place that it might reasonably be expected to flow into the water.²³⁰ Section 31 of the Policy makes it an offence to deposit certain contaminants such as rubbish, insecticide or herbicide into roadsides or gutters or any other place from which it might reasonably be expected to move to or be washed into water. Similarly, section 32 prohibits the release of a build up of sediment of any form from being released

²²⁹ *Environmental Protection (Water) Policy 1997*; section 18

²³⁰ *Environmental Protection (Water) Policy 1997*; section 31 - "Prohibition on deposit or release of certain things.

(1) This section applies to the following things - (a) rubbish; (b) scrap metal, motor vehicle parts, motor vehicle bodies or tyres; (c) building waste; (d) sawdust; (e) solid or liquid waste from an on-site domestic waste water treatment system; (f) cement or concrete; (g) a degreasing agent, paint, varnish or paint thinner; (h) any manufactured product, or any by-product or waste from a manufacturing process, that has a pH less than 6 or greater than 9; (i) an insecticide, herbicide, fungicide or other biocide; (j) oil. (2) A person must not deposit or release a thing to which this section applies - (a) into a roadside gutter, stormwater drain or a water; or (b) in a place where it could reasonably be expected to move or be washed into a roadside gutter, stormwater drain or a water. Maximum penalty - (a) for a thing mentioned in subsection (1)(a) to (d) - 20 penalty units; or (b) for a thing mentioned in subsection (1)(e) to (j) - 40 penalty units. (3) However, a person does not commit an offence against subsection (2) if the deposit or release was authorised under any of the following - (a) a development condition of a development approval; (b) an environmental authority; (c) a standard environmental condition of a code of environmental compliance for a chapter 4 activity; (d) an environmental management program; (e) an environmental protection order; (f) an emergency direction. (4) If a person is charged with an offence against subsection (2), it is a defence to the charge for the person to prove - (a) the deposit or release happened while carrying out a lawful activity; and (b) the person complied with the general environmental duty either by complying with the relevant code of practice (if any) or in some other way.

into a place where it might reasonably be expected to move into a waterway.²³¹ Consequently, pollution of diffuse sources is regulated by the prohibition of the release of any form of contaminant into a place where it may enter a waterway. This prohibition only extends to releases without authorisation. Because of the relatively minor scale of penalties for offences specified under the *Environmental Protection (Water) Policy 1997*, most significant prosecutions involving issues of water pollution and water quality should be undertaken in relation to the environmental harm provisions of the *Environmental Protection Act 1994 (Qld)*. However, to date, very few prosecutions have been undertaken under the *Environmental Protection (Water) Policy 1997*, and none relating to diffuse land-based pollution of any nature.

Water Act 2000 (Qld)

The *Water Act 2000 (Qld)* represented the biggest change to the water laws of Queensland since 1910. The water industry in Queensland is largely under state development control; and mostly for irrigation and mining purposes. In essence, the Act predominantly relates to canegrowers who are irrigators, rather than those that rely specifically on rainfall to irrigate their paddocks. The *Water Act 2000 (Qld)* covers the law relating to rights in water and also deals with the construction, control and management of works relating to water conservation and protection, irrigation, water supply and drainage, and protection and improvement of watercourses' physical integrity. "Physical integrity" relates to bed and bank stability, and associated water quality. The *Water Act 2000 (Qld)* applies to all lands (Crown and private) defined as being within the high banks of a stream or lake, as well as imposing limited controls on lands outside of these features. The *Water Act 2000 (Qld)* does not, however, specifically address downstream water quality impacts of expanded water allocation and associated developments.

²³¹ *Environmental Protection (Water) Policy 1997*; section 32 - "Prohibition on build-up of sediment"

(1) A person must not - (a) release stormwater run off into a roadside gutter, stormwater drain or a water that results in the build-up of sand, silt or mud in the gutter, drain or water; or (b) deposit sand, silt or mud - (i) in a roadside gutter, stormwater drain or a water; or (ii) in a place where it could reasonably be expected to move or be washed into a roadside gutter, stormwater drain or water and result in a build-up of sand, silt or mud in the gutter, drain or water. Maximum penalty - 20 penalty units. (2) However, a person does not commit an offence against subsection (1) if the release or deposit was authorised under any of the following - (a) a development condition of a development approval; (b) an environmental authority; (c) a standard environmental condition of a code of environmental compliance for a chapter 4 activity; (d) an environmental management program; (e) an environmental protection order; (f) an emergency direction. (3) If a person is charged with an offence against subsection (1), it is a defence to the charge for the person to prove - (a) the release or deposit happened while carrying out a lawful activity; and (b) the person complied with the general environmental duty either by complying with the relevant code of practice (if any) or in some other way.

This *Water Act 2000* (Qld) specifically provides for protection against disturbances that may adversely affect the stability of bed and banks of streams and lakes, eg the clearing of native vegetation,²³² excavation,²³³ and placement of fill. The *Water Act 2000* (Qld) also relates to activities outside of these features that may adversely impact on water quality, for example, the dumping of waste that may wash into a watercourse or lake and degrade water quality or create an obstruction to flow.²³⁴ The protection of these areas is managed through a permitting system that has powers to issue “stop work” notices.²³⁵ Given the importance of the *Water Act 2000* (Qld), a landholder intending to undertake an activity that will disturb the physical condition of a watercourse or a riparian area is required to first obtain a permit.²³⁶ A licence is required to do specific things (eg construct a dam) and these activities can be subject to conditions. In assessing applications for permits, the Queensland Department of Natural Resources, Mines and Water must consider:

- the season and how this may affect the impact of the activity on the river system;
- the possible effects of the activity on water quality;
- the reasons behind the applicant wanting to undertake the activity;
- the long-term impacts on the sustainable use of the river system, and;
- the likely cumulative impacts on the river system that could accrue as a result of the activity.²³⁷

²³² *Water Act 2000* (Qld); Pt 8.

²³³ *Water Act 2000* (Qld); section 282

²³⁴ *Water Act 2000* (Qld); section 268 - “Criteria for deciding application for a permit to destroy vegetation, excavate or place fill in a watercourse, lake or spring. In deciding whether to grant or refuse the application or what should be the conditions of the permit, the chief executive must consider the following - (a) the effects of the proposed activity on water quality; (b) the quantity of vegetation to be destroyed or material to be excavated or placed; (c) the type of vegetation to be destroyed or material to be excavated or placed; (d) the seasonal factors influencing the watercourse, lake or spring from time to time; (e) the position in the watercourse, lake or spring of the vegetation to be destroyed or the proposed excavation or placing of fill; (f) the reasons given by the applicant for wishing to carry out the activity; (g) whether, and to what extent, the activity that the permit would allow may have an adverse effect on the physical integrity of the watercourse, lake or spring; (h) the implications of granting the permit for the long-term sustainable use of the river systems of Australia, and especially the cumulative effect of granting the application and likely similar applications; (i) any other matters the chief executive considers to be relevant.”

²³⁵ *Water Act 2000* (Qld); section 789 - “Effect of orders. (1) An enforcement order or an interim enforcement order may direct the respondent – (a) to stop an activity that constitutes, or will constitute, an offence against this Act; or (b) not to start an activity that will constitute an offence against this Act; or (c) to do anything required to stop committing an offence against this Act; or (d) to return anything to a condition as close as practicable to the condition it was in immediately before an offence against this Act was committed; or (e) to do anything to comply with this Act. (2) Without limiting the court’s powers, the court may make an order requiring the demolition, removal or modification of – (a) works for taking or interfering with water or other resources; or (b) a referable dam. (3) An enforcement order or an interim enforcement order – (a) may be in terms the court considers appropriate to secure compliance with this Act; and (b) must state the time by which the order is to be complied with.”

²³⁶ *Water Act 2000* (Qld); section 268

²³⁷ *Water Act 2000* (Qld); section 268

These factors combined will then be assessed, and a permit issued, or not, depending on the potential impact of the activity on the river/riparian system. Importantly, the *Water Act 2000* (Qld) also covers a number of situations that do not require a permit to be first obtained. For example, riverine disturbances related to works licensed under other sections of the Act (eg installing a pump), may be approved activities if undertaken by River Improvement Trusts and electricity authorities (authorised removal of sand and gravel), and to clearing undertaken in emergency situations, such as fires.²³⁸ A regulation has also exempted authorised mining exploration and development activities, authorised clearing on leasehold lands (see the *Land Act*), and clearing of declared pest plants.

There is potential for non-point (diffuse) land and water degradation to be addressed through two statutory planning instruments, Water Use Plans and Land and Water Management Plans.²³⁹ Water Use Plans are subordinate legislation, authorising the control of activities that may cause negative effects on land and water resources, including salinity, deteriorating water quality and soil erosion. Water Use Plans are prepared for management areas, and define the objectives and performance

²³⁸ *Water Act 2000* (Qld); section 814 - Destroying vegetation, excavating or placing fill without permit (1) A person must not do any of the following activities unless the person has a permit under section 269 to carry out the activity - (a) destroy vegetation in a watercourse, lake or spring; (b) excavate in a watercourse, lake or spring; (c) place fill in a watercourse, lake or spring. Maximum penalty - 1665 penalty units. (2) Subsection (1) does not apply to - (a) the destruction of vegetation, excavation or placing of fill - (i) that is permitted or required, or happens as a necessary and unavoidable part of some other activity that is permitted or required under - (A) a licence, permit or other authority under another section of this Act; or (B) a development permit for assessable development mentioned in the *Integrated Planning Act 1997*, schedule 8, part 1, table 4, item 3(a) or (d) or 4 or table 5, item 1; or (ii) that is permitted or required under the *River Improvement Trust Act 1940*; or (iii) that happens as a necessary and unavoidable part of extracting quarry material or forest products under the *Forestry Act 1959*; or . that is required or happens as a necessary and unavoidable part of some other activity that is required because of an emergency endangering either of the following, and for which notice is given to the chief executive as soon as practicable after starting to carry out the activity - (A) the life or health of a person; (B) the water quality or physical integrity of a watercourse, lake or spring; or (v) in a watercourse, lake or spring prescribed under a regulation; or (vi) in a watercourse, lake or spring in an area prescribed under a regulation; or (vii) for the excavation or placing of fill - happening within the quantity limits prescribed under a regulation; or (viii) that is permitted under a regulation; or (b) the destruction of vegetation - (i) that is required under a requisition under the *Fire and Rescue Authority Act 1990*, section 69, for reducing the risk of fire; or (ii) that is permitted or required to be carried out under the *Electrical Safety Act 2002* or the *Electricity Act 1994* to prevent the obstruction of, or interference with, an electric line or creation of an electrical hazard; or (iii) that happens as a necessary part of works carried out under this Act, other than under a licence, permit or notice; or (iv) that is regrowth, and does not consist of mulga or other fodder trees—following the destruction under a permit given under section 269 less than 2 years previously; or (v) that has been lawfully planted for woodlot, fodder, agriculture, forestry, garden or horticultural purposes; or (vi) that is necessary to prevent personal injury or property damage or to provide for emergency access. (2AA) Despite subsection (2)(a)(viii) - (a) a provision of a regulation that permits the destruction of vegetation, excavation or placing of fill if it is carried out under a prescribed guideline does not apply to a wild river area; and (b) subsection (1) continues to apply to the destruction of vegetation, excavation or placing of fill in the area. (2AB) Subsection (2AA) applies despite the *Wild Rivers Act 2005*, section 17(2)(b). (2A) A person must not contravene a condition of a permit under section 269 unless the person has a reasonable excuse. Maximum penalty - 1665 penalty units. (3) On the conviction of a person for an offence against subsection (1) or (2A), the court may order the person to pay to the State the cost of any remedial work or rehabilitation necessary or desirable because of the commission of the offence. (4) Subsection (3) does not limit the court's power under the *Penalties and Sentences Act 1992* or another law.

²³⁹ *Water Act 2000* (Qld); Part 3

standards for the practices of water users (including water use efficiency, water reuse and water quality) and monitoring requirements in the area. Land and Water Management Plans have a life of 10 years, although there is an allowance for the Minister to amend or replace an existing Land and Water Management Plan under certain circumstances.²⁴⁰ Land and Water Management Plans are farm-level plans prepared to address potentially adverse consequences to riparian and stream health from irrigation,²⁴¹ and describe how and where water can be applied to the land. However, to date Land and Water Management Plan have been developed for few catchments and have not been focused on water quality, and Water Use Plans have not yet been created for any catchment.

The purpose of Chapter 2 of the *Water Act 2000* (Qld) is for the sustainable management and efficient water use of our valuable resources. Sustainable management is not about balancing consumption with ecological protection, instead there are limits on the type of water use contemplated and the protection of the health of the ecosystem is a necessary part of the concept. The purpose cannot be implemented without scientific data, eg whether a specific catchment is healthy, and thus what do we need to do to keep it healthy and what water management do we need to allocate to sustain the system? Under both sections 258²⁴² and 259,²⁴³ regulations may be made under the Act in relation to the use of land in the catchment area, or a part of the area; the construction and use of buildings and structures on the land. In both circumstances, if a local planning scheme under the *Integrated Planning Act 1997* (Qld) or a local law is inconsistent with the regulation, the planning scheme or local law is ineffective.

Coastal Protection and Management Act 1995 (Qld)

State and regional planning processes are the foundation of the State-wide policy framework, within which decisions on specific impact assessment processes are undertaken. The *Coastal Protection and Management Act 1995* (Qld) was introduced to address the issue of attaining consistent management of Queensland's coastal resources. Under the *Coastal Protection and Management Act 1995* (Qld), the coastal zone is defined to include "coastal waters; and all areas to the landward side of coastal waters in which there are physical features, ecological or natural processes or human

²⁴⁰ *Water Act 2000* (Qld); section 77

²⁴¹ *Water Act 2000* (Qld); section 73

²⁴² *Water Act 2000* (Qld); section 258 - Declaring catchment area

²⁴³ *Water Act 2000* (Qld); section 259 - Regulating land use in catchment area

activities that affect, or potentially affect, the coast or coastal resources”.²⁴⁴ The *Coastal Protection and Management Act 1995* (Qld) allows for the preparation of State and regional coastal management plans,²⁴⁵ and a “coastal management district” may be declared by regulation or under a regional plan.²⁴⁶ A coastal management district can be declared over coastal waters, over a foreshore (up to 400 m inland from the high-water mark), a river mouth or estuarine delta (up to 1000 m inland from the high-water mark) or along tidal rivers, saltwater lakes and other bodies of internal tidal water (up to 100 m from the high water mark along the river, lake or water body).²⁴⁷ This allows for large areas of land near the coastline to be covered by the Act. It is also possible to control activities through the regional coastal management plans, and orders to remedy or restrain an offence – or a potential offence – under the *Coastal Protection and Management Act 1995* (Qld) can be issued.²⁴⁸

Under the *Coastal Protection and Management Act 1995* (Qld), the Environmental Protection Agency prepares statutory Regional Coastal Management Plans for the state and for eleven regions covering the Queensland coastal catchments.²⁴⁹ These Plans provide the capacity to address a number of broad environmental concerns, especially with regard to loss of wetlands and riparian areas, through the development of State interest policies. These policies are required to be incorporated into Local Government Planning Schemes and other decision-making processes. They have the potential to address cumulative impacts on water quality. Non-statutory regional plans are being developed under the *Integrated Planning Act 1997* (Qld) to guide local government on the preparation of Planning Schemes. These schemes will address State interests for land use and development, protecting valuable features and for the provision of infrastructure. Unfortunately, the plans established under the State regional and coastal planning processes do not provide for the management of existing activities, such as agriculture.

²⁴⁴ *Coastal Protection and Management Act 1995* (Qld); section 15 - “The ‘coastal zone’ means – (a) coastal waters; or (b) all areas to the landward side of coastal waters in which there are physical features, ecological or natural processes or human activities that affect, or potentially affect, the coast or coastal resources.

²⁴⁵ *Coastal Protection and Management Act 1995* (Qld); Ch 2, Pt 2

²⁴⁶ *Coastal Protection and Management Act 1995* (Qld); Ch 2, Pt 3

²⁴⁷ *Coastal Protection and Management Act 1995* (Qld); section 55 - “Where coastal management districts may be declared. (1) A coastal management district may be declared – (a) over coastal waters; or (b) over a foreshore and over land up to 400 m inland from the high water mark along the foreshore; or (c) at a river mouth or estuarine delta – over land up to 1000 m from the high water mark at the river mouth or estuarine delta; or (d) along tidal rivers, saltwater lakes and other bodies of internal tidal water – over land up to 100 m from the high water mark along the river, lake or body of water; or (e) over an island in coastal waters. (2) Despite subsection (1), a coastal management district may also include all or part of a coastal wetland, dune system or key coastal site and up to 100 m from the wetland, system or site.”

²⁴⁸ *Coastal Protection and Management Act 1995* (Qld); section 148 - “Restraint of contraventions of Act etc. (1) A proceeding may be brought in the Planning and Environment Court for an order to remedy or restrain an offence against this Act, or a threatened offence against this Act ...”.

²⁴⁹ *Coastal Protection and Management Act 1995* (Qld), Ch 2, Pt 2, Div 2

The *Integrated Planning Act 1997 (Qld)*, in conjunction with the *Coastal Protection and Management Act 1995 (Qld)*, is the primary piece of legislation dealing with land use and planning in Queensland adjacent to the coastal zone. However, it has limited effect on diffuse land-based coastal marine pollution, except when undertaking certain activities. The *Integrated Planning Act 1997 (Qld)* provides powers for local authorities to declare and impose development constraints on polluters and others within their jurisdiction. Operational works such as digging drainage canals and the extraction of sand, rock and gravel from rivers are also covered by the *Integrated Planning Act 1997 (Qld)*.

An example of a local government initiative, Hinchinbrook Shire Council, has made provision for regulating the change or intensification of land use for agricultural purposes in their local government plans.²⁵⁰ The provisions were identified by a case study on implementation of integrated catchment management strategies in local government planning schemes. In particular, changes resulting in intensification of agricultural use, such as fertilised cropping, are constrained in wetlands and require local government approval. This is an example of best practice for local government planning, though to date these provisions have not been taken up by many of the local governments with coastal catchments.

Queensland Policy with respect to diffuse land-based coastal pollution

The now Department of Natural Resources and Water introduced the “Good Quality Agricultural Land Policy”. The “Position Statement” for the Policy is:

The Queensland Government considers that good quality agricultural land is a finite national and State resource that must be conserved and managed for the longer term. As a general aim, the exercise of planning powers should be used to protect such land from those developments that lead to its alienation or diminished productivity.

The Planning Guidelines attached to the Policy define Good Quality Agricultural Land as “*land that is capable of sustainable use for agriculture, with a reasonable level of inputs, and without causing degradation of land or other natural resources*”. It would therefore seem appropriate that the

²⁵⁰ Queensland Environmental Protection Agency (2003) *Cardwell-Hinchinbrook Regional Coastal Management Plan*.

Queensland Government would adequately protect this environment from degradation pursuant to the Position Statement. To undertake that protection, a range of measures has been developed.

In response to community interest in dealing with and managing issues such as water quality, land degradation and river and stream management using a catchment-wide approach, the main broad-scale management practice that can manage diffuse land-based coastal marine pollution is Integrated Catchment Management,²⁵¹ although much of this has been now incorporated into the regional natural resource management boards. Queensland launched the program in 1990 as part of the Natural Resources Management Program.²⁵² The program is the primary non-regulatory tool to reduce catchment-based pollutant discharge to marine systems and the coastal zone. Water quality issues drove the move to catchment management, particularly the concern for downstream effects of land management practices in tropical catchments. The original principles on which the strategy is based are:

- Land and water resources are basic interactive parts of natural ecosystems and their management should be based on river catchments as geographic units that account for the interactions between these resources.
- River catchments are continuously changing in response to natural processes and human activity, and their management must take account of these changes.
- The management of land and water resources must be coordinated, with decisions based on the best available information.
- Sound land and water management is best achieved through the informed action of individual users and managers of these resources.

²⁵¹ Queensland Department of Natural Resources and Mines (1999) *A Guide to Integrated Catchment Management in Queensland* (Queensland Department of Natural Resources and Mines, Brisbane, January 1999) 34 pp

²⁵² Bellamy JA and Johnson AKL, "Integrated Resource Management: Moving from Rhetoric to Practice in Australian Agriculture" (2000) 25 (No 3) *Environmental Management* 265; Bellamy JA and McDonald GT, *Beyond "Talk the Talk" in Natural Resource Management: Lessons from Catchment and Regional Initiatives in Australia* (CSIRO and University of Queensland, Brisbane, 2003) 19 pp; Bellamy JA, Ross H, Ewing SA and Meppem T, "Integrated Catchment Management: Learning from the Australian Experience from the Murray-Darling Basin" (CSIRO (Sustainable Ecosystems), University of Queensland and University of Melbourne, Brisbane, Gatton and Melbourne, January 2002) ; Bellamy JA, Walker DH, McDonald GT and Syme GJ, *Tracking Progress in Natural Resource Management: A Systems Approach to Evaluation* (Land and Water Resource Research and Development Corporation, St Lucia, August 1999) 34 pp; Bellamy JA, Walker DH, McDonald GT and Syme GJ, "A systems approach to the evaluation of natural resource management initiatives" (2001) *Journal of Environmental Management* 63, 407; Bellamy JA and Webb V, *Benchmarking the Use of New Technologies for Natural Resource Management: A Pilot Study on the Innovation and Change in the Sugar Industry* (CSIRO Sustainable Ecosystems for CRC for Sustainable Sugar Production, St Lucia, June 2003) 85 pp.

- A balance between economic development and the conservation of land and water resources must be maintained.²⁵³

Subsequent minor changes have occurred in the broader natural resources management policy and institutional context since then; however it would appear that this program has been largely unsuccessful in the reduction of inputs that degrade water quality.

State Interest Planning Policies (SIPPs) enunciate state interests as a guide to planning in Queensland. The SIPPs interpret existing legislation, policies, strategies, plans and international/national commitments in planning terms. The SPP for Queensland Waters which is administered by the Environmental Protection Agency may provide a mechanism for managing diffuse pollution and the Department of Natural Resources and Water State Interests in Natural Resources are relevant in that they identify responsibilities in terms of preventing land degradation and protecting natural waters, including minimising harm to marine waters from diffuse pollutants.

SIPPs are statutory instruments under the *Integrated Planning Act 1997* (Qld) with the purpose of articulating the Queensland Government's position on development issues of State interest. SIPPs dealing with Acid Sulfate Soils and with flood and landslide risks are of potential relevance to diffuse sources of marine pollution. Under provisions of the *Coastal Protection and Management Act 1995* (Qld), State Coastal Management Plans and subsequent Regional Coastal Management Plans these plans have the effect of State Planning Policies for the purpose of making and amending planning schemes and assessing and deciding development applications.

New South Wales - Regulation of land-sourced coastal marine pollution under Catchment Management and Coastal legislation

The coordinated and sustainable use and management of land, water, vegetation and other natural resources on a water catchment basis is under the control of the Department of Infrastructure, Planning and Natural Resources. Other relevant State agencies in NSW include the NSW Agriculture, and the Department of Environment and Conservation (bringing together NSW National Parks and Wildlife Service, the NSW Environment Protection Authority and other

²⁵³ Queensland Department of Natural Resources and Mines (1999) *A Guide to Integrated Catchment Management in Queensland* (Queensland Department of Natural Resources and Mines, Brisbane, January 1999) 34 pp

agencies which all have some input into catchment management. Catchment management began in 1984, and was formalised with the introduction of the *Catchment Management Act 1989* (NSW). Subsequently, the NSW Parliament introduced the *Catchment Management Authorities Act 2003* (NSW) that provided catchment management groups with statutory power to place restrictions on activities that could produce diffuse land-based coastal marine pollution. Unlike Queensland, both NSW and Victoria (to be discussed later in this report) have both taken a statutory approach rather than a voluntary coordinated approach for the management of catchments and diffuse land-based coastal marine pollution.

***Catchment Management Authorities Act 2003* (NSW)**

In late 2003, the NSW Minister for Infrastructure, Planning and Natural Resources announced reforms for the protection of natural resources including waters use and management in NSW. A key component of the reform was the establishment of 13 Catchment Management Authorities to replace 72 existing natural resource management committees. From January 2004, Catchment Management Authorities were formally constituted as statutory authorities with a responsible and accountable board. Legislation was introduced to support the Catchment Management Board's arrangements. The *Catchment Management Authorities Act 2003* (NSW) supports the formation of the 13 Catchment Management Authorities. The objects of the *Catchment Management Authorities Act 2003* (NSW) are defined in Section 3,²⁵⁴ however, little is spoken of in respect to land-based pollution whether point source or diffuse. Catchment Management Authorities boards report directly to the Minister for Infrastructure, Planning and Natural Resources. Functions of the Catchment Management Authorities include the preparation of catchment action plans and associated investment strategies, recommending and managing incentive programs to implement catchment management plans, and allocating funds to support the development and implementation of Property Vegetation Plans, but does not include any planning or regimes for diffuse land-based pollution.

²⁵⁴ *Catchment Management Authorities Act 2003* (NSW) Section 3 - Objects of Act

The objects of this Act are as follows: (a) to establish authorities for the purpose of devolving operational, investment and decision-making natural resource functions to catchment levels, (b) to provide for proper natural resource planning at a catchment level, (c) to ensure that decisions about natural resources take into account appropriate catchment issues, (d) to require decisions taken at a catchment level to take into account State-wide standards and to involve the Natural Resources Commission in catchment planning where appropriate, (e) to involve communities in each catchment in decision making and to make best use of catchment knowledge and expertise, (f) to ensure the proper management of natural resources in the social, economic and environmental interests of the State, (g) to apply sound scientific knowledge to achieve a fully functioning and productive landscape, (h) to provide a framework for financial assistance and incentives to landholders in connection with natural resource management.

Protection of the Environment Administration Act 1991 (NSW) and Protection of the Environment Operations Act 1997 (NSW)

New South Wales has a number of legislative regimes similar to that of Queensland for the protection of the environment. These include the *Protection of the Environment Administration Act 1991 (NSW)*, the *Protection of the Environment Operations Act 1997 (NSW)* and the *Water Management Act 2000 (NSW)*. All of the said are in some way important in respect of point source pollution; however none specifically addresses the impacts of diffuse land-based pollution. Under the *Protection of the Environment Administration Act 1991 (NSW)*, Section 6,²⁵⁵ states that one of the objects is to promote pollution prevention and also adopt principles to reduce harmful levels of discharge, Further, the objects of the *Protection of the Environment Operations Act 1997 (NSW)* are to prevent the degradation of the environment by the use of mechanisms that promote pollution prevention and cleaner production, the reduction to harmless levels of the discharge of substances likely to cause harm to the environment, the elimination of harmful wastes and the making of progressive environmental improvements, including the reduction of pollution at their source.²⁵⁶

Specifically, water pollution in NSW is primarily regulated by the *Protection of the Environment Operations Act 1997 (NSW)*. Water pollution is the introduction of any matter (solid, liquid or gaseous) into water which changes the physical, chemical or biological condition of the water. The definition of water pollution in the *Protection of the Environment Operations Act 1997 (NSW)* includes the placing of any matter in a position where it enters or is likely to enter any waters

²⁵⁵ *Protection of the Environment Administration Act 1991 (NSW)*; Section 6 - Objectives of the Authority

(1) The objectives of the Authority are: (a) to protect, restore and enhance the quality of the environment in New South Wales, having regard to the need to maintain ecologically sustainable development, and (b) to reduce the risks to human health and prevent the degradation of the environment, by means such as the following: promoting pollution prevention, adopting the principle of reducing to harmless levels the discharge into the air, water or land of substances likely to cause harm to the environment

²⁵⁶ *Protection of the Environment Operations Act 1997 (NSW)*; section 3 - Objects of Act - The objects of this Act are as follows: (a) to protect, restore and enhance the quality of the environment in New South Wales, having regard to the need to maintain ecologically sustainable development, (b) to provide increased opportunities for public involvement and participation in environment protection, (c) to ensure that the community has access to relevant and meaningful information about pollution, (d) to reduce risks to human health and prevent the degradation of the environment by the use of mechanisms that promote the following: (i) pollution prevention and cleaner production, (ii) the reduction to harmless levels of the discharge of substances likely to cause harm to the environment, (iia) the elimination of harmful wastes, (iii) the reduction in the use of materials and the re-use, recovery or recycling of materials, (iv) the making of progressive environmental improvements, including the reduction of pollution at source, (v) the monitoring and reporting of environmental quality on a regular basis, (e) to rationalise, simplify and strengthen the regulatory framework for environment protection, (f) to improve the efficiency of administration of the environment protection legislation, (g) to assist in the achievement of the objectives of the *Waste Avoidance and Resource Recovery Act 2001 (NSW)*.

whether through an act or omission including refuse, litter, debris or other matter, whether solid or liquid or gaseous, so that the change in the condition of the waters

“is likely to make, the waters unclean, noxious, poisonous or impure, detrimental to the health, safety, welfare or property of persons, undrinkable for farm animals, poisonous or harmful to aquatic life, animals, birds or fish in or around the waters or unsuitable for use in irrigation, or obstructs or interferes with, or is likely to obstruct or interfere with persons in the exercise or enjoyment of any right in relation to the waters”.²⁵⁷

This clearly could include diffuse land-based pollution.

There is a blanket prohibition on water pollution under Part 5.3 of the *Protection of the Environment Operations Act 1997* (NSW), except where a licence is held. With respect to licences, certain activities (eg aquaculture) require a permit. Pursuant to section 120 of the *Protection of the Environment Operations Act 1997* (NSW), A person who pollutes any waters is guilty of an offence.²⁵⁸ Section 123 for example provided that if a person who is guilty of an offence under, on conviction, in the case of a corporation, a penalty not exceeding \$1,000,000 and, in the case of a continuing offence, to a further penalty not exceeding \$120,000 for each day the offence continues, or in the case of an individual, to a penalty not exceeding \$250,000 and, in the case of a continuing offence, to a further penalty not exceeding \$60,000 for each day the offence continues may be applied by the courts.²⁵⁹ Runoff of contaminated stormwater and/or diffuse land-based coastal marine pollution without a licence is, technically, an offence under the *Protection of the Environment Operations Act 1997* (NSW). There have been numerous convictions under the *Protection of the Environment Operations Act 1997* (NSW) for point source pollution events, but again there is no mention of diffuse land-based pollution, and all measures appear to be predominantly reactive and not proactive except for point source polluters. However, it possible for a regulating body to use section 120 as an effective tool to require strict compliance of best practice guidelines and policies from a wide range of sources such as marinas, urban stormwater and construction activities.

²⁵⁷ *Protection of the Environment Operations Act 1997* (NSW)

²⁵⁸ *Protection of the Environment Operations Act 1997* (NSW); section 120 - Prohibition of pollution of waters

²⁵⁹ *Protection of the Environment Operations Act 1997* (NSW); section 123 - Maximum penalty for water pollution offences

New South Wales' Policy with respect to diffuse land-based coastal pollution

State Environmental Planning Policies cover matters of environmental significance for the whole state. State Environmental Planning Policies are prepared by the Director - General of the Department of Infrastructure, Planning and Natural Resources, often at the direction of the Minister for Planning. There are a number of State Environmental Planning Policies that are relevant to coastal development, but in particular, State Environmental Planning Policy 71: Coastal Protection. This Policy created a new development assessment regime and gives force to parts of the NSW Coastal Policy 1997.

State Environmental Planning Policy 71 (Coastal Protection)

State Environmental Planning Policy 71 (Coastal Protection) provides requirements and restrictions on development in NSW coastal areas, with the exception of coastal land in the greater Sydney area. Where the provisions of State Environmental Planning Policy 71: (Coastal Protection) are inconsistent with any other EPI, State Environmental Planning Policy 71 (Coastal Protection) prevails. State Environmental Planning Policy 71 (Coastal Protection) regulates “significant coastal developments”, which are developments in a “sensitive coastal location”, within 100m below the mean high water mark of the sea, a bay or an estuary or on land listed in Schedule 3. ‘Sensitive coastal locations’ include:

- land within 100m above mean high water mark of the sea, a bay or an estuary,
- coastal lakes,
- RAMSAR wetlands and World Heritage areas,
- Marine Parks and Aquatic Reserves under the *Fisheries Management Act 1994* (NSW),
- land within 100m of any of the above or land reserved under the *National Parks and Wildlife Act 1974* (NSW) or State Environmental Planning Policy 14 (Coastal Wetlands), and
- residential land within 100m of State Environmental Planning Policy 26 (Littoral rainforests).

State Environmental Planning Policy 71 (Coastal Protection) prohibits certain types of development. Proposed developments of the following types are automatically referred to the Minister for consent:

- mining and other extractive industry;
- industry, that is “designated development”,²⁶⁰
- landfill;
- tourist facilities and recreational establishments (excluding internal refits or minor alternations or additions);
- marinas, that are designated development,²⁶¹
- structures greater than 13m in height;
- subdivision in sensitive coastal areas or of over 25 lots for residential zones or 5 lots for rural residential zones;
- erection of buildings 2 or more storeys in height;
- any development within 100m below mean high water mark of the sea, a bay or an estuary;
- and
- development described in a ‘catch-all’ pursuant to Schedule (3).

When a local council prepares a local Environmental Plan or a consent authority considers a development application for development in the coastal zone, the following matters must be taken into account:

- the aims of State Environmental Planning Policy 71 (Coastal Protection);
- the retention, improvement and creation of public access to the foreshore;
- the suitability of development given its type, location and design;
- any detrimental impact that development may have on the amenity of the coastal foreshore;
- the scenic qualities of the NSW coast;
- measures to conserve animals, fish, plants and marine vegetation protected under the *Threatened Species Act 1995* (NSW) and the *Fisheries Management Act 1994* (NSW);
- the impact of development on existing wildlife corridors;
- the likely impact of coastal processes and coastal hazards on development and any likely impacts of development on coastal processes and coastal hazards;
- measures to reduce the potential for conflict between land-based and water-based coastal activities;
- measures to protect the cultural places, values, customs, beliefs and traditional knowledge of Aborigines;

²⁶⁰ *State Environmental Planning Policies 71* (Coastal Protection); section 2.2.1

²⁶¹ *State Environmental Planning Policies 71* (Coastal Protection); section 2.2.1

- likely impacts of development on the water quality of coastal waterbodies;
- the conservation and preservation of items of heritage, archaeological or historic significance;
- for development applications – the cumulative impact of the proposed development on the environment; and
- for development applications - measures to ensure efficient water and energy usage by the proposed development.

As can be observed, although the State Environmental Planning Policy 71: (Coastal Protection) appears to be an excellent policy for regulating development within the coastal zone, it provides very little for the prevention and control of diffuse land-based coastal marine pollution except for where there is a conflict between land-based and water based coastal activities. If considering this matter, it could be suggested that if used effectively, the State Environmental Planning Policy 71 could be used to limit the impacts of diffuse land-based coastal marine pollution.

Victoria - Regulation of land-based coastal marine pollution under Catchment Management and Coastal legislation

Victoria has a comprehensive legislative framework addressing natural resource and environment management, conservation and sustainable utilisation. The primary overarching legislation dealing with biodiversity conservation and sustainable use of native flora and fauna is the *Flora and Fauna Guarantee Act 1988 (Vic)*. Section 3 of the *Flora and Fauna Guarantee Act 1988 (Vic)* provided a definition of a "*potentially threatening process*" means a process which may have the capability to threaten the survival, abundance or evolutionary development of any taxon or community of flora or fauna.²⁶² The *Flora and Fauna Guarantee Act 1988 (Vic)* allows for the listing of a threatening process on flora and fauna.²⁶³ The authors suggest that diffuse land-based coastal pollution could be a threatening process to both marine and estuarine flora and fauna.

²⁶² *Flora and Fauna Guarantee Act 1988 (Vic)*: S 3 - Definitions

²⁶³ *Flora and Fauna Guarantee Act 1988 (Vic)*: S 11 – Eligibility for Listing

Catchment and Land Protection Act 1994 (Vic)

The *Catchment and Land Protection Act 1994 (Vic)* establishes a framework for the integrated management and protection of catchments that encourages community participation in the management of land and water resources. The objectives of the *Catchment and Land Protection Act 1994 (Vic)* includes the maintenance and long-term enhancement of land productivity while also conserving the environment to ensure that the quality of the State's land and water resources and their associated plant and animal life are maintained and enhanced. Catchment Management Boards have broad-ranging functions including preparing a regional catchment strategy and coordinating and monitoring its implementation, advising the Minister on regional priorities and resource allocations, and recommending actions to prevent land degradation on Crown land. The *Catchment and Land Protection Act 1994 (Vic)* operates in conjunction with a range of other legislation that also affect the management and conservation of Victoria's natural resources (eg *Conservation, Forests and Lands Act 1987*; *Environment Protection Act 1970 (Vic)*; *Forests Act 1958 (Vic)*; *Land Act 1958 (Vic)*; *National Parks Act 1975 (Vic)*; *Planning and Environment Act 1987 (Vic)*; and the *Water Act 1989 (Vic)*).

Within the *Catchment and Land Protection Act 1994 (Vic)*, there is particular relevance to diffuse land-based pollution and controls that may be placed on individuals. The *Catchment and Land Protection Act 1994 (Vic)* provides that specific areas that may be considered vulnerable may be declared and are subject to specific area plans.²⁶⁴ These plans can impose a specific land use condition that is legally binding,²⁶⁵ and therefore the landowner must comply or face possible

²⁶⁴ *Catchment and Land Protection Act 1994 (Vic)* Sections 33 – 35 Section 33 - *Secretary may serve land use conditions* (1) The Secretary may, in accordance with a special area plan, serve on a land owner a document setting out land use conditions applying to the land of the land owner. (2) Land use conditions must – (a) refer to the special area plan that permits the imposition of the land use conditions; and (b) include the following information from that plan – (i) a general description of the properties to which the land use conditions will apply; and (ii) an estimate of the total cost of compliance with all the land use conditions; and (iii) the method of apportioning that part of the cost to be borne by land owners between the properties to which the conditions will apply; and (c) describe the land of the land owner to which the conditions apply; and (d) state any amount (determined in accordance with the plan) for which the land owner is liable. (3) Land use conditions must not require action to be taken – (a) that is prohibited under a planning scheme under the *Planning and Environment Act 1987*; or (b) for which a permit under that Act is required unless the requirement in the plan is conditional on a permit being obtained and complied with. (4) Land use conditions must not prohibit or restrict – (a) exploration or mining for a mineral within the meaning of the *Mineral Resources Development Act 1990* or petroleum; or (b) exploration for or extraction of stone within the meaning of the *Extractive Industries Development Act 1995*; or (c) the carrying out of an activity in accordance with a lease, licence, permit or authority under the *Mineral Resources Development Act 1990*, the *Petroleum Act 1958* or the *Extractive Industries Development Act 1995*.

²⁶⁵ *Catchment and Land Protection Act 1994 (Vic)* Sections 34 - Status of land use conditions
A land use condition is binding on – (a) the land owner served with it; and (b) each subsequent land owner for the time being of the land to which it applies as if each had been served with the land use condition on becoming the land owner.

prosecution.²⁶⁶ Landowners are also under a general duty pursuant to section 20,²⁶⁷ to protect water resources. The *Catchment and Land Protection Act 1994 (Vic)* forms a strong legislative base for ensuring ecologically sustainable development that protects environmental values and can limit the impacts of diffuse land-based coastal marine pollution.

Environment Protection Act 1970 (Vic)

The further Act that resembles anything in the way of the prevention, reduction and control of land-based pollution could possibly be the *Environment Protection Act 1970 (Vic)*. Under Section 39,²⁶⁸ a person shall not pollute any waters so that the condition of the waters is changed. State environment protection policies established under the *Environment Protection Act 1970 (Vic)* express, in law, the community's expectations, needs and priorities for using and protecting the environment and include land-based pollution of internal waterways. State environment protection policies provide a clear statutory framework of environmental performance objectives. However, like most environmental legislation, it is reactive rather than proactive. Victoria also has the *Coastal Management Act 1995 (Vic)*; however nowhere in this Act is there any reference to land-based pollution of the marine environment and the protection of this environment.

²⁶⁶ *Catchment and Land Protection Act 1994 (Vic)* Sections 35 - Offence to disobey land use condition

(1) A land owner of land to which a land use condition applies must comply with it. Penalty - 60 penalty units. (2) Sub-section (1) does not make the Crown, a Minister or the Secretary liable for an offence.

²⁶⁷ *Catchment and Land Protection Act 1994 (Vic)*; Section 20 (1) (c) - General duties of land owners In relation to his or her land a land owner must take all reasonable steps to - (c) protect water resources

²⁶⁸ *Environment Protection Act 1970 (Vic)* – Section 39 - Pollution of waters

(1) A person shall not pollute any waters so that the condition of the waters is so changed as to make or be reasonably expected to make those waters – (a) noxious or poisonous; (b) harmful or potentially harmful to the health, welfare, safety or property of human beings; (c) poisonous, harmful or potentially harmful to animals, birds, wildlife, fish or other aquatic life; (d) poisonous, harmful or potentially harmful to plants or other vegetation; or (e) detrimental to any beneficial use made of those waters. (2) Without in any way limiting the generality of sub-section (1) a person shall be deemed to have polluted waters in contravention of sub-section (1) if (a) that person causes or permits to be placed in or on any waters or in a place where it may gain access to any waters any matter whether solid, liquid or gaseous which – (i) is prohibited by or under this Act; or (ii) does not comply with any standard prescribed for that matter; or (b) that person causes or permits the temperature of receiving waters to be raised or lowered by more than the prescribed limits. (3) A person shall not cause or permit waste to be placed or left in any position whereby it could reasonably be expected to gain access to any waters in circumstances where if access was gained the waste would be likely to result in those waters being polluted. (4) A person shall not cause or permit waste to be discharged or deposited onto the dry bed of any waterway in circumstances where if the waterway had contained waters the discharge or deposit would be likely to result in those waters being polluted. (5) A person who contravenes any of the provisions of this section shall be guilty of an indictable offence against this Act and liable to a penalty of not more than 2400 penalty units and in the case of a continuing offence to a daily penalty of not more than 1200 penalty units for each day the offence continues after conviction or after service by the Authority of notice of contravention of this section

Victorian Policy with respect to diffuse land-based coastal pollution

Coastal Management Act 1995 (Vic) and Victorian Coastal Strategy

The Victorian Coastal Strategy was prepared by the Victorian Coastal Council and adopted by the Victorian State Government. The Victorian Coastal Council is the peak body established under the *Coastal Management Act 1995 (Vic)*. The Strategy established a broad vision for the long-term sustainable management of the coast and outlines a framework and principles to guide future decision making and priority setting. The release of this Victorian Coastal enhances the previous coastal strategy and developed a consistent approach to a range of coastal issues.

The Victorian Coastal Strategy provides for long term planning for the Victorian coast to:

- *ensure protection of significant environmental features;*
- *provide clear direction for the future use of the coast, including the marine environment;*
- *identify suitable development areas and opportunities on the coast; and*
- *ensure the sustainable use of natural resources.*²⁶⁹

The *Coastal Management Act 1995 (Vic)* requires land managers to take account of the Victorian Coastal Strategy²⁷⁰, Coastal Plans²⁷¹ and Management Plans.²⁷²

Victoria also has a broad array of coastal action plans including:

- *Anglesea Coastal Action Plan, 1999;*
- *Gippsland Lakes Coastal Action Plan, 1999;*
- *Lorne Coastal Action Plan, 1998;*
- *Warrnambool Coastal Action Plan, 1999;*
- *Waterfront Geelong Coastal Action Plan, 1998;*
- *Moyne Coastal Action Plan, 2001;*
- *Skenes Creek to Marengo Coastal Action Plan, 2001;* and
- *Gippsland Coastal Waters Coastal Action Plan, 2001.*

²⁶⁹ *Victorian Coastal Strategy* (2002) Available at <http://www.vcc.vic.gov.au/strategy> Accessed 29 September 2006

²⁷⁰ *Coastal Management Act 1995 (Vic)*: s 21 - Land managers to take Strategy into account

²⁷¹ *Coastal Management Act 1995 (Vic)*: s 29 - Land managers to take Plan into account

²⁷² *Coastal Management Act 1995 (Vic)*: s 36 - Land managers to take Plan into account

Diffuse land-based water quality and quantity remains a high priority. Most local areas have enacted stormwater management plan.²⁷³ Further, the Victorian Government has funded approximately \$22 million to facilitate a range of stormwater initiatives including diffuse sources.²⁷⁴ One of the important focuses in on the Gippsland Lakes. The Victorian Government has commitment to a 40% reduction over 20 years in nutrients entering the Gippsland Lakes, this being a financial commitment of over \$12 million to support initiatives and a regionally integrated approach between all of the major agencies and groups. One of the important initiatives in the Gippsland Lakes region is the reduction in land subsidence, this being often a cause of diffuse land-based pollution.

Victoria has also made significant progress with respect to diffuse land-based pollution through the management of key risks through the *Port Phillip Bay Environmental Management Plan*²⁷⁵ that provides the framework to address two key risks to Port Phillip Bay's environment, and specifically nutrients management including nutrient monitoring, modelling and load reduction models. A management framework for targeting a 1000 tonne reduction in annual nitrogen loads to the Bay by 2006 has been developed under the Management Plan. The reduction is required by the *State Environment Protection Policy* for Port Phillip Bay. The focus of nitrogen reduction is on the Western Treatment Plant and catchment waterways and thus includes diffuse land-based pollution.

Tasmania - Regulation of land-based coastal marine pollution under Catchment Management and Coastal legislation

Water Management Act 1999 (Tas)

The *Water Management Act 1999* (Tas) provides a framework for the management of Tasmania's freshwater resources. The *Water Management Act 1999* (Tas) objectives are with respect to the resource management and planning system of Tasmania as specified in Schedule 1 and in particular to provide for the use and management of the freshwater resources of Tasmania.²⁷⁶ Schedule 1

²⁷³ James, D., (2002) *The Good the Bad and the Ugly – A Victorian Roundup*, paper presented to the Coast to Coast Conference, 2002

²⁷⁴ James, D., (2002) *The Good the Bad and the Ugly – A Victorian Roundup*, paper presented to the Coast to Coast Conference, 2002

²⁷⁵ *Port Phillip Bay Environmental Management Plan* Available at <http://www.dse.vic.gov.au> Accessed 29 September 2006

²⁷⁶ *Water Management Act 1999* (Tas); Section 6 – Objects of the Act: (1) The objectives of this Act are to further the objectives of the resource management and planning system of Tasmania as specified in Schedule 1 and in particular to

provides objectives include promoting the sustainable development of natural and physical resources and the maintenance of ecological processes and genetic diversity.²⁷⁷ Whilst there is no direct reference to diffuse land-based coastal marine pollution, there is acknowledgement of the need to minimise adverse affects on the environment, which would include the marine environment. Further , there indirect reference is provided in section 282 of the *Water Management Act 1999* (Tas) which places a duty on the “owner and occupier of land on which a watercourse or lake is situated or that adjoins a watercourse or lake, and any other person permitted to take water on or from that land, to take reasonable steps to prevent damage to the bed and banks of the watercourse or the bed, banks or shores of the lake and to the ecosystems that depend on the watercourse or lake.”²⁷⁸ Assuming “damage” includes pollution, section 282 could cover activities such as land clearing, agricultural or pastoral activities which are know to contribute to diffuse land-based coastal marine pollution. This also presupposes the damage to the watercourse does eventually impact the marine environment. The link to the regulation of diffuse land-based coastal marine pollution is rather tenuous.

Environmental Management and Pollution Control Act 1994 (Tas)

The stated objectives of the resource Management and Planning System in Tasmania refer to the need to safeguard water resources. Schedule 1 of the *Environmental Management and Pollution*

provide for the use and management of the freshwater resources of Tasmania having regard to the need to – (a) promote sustainable use and facilitate economic development of water resources; and (b) recognise and foster the significant social and economic benefits resulting from the sustainable use and development of water resources for the generation of hydro-electricity and for the supply of water for human consumption and commercial activities dependent on water; and (c) maintain ecological processes and genetic diversity for aquatic ecosystems; and (d) provide for the fair, orderly and efficient allocation of water resources to meet the community's needs; and (e) increase the community's understanding of aquatic ecosystems and the need to use and manage water in a sustainable and cost-efficient manner; and (f) encourage community involvement in water resource management. (2) It is the obligation of the Minister, the Secretary, a water entity and any other person on whom a function is imposed or a power is conferred under this Act to perform the function or exercise the power in such a manner as to further the objectives specified in subsection (1) and in Schedule 1.

²⁷⁷ *Water Management Act 1999* (Tas); Schedule 1 - Objectives of the Resource Management and Planning System of Tasmania

1. The objectives of the resource management and planning system of Tasmania are – (a) to promote the sustainable development of natural and physical resources and the maintenance of ecological processes and genetic diversity; and (b) to provide for the fair, orderly and sustainable use and development of air, land and water; and (c) to encourage public involvement in resource management and planning; and (d) to facilitate economic development in accordance with the objectives specified in paragraphs (a), (b) and (c); and (e) to promote the sharing of responsibility for resource management and planning between the different spheres of Government, the community and industry in Tasmania. 2. In item 1(a), "sustainable development" means managing the use, development and protection of natural and physical resources in a way, or at a rate, which enables people and communities to provide for their social, economic and cultural wellbeing and for their health and safety while – (a) sustaining the potential of natural and physical resources to meet the reasonably foreseeable needs of future generations; and (b) safeguarding the life-supporting capacity of air, water, soil and ecosystems; and (c) avoiding, remedying or mitigating any adverse effects of activities on the environment.

²⁷⁸ *Water Management Act 1999* (Tas); Section 282 - Duty not to damage watercourse or lake

Control Act 1994 (Tas) includes objectives included but not limited to promoting the sustainable development of natural and physical resources and the maintenance of ecological processes and genetic diversity. Sustainable development is defined to include reference to the need to maintain water resources and would seem to include coastal waters. Sustainable development as defined in the *Environmental Management and Pollution Control Act 1994* (Tas) means managing the use, development and protection of natural and physical resources in a way, or at a rate, which enables people and communities to provide for their social, economic and cultural well-being and for their health and safety while -

- (a) sustaining the potential of natural and physical resources to meet the reasonably foreseeable needs of future generations; and
- (b) safeguarding the life-supporting capacity of air, water, soil and ecosystems; and
- (c) avoiding, remedying or mitigating any adverse effects of activities on the environment.²⁷⁹

The objectives of the pollution control system established by the *Environmental Management and Pollution Control Act 1994* (Tas) provide more direct reference to water quality, including objective (c) is: to regulate, reduce or eliminate the discharge of pollutants and hazardous substances to air, land or water consistent with maintaining environmental quality.²⁸⁰

²⁷⁹ *Environmental Management and Pollution Control Act 1994* (Tas); Schedule 1 – Objectives (Sections 8, 12 and 28)

²⁸⁰ *Environmental Management and Pollution Control Act 1994* (Tas); Schedule 1 – Objectives (Sections 8, 12 and 28) - PART 1 - Objectives of the resource Management and Planning System of Tasmania

1. The objectives of the resource management and planning system of Tasmania are – (a) to promote the sustainable development of natural and physical resources and the maintenance of ecological processes and genetic diversity; and (b) to provide for the fair, orderly and sustainable use and development of air, land and water; and (c) to encourage public involvement in resource management and planning; and (d) to facilitate economic development in accordance with the objectives set out in paragraphs (a), (b) and (c); and (e) to promote the sharing of responsibility for resource management and planning between the different spheres of Government, the community and industry in the State. 2. In clause 1(a), "sustainable development" means managing the use, development and protection of natural and physical resources in a way, or at a rate, which enables people and communities to provide for their social, economic and cultural well-being and for their health and safety while – (a) sustaining the potential of natural and physical resources to meet the reasonably foreseeable needs of future generations; and (b) safeguarding the life-supporting capacity of air, water, soil and ecosystems; and (c) avoiding, remedying or mitigating any adverse effects of activities on the environment. PART 2 - Objectives of the Environmental Management and Pollution Control System Established by this Act 3. The objectives of the environmental management and pollution control system established by this Act are, in support of the objectives set out in Part 1 of this Schedule – (a) to protect and enhance the quality of the Tasmanian environment; and (b) to prevent environmental degradation and adverse risks to human and ecosystem health by promoting pollution prevention, clean production technology, reuse and recycling of materials and waste minimization programmes; and (c) to regulate, reduce or eliminate the discharge of pollutants and hazardous substances to air, land or water consistent with maintaining environmental quality; and (d) to allocate the costs of environmental protection and restoration equitably and in a manner that encourages responsible use of, and reduces harm to, the environment, with polluters bearing the appropriate share of the costs that arise from their activities; and (e) to require persons engaging in polluting activities to make progressive environmental improvements, including reductions of pollution at source, as such improvements become practicable through technological and economic development; and (f) to provide for the monitoring and reporting of environmental quality on a regular basis; and (g) to control the generation, storage, collection, transportation, treatment and disposal of waste with a view to reducing, minimizing and, where practicable,

Section 23A of the *Environmental Management and Pollution Control Act 1994* (Tas) creates a general environmental duty to take “such steps as are practicable or reasonable to prevent or minimise environmental harm or environmental nuisance.” In the context of this section, it is suggested that activities causing diffuse land-based marine pollution should be covered such that causing pollution would expose the polluter to liability.

Planning applications for level one, two and three activities (with level 3 carrying the greatest environmental risk) are addressed in the *Environmental Management and Pollution Control Act 1994* (Tas). Level 2 activities as listed in Schedule 2 have the potential to contribute to diffuse land-based marine pollution. Such activities include: wood processing and mills (including operations in forest harvesting areas), waste depots, fish processing works, processing works for food including agriculture and extractive industries. As such, there is regulation of land-based marine pollution through planning approvals and conditions but, as is consistent with most state legislation, the activities addressed within the approval process are predominantly, or always point source issues.

Land Use Planning and Approvals Act 1993 (Tas)

Indirect reference is made to the necessity to avoid marine pollution in the Act’s objectives stated in Schedule 1.²⁸¹ Under the Act, land use is controlled via Planning Schemes which are developed by local municipalities and approved by the Resource Planning and Development Commission.²⁸² Planning Scheme may make provision for the use, development, protection and conservation of any land within the Scheme’s area of application. Measures to reduce diffuse sourced land-based marine pollution can vary according to the Planning Scheme. It is noted that under section 20 the application of Planning Schemes can be limited. Section 20(7) states:

Nothing in any planning scheme or special planning order affects –

eliminating harm to the environment; and (h) to adopt a precautionary approach when assessing environmental risk to ensure that all aspects of environmental quality, including ecosystem sustainability and integrity and beneficial uses of the environment, are considered in assessing, and making decisions in relation to, the environment; and (i) to facilitate the adoption and implementation of standards agreed upon by the State under inter- governmental arrangements for greater uniformity in environmental regulation; and (j) to promote public education about the protection, restoration and enhancement of the environment; and (k) to co-ordinate all activities as are necessary to protect, restore or improve the Tasmanian environment.

²⁸¹ One of the objectives of the resource management and planning system of Tasmania is stated to be ‘avoiding, remedying or mitigating any adverse effects of activities on the environment.’

²⁸² Established under the *Resource Planning and Development Commission Act 1997* (Tas)

- (a) *forestry operations conducted on land declared as a private timber reserve under the Forest Practices Act 1985; or*
- (b) *the undertaking of mineral exploration in accordance with an exploration licence, or retention licence, issued under the Mineral Resources Development Act 1995, provided that any mineral exploration carried out is consistent with the standards specified in the Mineral Exploration Code of Practice; or*
- (c) *fishing; or*
- (d) *marine farming in State waters.*

The first two listed activities would be expected to contribute to land-based marine pollution by the very nature of the activity.

Tasmanian Policy with respect to diffuse land-based coastal pollution

The Tasmanian Government adopted the *State Coastal Policy* in 1996. The Coastal Policy was amended in 2003 in accordance with the *State Coastal Policy Validation Act 2003* (Tas). The Coastal Policy does not directly address diffuse land-based coastal marine pollution; however references to the pollution of coastal waters is made throughout the Coastal Policy. For example, Guiding Principle 2 of the *State Coastal Policy* states that “the coast shall be used and developed in a sustainable manner.”²⁸³ In pursuing sustainable development, the Coastal Policy states that:

*“Whole farm planning and sustainable farming activities will be encouraged on agricultural land in the coastal zone and in coastal catchments in order to minimise problems such as erosion, sedimentation and pollution of coastal waters including surface and ground waters”*²⁸⁴

The *State Policy on Water Quality Management 1997*²⁸⁵ more directly addresses the management of diffuse land-based coastal marine pollution. Specifically, the Objectives of the *State Policy on Water Quality Management* illustrate how the Policy is directed to the prevention of diffuse land-

²⁸³ Tasmanian Department of Primary Industries, Water & Environment

²⁸⁴ Tasmanian Department of Primary Industries, Water & Environment (2003) *Tasmanian State Coastal Policy*, paragraph 2.1.13

²⁸⁵ Tasmanian Department of Primary Industries, Water & Environment (1997) - Made pursuant to the *State Policies and Projects Act 1993* (Tas)

based pollution.²⁸⁶ Further, Part 4²⁸⁷ and Division 3²⁸⁸ provide specific reference to diffuse pollution (*pollution which enters the receiving waters via a number of entry points, or arises from a large number of dispersed sources*). The Policy addresses a range of activities that contribute to diffuse land-based coastal marine pollution. The development of Codes of Practice and/or guidelines with best practice environmental management is also envisaged; however there was little indication that these had actually been developed. The areas addressed are:

- the control of erosion and stormwater runoff from land disturbance including development through the requirement that planning schemes place conditions upon development approvals to address pollutants in storm water runoff. Where land is adjacent to water courses, attention to buffer strips should be required;
- the minimisation of agricultural runoff through the implementation of best practice;
- the control of urban runoff through state and local government controls;
- the conduct of forestry operations in accordance with the State Forest Practices Code;
- the control of road construction and maintenance operations to prevent erosion and the pollution of streams and waterways by runoff from sites ;
- surveys to identify high acidity soils which would produce highly acidic runoff;
- the control of acid drainage from mine sites through controls on the approval of new mines or re-working existing mines; and
- stream management.²⁸⁹

South Australia - Regulation of land-based coastal marine pollution under Catchment Management and Coastal legislation

Environmental Protection Act 1993 (SA)

The *Environmental Protection Act 1993 (SA)* applies to the coastal waters of South Australia (out to three (3) nautical miles) and thus has geographical coverage over land-based coastal marine

²⁸⁶ Tasmanian Department of Primary Industries, Water & Environment (1997) *Tasmanian State Policy on Water Quality Management*; section 6.1(b) “ensure that diffuse source and point source pollution does not prejudice the achievement of water quality objectives and that pollutants discharged to waterways are reduced as far as is reasonable and practical by the use of best practice environmental management”;

²⁸⁷ Tasmanian Department of Primary Industries, Water & Environment (1997) *Tasmanian State Policy on Water Quality Management* Part 4 “Outcomes- Actions to Achieve Water Quality Objectives”

²⁸⁸ Tasmanian Department of Primary Industries, Water & Environment (1997) *Tasmanian State Policy on Water Quality Management* Division 3 “Management of Diffuse Sources of Pollution”

²⁸⁹ Tasmanian Department of Primary Industries, Water & Environment (1997) *Tasmanian State Policy on Water Quality Management* Division 3 “Management of Diffuse Sources of Pollution”

pollution. Pollution is defined in section 3 of the *Environmental Protection Act 1993* (SA) to include the discharge, emission, deposit or disturbance of pollutants, or causing or failing to prevent the discharge, emission, depositing, disturbance or escape of pollutants. Pursuant to section 36, persons are prohibited from undertaking a prescribed activity of environmental significance unless authorised under an environmental authorisation in the form of a licence.²⁹⁰ As is consistent with most State environmental legislation throughout Australia, the *Environmental Protection Act 1993* (SA) provides within Schedule 1 for prescribed activities of environmental significance which might contribute to land-based coastal marine pollution including animal husbandry, mining activities and food production. However, these activities are usually considered to be point source activities, although unlike most state environmental acts, agriculture is included in Schedule 1 of the *Environmental Protection Act 1993* (SA).²⁹¹

Coastal and marine pollution protection is provided if an area falls under a proclaimed Water Protection Area. Part 8 Division 1 of the *Environmental Protection Act 1993* (SA) provided for Water quality in water protection areas. Pursuant to section 64, where an application is made to drain or discharge any solid, liquid or gaseous material directly or indirectly into a water source, such applications are referred to the Water Minister. Foreseeable risks of pollution can be minimised by the issuance of a notice under section 64B of the *Environmental Protection Act 1993* (SA) requiring the owner or occupier of the land, to take such action as the Minister considers necessary or desirable.²⁹² Failure to comply can attract an individual penalty of \$75,000.²⁹³ Part 9 of the *Environmental Protection Act 1993* (SA) contains the offences provisions (strict liability and faulty based, serious²⁹⁴ or material environmental harm²⁹⁵, environmental nuisance). These

²⁹⁰ *Environmental Protection Act 1993* (SA); section 36 -

²⁹¹ *Environmental Protection Act 1993* (SA); Schedule 1

²⁹² *Environmental Protection Act 1993* (SA); Section 64B - (1) Where an application of a kind prescribed by subsection (1a) is made under Part 6 for an environmental authorisation in respect of an activity to be undertaken in a water protection area (except a water protection area, or part of a water protection area, excluded from the operation of this section by regulation) - (a) the application must be referred to the Water Resources Minister together with a copy of any relevant information provided by the applicant; and (b) subject to subsection (2), the Authority must not make a decision on the application until it receives a response from the Water Resources Minister.

²⁹³ *Environmental Protection Act 1993* (SA); Section 64B (2)

²⁹⁴ *Environmental Protection Act 1993* (SA); Section 79 - Causing serious environmental harm

(1) A person who causes serious environmental harm by polluting the environment intentionally or recklessly and with the knowledge that environmental harm will or might result is guilty of an offence.

Penalty: If the offender is a body corporate - \$2 000 000; If the offender is a natural person - \$500 000 or Division 4 imprisonment or both. (2) A person who by polluting the environment causes serious environmental harm is guilty of an offence. Penalty: If the offender is a body corporate - \$500 000; If the offender is a natural person - \$250 000.

(3) If in proceedings for an offence against subsection (1) the court is not satisfied that the defendant is guilty of the offence charged but is satisfied that the defendant is guilty of an offence against subsection (2), the court may find the defendant guilty of the latter offence.

²⁹⁵ *Environmental Protection Act 1993* (SA); Section 80 - Causing material environmental harm

provisions apply after the damage has occurred and therefore do not directly apply to diffuse land-based coastal marine pollution, either as an incentive to minimise pollution or disincentive to causing pollution.

Coast Protection Act 1972 (SA)

The *Coast Protection Act 1972 (SA)* establishes a Coast Protection Board with the function of, *inter alia*, protecting the coast from erosion, damage, deterioration, pollution and misuse. The area of application of the *Coast Protection Act 1972 (SA)* is limited to the immediate coastline, that being the normal jurisdiction of the State. The coast is defined in section 4 of the *Coast Protection Act 1972 (SA)*.²⁹⁶ As such the opportunities to address and regulate diffuse land-based coastal marine pollution such as land clearing and agriculture are limited. It is suggested that this power could be utilised as a discretionary power to protect the coastal marine environment from diffuse land-based pollution.

South Australian Policy with respect to diffuse land-based coastal pollution

The *Environment Protection (Water Quality) Policy 2003*²⁹⁷ has the principal objective of achieving the sustainable management of waters. One particular interest is that the *Environment Protection (Water Quality) Policy 2003* aim is to seek, by protecting or enhancing water quality while allowing economic and social development, to ensure that pollution from both diffuse and point sources does not prejudice the achievement of those water quality objectives.²⁹⁸ Part 5 of the Policy addresses diffuse land-based pollution²⁹⁹ but is more relevant to stormwater diffuse impacts. For example, the

(1) A person who causes material environmental harm by polluting the environment intentionally or recklessly and with the knowledge that environmental harm will or might result is guilty of an offence. Penalty: If the offender is a body corporate - \$500 000; If the offender is a natural person - \$250 000 or Division 5 imprisonment or both. (2) A person who by polluting the environment causes material environmental harm is guilty of an offence. Penalty: If the offender is a body corporate - \$250 000; If the offender is a natural person - \$150 000. (3) If in proceedings for an offence against subsection (1) the court is not satisfied that the defendant is guilty of the offence charged but is satisfied that the defendant is guilty of an offence against subsection (2), the court may find the defendant guilty of the latter offence.

²⁹⁶ *Coast Protection Act 1972 (SA)*; Section 4 - *coast* means all land that is - (a) within the mean high water mark and the mean low water mark on the seashore at spring tides; or (b) above and within one hundred metres of that mean high water mark; or (c) below and within three nautical miles of that mean low water mark; or (d) within any estuary, inlet, river, creek, bay or lake and subject to the ebb and flow of the tide; or (e) declared by regulation to constitute part of the coast for the purposes of this Act;

²⁹⁷ Enacted pursuant to the *Environmental Protection Act 1993 (SA)*

²⁹⁸ *Environment Protection (Water Quality) Policy 2003*; section 7 – Object of Policy – 7(2)(b) ensure that pollution from both diffuse and point sources does not prejudice the achievement of those water quality objectives;

²⁹⁹ *Environment Protection (Water Quality) Policy 2003*; Part 5

construction of roads, building or construction undertakings and the management of stormwater systems are regulated by Stormwater Pollution Prevention Codes.³⁰⁰

Draft Estuaries Policy and Action Plan

In June 2005, the Department for Environment and Heritage released a draft Estuaries Policy & Action Plan. The Policy remains in draft form. It does acknowledge the importance of estuaries in providing a transition area from rivers to the sea and sets as a vision a benchmark of health estuaries for present and future generations. The problems identified for attention reflect some of the identified drivers of land based marine pollution. The three principle areas are:

- Poor coordination and integration of management and planning for estuaries.
- Lack of knowledge (both science and management) about South Australia's estuaries.
- Low level of awareness in the general community of estuaries as important natural environments that need protection.

An estuary is defined in the policy as:

‘A partially enclosed coastal body of water that is either permanently, periodically, intermittently or occasionally open to the sea within which there is a measurable variation in salinity due to the mixture of seawater with water derived from on or under the land’.

The Act also notes that an estuary may include any ecosystem processes or biodiversity associated with an estuary and estuarine habitat adjacent to an estuary.

The draft policy adopts 15 principles for estuarine management and imports the policy of integrated management. In particular, principle 6 states: *‘Planners and decision makers from all levels need to take into account, in an integrated manner, all uses and activities on our estuaries’*. Given that a significant proportion of diffuse sourced land-based marine pollution enters the oceans via run off to estuaries, this draft policy is a welcome initiative. However it remains in draft form over 12 months after its release for public comment and further action to implement the policy is required.

³⁰⁰ See generally *Environment Protection (Water Quality) Policy* 2003; Part 5, sections 39, 40, 41 and 42

The South Australian Department of Environment and Heritage released the *Living Coast Strategy for South Australia* in 2004. Objective 3 of the Strategy is aimed at reducing land-based coastal marine pollution. The impact of diffuse land-based marine pollution is specifically acknowledged:

*Diffuse pollution occurs along the coastal and river interfaces with land. Nutrients may be carried by land run-off and groundwater, and may be concentrated by the local watershed or specifically sourced from individual boats through waste and anti-foulants. Diffuse pollution contributes significant pollution loads to coastal waters, particularly nutrients, pesticides, heavy metals, pathogens, and sediments. The sources of diffuse pollution are often a considerable distance from the coast. It is therefore critical that close planning and operational linkages are formed between coastal and inland water management agencies to address diffuse pollution sources.*³⁰¹

The Living Coast Strategy notes that “diffuse source pollutants entering coastal, estuarine and marine environments are of particular concern in the South East (from drainage of land via the River Murray) and the Gulf St Vincent (from watercourses and stormwater drains).³⁰² However most of the actions areas address point source land-based coastal marine pollution such as wastewater and stormwater discharge, and provide very little for diffuse sources of land-based pollution.

One specific action within the *Living Coast Strategy for South Australia* is aimed a Catchment Management, and seeks to “actively encourage Catchment Water Management Boards/Regional NRM Boards and local government to develop integrated water quality and stormwater management strategies’ and to ‘implement strategies to reduce diffuse pollution of watercourses and stormwater drains discharging into marine waters.’³⁰³ The Environmental Protection Authority currently undertake a *Beach Water Quality Program* whereby the water quality at 12 metropolitan beaches (Largs Bay, Semaphore, Grange, Henley Beach, West Beach, Glenelg North, Glenelg, Brighton, Port Noarlunga, Moana, Victor Harbour, Horseshoe Bay) is monitored. The Program cites the Catchments Management plans as an example of State government efforts to address land-based coastal marine pollution.³⁰⁴

³⁰¹ South Australian Department of Environment and Heritage, (1994) *Living Coast Strategy fro South Australia*, at 38. Available at http://www.environment.sa.gov.au/coasts/pdfs/living_coast.pdf

³⁰² South Australian Department of Environment and Heritage, (1994) *Living Coast Strategy fro South Australia*, at 41

³⁰³ South Australian Department of Environment and Heritage, (1994) *Living Coast Strategy fro South Australia* at 42

³⁰⁴ South Australian Environmental Protection Authority, (2003) *Beach Water Quality Program*, Available at <http://www.environment.sa.gov.au/reporting/coast/beach.html> Accessed 11 July 2006

Western Australia - Regulation of land-based coastal marine pollution under Catchment Management and Coastal legislation

Environmental Protection Act 1986 (WA)

Land-based coastal marine pollution is indirectly addressed in the *Environmental Protection Act 1986 (WA)*. The definition of pollution and environmental harm, as provided in section 3A is wide enough to cover coastal marine pollution.³⁰⁵ However, it should be specifically noted that although the relevant section refers to indirect actions such as diffuse land-based coastal marine pollution it could be difficult to prove the impacts from a single polluter due to the definitions contained with respect to the environmental harm provisions. Offences are included in Part V of the *Environmental Protection Act 1986 (WA)* and include causing pollution or unreasonable emissions to the environment (s49),³⁰⁶ discharging water likely to cause pollution (s50),³⁰⁷ serious environmental harm (s50A)³⁰⁸ and material environmental harm (50B).³⁰⁹

³⁰⁵ *Environmental Protection Act 1986 (WA)*; Section 3A - Pollution and environmental harm

(1) In this Act “pollution” means direct or indirect alteration of the environment (a) to its detriment or degradation; (b) to the detriment of an environmental value; or (c) of a prescribed kind, that involves an emission. (2) In this Act “environmental harm” means direct or indirect (a) harm to the environment involving removal or destruction of, or damage to (i) native vegetation; or (ii) the habitat of native vegetation or indigenous aquatic or terrestrial animals; (b) alteration of the environment to its detriment or degradation or potential detriment or degradation; (c) alteration of the environment to the detriment or potential detriment of an environmental value; or (d) alteration of the environment of a prescribed kind; “material environmental harm” means environmental harm that (a) is neither trivial nor negligible; or (b) results in actual or potential loss, property damage or damage costs of an amount, or amounts in aggregate, exceeding the threshold amount; “serious environmental harm” means environmental harm that (a) is irreversible, of a high impact or on a wide scale; (b) is significant or in an area of high conservation value or special significance; or (c) results in actual or potential loss, property damage or damage costs of an amount, or amounts in aggregate, exceeding 5 times the threshold amount. (3) For the purposes of subsection (2) “damage costs” means the reasonable costs and expenses that are or would be incurred in taking all reasonable and practicable measures to prevent, control or abate the environmental harm and to make good resulting environmental damage; “threshold amount” means \$20 000, or if a greater amount is prescribed by regulation, that amount.

³⁰⁶ *Environmental Protection Act 1986 (WA)*; Section 49 - Causing pollution and unreasonable emissions

(1) In this section - “unreasonable emission” means an emission or transmission of noise, odour or electromagnetic radiation which unreasonably interferes with the health, welfare, convenience, comfort or amenity of any person. (2) A person who intentionally or with criminal negligence - (a) causes pollution; or (b) allows pollution to be caused, commits an offence. (3) A person who causes pollution or allows pollution to be caused commits an offence. (4) A person who intentionally or with criminal negligence - (a) emits an unreasonable emission from any premises; or (b) causes an unreasonable emission to be emitted from any premises, commits an offence. (5) A person who - (a) emits an unreasonable emission from any premises; or (b) causes an unreasonable emission to be emitted from any premises, commits an offence. (6) A person charged with committing an offence against subsection (2) may be convicted of an offence against subsection (3) which is established by the evidence. (7) A person charged with committing an offence against subsection (4) may be convicted of an offence against subsection (5) which is established by the evidence.

³⁰⁷ *Environmental Protection Act 1986 (WA)*; Section 50 - Discharge of waste in circumstances in which it is likely to cause pollution

(1) A person who intentionally or with criminal negligence - (a) causes waste to be placed; or (b) allows waste to be placed, in any position from which the waste - (c) could reasonably be expected to gain access to any portion of the environment; and (d) would in so gaining access be likely to result in pollution, commits an offence. (2) A person who causes or allows waste to be placed in any position from which the waste - (a) could reasonably be expected to gain access to any portion of the environment; and (b) would in so gaining access be likely to result in pollution, commits an

Waterways Conservation Act 1976 (WA)

The *Waterways Conservation Act 1976 (WA)* provides for the conservation and management of WA waters (including the rivers, inlets and estuaries to which the Act applies) and of the associated land and environment, for the establishment of a Rivers and Estuaries Council and certain Management Authorities, and for incidental and other purposes. The *Waterways Conservation Act 1976 (WA)* creates a framework of disposal licence (more applicable to point-source pollution) for the discharge or deposit of any -matter and defines pollution.³¹⁰ The indirect manner in which diffuse land-based coastal marine pollution enters the marine environment is regulated through section 48³¹¹. Interestingly, section 48 (4)(b) specifically states that a person is not guilty of an

offence. (3) A person charged with committing an offence against subsection (1) may be convicted of an offence against subsection (2) which is established by the evidence.

³⁰⁸ *Environmental Protection Act 1986 (WA)*; Section 50A Causing serious environmental harm

(1) A person who, intentionally or with criminal negligence - (a) causes serious environmental harm; or (b) allows serious environmental harm to be caused, commits an offence. (2) A person who - (a) causes serious environmental harm; or (b) allows serious environmental harm to be caused, commits an offence. (3) A person charged with committing an offence against subsection (1) may be convicted of an offence against subsection (2) which is established by the evidence.

³⁰⁹ *Environmental Protection Act 1986 (WA)*; Section 50B Causing material environmental harm

(1) A person who intentionally or with criminal negligence - (a) causes material environmental harm; or (b) allows material environmental harm to be caused, commits an offence. (2) A person who - (a) causes material environmental harm; or (b) allows material environmental harm to be caused, commits an offence. (3) A person charged with committing an offence against subsection (1) may be convicted of an offence against subsection (2) which is established by the evidence.

³¹⁰ *Waterways Conservation Act 1976 (WA)*; Section 3 - "pollution" means any direct or indirect alteration of the environment to its detriment or degradation, and includes any effluent, litter, refuse, sewage, or waste, or any other matter or thing, of whatever kind and in whatever form, that impairs or is likely to impair the environment.

³¹¹ *Waterways Conservation Act 1976 (WA)*; Section 48 - Control of pollution, and the use of waters

(1) The provisions of this section apply to and in relation to any waters or any land for the time being subject to the powers of the Commission, save where the exercise of the powers conferred by this section would be inconsistent with the provisions of any Agreement to which the State is a party and which, or the execution of which, is or has been ratified or approved by an Act and the Governor, by Order in Council published in the *Gazette*, declares that any or all of the provisions of this section shall not apply according to the Order in respect of any or all of the places, premises, acts or things to which that Agreement relates. (2) An Order in Council made for the purposes of subsection (1) may be varied or revoked by a subsequent Order. (3) Subject to subsection (1), a person shall be guilty of an offence if he causes or knowingly permits - (a) any poisonous, noxious or polluting matter to be discharged or deposited on or in any waters or land to which this section applies which he knows or ought reasonably to know will lead, or be likely to lead, to the impairment of the physical, chemical or biological condition of those waters or any subterranean source of those waters, or will tend (either directly or in combination with other matter which he or another person causes or permits to enter those waters) to impede the proper flow of those waters in a manner leading or likely to lead to a substantial aggravation of pollution due to other causes or of the consequences of such pollution; or (b) any industrial effluent, waste or other matter from any mine, treatment plant, processing establishment, or factory, whether treated or otherwise, to be discharged or deposited so as to run or otherwise enter into waters to which this section applies, or any subterranean source of those waters; or (c) anything to be done, or omitted, whereby the use of the waters or associated or adjacent land for navigational, recreational or other beneficial purposes is impaired or otherwise adversely affected. (4) A person shall not be guilty of an offence by virtue of subsection (3) if - (a) the discharge or deposit is authorised by a disposal licence issued for the purpose under section 47 and is in accordance with the conditions, if any, to which the licence is subject; (b) the entry of the matter into the waters is attributable to an act or omission which is in accordance with good agricultural practice and the Commission has not, by notice in writing given not less than 3 months

offence pursuant to the section if the entry of the matter into the waters is attributable to an act or omission which is in accordance with good agricultural practice.³¹² The *Waterways Conservation Act 1976 (WA)* however does not provide a definition of an “good agricultural practice”, making it difficult to prosecute for possible diffuse land-based coastal marine pollution

Western Australia Policy with respect to diffuse land-based coastal pollution

The Western Australia government has enacted a number of Environmental Protection Policies specifically related to water and marine environments. Specifically the Environmental Protection Policies with respect to aquatic waters include the *Environmental Protection (Swan and Canning Rivers) Policy 1998*. The purpose of the *Environmental Protection (Swan and Canning Rivers) Policy 1998* is to ensure that the values of the Swan and Canning Rivers are restored, maintained and protected by managing the activities that affect them. Section 7 of the *Environmental Protection (Swan and Canning Rivers) Policy 1998* includes activities that can cause waterways and catchments to be degraded. Within these items are a number of diffuse land-based sources of potential coastal marine pollution. Part 4 of the *Environmental Protection (Swan and Canning Rivers) Policy 1998* provides for measures to achieve the environmental quality objectives. Specifically, the *Environmental Protection (Swan and Canning Rivers) Policy 1998* listed the clearing of vegetation, waterwater, drainage and agriculture that are/could be considered the significant contributors of diffuse land-based coastal marine pollution. To address these activities, clause 10 provides for a comprehensive management plan to achieve and maintain the environmental quality objectives. Further, the management plans is required to develop strategies for the development of best management practices to control drainage, sewage, and the disposal of wastewater and the discharge of nutrients including indirect impacts. However, unlike most

previously, required the owner or occupier of the place where the act or omission occurred, or any previous owner or occupier of that place, to apply for a licence in respect of that act or omission; (c) the discharge or deposit is caused or permitted in an emergency in order to avoid danger to the public and, as soon as reasonably practicable after it occurs, particulars of the discharge or deposit are furnished to the Commission and to such other persons as the Commission may direct; or (d) the entry of the matter into the waters is attributable to events none of which that person could reasonably have been expected to prevent. (5) Provision may be made by by-laws for - (a) prohibiting or regulating the keeping or use on waters to which this section applies of a vessel that is fitted with a water closet or other prescribed sanitary appliance designed to permit polluting matter to pass into the water; (b) prohibiting the keeping or use on waters to which this section applies of a ferry or charter vessel that is not fitted with prescribed facilities for the storage of polluting matter; and (c) regulating the disposal of polluting matter from facilities mentioned in paragraph (b) and, without limiting the generality of the foregoing, prohibiting it from being disposed of otherwise than at a prescribed place in a prescribed manner.

³¹² *Waterways Conservation Act 1976 (WA)*; Section 48(4)(b)

strategies, the process is currently in its implementation phase and very little evidence was available to indicate the success of the said strategies.

In 2001 the Western Australian government released a draft *Coastal Zone Management Policy*. Although release for three (3) months of public comment, the Policy remains in draft form. The aim of the Policy is to establish a broad policy framework for planners, developers, managers and users and acknowledges the increasing pressures and demands upon the Western Australian coastline. The Policy is yet to be adopted by the Western Australian government which is disappointing for the government position paper, "*Coasts WA: Better Integration*" (2003), identified the finalisation of the policy as a priority.³¹³

The Western Australian government has also adopted a draft *Environment Protection (State Marine Waters) Policy* in 1998. Whilst there is no direct reference to diffuse land-based coastal marine pollution, both the impact of marine pollution and the realities of indirect discharges are acknowledged.

The Western Australian Department of Environment also coordinates the 'Ribbons of Blue' Program.³¹⁴ Run in conjunction with *Water Watch WA*, the Program is best described as a community education program with minimal reference to diffuse land-based coastal marine pollution through the aim of "increasing community awareness and understanding of water quality issues in a whole of catchment context."³¹⁵ This program is also linked with the Western Australia Integrated Catchment Management Program for the Swan and Avon Rivers.³¹⁶ The Swan Catchments Centre coordinates community groups in the catchment area as well as the Swan Catchment Council.

³¹³ Coasts WA: Better Integration, The West Australian Government's Response to the Coastal Taskforce Report. 2003, 35.

³¹⁴ Part of the Natural Heritage Trust funded by Water Watch Australia.

³¹⁵ Department of Water, Government of Western Australia, Available at <http://www.wrc.wa.gov.au/ribbons/> Accessed 21 June 2006

³¹⁶ Department of Water, Government of Western Australia, Available at <http://www.wrc.wa.gov.au/swanavon/index.html> Accessed 28 June 2006.

Recommendations for an integrated model for diffuse land-based coastal marine pollution

By its very nature, diffuse land-based coastal marine pollution is extremely difficult to control. It has been observed that “by definition, pollution from diffuse sources cannot be readily identified and measured as it leaves a landholder’s property.”³¹⁷ Hence it is crucial that diffuse land-based coastal marine pollution be defined so that the activities that fall within can be clarified and understood.

There are many types of activities that cause diffuse land-based coastal marine pollution. Often these activities are addressed a single policy document. It is extremely common that there is a risk that some sources are given greater priority than others. For example, sewage disposal can be controlled at the source as it is readily traced back to the source. Lead contamination from anti-fouling paint requires control before the paint is applied (e.g. through the requirement to use lead free paints) whilst sediment pollution from dredging, land fill or reclamation requires control at the land use stage. Diffuse land-based coastal marine pollution is the most difficult pollution to manage for it is often incremental through continued sediment runoff or nutrient leeching. The cumulative effects on the marine environment are often difficult to measure until they are extensive. To effectively manage diffuse land-based coastal marine pollution, action must be taken at level where decisions on land use are made. Traditionally this has been at the State and local government level. Policies which address all types of land-based coastal marine pollution are at risk of overlooking the importance of diffuse land-based coastal marine pollution and its need to be addressed separately and quite deliberately.

Ultimately diffuse land-based coastal marine pollution requires decisions on land use, development and planning to decrease the risk of nutrient and sediment runoff. This micro-management is best done at the local level but to ensure all local councils are working to the same standard (eg horizontal integration), there must be a degree of coordination from the Commonwealth government (the vertical integration) through consultation with the States.³¹⁸

³¹⁷ Gunningham, N. and Sinclair, D. ‘Curbing non-point pollution: Lessons for the Swan-Canning’ (2004) 21 *Environmental and Planning Law Journal* 181.

³¹⁸ See generally Wulf, P.L. (2004) Diffuse Land-Based Pollution and the Great Barrier Reef World Heritage Area: The Commonwealth's Responsibilities and Implications for the Queensland Sugar Industry. *Environmental and Planning Law Journal*, 21 (6), 424 – 444

The implementation of Australia's international obligations in relation to the environment could be complex, but it is apparent that Australia has failed in respect of its international obligations to legislate for point-source land-based pollution but more importantly for present purposes; diffuse land-based coastal marine pollution. While many environmental agreements are primarily worldwide in scope, it is important to note that Australia is becoming increasingly involved in environmental agreements and programs specifically tailored to the needs of the Pacific region.³¹⁹ While Australia has ratified all of these regional agreements, none of them have been implemented by Commonwealth legislation to date.

Australia's legislative response to the ratification of UNCLOS and other similar treaties is inadequate. Under *UNCLOS*, the *SPREP*,³²⁰ and the *Torres Strait Treaty*,³²¹ Australia has obligations with respect to land-based pollution. It should also be highlighted that the Commonwealth's jurisdiction to control land-sourced marine pollution under the general duty imposed by Article 207 of the UNLOSC and other treaties extends to regulating sources of marine pollution above the international baseline³²² and within State and Territory internal waters.

While the Commonwealth has enacted legislation to implement its obligations under international law to prevent pollution from vessels as previously discussed, the Commonwealth has not enacted legislation in relation to land-based pollution under *UNCLOS*, *SPREP* nor the *Torres Strait Treaty*. Moreover, the international legal obligations have not been satisfied by the various policies relating to land-based pollution adopted by the Commonwealth. In effect, the Commonwealth is relying on the various state legislative regimes to satisfy the obligations of the Conventions. However, the authors suggest that regardless of the correctness of the reliance on this approach, it is clear from that there is an inconsistent piecemeal approach with respect to legislative measures to prevent, reduce and control land-based coastal pollution, and that the approaches across the states are not working effectively for diffuse land-based pollution.

With a greater role likely to be played by the South Pacific Regional Environmental Programme in the foreseeable future, more emphasis on regional environmental protection is required. Australia's

³¹⁹ For example *Convention for the Protection of the Natural Resources and Environment of the South Pacific Region 1986*

³²⁰ *Convention for the Protection of the Natural Resources and Environment of the South Pacific Region 1986*

³²¹ *Treaty between Australia and the Independent State of Papua New Guinea concerning Sovereignty and Maritime Boundaries in the area between the two Countries, including the area known as Torres Strait, and Related Matters*

³²² *United Nations Convention on the Law of the Sea*, United Nations, Montego Bay Jamaica, 10 December 1982; Articles 5-14: see also Australian Department of Foreign Affairs and Trade, Canberra, Australian Treaty Service 1994

international obligations to implement environmental protection measures nationally under these treaties will need urgent consideration. Australia already faces and will face greater obligations under international environmental law at the global and South Pacific regional level. Effectively to implement these obligations on a national basis must be considered.³²³ Also at present, Australia does not have a national program of action of the sort contemplated by the *Washington Declaration and Global Programme of Action for the Protection of the Marine Environment from Land-Based Activities*.³²⁴ While some elements are in place through the actions of the Commonwealth states and territories, and the policies of the Commonwealth, there remain many recommendations in the Programme that have not been implemented.

Australia could also take the lead and institute protocols as established in the *Convention for the Protection and Development of the Marine Environment in the Wider Caribbean Region*.³²⁵ Under Annex IV, defined as Agricultural Non-Point Sources of Pollution, it specifically states that:

*“each Party shall, no later than five years, formulate policies, plans and legal mechanisms for the prevention, reduction and control of pollution of the Convention area from agricultural non-point sources of pollution that may adversely affect the Convention area. These programmes shall be identified in such policies, plans and legal mechanisms to mitigate pollution of the Convention area from agricultural non-point sources of pollution, in particular, if these sources contain nutrients (nitrogen and phosphorus), pesticides, sediments, pathogens, solid waste or other such pollutants that may adversely affect the Convention area.”*³²⁶

If actions such as this were to be undertaken by the Commonwealth, diffuse land-based pollution of the coastal marine environment may be mitigated and reversed in the near future as are required by our international obligations.

³²³ Anton, D. K., Kohout, J., and N. Pain. 1993. Nationalizing environmental protection in Australia: The international dimensions. *Environmental Law* 23: 763-83

³²⁴ Brunton, N., 2002, "Land-based sources of marine pollution": in Lipman, Z. and Bates, G. (Eds.) *Pollution Law in Australia*. LexisNexis Butterworths, Chatswood, Chapter 9 pp. 348 - 381; Wulf, P.L. (2004) Diffuse Land-Based Pollution and the Great Barrier Reef World Heritage Area: The Commonwealth's Responsibilities and Implications for the Queensland Sugar Industry. *Environmental and Planning Law Journal*, 21 (6), 424 – 444

³²⁵ *Convention for the Protection and Development of the Marine Environment in the Wider Caribbean Region*

³²⁶ Protocol Concerning Pollution from Land-Based Sources and Activities to *the Convention for the Protection and Development of the Marine Environment in the Wider Caribbean Region* - Annex IV - Plans for the Prevention, Reduction and Control of Agricultural Non-Point Sources of Pollution

With respect to Commonwealth legislation and specifically policy, it is critical that any policy dealing with diffuse land-based pollution has strong recommendations or links to legislative enforcement such as those of the *Convention for the Protection and Development of the Marine Environment in the Wider Caribbean Region*, preferably guidelines and supportive legislation, to ensure that State Governments and local councils are forced to reduce and prohibit development that pollutes the oceans. The Commonwealth may even consider imposing fines or restoration costs on the offending party should such pollution be generated. These might be modelled on those available in other Commonwealth and State legislation (eg the sanctions that can be imposed under the *Environment Protection and Biodiversity Conservation Act 1999* (Cth) and also for example, the environmental harm provisions in the *Environmental Protection Act 1994* (Qld) and/or any other state environmental protection legislation). This is fundamental to the health and rehabilitation of many of our coastal environments and to redressing the impacts of increased leaching of acid sulphate soils, nutrients, sedimentation, salinity, and industrial waste.³²⁷

Australia should consider implementing a National Environmental Protection Measure on Water Quality. This is foreshadowed by the *National Environmental Protection Act 1994* (Cth) which lists, for example in section 14, “*ambient marine, estuarine and fresh water quality*” as a matter which may be addressed by a NEPM. Whilst NEPMs have been written on air quality, air toxics, diesel emissions, movement of controlled waste, the national pollutant inventory, site contamination, used packaging materials. A NEPM on water quality could provide the impetus for a co-ordinated national policy on water pollution from point sources and diffuse land-based coastal marine pollution.

Australia has an international responsibility under the External Affairs power in the Constitution to abide by those Conventions and Treaties the Commonwealth has signed on behalf of Australia. Fisher recognised the strength and ambit of the Commonwealth’s Constitutional basis for regulating the marine and terrestrial environment, by suggesting that:

“*There can be little doubt that the Commonwealth has legislative capacity over the marine environment so far as it is constituted not only by the territorial sea and the sea-bed of the territorial sea, the continental shelf and the exclusive economic zone (including the*

³²⁷ Baker, J., 2003, *A Report on the Study of Land-Sourced Pollutants and Their Impacts on Water Quality in and Adjacent to the Great Barrier Reef - An assessment to guide the development of management plans to halt any decline in the water quality of river catchments draining to the reef, as a result of land-based pollution, and to achieve the long-term goal of reversing any trend in declining water quality*, Intergovernmental Steering Committee for GBR Water Quality Action Plan, Brisbane, 10 January 2003, 187 pp.

*Australian Fishing Zone) but also by any other areas of the marine environment in respect of which Australia has assumed obligations under international law even if these obligations extend to land-based activities which are the source of pollution of the marine environment.”*³²⁸

It seems strange that the Office of International Law in the Commonwealth Attorney General Department argues that Australia has abided by its obligations to adopt laws and regulations to *prevent, reduce and control* land-based pollution.³²⁹ Although this statement was made over 11 years ago, there continues to be a solid argument against this claim.³³⁰ First, the legislation of the states and territories is not directly related to the prevention or reduction of land-based pollution as it implements policies that are focused upon the issuance of licenses controlling land-based pollution.³³¹ Secondly, none of the regulations effectively regulate diffuse land-based pollution, and thirdly, the states and territories do not take into account the international responsibilities and obligations of the Commonwealth agreed under the *Montreal Guidelines for the Protection of the Marine Environment against Pollution from Land-based Sources*, the *Washington Declaration*, the *Global Programme of Action for the Protection of the Marine Environment from Land-Based Activities* and Chapter 17 of Agenda 21. Australia also appears very cautious about its wider environmental obligations under both UNCLOS and the SPREP.³³² The issue of diffuse land-based impacts arising from agriculture that have deleterious effects on the marine environment must be addressed.

There is no requirement that the Commonwealth fully control all land-based pollution entering the marine environment, whether point source or diffuse.³³³ The Commonwealth can do so through the States and their specific legislation. State environmental agencies must continue to play an important role in delegable functions such as licensing and inspection, however this must extend to

³²⁸ Fisher D. E., 1999, 'The Impacts of International Law Upon the Australian Environmental Legal System' 16 (5) EPLJ 372 at pp 373-374

³²⁹ Balkin, R., 1995, *Submission by the Office of International Law, Commonwealth Attorney-General's Department to Senate Environment, Recreation, Communications and Art References Committee Marine Pollution Inquiry*, Senate Environment, Recreation, Communications and Art References Committee, Canberra pp 769-70

³³⁰ See generally Brunton, N., 2002, "Land-based sources of marine pollution": in Lipman, Z. and Bates, G. (Eds.) *Pollution Law in Australia*. LexisNexis Butterworths, Chatswood, Chapter 9 pp. 348 - 381; Wulf, P.L. (2004) Diffuse Land-Based Pollution and the Great Barrier Reef World Heritage Area: The Commonwealth's Responsibilities and Implications for the Queensland Sugar Industry. *Environmental and Planning Law Journal*, 21 (6), 424 - 444

³³¹ Brunton, N., 2002, "Land-based sources of marine pollution": in Lipman, Z. and Bates, G. (Eds.) *Pollution Law in Australia*. LexisNexis Butterworths, Chatswood, Chapter 9 pp. 348 - 381

³³² Brunton, N., 2002, "Land-based sources of marine pollution": in Lipman, Z. and Bates, G. (Eds.) *Pollution Law in Australia*. LexisNexis Butterworths, Chatswood, Chapter 9 pp. 348 - 381

³³³ Williams, C., 1996, n 16

all sources of pollution, including those diffuse sources that have been identified as possibly causing a significant impact on coastal marine environments.³³⁴ Nevertheless, a national agency is crucial to overall enforcement and coordination of environmental protection in Australia.³³⁵ Fisher also notes, as a question of fulfilling Australia's international legal obligations:³³⁶

“The International Conventions on the environment make it clear that it is for each individual State to determine how to discharge its obligations. So far as Australia is concerned, it maybe that it is for the Commonwealth directly to legislate to implement the obligations in the Convention or that the legislation of the States may be sufficient to ensure that Australia complies with its International obligations.”

Australia is free to choose an approach of sharing power and responsibility between the Commonwealth and State/Territory governments if it chooses to do so.³³⁷ There is no international legal obligation that the Commonwealth Government alone must satisfy all of Australia's international legal obligations itself through federal legislation.³³⁸ In effect it is not the model or method of implementation which is important, or whether the Commonwealth or States/Territories satisfy the obligations, but simply whether the obligations are met.³³⁹ McNair emphasises this, that it is substance (the practical effect of laws) not form against which compliance with international legal obligations is measured.³⁴⁰

“A State's action or inaction may amount to a breach of a Treaty if the reality of what is occurring constitutes a breach even if on the face of the circumstances no breach has occurred.”

As can be highlighted from the above, it would seem that little has changed with respect to the depressing writings in the Meng Qing-Nan statement from 1989.³⁴¹ The harmful impacts of diffuse

³³⁴ See generally Wulf, P.L. (2004) Diffuse Land-Based Pollution and the Great Barrier Reef World Heritage Area: The Commonwealth's Responsibilities and Implications for the Queensland Sugar Industry. *Environmental and Planning Law Journal*, 21 (6), 424 – 444; Wulf, P.L. (2004/2005) Diffuse Land-based Water Pollution in Sugar Cane Catchments: Queensland State Government Responsibilities and Legal Implications for the Queensland Sugar Industry. *Queensland Environmental Practice Reporter*, 10 (48), 130 - 147

³³⁵ Anton, D. K., Kohout, J., and N. Pain. 1993. Nationalizing environmental protection in Australia: The international dimensions. *Environmental Law* 23: 763-83

³³⁶ Fisher D. E., 1999, 'The Impacts of International Law Upon the Australian Environmental Legal System' 16 (5) *EPLJ* 372

³³⁷ Section 51 of the Commonwealth of Australia Constitution Act 1900; see also Fowler R.J., (1984) 'Environmental Law and its Administration in Australia' *Environmental and Planning Law Journal* 1 (10)

³³⁸ Brunton, N., 2002, "Land-based sources of marine pollution": in Lipman, Z. and Bates, G. (Eds.) *Pollution Law in Australia*. LexisNexis Butterworths, Chatswood, Chapter 9 pp. 348 - 381

³³⁹ Boyle, A. E., 1992, Land-based Sources of Marine Pollution *Marine Policy* 16 (1) 20

³⁴⁰ McNair *The Law of Treaties* (1st Ed) Clarendon Press, Oxford, 1961, reprinted 1986 at 549

³⁴¹ Qing-nan M., *Land-based Marine Pollution*, Graham & Trotman Ltd, London, 1987 at p. 63

land-based coastal marine pollution are clearly understood, and have provided international States with ample reason to regulate the activities that cause land-based marine pollution. However, the challenge is a daunting one to not only effectively regulate point source land-based pollution but to also regulate diffuse land-based pollution but it must be tackled urgently.

Conclusion

Although diffuse sources of pollution are important contributors to water quality concerns, to date there has been a lack of co-ordination on policies or legislation to address the problem even though the impacts are well understood.³⁴² Accordingly the activities contributing to diffuse land-based marine pollution are regulated on a State by State basis with the degree of protection provided to marine waters varying greatly. The problem is exacerbated by the fact that the activities which contribute to land-based marine pollution generally, and more importantly diffuse pollution, are typically regulated by State and local governments. Farming, development, land clearing, building and urban stormwater are all activities generally covered by planning laws and regulations, and/or specific regulations enacted by individual states. Further, the problem of diffuse land-based marine pollution is often a “hidden” one in that the pollution is cumulative with no obvious single source. It is therefore extremely difficult to identify and regulate effectively.

There are a number of national policies which target specific problems yet again fail to provide the co-ordinated approach required to address a national problem. Two recent policy initiatives have focused attention on water quality as the key ecological link between agricultural land-use and potential down-stream effects. The *National Action Plan for Salinity and Water Quality*,³⁴³ *National Heritage Trust 2* and the *Reef Water Quality Protection Plan*³⁴⁴ have focused the regulator’s attention and provided new resources to resolving problems with water quality. Both the Science

³⁴² For example, in the Great Barrier Reef World Heritage Area, see Baker J, *A Report on the Study of Land-Sourced Pollutants and Their Impacts on Water Quality in and Adjacent to the Great Barrier Reef* (Intergovernmental Steering Committee for GBR Water Quality Action Plan, Brisbane, 2003) p 187. See also www.premiers.qld.gov.au

³⁴³ For example, the Commonwealth and Queensland Governments, *An Agreement between the Commonwealth of Australia and The State of Queensland for the Implementation of the Intergovernmental Agreement on a National Action Plan for Salinity and Water Quality* (Commonwealth and Queensland Governments, Canberra, 2001) p 60.

³⁴⁴ Reef Protection Steering Committee, *Reef Water Quality Protection Plan for Catchments adjacent to the Great Barrier Reef World Heritage Area* (Marine and Water Division Environment Australia and Environment and Resource Policy Department of Premiers and Cabinet Queensland Government, Brisbane and Canberra, October 2003) 44 pp.

Panel³⁴⁵ and the Productivity Commission³⁴⁶ stated that the reduction of nutrient input to coastal rivers will require innovative techniques and a concerted effort over many years. Both reports discuss the potential benefit of establishing nutrient sensitive zones in coastal catchments and zones to control the use of commercial quantities of fertiliser that have a significant impact on diffuse land-based coastal marine pollution. There is also a need to conduct a thorough policy analysis of the most effective and cost efficient means of controlling fertiliser inputs, either through nutrient management plans or other instruments. This should be undertaken within the Council of Australian Government forum to produce an overarching regime that is consistent across all jurisdictions within Australia.

The *National Action Plan for Salinity and Water Quality* is the first strategy for comprehensively addressing problems of salinity and water quality at the national level, while the *Reef Water Quality Protection Plan* reviews historical and current conditions, and proposes quantitative targets for reductions in sediment and nutrient runoff. Such strategies need to be complemented by research to achieve scientific underpinning of targets and incremental improvement of plans with specific management action targets to reduce end of pipe pollution and end of catchment targets. Although these may seem effective in many instances, such as the current *Total Maximum Daily Load* regime as used in the United States of America, they are not always effective. The process of planning and target setting needs to be iterative and inclusive of industries, community and all levels of government, thus fostering greater understanding and acceptance of the target setting process and maximising implementation of agreed strategies. In addition to the target setting process triggered by *National Action Plan for Salinity and Water Quality*, and *National Heritage Trust* (2), government policy can assist the industry and other stakeholders in more effectively establishing integrated catchment management. Financial incentives may help to build participation. In districts with significant irrigation activities, instruments such as water pricing could encourage better management of water and are also stipulated under the Council of Australian Government's water reform agenda.³⁴⁷

³⁴⁵ Baker J, *A Report on the Study of Land-Sourced Pollutants and Their Impacts on Water Quality in and Adjacent to the Great Barrier Reef* (Intergovernmental Steering Committee for GBR Water Quality Action Plan, Brisbane, 2003) p 187

³⁴⁶ Australian Government Productivity Commission *Industries, Land Use and Water Quality in the Great Barrier Reef Catchment* (Commonwealth of Australia, Canberra, 2003) p 415. Available at <http://www.pc.gov.au>

³⁴⁷ Council of Australian Governments' National Water Initiative Available at <http://www.pmc.gov.au/nwi/index.cfm> Accessed 4 July 2006

Cooperation and integration (vertical and horizontal) between three tiers of government (national, state, and local) is crucial. Such co-operation was envisaged by the IGAE. Further the Commonwealth possesses the legislative authority under the *Constitution* to legislate to compel States to take action to address diffuse land-based marine pollution, although it is acknowledged in this environment of co-operative federalism that such action is unlikely to be contemplated within the current political climate particularly if we consider the current issues/debate with respect to the *National Water Initiative*.

National policies such as the Coastal Catchments Initiative and the National Action Plan for Salinity and Water Quality needs to be broadened to take a holistic approach to diffuse land-based marine pollution in preference to the location specific and reactive policies currently in place. Existing legislation such as the *Environment Protection and Biodiversity Conservation Act 1999* (Cth) and *National Environment Protection Council Act 1994* (Cth) do provide some avenues for action in targeting diffuse land-based marine pollution, however it is suggested that a specific Act which acknowledged the international obligations assumed by Australia and addresses diffuse land-based marine pollution is required.

Despite the advocacy of motivational, social and market-based incentives, it is apparent there is a necessity for important regulatory change, as non-regulatory instruments are not always effective when they act alone. Regulation is an efficient and effective way of affirming the minimum acceptable standards. Regulations also provide precautionary standards and an essential set of guidelines to protect against industries that impact significantly on the environment. As regulatory incentives provide protection against those who do not respond to other measures, they are particularly important when threats to natural resources are likely to become irreversible.