

# Introduction

## Background

- 1.1 The global consumption of seafood has been steadily growing for the last five decades. This growth is driven not just by population growth but also by a growth in the per capita consumption of seafood, particularly in China.<sup>1</sup>
- 1.2 Growing seafood consumption has largely been serviced by the aquaculture industry which has increased its share of the total global food fish supply from 9 per cent in 1980 to 48 per cent in 2011.<sup>2</sup> Production from wild caught fisheries appears to have reached a peak, with production levels stagnating in recent years. Future consumption growth will need to be met by continued expansion of the aquaculture sector.<sup>3</sup>
- 1.3 Australia is a small player in the aquaculture industry, comprising less than one per cent of global production,<sup>4</sup> with the majority of Australia's aquaculture located in the southern states. The Australian Bureau of Agricultural and Resource Economics and Sciences (ABARES) reported that the Tasmanian salmon industry is worth more than double the combined value of the aquaculture industries of Queensland, Western Australia, and the Northern Territory.<sup>5</sup>

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1 Food and Agriculture Organisation (FAO), *The State of World Fisheries and Aquaculture 2014*, 2014, p. 3.

2 World Bank, *Fish to 2030: Prospects for Fisheries and Aquaculture*, December 2013, p. 1.

3 FAO, *The State of World Fisheries and Aquaculture 2014*, 2014, p. 5.

4 Department of Agriculture (DoA), *Submission 11*, p. 2.

5 Australian Bureau of Agricultural and Resource Economics and Sciences (ABARES), *Australian Fisheries and Aquaculture Statistics 2014*, December 2015, pp. 18-22. The ABARES statistics take into account Australia's pearling industry, but do not include crocodile farming in Northern Australia.

- 1.4 Australia has a significant pearling industry located in Western Australia and the Northern Territory. The challenges facing the industry arising from foreign imported pearls, oyster oedema disease, and seismic testing are discussed in Chapter 2 and Chapter 4.
- 1.5 Despite its current, relatively modest production scale, there are significant growth opportunities for aquaculture in Northern Australia. The Commonwealth Scientific and Industrial Research Organisation (CSIRO) estimates that there are over 1.5 million hectares of land suitable for aquaculture operations in Northern Australia.<sup>6</sup> Much of this land is adjacent to undeveloped coastlines of Australia with pristine waters suitable for the development of clean, green, premium seafood.<sup>7</sup>
- 1.6 Aquaculture has the potential to make a significant impact on the development of Northern Australia; the proposed Project Sea Dragon alone is projected to employ over 1600 people.<sup>8</sup> Crucially, aquaculture and the economic development opportunities it can generate, has support from a number of Aboriginal and Torres Strait Islander communities in Northern Australia.<sup>9</sup>
- 1.7 Northern Australia's proximity to Asia provides an opportunity for Australian aquaculture to provide sustainable seafood produced in a bio-secure environment to Asia's growing, and increasingly food safety conscious, middle classes.<sup>10</sup> The domestic market also has significant growth potential. Perhaps surprisingly, Australia currently imports 69 per cent of its seafood; substituting imports with Australian farmed seafood has the potential to drive investment in the aquaculture industry into the future.<sup>11</sup>
- 1.8 There are also substantial challenges to operating in the aquaculture industry in Northern Australia. Farms are often located in remote areas with minimal infrastructure investment making deliveries to and from the farm complex and costly. Regulatory frameworks, particularly in Queensland, have also often impeded the development and expansion of new and existing farms.

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6 Joint Select Committee on Northern Australia (JSCNA), *Inquiry into the Development of Northern Australia: CSIRO, Submission 108*, p. 12.

7 Northern Territory Department of Primary Industry and Fisheries (NTDPIF), *Submission 13*, p. 3.

8 Dr Chris Mitchell, *Seafarms, Committee Hansard*, Brisbane 27 August 2015, p. 19.

9 NTDPIF, *Submission 13*, p. 3.

10 NTDPIF, *Submission 13*, p. 3.

11 ABARES, *Australian Fisheries and Aquaculture Statistics 2014*, December 2015, p. 2.

## Defining Aquaculture

- 1.9 The Food and Agriculture Organisation (FAO) defines aquaculture as:  
... the farming of aquatic organisms, including fish, molluscs, crustaceans and aquatic plants. Farming implies some form of intervention in the rearing process to enhance production, such as regular stocking, feeding, protection from predators, etc.<sup>12</sup>
- 1.10 The FAO highlights the rearing and ownership of the aquatic organisms as the key factors that define aquaculture. By contrast, the harvest of fisheries, regardless of licenses, involves collection of aquatic organisms from a common property resource.<sup>13</sup>
- 1.11 During the *Inquiry into Opportunities for Expanding the Aquaculture Industry in Northern Australia* (the Inquiry) the Joint Select Committee on Northern Australia (the Committee) received evidence on a wide range of aquatic species, including amphibious species such as crocodiles. The Committee also considered diverse production methods that include the capture of wild-sourced aquatic juveniles or broodstock (e.g. pearls), and the release of farm-raised stock into the wild for maturation (e.g. trepang). For the purposes of this Inquiry, aquaculture includes the cultivation of the following species:
- Algae;
  - Barramundi;
  - Cherabin and Redclaw Freshwater Crayfish;
  - Clams, oysters, sea shells and sponges;
  - Cobia, Grouper, and other finfish;
  - Crocodiles;
  - Pearl Oysters;
  - Prawns; and
  - Trepang (sea cucumber).

## Committee's Role

- 1.12 The Joint Select Committee on Northern Australia (the Committee) was created by a resolution of appointment passed by the House of
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12 FAO, 'Definitions: Aquaculture', <http://www.fao.org/docrep/003/x6941e/x6941e04.htm>, accessed 12 November 2015.

13 FAO, 'Definitions: Aquaculture', <http://www.fao.org/docrep/003/x6941e/x6941e04.htm>, accessed 12 November 2015.

Representatives on 21 November 2013<sup>14</sup> and passed with amendment by the Senate on 4 December 2013.<sup>15</sup>

- 1.13 On 27 and 28 August 2014, the House of Representatives and Senate respectively, amended the Committee's Resolution of Appointment to enable it to continue its work for the life of the 44<sup>th</sup> Parliament.<sup>16</sup>
- 1.14 On 4 September 2014, following the presentation of its first major report on its *Inquiry into the Development of Northern Australia* titled *Pivot North*, the Committee's resolution of appointment was amended to empower it to:
- monitor issues relevant to the development and implementation of the government's white paper<sup>17</sup> [on developing Northern Australia], and
  - consider any related issues as may be referred to it by either House of the Parliament or a Minister.
- 1.15 As part of its *Inquiry into Developing Northern Australia*, the Committee examined evidence from the Commonwealth Scientific and Research Organisation (CSIRO) on the 'significant potential for the development of large-scale, saltwater pond aquaculture in coastal regions in Northern Australia'.<sup>18</sup> The CSIRO identified about 528 000 hectares in the Northern Territory, 594 000 hectares in Queensland, and 516 000 hectares in Western Australia as having potential for aquaculture.<sup>19</sup> As part of its *Pivot North* Report, the committee recommended that the Government facilitate the development of the aquaculture industry in Northern Australia by improving the regulatory framework.<sup>20</sup>
- 1.16 Consequently, on 5 March 2015, the Committee wrote to the then Prime Minister, the Hon Tony Abbott MP to seek to undertake an *Inquiry into Opportunities for the Aquaculture Industry in Northern Australia*.
- 1.17 On 6 March 2015, the then Prime Minister, the Hon Tony Abbott MP agreed to refer the matter of '*Opportunities for Expanding the Aquaculture Industry in Northern Australia*' to the Committee for inquiry and report.

14 Commonwealth of the Parliament of Australia, *House of Representatives Votes and Proceedings* No. 7, 21 November 2013, p. 129.

15 Commonwealth of the Parliament of Australia, *Senate Journal* No. 6, 4 December 2013, p. 224.

16 Commonwealth of the Parliament of Australia, *House of Representatives Votes and Proceedings* No. 60, 27 August 2014, p. 761; *Senate Journal* No. 48, 28 August 2014, p. 1346.

17 The Government's White Paper on Developing Northern Australia was released on 18 June 2015.

18 JSCNA, *Inquiry into the Development of Northern Australia: CSIRO, Submission 108*, p. 12.

19 JSCNA, *Inquiry into the Development of Northern Australia: CSIRO, Submission 108*, p. 12.

20 JSCNA, *Pivot North: Inquiry into Development of Northern Australia Final Report*, Canberra, September 2014, p. 189.

## About the Inquiry

### Objectives and Scope

- 1.18 The Committee was tasked with inquiring into and reporting on opportunities for expanding the aquaculture industry in Northern Australia including:
- the ability to commercialise new innovation;
  - develop new aquaculture projects and products; and
  - seek out new markets.
- 1.19 As part of its Inquiry, the Committee sought to receive information about best practice in use nationally and internationally in regard to all types of aquaculture product that is potentially able to be produced, farmed or ranched in Northern Australia.
- 1.20 The Committee received information about:
- Research and innovation, including data collection and the potential for industry-led research and innovation.
  - Country of origin labelling and the impact of import product substitution on the Northern Australian aquaculture market.
  - Opportunities for involving Aboriginal and Torres Strait Islander communities in aquaculture enterprises.
  - The economic incentives for attracting and maintaining investment in Northern Australian aquaculture, which included an examination of required infrastructure, and the impact of regulatory frameworks for new project approvals as well as the impact of aquaculture on the physical environment.
  - The creation of strategic aquaculture development zones.

### Inquiry Conduct

- 1.21 Following receipt of a reference from the then Prime Minister, the Committee formally adopted the Inquiry into Opportunities for Expanding the Aquaculture Industry in Northern Australia on 17 March 2015.
- 1.22 A media release which called for submissions officially launched the inquiry on 19 March 2015.
- 1.23 Unsolicited correspondence advertising the inquiry and inviting submissions was also sent to a wide range of organisations and individuals including: local, state/territory and Commonwealth

governments and agencies, peak aquaculture organisations and universities.

- 1.24 The Committee received 49 submissions and 17 exhibits, which are listed at Appendix A. The Committee subsequently held 10 public hearings across Northern Australia and in Canberra as outlined in the table below. The Committee also conducted 4 days of inspections.

<b>Public Hearings Held</b>	
<b>Date</b>	<b>Place</b>
9 June 2015 10 June 2015	Broome, WA
11 June 2015	Perth, WA
14 July 2015	Darwin, NT
24 August 2015	Cairns, Qld
26 August 2015	Townsville, Qld
27 August 2015	Brisbane, Qld
15 September 2015 13 October 2015 10 November 2015	Canberra, ACT

- 1.25 A list of witnesses who appeared before the Committee at public hearings is at Appendix B. Submissions received and transcripts of evidence of public hearings are available from the Committee's website at: [www.apf.gov.au/jscna](http://www.apf.gov.au/jscna)

## Report Structure

- 1.26 Chapter 2 compares and contrasts aquaculture in Northern Australia in relation to aquaculture in the rest of Australia, including: production, the trade in aquaculture products, and opportunities to develop new aquaculture species.
- 1.27 Chapter 3 focuses on the regulation issues which impact aquaculture enterprises, including: the approvals process for new ventures (particularly in the Great Barrier Reef region), the creation of aquaculture development zones, and approval processes which affect routine operations.
- 1.28 Chapter 4 discusses opportunities to develop aquaculture in Northern Australia, including: financing aquaculture ventures, strategic leadership requirements, skills training, opportunities for the involvement of Aboriginal and Torres Strait Islander communities, research and

development, industry infrastructure requirements, and marketing opportunities such as country of origin labelling.