

Chapter 7

Management of shipping in the Great Barrier Reef

7.1 This chapter examines key issues raised in relation to shipping¹ in the Great Barrier Reef, including:

- rates of shipping through the Great Barrier Reef;
- management and regulatory measures in relation to shipping (including the proposed North-East Shipping Management Plan); and
- the impacts of shipping.

Trends in shipping traffic through the reef

7.2 There was a consensus in evidence to the committee that shipping is increasing in the Great Barrier Reef region, although there were differing perspectives on the likely extent of this increase.

7.3 The *Outlook Report 2014* states that shipping in the Great Barrier Reef region 'has increased substantially since 2000, driven mainly by industrial and mining activity'. It forecasts that 'the number of vessel calls to ports adjacent to the region will increase by about 250 per cent over the next 20 years'. This forecast is based on 'projected export capacities, information from existing development proposals and predictions for the region's four major ports' and, in particular, growth in the mining and liquefied natural gas industry and port expansions. The report provided a graph indicating that by 2020 there will be around 7500 vessel calls to Great Barrier Reef ports (including around 4200 coal vessels), up from around 4000 total calls in 2012.²

7.4 However, the extent of any future increases in shipping was the subject of discussion in evidence to this inquiry. GBRMPA pointed out that there is uncertainty in forecasting shipping volumes:

As levels of shipping activity are affected by a number of economic factors, it is difficult to predict the amount of shipping that will occur through the waters of the Great Barrier Reef in future years.³

1 Note that there is a range of shipping occurring in the Great Barrier Reef region. The terms of reference for this inquiry refer to 'industrial' shipping, hence that is the focus in this chapter where possible, although it is noted that not all evidence made this distinction.

2 GBRMPA, *Outlook Report 2014*, pp 135–136; see also graph in GBRMPA, 'Shipping – challenges for the Great Barrier Reef', *Ports and Shipping Information Sheet*, p. 3; WWF-Australia and AMCS, *Submission 23*, p. 3. All these forecasts cite PGM Environment, *Great Barrier Reef Shipping: Review of Environmental Implications*, December 2012, <http://www.environment.gov.au/system/files/pages/884f8778-caa4-4bd9-b370-318518827db6/files/23qrc-doc3.pdf> (accessed 31 July 2014).

3 GBRMPA, 'Shipping – challenges for the Great Barrier Reef', *Ports and Shipping Information Sheet*, p. 1.

7.5 The Queensland Ports Association observed that, in recent times, there have been 'a number of widely varying and in some instances inaccurate estimates of future shipping numbers in the GBR'.⁴ WWF Australia and AMCS also acknowledged that 'estimates vary for the projected increase in shipping' in the Great Barrier Reef region.⁵ Mr Roche from the Queensland Resources Council explained that 'there is a difference of view about what is a realistic picture for the expansion of the industry over the decade'.⁶ He tabled a document indicating that 'at the upper end of official forecasts, ship calls could increase from a current 4600 vessels a year to around 6000 by 2020'.⁷

7.6 At the other end of the spectrum, some submitters and witnesses referred to a Greenpeace report predicting that coal ships passing through the Great Barrier Reef World Heritage Area will increase to around 10,000 by the end of the decade.⁸ However, the Queensland Resources Council described these figures as 'ludicrous' and 'incorrect'. Both the Queensland Ports Association and the Queensland Resources Council noted that forecasts are being lowered, reflecting changes in market conditions, including lower resources demand, over the past 12–18 months.⁹ Queensland Ports Association also submitted that 'any increase in shipping traffic of itself, presents a minimal change to the risk if managed accordingly'.¹⁰

4 Queensland Ports Association, *Submission 13*, p. 9; see also Mr Michael Roche, Chief Executive, Queensland Resources Council, *Committee Hansard*, 21 July 2014, pp 30 and 35.

5 WWF-Australia and AMCS, *Submission 23*, p. 3.

6 Mr Michael Roche, Chief Executive, Queensland Resources Council, *Committee Hansard*, 21 July 2014, p. 35.

7 Mr Michael Roche, Chief Executive, Queensland Resources Council, *Committee Hansard*, 21 July 2014, p. 35, referring to Queensland Resources Council, *Working alongside the Great Barrier Reef*, 2013.

8 See, for example, Capricorn Conservation Council, *Submission 27*, p. 19, citing Greenpeace, *Boom Goes the Reef: Australia's coal export boom and the industrialisation of the Great Barrier Reef*, March 2012, p. 4, http://www.greenpeace.org/australia/Global/australia/reports/Boom_goes_the_Reef_Report_4_MB.pdf (accessed 1 August 2014).

9 Queensland Ports Association, *Submission 13*, p. 9; Queensland Resources Council, *Submission 28*, p. 14; citing Braemar Seascope (2013) *North Queensland Ship Traffic Growth Study Supplementary Report*, March 2013, Prepared for Australian Maritime Safety Authority, available at: <http://www.amsa.gov.au/community/consultation/nsm-consultation.asp> (31 July 2014); see also Mr Michael Roche, Chief Executive, Queensland Resources Council, *Committee Hansard*, 21 July 2014, p. 30; Mr David Rynne, Director, Economic and Infrastructure Policy, Queensland Resources Council, *Committee Hansard*, 21 July 2014, pp 36–37.

10 Queensland Ports Association, *Submission 13*, p. 9.

7.7 The committee also received evidence that the size of ships in the region is increasing, and that there is a global trend towards longer ships with deeper drafts.¹¹ The Mackay Conservation Group, for example, were concerned that the use of larger ships means that there is a need for more dredging.¹² Indeed, the committee notes that the GBRMPA Region Strategic Assessment states that:

In order to accommodate deeper draft ships, some ports may require more capital and ongoing maintenance dredging into the future.¹³

7.8 However, Mr Anderson of Ports Australia told the committee that, while 'container ships are getting a lot bigger', he did not think there will be a 'massive increase in the size of vessels coming to Queensland'.¹⁴

7.9 Dr Reichelt noted that GBRMPA is looking at the 'idea of a reef-class vessel that is wider and shallower and does not need deep channels'.¹⁵

Management and regulatory measures in relation to shipping

7.10 Other submissions and witnesses argued that work is being done to minimise the risks of shipping to the reef. In particular, government and industry groups told the committee that shipping in the Great Barrier Reef region is well managed, highly regulated and relatively low risk.¹⁶

7.11 For example, Commodore Rod Nairn of Shipping Australia told the committee that 'the existing regulatory environment for shipping in the Great Barrier Reef is both comprehensive and efficient'.¹⁷

7.12 The Australian and Queensland Governments submitted that:

11 GBRMPA, *Outlook Report 2014*, p. 135; see also GBRMPA, *Great Barrier Reef Region Strategic assessment, Strategic Assessment Report*, August 2013, p. 5–29; see also Ms Wendy Tubman, Coordinator, North Queensland Conservation Council (NQCC), *Committee Hansard*, 15 August 2014, p. 2.

12 Mackay Conservation Group, *Submission 42*, p. 43.

13 GBRMPA, *Great Barrier Reef Region Strategic Assessment, Strategic Assessment Report*, August 2013, p. 5–29.

14 Mr David Anderson, Chief Executive Officer, Ports Australia, *Committee Hansard*, 21 July 2014, pp 23–24; see also Mr Tom Kaveney, Environmental Policy Advisor, Queensland Ports Association, *Committee Hansard*, 21 July 2014, p. 24; Commodore Rod Nairn, Chief Executive Officer, Shipping Australia, *Committee Hansard*, 21 July 2014, p. 45.

15 Dr Russell Reichelt, Chairman and Chief Executive, GBRMPA, *Committee Hansard*, 23 July 2014, p. 52.

16 See, for example, Shipping Australia, *Submission 3*, p. 3; Queensland Ports Association, *Submission 13*, p. 9; Queensland Resources Council, *Submission 28*, p. 14; Minerals Council of Australia, *Submission 35*, p. 8; Mr David Anderson, Chief Executive Officer, Ports Australia, *Committee Hansard*, 21 July 2014, p. 24; Commodore Rod Nairn, Chief Executive Officer, Shipping Australia, *Committee Hansard*, 21 July 2014, p. 44; see also GBRMPA, *Outlook Report 2014*, p. 26.

17 Commodore Rod Nairn, Chief Executive Officer, Shipping Australia, *Committee Hansard*, 21 July 2014, p. 44.

Commercial shipping has been occurring in the reef area for around 100 years and all but the smallest vessels are confined to a few well-defined routes. The shipping is highly regulated by international, Commonwealth, state and local regulations and reef-specific policies. Despite a substantial increase in ship movements since 1996, groundings have reduced in the same time period.¹⁸

7.13 The committee received evidence referring to a range of existing measures that regulate and manage shipping through the Great Barrier Reef. These included:

- the Great Barrier Reef has been declared a Particularly Sensitive Sea Area (PSSA) by the International Maritime Organization (IMO), which was extended southward to the southern extent of the reef and enables Australia to apply specific maritime controls, such as compulsory pilotage, designation of shipping routes and mandatory location reporting;¹⁹
- the Great Barrier Reef and Torres Strait Vessel Traffic Service (REEFVTS) to monitor ship movements in the Great Barrier Reef and intervene if shipping moves beyond defined limits such as designated shipping areas;²⁰
- a compulsory pilotage regime for certain ships²¹ which covers certain parts of the reef, including the inner route of the Great Barrier Reef and around the Whitsundays;²²
- numerous international conventions which Australia has ratified that relate to the safety of shipping and protection of the marine environment;²³ and
- ship quality vetting.²⁴

7.14 The Queensland Ports Association concluded that:

18 Australian and Queensland Governments, *Submission 34*, p. 8.

19 Shipping Australia, *Submission 3*, p. 2; Queensland Ports Association, *Submission 13*, p. 9; see also Commodore Rod Nairn, Chief Executive Officer, Shipping Australia, *Committee Hansard*, 21 July 2014, p. 44.

20 Shipping Australia, *Submission 3*, pp 2–3; Queensland Ports Association, *Submission 13*, p. 9; Queensland Resources Council, *Submission 28*, p. 14; Commodore Rod Nairn, Chief Executive Officer, Shipping Australia, *Committee Hansard*, 21 July 2014, pp 44 and 46; Mr Michael McCabe, Coordinator, Capricorn Conservation Council, *Committee Hansard*, 22 July 2014, p. 31.

21 That is, ships over 70 metres, and also loaded oil tankers, chemical carriers and liquefied gas carriers: *Outlook Report 2014*, p. 136.

22 Shipping Australia, *Submission 3*, pp 2–3; Queensland Ports Association, *Submission 13*, p. 9; Queensland Resources Council, *Submission 28*, p. 14; Commodore Rod Nairn, Chief Executive Officer, Shipping Australia, *Committee Hansard*, 21 July 2014, pp 44 and 46; see also *Outlook Report 2014*, p. 136; and draft *North East Shipping Management Plan*, p. 47.

23 Shipping Australia, *Submission 3*, p. 3.

24 Queensland Ports Association, *Submission 13*, p. 9; Queensland Resources Council, *Submission 28*, p. 14.

Overall the impacts and risks to the [Great Barrier Reef] from shipping are considered to be extremely well managed and are improving over time to address the increased shipping volumes and related risks.²⁵

North-East Shipping Management Plan

7.15 In addition to these measures, the Australian and Queensland Governments referred to the draft North-East Shipping Management Plan (as mentioned in Chapter 2), noting that the plan 'identifies measures to manage risks associated with shipping' in the Great Barrier Reef region and that:

These measures are to be implemented through a work program, to prevent or mitigate ship-sourced pollution and other environmental impacts associated with the projected growth of shipping over the next 10 years.²⁶

7.16 The plan was made available for public comment and consultation in August 2013, and will be finalised this year.²⁷

7.17 Some submitters and witnesses were concerned that the Strategic Assessment contains little detail on measures to reduce risks from shipping but rather defers to the proposed North-East Shipping Management Plan.²⁸

7.18 Most industry groups were supportive of the North-East Shipping Management Plan.²⁹ For example, Shipping Australia described it as 'extensive', stating that it provides 'an integrated approach to the planning, regulation and management of ports and shipping activity' in the Great Barrier Reef region, and 'should allay any fears that shipping activities may negatively impact' on the reef.³⁰

7.19 The Minerals Council of Australia agreed that the North-East Shipping Management Plan:

...should provide further confidence that shipping through the [Great Barrier Reef] area will remain well managed into the future and present a low risk to listed [Great Barrier Reef] values.³¹

25 Queensland Ports Association, *Submission 13*, p. 9.

26 Australian and Queensland Governments, *Submission 34*, p. 31.

27 Australian and Queensland Governments, *Submission 34*, p. 31; Australian Maritime Safety Authority, *North-East Shipping Management Plan*, <http://www.amsa.gov.au/community/consultation/nesm-consultation.asp> (accessed 31 July 2014); see also Department of the Environment, *Answers to written questions on notice*, p. 10.

28 See, for example, Cairns Marine Local Advisory Committee, *Submission 7*, p. 4; IFAW, *Submission 10*, p. 2; CAFNEC, *Submission 19*, Attachment 3, p. 7; Ms Sharon Livermore, Marine Campaigner, IFAW, *Committee Hansard*, 23 July 2014, p. 39.

29 See, for example, Mr David Anderson, Chief Executive Officer, Ports Australia, *Committee Hansard*, 21 July 2014, p. 24.

30 Shipping Australia, *Submission 3*, p. 2.

31 Minerals Council of Australia, *Submission 35*, p. 7.

7.20 Mr Simon Meyjes of Australian Reef Pilots noted, for example, that there are proposals under the North-East Shipping Management Plan to extend the some of the compulsory pilotage areas south and possibly make it mandatory by 2020.³²

7.21 However, many submitters and witnesses were critical of the North-East Shipping Management Plan. For example, the Cairns Local Marine Advisory Committee submitted that the draft North-East Shipping Management Plan:

...falls short in addressing issues such as sediment plumes from shipping movements (under-vessel clearance), noise pollution and the expected increases in size and number of vessels both visiting Queensland ports and travelling past without coming ashore in Queensland.³³

7.22 The Cairns and Far North Environment Centre (CAFNEC) commented that the plan 'is characterised by a lack of detail regarding existing and future impacts of shipping in the [Great Barrier Reef] region and a lack of real commitment to addressing impacts...'. CAFNEC suggested that 'the plan should be withdrawn and resubmitted with adequate detail on both known and potential impacts'.³⁴

7.23 WWF-Australia and the Australian Marine Conservation Society recognised that the draft plan 'provides an important set of priority actions', but submitted that urgent changes are needed if the Great Barrier Reef is to be adequately protected. Their suggestions included, for example, requiring compulsory pilotage for the entire Great Barrier Reef region, regimes to encourage the use of high-standard ships in Great Barrier Reef waters, and improved marine biosecurity arrangements.³⁵

7.24 Other issues identified in relation to the draft North-East Shipping Management Plan included the lack of ship speed controls (as discussed later in this chapter),³⁶ and the inadequate consideration of underwater noise pollution.³⁷ These issues are both discussed further later in this chapter.

Impacts of increased shipping

7.25 The committee heard a number of concerns related to the potential impacts of increased shipping on the Great Barrier Reef, including:

32 Mr Simon Meyjes, Chief Executive Officer, Australian Reef Pilots, *Committee Hansard*, 21 July 2014, p. 46.

33 Cairns Marine Local Advisory Committee, *Submission 7*, p. 4; see also CAFNEC, *Submission 19*, Attachment 3, p. 7.

34 CAFNEC, *Submission 19*, Attachment 2, p. 1.

35 WWF Australia and AMCS, *Submission 23*, p. 4.

36 IFAW, *Submission 10*, p. 2; Ms Sharon Livermore, Marine Campaigner, International Fund for Animal Welfare, *Committee Hansard*, 23 July 2014, p. 39.

37 See, for example, Mr Geoff McPherson, *Submission 15*, pp 11–12 and 44 and *Committee Hansard*, 23 July 2014, p. 41; CAFNEC, *Submission 19*, Attachment 2, p. 2; Australians for Animals, *Submission 52*, p. 84; Ms Suzanne Arnold, Coordinator, Australians for Animals, *Committee Hansard*, 23 July 2014, p. 47.

- increased ship strikes, affecting mainly larger animals, such as dugongs, whales, turtles and dolphins;³⁸
- increased acoustic noise pollution from ships (and dredging);³⁹
- the risk of ballast water being released from ships moving through the reef, which carry contaminants and invasive species;⁴⁰
- the use of tributyltin (TBT), an antifouling agent used on ships hulls;⁴¹ and
- shipping incidents, accidents and collisions with the reef system itself.⁴²

7.26 However, Commodore Nairn of Shipping Australia suggested that, compared to the major threats to the Great Barrier Reef:

...the negative impacts of shipping seem to be a disproportionate focus, as they are in fact negligible in the reef environment and are far outweighed by the economic benefit to Australia of effective shipping operations, which accounted for \$60 billion in trade in Queensland in 2010–11.⁴³

7.27 The committee received evidence during the inquiry on the risk of ship groundings and collisions; as well as two other issues in relation to shipping where it was argued that management measures could be significantly improved: ship strike and underwater noise pollution. All of these issues are discussed further below.

Shipping incidents

7.28 It was noted that there have been improvements in shipping safety management in the Great Barrier Reef over the past decade (see further 'Management and regulatory measures in relation to shipping'), and that there have been very few shipping incidents,⁴⁴ the main exception being the grounding of the *Shen Neng* in April 2010.⁴⁵ In particular the introduction of the REEFVTS in 2004 was a noted

38 See, for example, IFAW, *Submission 10*, p. 1; see also Ms Sharon Livermore, Marine Campaigner, IFAW, *Committee Hansard*, 23 July 2014, p. 39; Mackay Conservation Group, *Submission 42*, p. 6.

39 Mr Geoff McPherson, *Submission 15*; Mr Jeremy Tager, *Submission 18*, p. 3; Australians for Animals, *Submission 52*, pp 1 and 76–80.

40 See, for example, WWF Australia and AMCS, *Submission 23*, p. 4.

41 See, for example, Mackay Conservation Group, *Submission 42*, p. 6; Mr Michael McCabe, Coordinator, Capricorn Conservation Council, *Committee Hansard*, 22 July 2014, p. 31.

42 See, for example, Capricorn Conservation Council, *Submission 27*, p. 14; Mr Michael McCabe, Coordinator, Capricorn Conservation Council, *Committee Hansard*, 22 July 2014, p. 31.

43 Commodore Rod Nairn, Chief Executive Officer, Shipping Australia, *Committee Hansard*, 21 July 2014, p. 44.

44 See, for example, Australian Reef Pilots, *Submission 47*, p. 2 and Mr Simon Meyjes, Chief Executive Officer, Australian Reef Pilots, *Committee Hansard*, 21 July 2014, p. 45; Commodore Rod Nairn, Chief Executive Officer, Shipping Australia, *Committee Hansard*, 21 July 2014, p. 47; Minerals Council of Australia, *Submission 35*, p. 7.

45 See, for example, Capricorn Conservation Council, *Submission 27*, p. 14; Mr Michael McCabe, Coordinator, Capricorn Conservation Council, *Committee Hansard*, 22 July 2014, p. 31.

improvement by several witnesses and submitters.⁴⁶ For example, in expressing support for the REEFVTS, the Queensland Resources Council submitted that:

Shipping incidents since the introduction of REEFVTS have reduced from on average 1 a year to a single incident in the REEFVTS coverage area since 2003 (being a temporary bulk carrier grounding in the Torres Strait). The Shen Neng incident at Douglas Shoal in 2010 occurred outside the then coverage area for REEFVTS. That coverage area was subsequently expanded to include the southern area of the GBR.⁴⁷

7.29 However, Mr Meyjes of Australian Reef Pilots warned against complacency, citing recent examples of shipping accidents elsewhere in the world which 'remind us of our vulnerabilities'. He noted that 'all of these accidents occurred as a result of some form of human error'. He suggested that although:

...shipping in Australia appears safe because we do not see high accident rates, that does not mean that a bad accident is not perhaps around the corner. We believe a lot more can be done and should be done in practical terms to ensure the safety of shipping.⁴⁸

7.30 He expressed a particular concern:

Ships that do not have a coastal pilot or a port pilot on board are navigated through dangerous waters with crews of unknown training often from ships registered in foreign flags of convenience, where safety standards are not shared with Australia... We are not at all confident in the training standards delivered by a lot of other countries... We are aware of the ready availability of forged qualifications in some countries.⁴⁹

7.31 The Keppel and Fitzroy Delta Alliance expressed support for compulsory pilotage and for pilots to have sufficient training, skills, experience and knowledge in relation to the Great Barrier Reef waters.⁵⁰

7.32 Mr Leck of WWF-Australia identified 'reducing the risk of shipping by prohibiting rogue vessels from entering the Great Barrier Reef World Heritage area' as a key action to improve the management of the reef.⁵¹

46 See, for example, Queensland Resources Council, *Submission 28*, p. 14; Mr David Anderson, Chief Executive Officer, Ports Australia, *Committee Hansard*, 21 July 2014, p. 24; Mr Michael Roche, Chief Executive, Queensland Resources Council, *Committee Hansard*, 21 July 2014, p. 31.

47 Queensland Resources Council, *Submission 28*, p. 14.

48 Simon Meyjes, Chief Executive Officer, Australian Reef Pilots, *Committee Hansard*, 21 July 2014, p. 45.

49 Simon Meyjes, Chief Executive Officer, Australian Reef Pilots, *Committee Hansard*, 21 July 2014, p. 46.

50 Keppel and Fitzroy Delta Alliance, *Submission 40*, Attachment 1, p. 23; see also Ms Ginny Gerlach, Director and Coordinator, Keppel and Fitzroy Delta Alliance, *Committee Hansard*, 22 July 2014, p. 39.

51 Mr Richard Leck, National Manager, Marine Conservation and Sustainable Development, WWF-Australia, *Committee Hansard*, 21 July 2014, p. 15.

7.33 Mr Roche also mentioned the RightShip program, which he told the committee ensures that 'bulk carriers are subject to independent vetting to exclude substandard ships from reef waters'. He suggested that the committee consider 'recommending that such vetting apply to all commercial shipping through the reef'.⁵²

7.34 The Capricorn Conservation Council acknowledged that improvements have been made to 'better track ship movement', but noted that 'incidents of ships' captains taking short cuts through [Great Barrier Reef] are still occurring'.⁵³ Indeed, the committee notes that crew members of a bulk carrier were recently fined for taking a short cut through the Great Barrier Reef Marine Park.⁵⁴

Ship strike

7.35 The submissions from the International Fund for Animal Welfare (IFAW) focused on 'the increasing risk of ship strike to whales in the Great Barrier Reef as a result of current and projected increases in shipping'. Ms Livermore from IFAW expressed concern that 'there is no ship strike strategy' and that 'there has been no attention to ship strikes either within the Great Barrier Reef or in Australian waters to date'.⁵⁵ IFAW explained that an analysis of shipping traffic in the Great Barrier Reef shows 'considerable overlap between shipping lanes and critical whale habitat' (including mating and calving grounds).⁵⁶ In terms of evidence of ship strikes, IFAW submitted that:

While records show just a handful of reports of ship strikes of humpback whales in Australia, it is widely recognised that these figures likely under-represent actual incidences. Many mariners do not know of reporting requirements for ship strikes and in many cases ship strikes may go unnoticed; even an animal as large as a whale pales into insignificance against a 300m cargo vessel.⁵⁷

7.36 However, Commodore Nairn of Shipping Australia told the committee that he has 'not been involved in a ship strike', despite having spent 20 years at sea (and 15

52 Mr Michael Roche, Chief Executive, Queensland Resources Council, *Committee Hansard*, 21 July 2014, p. 31.

53 Capricorn Conservation Council, *Submission 27*, p. 14; Mr Michael McCabe, Coordinator, Capricorn Conservation Council, *Committee Hansard*, 22 July 2014, p. 31.

54 The Hon Greg Hunt MP, Minister for the Environment, 'Hefty fines for bulk carrier travelling outside of shipping area', *Media release*, 30 July 2014; see also Samantha Healy, 'Everything sweet for Chinese sailors after copping measly fine for Great Barrier Reef shortcut', *Courier Mail*, 30 July 2014, <http://www.couriermail.com.au/news/queensland/everything-sweet-for-chinese-sailors-after-copping-measly-fine-for-great-barrier-reef-shortcut/story-fnihsrf2-1227006379949?nk=406309be43579d90c40d3a7fd3d6b80a> (accessed 31 July 2014).

55 Ms Sharon Livermore, Marine Campaigner, IFAW, *Committee Hansard*, 23 July 2014, p. 42 and see also pp 39 and 44.

56 IFAW, *Submission 10*, p. 1; see also Ms Sharon Livermore, Marine Campaigner, IFAW, *Committee Hansard*, 23 July 2014, p. 39.

57 IFAW, *Submission 10*, p. 7; see also Ms Sharon Livermore, Marine Campaigner, IFAW, *Committee Hansard*, 23 July 2014, pp 39 and 44.

years inside the Great Barrier Reef) and that 'the speeds of my ships were 15 knots and less'.⁵⁸ Mr Meyjes of Australian Reef Pilots similarly noted a discussion with a senior pilot who had 'spent nearly his nearly his whole life on the reef and has not personally experienced a ship strike with a whale or a dugong but he has seen carcasses at sea. We would all have to assume that these things happen'.⁵⁹

7.37 Nevertheless, IFAW suggested further steps be taken to reduce the risk of ship strikes. IFAW noted that efforts elsewhere in the world 'have focused on separating areas where whales and ships are or reducing ship speeds'.⁶⁰ They suggested that 'ship speed controls should be introduced in the Great Barrier Reef to reduce the risk of fatal ship strikes on whales'.⁶¹ IFAW noted that the most common speed for ships passing through core whale habitat areas of the Great Barrier Reef was around 12-14 knots. Ms Livermore, IFAW, explained that higher ship speed increases the risks of fatal injuries:

At these speeds, if a ship hits a whale there is a 50 to 70 per cent chance of it being killed instantly...at 18 knots there is a 90 per cent chance a whale will be killed; if you reduce the speed down to 10 knots there is only a 30 per cent chance. Speed is really the key: the severity of the injury a whale will sustain after being struck is directly linked to ship speed.⁶²

7.38 Ms Livermore proposed a speed limit of 10 knots in the Great Barrier Reef Marine Park, particularly for cargo and container ships in critical whale habitat areas.⁶³ IFAW further suggested a number of additional measures to reduce the risk of ship strike to whales, including:

...assessing whether shipping lanes can be moved at all to avoid areas of whale habitat; alerting mariners to areas of whale habitat through navigational charts, the REEFVTS system, and other targeted awareness programmes; improving mariner awareness about the risk of ship strikes and the need to report incidences; and producing as a priority the Government's planned ship strike strategy...⁶⁴

7.39 In response to questions on notice on this issue, the Department of the Environment advised that an 'expected action' out of the North-East Shipping Management Plan is the development of the National Vessel Strike Strategy for

58 Commodore Rod Nairn, Chief Executive Officer, Shipping Australia, *Committee Hansard*, 21 July 2014, p. 48.

59 Mr Simon Meyjes, Chief Executive Officer, Australian Reef Pilots, *Committee Hansard*, 21 July 2014, p. 48.

60 IFAW, *Submission 10*, p. 7; see also Ms Sharon Livermore, Marine Campaigner, IFAW, *Committee Hansard*, 23 July 2014, p. 39.

61 IFAW, *Submission 10*, p. 1 and see also pp 4–5.

62 Ms Sharon Livermore, Marine Campaigner, IFAW, *Committee Hansard*, 23 July 2014, p. 39; see also IFAW, *Submission 10*, p. 4.

63 Ms Sharon Livermore, Marine Campaigner, IFAW, *Committee Hansard*, 23 July 2014, p. 43.

64 IFAW, *Submission 10*, p. 2.

cetaceans, which will aim to 'minimise the risk of vessel strikes and the impacts they may have on human safety, property and marine megafaunal populations'. The Department further advised that the objectives of the strategy include:

- data collection to understand the scale of the problem in Australian waters;
- development of more assessable and efficient reporting procedure; and
- development of mitigation measures in response to this information.

7.40 Finally, the Department noted that 'the development and implementation of appropriate mitigation measures will be undertaken with relevant stakeholders including the shipping industry and may include speed restrictions'.⁶⁵

Noise pollution

7.41 As noted in relation to the draft North-East Shipping Management Plan earlier in this chapter, some evidence suggested that the issue of underwater noise has not been adequately addressed in the Great Barrier Reef region.⁶⁶ For example, Mr McPherson explained that noise pollution comes from both shipping and port conservation and maintenance.⁶⁷ He further explained that noise can 'alter habitats of marine animals and potentially mask communications for species that rely on sound to mate, feed, avoid predators and navigate' and can have stress impacts on those mammals.⁶⁸ Australians for Animals similarly referred to a range of research which outlines the impacts of underwater noise on marine mammals.⁶⁹

7.42 Mr McPherson and Australians for Animals noted that research indicates that noise pollution impacts may also affect other aspects of the marine ecosystem, not just marine mammals. For example, shipping noise may also mask the 'biological noise of coral reefs', and that masking could inhibit 'the settlement of coral, crab and fish larvae on the reefs'.⁷⁰

7.43 Mr McPherson noted that underwater noise is a recognised marine pollutant under the United Nations *Convention on the Law of the Sea* (UNCLOS) and that in April 2014, the International Maritime Organization (IMO) approved voluntary guidelines for the reduction of shipping noise from commercial ships on the marine environment. The guidelines address issues such as measurement of shipping noise, ship design and maintenance to help reduce noise and also suggest that:

65 Department of the Environment, *Answers to written questions on notice*, p. 10.

66 Mr Geoff McPherson, *Submission 15*; Mr Jeremy Tager, *Submission 18*, p. 3; Australians for Animals, *Submission 52*, pp 1 and 76–80.

67 Mr Geoff McPherson, *Submission 15*, p. 3; see also Australians for Animals, *Submission 52*, p. 77.

68 Mr Geoff McPherson, *Submission 15*, pp 13 and 45; see also *Committee Hansard*, 23 July 2014, p. 40.

69 Australians for Animals, *Submission 52*, pp 86–90.

70 Mr Geoff McPherson, *Committee Hansard*, 23 July 2014, p. 40 and see also *Submission 15*, pp 31–34; Australians for Animals, *Submission 52*, pp 90–92.

Speed reductions or routing decisions to avoid sensitive marine areas including well-known habitats or migratory pathways when in transit will help to reduce adverse impacts on marine life.⁷¹

7.44 However, Mr McPherson submitted that there appears to be a 'strong reluctance' by Australian authorities to recognise marine underwater noise as a pollutant impacting the GBRWHA despite its international acknowledgement. Mr McPherson told the committee that:

There is no reason why acoustic noise pollution, as defined by UNCLOS in 1982 and accepted by IMO, should be so clearly ignored. In fact, reduction of shipping noise pollution offers one of the most readily documented and readily achievable pollution mitigation schemes going...⁷²

7.45 Mr McPherson recommended that shipping noise be mitigated by 'improved propulsion system redesigns and by more appropriate scheduling of shipping through the [Great Barrier Reef] on a seasonal and locational basis'.⁷³

7.46 Australians for Animals were similarly concerned that the issue of underwater noise is being ignored, including by the recent draft North-East Shipping Management Plan and the Queensland Ports Strategy.⁷⁴

7.47 The committee notes that noise pollution is acknowledged as an issue in the Great Barrier Reef Region Strategic Assessment, which identifies 'an urgent need for greater understanding of the ecological impacts of noise within the region and for guidance on measures to avoid or mitigate these impacts'.⁷⁵ However, Mr McPherson was critical of the Strategic Assessment's treatment of noise pollution and refuted the statement that there is a need for further guidance. He suggested that international organisations have in fact provided that guidance.⁷⁶

71 International Maritime Organization, *Guidelines for the Reduction of Underwater Noise from Commercial Shipping to Address Adverse Impacts on Marine Life*, 7 April 2014, Annex, pp 3–6, available at: http://docs.nrdc.org/water/files/wat_14050501a.pdf (accessed 31 July 2014); see also IMO, *Marine Environment Protection Committee (MEPC), 66th session, 31 March to 4 April 2014*, <http://www.imo.org/MediaCentre/MeetingSummaries/MEPC/Pages/MEPC66.aspx> (accessed 31 July 2014); Mr Geoff McPherson, *Committee Hansard*, 23 July 2014, pp 38 and 40 and *Submission 15*, pp 37–38; see also Australians for Animals, *Submission 52*, p. 1.

72 Mr Geoff McPherson, *Committee Hansard*, 23 July 2014, p. 41; see also Mr Geoff McPherson, *Submission 15*, pp 4 and 44.

73 Mr Geoff McPherson, *Submission 15*, p. 44; see also p. 47 and *Committee Hansard*, 23 July 2014, p. 45.

74 Australians for Animals, *Submission 52*, p. 80.

75 GBRMPA, Great Barrier Reef Region Strategic Assessment, p. 6–47.

76 Mr Geoff McPherson, *Submission 15*, pp 12 and 15.

7.48 At the same time, the committee heard there is a move towards newer ships with built-in noise reduction systems and/or which are more efficient at lower speeds.⁷⁷ The committee was told that lower speeds would mean that ships are quieter.⁷⁸

77 Mr Geoff McPherson, *Committee Hansard*, 23 July 2014, pp 44–45; Mr Simon Meyjes, Chief Executive Officer, Australian Reef Pilots, *Committee Hansard*, 21 July 2014, p. 48.

78 Ms Sharon Livermore, Marine Campaigner, IFAW, *Committee Hansard*, 23 July 2014, pp 41– 42.

