

Chapter 1

Introduction

1.1 On 14 September 2016, the Senate referred the following matter to the Environment and Communications References Committee for inquiry and report:

The current and future impacts of climate change on marine fisheries and biodiversity, including:

- (a) recent and projected changes in ocean temperatures, currents and chemistry associated with climate change;
- (b) recent and projected changes in fish stocks, marine biodiversity and marine ecosystems associated with climate change;
- (c) recent and projected changes in marine pest and diseases associated with climate change;
- (d) the impact of these changes on commercial fishing and aquaculture, including associated business activity and employment;
- (e) the impact of these changes on recreational fishing;
- (f) the adequacy of current quota-setting and access rights provisions and processes given current and projected climate change impacts;
- (g) the adequacy of current and proposed marine biodiversity protections given current and projected climate change impacts;
- (h) the adequacy of biosecurity measures and monitoring systems given current and projected climate change impacts; and
- (i) any other related matters.¹

Conduct of the inquiry

1.2 In accordance with its usual practice, the committee advertised the inquiry on its website and wrote to relevant individuals and organisations inviting submissions. The date for receipt of submissions was 4 November 2016.

1.3 The committee received 25 submissions, which are listed at Appendix 1. The public submissions are available on the committee's website at [www.aph.gov.au/senate ec](http://www.aph.gov.au/senate_ec).

1.4 The committee also held six public hearings for this inquiry, as follows:

- Hobart, 21 February 2017;
- Sydney, 16 March 2017 and 17 March 2017;
- Cairns, 29 August 2017;

1 *Journals of the Senate*, 14 September 2016, p. 197.

- Townsville, 30 August 2017; and
- Canberra, 20 October 2017.

1.5 A list of witnesses who appeared at the hearings is at Appendix 2.

1.6 The committee was initially required to report by 30 June 2017. To enable further public hearings to be conducted, however, the committee sought and received two extensions to the reporting date (first to 13 September 2017, and subsequently to 29 November 2017).² On 28 November 2017, the reporting date was extended further to 6 December 2017.³

1.7 The committee thanks all of the individuals, organisations and government departments and agencies that contributed to the inquiry

Structure of the report

1.8 This report comprises seven chapters, as follows:

- Chapter 1 has outlined introductory matters regarding the referral and conduct of the inquiry.
- Chapter 2 summarises evidence received regarding recent and projected changes in ocean temperatures, currents and chemistry associated with climate change.
- Chapter 3 discusses evidence received regarding changes in fish stocks, marine biodiversity and marine ecosystems.
- Chapter 4 examines the evidence received regarding the consequences of climate change for fishing, aquaculture and other economic activities such as tourism. Included in this chapter is an examination of the recent and projected changes in marine pests and diseases associated with climate change.
- Chapter 5 commences the report's discussion of climate change adaptation by focusing on regulatory responses. The chapter commences by discussing the overall approach to how the effects of climate change on the marine environment is considered under existing environmental and resource management legislation. The chapter then examines climate change adaptation in more specific areas, including fisheries management, protecting marine biodiversity, and biosecurity.
- Chapter 6 continues the consideration of current and potential climate change adaptation efforts, with a particular focus on the fishing and aquaculture industries, and the Great Barrier Reef. Research efforts are also discussed.
- Chapter 7 contains the committee's overall conclusions and recommendations.

2 *Journals of the Senate*, 28 March 2017, p. 1202; 19 June 2017, p. 1472.

3 *Journals of the Senate*, 28 November 2017, p. 2312.

Note on references

1.9 Many submissions to this inquiry cited published research extensively. This report cites the evidence presented to the committee in the submissions, however, where the author of a submission refers to original research, the citation is generally omitted from this report. Readers should refer to the submissions for details of the research relied on for the evidence presented to the committee; as noted above, the public submissions are available on the committee's website.

