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The Parliament of the Commonwealth of Australia

# PIVOT NORTH

## Inquiry into the Development of Northern Australia: Final Report

Joint Select Committee on Northern Australia

September 2014

Canberra

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## Chair's Foreword

The inquiry into the development of Northern Australia has been greeted with a huge amount of enthusiasm and anticipation, but also with much scepticism about its possible outcomes. Since 1937, there have been numerous reports and recommendations with the aim of developing Northern Australia which are gathering dust on shelves. It is now up to us to prove the sceptics wrong and get things moving.

The development of Northern Australia is one of the great challenges and opportunities facing the nation. Northern Australia covers over forty per cent of Australia's land mass but contains only four per cent of Australia's population. It has abundant land, water and mineral resources. It has medical and educational institutions with world class facilities. Northern Australia is on the doorstep of Asia and a significant portion of it is part of the tropical world – which by 2050 will encompass over half the world's population. There are great opportunities for the people of Northern Australia within the tropical zone. But the development of Northern Australia has in the past lacked a commitment by governments at all levels to pursue investment and development in a consistent, sustainable and coordinated way.

This inquiry has formed one part of a broader process aimed at promoting the development of Northern Australia. The Australian Government has made a commitment to produce within a twelve-month timeframe, a White Paper outlining the Government's vision for the future of Northern Australia. The Committee's findings and recommendations will inform the White Paper process, assisting the Government to formulate its policy for the future development of Northern Australia.

The Committee has made forty-two recommendations covering a wide range of important issues. There are seven priority recommendations addressing issues considered essential to the development of Northern Australia. The first is the creation of a Department of Northern Australian Development based in Northern Australia. This will give a high level political focus to Northern Australia, ensuring that the recommendations of this report and the direction set out in the White Paper are given priority in the development of Government policy. Several priority recommendations target urgent infrastructure with the capacity to rapidly facilitate economic development, including major roads and water infrastructure. Recommendation 5 calls for the Government to investigate the creation of special economic zones in Northern Australia. Recommendation 6 addresses the

availability and affordability of insurance in Northern Australia – currently a major impediment to development. Recommendation 7 urges the continued funding of the Great Artesian Basin Sustainability Initiative, which impacts on the availability of water across a large area of Australia.

The remaining recommendations include particular development proposals and measures to address opportunities for development and overcome impediments to development.

Amongst the opportunities, the Committee has recommended that the impacts of a changing climate, including mitigation and adaptation policies and strategies, are included in all planning processes. The Committee has also made recommendations to address the issue of socially significant communities, such as Nhulunbuy and Mount Isa, which are at risk due to the finite nature of mining opportunities.

The Committee has recommended establishing an abattoir in Northern Queensland; promoting tourism, arts and culture in Northern Australia; reopening the Christmas Island Casino; establishing a CRC for Northern Agriculture; and developing a national institute for tropical sports and sports medicine; relocating public service and defence assets to the North; developing digital communications technologies and an area-specific telecommunications and digital technology strategy; and increasing the presence of AQIS in Northern Australia. The Committee has also recommended that projects requiring the large-scale impoundment or extraction of water should not proceed before undergoing thorough scientific analysis; and the exploration of new methods to harness the Aboriginal and Torres Strait Islander workforce using successful models of Aboriginal and Torres Strait Islander enterprise. This is particularly significant given the large and growing proportion of Aboriginal and Torres Strait Islander people in Northern Australia. Allowing graduates to write-off HELP debts in exchange for living and working in remote locations is seen as a potential way to encourage people to move to the North. The Committee has also recommended that the Government encourage ongoing bilateral exchange between communities in Northern Australia and other communities in the region.

The Committee has recommended the design and implementation of long-term strategies for the development of capital infrastructure in northern Australia, and for the development of Northern agriculture. These strategies will underpin the long-term growth and development that Northern Australia needs if it is to fulfil its potential. The Committee has also recommended the creation of a network of standover and transfer facilities for the transit of cattle; the creation of a rural investment fund to provide opportunities for investors; the development of power grids in North Queensland and the Pilbara; and the use of renewable energy sources to provide power in remote communities.

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To address the impediments to development in the North, the Committee has recommended a strategy to promote liveability using the ‘hub-and-spoke’ model of service provision; the normalisation of local government arrangements in mining communities; improved regulatory arrangements for aquaculture; better regulation of fisheries to allow for sustainable growth of the industry; improved taxation arrangements, especially around FIFO employment; simplified land tenure arrangements; more cost-effective arrangements for the provision of customs and quarantine services at regional airports; and the harmonisation of regulation across jurisdictions. Currently we face a situation where even something as simple as the movement of cattle across state borders on a truck is fraught with regulatory inconsistency, to the detriment of the beef industry and animal welfare.

The main purpose of the Committee’s recommendations is to promote investment and liveability in Northern Australia. One of the major constraints that we face is building our northern population. Australia must find ways to build its population in the tropical North – not only to attract people, but also to retain them. That is absolutely critical. There are great opportunities available in Northern Australia, but we need more people living and working in the North to be able to realise these opportunities.

During the course of the inquiry, the Committee undertook an extensive program of travel for public hearings and inspections, and received a large number of valuable submissions from a broad range of individuals and organisations. I thank all those people who contributed to the inquiry, and for their efforts in participating in up to three processes: the inquiry process, the Government’s Green Paper process and finally the Government’s White Paper process. Without the enthusiasm and hard work of many people in Northern Australia, this inquiry would not have been as well informed and as valuable in regard to the quality of information received.

I wish to acknowledge the contribution of my fellow Committee members. Each and every one in their own way contributed positively to a very significant achievement – a tri-party consenting report – reflecting the clear commitment of the whole Committee to the development of Northern Australia. This report has a sense of ownership across parties and will live beyond the life of the Parliament because of that. I thank the Committee for its enthusiasm and endurance in the face of the great demands placed upon it because of the inquiry’s tight timeframe and the extensive travel required. I also wish to acknowledge the contribution of those participating members of the Committee who have made a significant contribution to its work – especially Senators Macdonald, O’Sullivan, Waters and Ludwig.

Hon Warren Entsch MP  
Chair





## Committee Membership

**Chair** Hon Warren Entsch MP

**Deputy Chair** Hon Alannah MacTiernan MP

**Members** Senator Sue Boyce (until 1.7.2014) Senator Hon Jan McLucas  
Senator Matthew Canavan (from 1.7.2014) Senator Deborah O'Neill (until 30.6.2014,  
then from 26.8.14)  
Mr George Christensen MP Ms Melissa Price MP  
Senator Alan Eggleston (until 1.7.2014) Senator Rachel Siewert  
Hon Gary Gray AO MP Senator Dean Smith (from 1.7.2014)  
Mrs Natasha Griggs MP Hon Warren Snowdon MP

### Participating Members

Senator Chris Back Senator Hon Kate Lundy  
Senator Cory Bernardi Senator Hon Ian Macdonald  
Senator Catryna Bilyk Senator John Madigan  
Senator Mark Bishop Senator Gavin Marshall  
Senator Hon Ronald Boswell Senator Anne McEwen  
Senator Carol Brown Senator James McGrath (from 1.7.2014)  
Senator David Bushby Senator Bridget McKenzie  
Senator Hon Doug Cameron Senator Claire Moore  
Senator Hon Kim Carr Senator Barry O'Sullivan  
Senator Hon Jacinta Collins Senator Stephen Parry (until 1.7.2014)

Senator Hon Stephen Conroy

Senator Sam Dastyari

Senator Sean Edwards

Senator Hon Don Farrell

Senator Hon John Faulkner

Senator David Fawcett

Senator Mark Furner

Senator Alex Gallacher

Senator Hon Bill Heffernan

Senator Helen Kroger

Ms Michelle Landry MP

Senator David Leyonhjelm (from  
9.7.2014)

Senator Sue Lines

Senator Hon Joe Ludwig

Senator Nova Peris OAM

Senator Helen Polley

Senator Louise Pratt (until 4.4.2014)

Senator Linda Reynolds (from 1.7.2014)

Senator Anne Ruston

Senator Zed Seselja

Senator Hon Lisa Singh

Senator Dean Smith (until 1.7.2014)

Senator Hon Ursula Stephens

Senator Glenn Sterle

Senator Hon Lin Thorp

Senator Mehmet Tillem

Senator Anne Urquhart

Senator Larissa Waters (from 16.6.2014)

Senator John Williams

Senator Hon Penny Wong

## Committee Secretariat

Secretary	Ms Stephanie Mikac (from 10.04.2014) Mr Peter Stephens (until 09.04.2014)
Inquiry Secretaries	Dr John Carter Dr Bill Pender
Senior Research Officer	Ms Loes Slattery
Administrative Officers	Ms Emily Costelloe Ms Megan Peile Ms Carissa Skinner





## Terms of reference

- (2) The Committee consider policies for developing the parts of Australia which lie north of the Tropic of Capricorn, spanning Western Australia, Northern Territory and Queensland, and in doing so:
  - a) examine the potential for development of the region's mineral, energy, agricultural, tourism, defence and other industries;
  - b) provide recommendations to:
    - i) enhance trade and other investment links with the Asia-Pacific;
    - ii) establish a conducive regulatory, taxation and economic environment;
    - iii) address impediments to growth; and
    - iv) set conditions for private investment and innovation;
  - c) identify the critical economic and social infrastructure needed to support the long term growth of the region, and ways to support planning and investment in that infrastructure.
  - ca) present to the Parliament its recommendation for a white paper which would detail government action needed to be taken to implement the committee's recommendations, setting out how the recommendations were to be implemented, by which government entity they were to be implemented, a timetable for implementation and how and when any government funding would be sourced;
  - d) report to each House of the Parliament; and
  - e) have such other functions as agreed by resolutions of the House of Representatives and the Senate;
- (3) as soon as practicable after 30 May 2014, the committee present an interim report to Parliament on the activities of the committee, which should include particular reference to the outcomes of public hearings held across Northern Australia, and any specialist knowledge emanating from the public submissions process;
- (4) the committee deliver its final report and recommendations to the Parliament on or before 4 September 2014;
- (4A) following presentation of the report, the committee:
  - (a) Monitor issues relevant to development and implementation of the government's white paper.





## List of abbreviations

AACo	Australian Agricultural Company
ABARES	Australian Bureau of Agricultural and Resource Economics and Sciences
ACT	Australian Capital Territory
ADF	Australian Defence Forces
AER	Australian Energy Regulator
AFANT	Amateur Fisherman's Association of the NT
AIDN-NT	Australian Industry and Defence Network-NT
AIMS	Australian Institute of Marine Science
AITHM	Australian Institute of Tropical Health and Medicine
ALRA	Aboriginal Land Rights (Northern Territory) Act 1976
AMA	African Mahogany Australia
ANDEV	Australians for Northern Development and Economic Vision
ANEDO	Australian Network of Environmental Defender's Offices
APPEA	Australian Petroleum Production and Exploration Association
AQIS	Australian Quarantine and Inspection Service
AUSMAT	Australian Medical Assistance Teams
BCCI	Broome Chamber of Commerce and Industry
BftT	Broadband for the Tropics

CBD	Central Business District
CCIQ	Chamber of Commerce and Industry Queensland
CCIWA	Chamber of Commerce and Industry of Western Australia
CDU	Charles Darwin University
CLC	Central Land Council
CME	Chamber of Minerals and Energy of Western Australia
CPC	Consolidated Pastoral Company Pty Ltd
CQU	Central Queensland University
CRC	Co-operative Research Centre
CSIRO	Commonwealth Scientific and Industrial Research Organisation
CTCG	Construction Technology Consulting Group
CUSP	Curtin University Sustainability Policy (Institute)
DAA	Development Assessment and Approval
DFAT	Department of Foreign Affairs and Trade
DIDO	drive-in, drive-out
EIAP	Etheridge Integrated Agriculture Project
ESVCLPs	Early Stage Venture Capital Limited Partnerships
FAC	Fitzroy Agricultural Corridor
FBT	Fringe Benefits Tax
FIFO	fly-in, fly-out
FINA	International Swimming Federation [Fédération Internationale de Natation]
FLNG	floating liquefied natural gas
GAB	Great Artesian Basin

GABSI	Great Artesian Basin Sustainability Initiative
GDP	Gross Domestic Product
GL	gigalitres
GNARTN	Greater Northern Australia Regional Training Network
GST	Goods and Services Tax
GW	gigawatts
HELP	Higher Education Loan Program
HMAS	Her Majesty's Australian Ship
ICT	Information and Communications Technology
IFED	Integrated Food and Energy Developments Pty Ltd
ILUA	Indigenous Land Use Agreement
JCU	James Cook University
KAI	Kimberley Agricultural Investment Pty Ltd
KALT	Kaurareg Aboriginal Land Trust
km	kilometres
KSCS	Kimberley Science and Conservation Strategy
KW	kilowatts
LHD	Landing Helicopter Docks
LNG	liquefied natural gas
LNP	Liberal National Party
MBS	Medicare Benefits Schedule
MCA	Minerals Council of Australia
MEP	Miwatj Employment and Participation
MIT	Managed Investment Trust

MITEZ	Mount Isa Townsville Economic Zone Inc.
ML	megalitres
MLA	Member of the Legislative Assembly
MoU	Memorandum of Understanding
MP	Member of Parliament
MRI	magnetic resonance imaging
MRRT	Minerals Resource Rent Tax
MSA	Meat Standards Australia
MSW	municipal solid wastes
MW	megawatts
NAILSMA	Northern Australian Indigenous Land and Sea Management Alliance
NCCTRC	National Critical Care and Trauma Response Centre
NLC	Northern Land Council
NPC	Northland Project Contracting
NPF	Northern Prawn Fishery Pty Ltd
NQ	North Queensland
NQBP	North Queensland Bulk Ports Corporation
NRMA	National Roads and Motorists' Association
NSIA	National Seafood Industry Alliance
NT	Northern Territory
NTA	Native Title Act 1993
NWC	National Water Commission
ONA	Office of Northern Australia
PBS	Pharmaceutical Benefits Scheme

PNG	Papua New Guinea
PRRT	Petroleum Resource Rent Tax
Pty Ltd	Proprietary Limited
PV	Photo Voltaic
Qld	Queensland
RAAF	Royal Australian Air Force
R&D	Research and Development
RDA	Regional Development Australia
RET	Renewable Energy Target
RIRDC	Rural Industries Research and Development Corporation
RPT	Regular Passenger Transport
SEA	Strategic Environmental Area
SEZ	Special Economic Zone
TAFE	Technical and Further Education
TIO	Territory Insurance Office
TTF	Tourism and Transport Forum
UK	United Kingdom
US	United States
UWA	University of Western Australia
WA	Western Australia
WALGA	Western Australian Local Government Association



## Introduction

### Background

- 1.1 The Joint Select Committee on Northern Australia (the Committee) was created by a resolution of appointment passed by the House of Representatives on 21 November 2013<sup>1</sup> and passed with amendment by the Senate on 4 December 2013.<sup>2</sup>
- 1.2 Amendment in the Senate resulted in a change of reporting dates for the Committee to the Parliament for the interim report from 30 June 2014 to 30 May 2014 or as soon as possible after that date. The tabling of the final report was changed from 6 September to 6 July.<sup>3</sup> Additional terms of reference were included in the amendment:
  - the requirement for the committee to make recommendations on taxation matters in reference to the regulatory and economic environment (of Northern Australia); and
  - the requirement to make recommendations ‘for a white paper which would detail government action needed to be taken to implement the committee’s recommendations, setting out how the recommendations were to be implemented, by which government entity they were to be implemented, a timetable for implementation and how and when any government funding would be sourced’.<sup>4</sup>

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

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

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

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

- 1.3 Following an amendment to its terms of reference, the Committee's final reporting date was changed to 1 September 2014.<sup>5</sup> The new reporting date allowed the Committee to complete its hearing program which had been disrupted by Cyclone Ita, and enabled additional hearings to be held in Canberra and Darwin.
- 1.4 In late August, the Committee's resolution of appointment was again amended so that it would be able to present its final report to the Parliament on 4 September 2014, and to continue for the life of the Parliament. After it presents its final report, the Committee would be empowered to:
- monitor issues relevant to the development and implementation of the government's white paper, and
  - consider any related issues as may be referred to it by either House of the Parliament or a Minister.<sup>6</sup>
- 1.5 The Committee tabled its interim report on 16 June 2014. A copy of the report can be found at: [www.aph.gov.au/jscna](http://www.aph.gov.au/jscna).

## Committee's Role

### Previous Reviews

- 1.6 In 1947, the Northern Australian Development Committee published a major report on the *Development of Northern Australia*.<sup>7</sup> The report described Northern Australia as 'one of the largest under-developed areas in the world', and stated that 'there are extensive regions where the natural resources are capable of supporting a considerably increased population'.<sup>8</sup>
- 1.7 Lack of progress in the development of Northern Australia was attributed 'in the first instance to the natural disadvantages such as the isolation from main industrial and administrative centres of settlement in the south, the marked seasonal nature of the rainfall and other characteristics of the tropical environment'. It was also 'due to the lack of continuity in the

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5 Commonwealth of the Parliament of Australia, *House of Representatives Votes and Proceedings No. 52*, 25 June 2014, p. 637; *Senate Journal No. 37*, 26 June 2014, p. 1039.

6 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.

7 H. C. Coombs, *Development of Northern Australia*, Report of the Northern Australian Development Committee, Canberra, 1947.

8 H. C. Coombs, *Development of Northern Australia*, Report of the Northern Australian Development Committee, Canberra, 1947, p. iii.

- developmental policies and the inability and/or the unwillingness of Governments to make available the finance required to provide transport facilities, public utilities and developmental works which are essential if settlement is to progress beyond the pioneering stage'.<sup>9</sup>
- 1.8 The report stated that, 'the development of these areas represents a challenge to the people and an obligation on the State and Commonwealth Governments of Australia'.<sup>10</sup>
- 1.9 More recent approaches to economic development in Northern Australia have focussed on:
- Commonwealth/State co-operation;
  - a review of taxation;
  - promoting exports;
  - developing infrastructure;
  - improving land use and land access;
  - reducing transport costs; and
  - recognising regional variation in the development of policy.<sup>11</sup>
- 1.10 In 1994, the Committee on Darwin produced a report for government that also contained views relevant to Northern Australian as a whole. The Committee stated that:
- Darwin cannot presume that its proximity to East Asia is sufficient in itself ... it must compete internationally.<sup>12</sup>
- 1.11 It also noted the need for population growth and for reliance on government spending 'to give way to economic growth generated by the private sector'.<sup>13</sup>
- 1.12 In 2007, the Australian Government established the Northern Australia Land and Water Taskforce (the Taskforce), 'to examine the longer term, strategic potential for further land and water development in northern

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9 H. C. Coombs, *Development of Northern Australia*, Report of the Northern Australian Development Committee, Canberra, 1947, p. iii.

10 H. C. Coombs, *Development of Northern Australia*, Report of the Northern Australian Development Committee, Canberra, 1947, p. iii.

11 Percy Harris, 'A Strategy for Promoting the Economic Growth of Northern Australia, Report to the Commonwealth Government', Centre for Applied Economic Research and Analysis, JCU, Townsville, July 1992, pp. ix-xi.

12 The Committee on Darwin, *Report of the Committee on Darwin*, Australian Government Printing Service, Canberra, 1995.

13 The Committee on Darwin, *Report of the Committee on Darwin*, Australian Government Printing Service, Canberra, 1995, p. xvii.

- Australia'. Particular emphasis was placed 'on the identification of the capacity of the north to play a role in future agricultural development'.<sup>14</sup>
- 1.13 The Taskforce took submissions and held meetings with residents and experts across Northern Australia.
- 1.14 In 2008, the new Australian Government reconstituted the Taskforce and altered its terms of reference 'to consider the broad range of sustainable development opportunities for northern Australia that are based on water resource availability', and to:
- ... consider the potential impact of such development on the underlying water balance and water quality, and on the natural environment, existing water users and the broader community.<sup>15</sup>
- 1.15 The Taskforce initiated the *Northern Australia Land and Water Science Review*, which synthesised existing information to explore a range of development alternatives and land use change activities, and their impacts on a selection of critical sustainability factors – especially water and its relationship with broader land management. The Review was managed by the Commonwealth Scientific and Industrial Research Organisation (CSIRO) and drew on the contributions of over 80 technical specialists, community members and industry representatives from many institutions. The Review was released in October 2009.<sup>16</sup>
- 1.16 The Taskforce reported in December 2009, making 15 recommendations targeted at sustainable use of land and water resources, improved land tenure arrangements and better co-ordination between governments.<sup>17</sup>
- 1.17 In response to the report of the Taskforce, the Northern Australia Sustainable Futures Program was established in 2010. The program has focused on addressing key challenges in regional development in co-operation with the Australian, Queensland, Western Australian and the Northern Territory governments. In addition, the Northern Australia Ministerial Forum was established in collaboration with the governments of Western Australia, Queensland and the Northern Territory.
- 1.18 The Office of Northern Development was established by the then Australian Government at the end of 1991 and continued until 1996. In March 2008, the Office of Northern Australia (ONA) was re-established within the Department of Infrastructure and Regional Development. The
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14 Northern Australia Land and Water Taskforce, *Midterm Report*, February 2009, p. 2.

15 Northern Australia Land and Water Taskforce, *Midterm Report*, February 2009, p. 7.

16 Northern Australia Land and Water Science Review, October 2009.

17 Northern Australia Land and Water Taskforce, *Sustainable Development of Northern Australia*, December 2009, pp. 3–4.

role of the ONA is to provide advice to the Australian Government on sustainable economic development issues in, or affecting, Northern Australia, and to broker solutions to improve co-ordination between governments, businesses and communities.

- 1.19 The ONA has co-ordinated the Northern Australia Beef Industry Action Agenda, which has included research on mosaic irrigation for the Northern Australian beef industry released in March 2014;<sup>18</sup> and the North Queensland Irrigated Agriculture Strategy, which produced assessments of the Gilbert and Flinders rivers catchments in December 2013.<sup>19</sup>
- 1.20 Other significant reports include:
- *Land Tenure in Northern Australia: Opportunities and Challenges for Investment* (June 2013);<sup>20</sup>
  - *The Emerging Carbon Economy for Northern Australia: Challenges and Opportunities* (November 2012);<sup>21</sup>
  - *Governance Challenges for Northern Australia* (September 2013);<sup>22</sup> and
  - *Rethinking the Future of Northern Australia's Regions: More than Mines, Dams and Development Dreams* (November 2013).<sup>23</sup>
- 1.21 Most recently, the House of Representatives Standing Committee on Regional Australia examined the impact of fly-in, fly-out work practices on regional Australia in its report *Cancer of the Bush or Salvation for Our Cities?*<sup>24</sup>

## 2030 Vision for Developing Northern Australia

- 1.22 This inquiry is consistent with an overall policy commitment by the Australian Government, set out in the Coalition's *2030 Vision for Developing Northern Australia*. The 2030 Vision, released in June 2013, drew attention to Australia's geographic position between 'the two great regions of global economic and population growth – the Asian region and

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18 CSIRO, *Mosaic Irrigation for the Northern Australian Beef Industry – Synthesis Report*, March 2014.

19 CSIRO, *Agriculture Resource Assessment for the Gilbert Catchment: Overview Report*, December 2013.

20 CSIRO, *Land Tenure in Northern Australia: Opportunities and Challenges for Investment*, June 2013.

21 CSIRO, *The Emerging Carbon Economy for Northern Australia: Challenges and Opportunities*, November 2012.

22 Allan Dale, *Governance Challenges for Northern Australia*, The Cairns Institute, JCU, September 2013.

23 Regional Australia Institute, *Rethinking the Future of Northern Australia's Regions: More Than Mines, Dams and Development Dreams*, November 2013.

24 House of Representatives Standing Committee on Regional Australia, *Cancer of the Bush or Salvation for Our Cities?*, Parliament of Australia, Canberra, February 2013.

the Tropical region.’ The paper predicted that the rise of these regions would create significant opportunities for Northern Australia to capitalise on its strengths and unlock major economic value for the benefit of all Australians.<sup>25</sup>

1.23 Further, the paper suggested that by 2030, Northern Australia could drive growth by:

- developing a food bowl, including premium produce, which could help to double Australia’s agricultural output;
- growing the tourist economy in the North to two million international tourists annually; and
- building an energy export industry worth \$150 billion to the economy, with a major focus on clean and efficient energy, providing major increases to resource exports.<sup>26</sup>

1.24 Other opportunities in the North were identified, including:

- establishing world-class medical centres of excellence;
- creating an education hub with vocational and higher education campuses in selected areas; and
- growing Australia’s exports of technical skills in the resources and agriculture sectors.<sup>27</sup>

1.25 To realise the worth of these opportunities, the paper suggested, a strong policy platform was needed for long-term sustainable development. This would include governance, population growth and streamlined land access legislation as well as improved infrastructure and water facilities.<sup>28</sup>

1.26 A commitment of the 2030 Vision was the release of a White Paper on developing Northern Australia within 12 months of the 2013 Federal election.<sup>29</sup>

## White Paper Process

1.27 The Committee’s inquiry was conducted in tandem with the Government’s commitment to produce a White Paper on Northern Australia. The Northern Australia Taskforce, comprising cross-agency public servants, placed within the Prime Minister and Cabinet portfolio, was tasked with producing the Australian Governments’ White Paper.

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25 *The Coalition’s 2030 Vision for Developing Northern Australia*, June 2013, p. 2.

26 *The Coalition’s 2030 Vision for Developing Northern Australia*, June 2013, p. 3.

27 *The Coalition’s 2030 Vision for Developing Northern Australia*, June 2013, p. 3.

28 *The Coalition’s 2030 Vision for Developing Northern Australia*, June 2013, p. 3.

29 *The Coalition’s 2030 Vision for Developing Northern Australia*, June 2013, p. 4.

- 1.28 A Secretaries Committee provides strategic oversight and facilitates co-operation across government departments. In addition, a Northern Australia Strategic Partnership has been formed consisting of the Prime Minister, Deputy Prime Minister, the Premiers of Queensland and Western Australia, and the Chief Minister of the Northern Territory. The Partnership recognises the need for a focused effort from all governments and provides national leadership on the development and implementation of the White Paper.<sup>30</sup>
- 1.29 On 10 June 2014, the Government announced the formation of the Northern Australia Advisory Group to provide expert advice to the members of the Northern Australia Strategic Partnership.<sup>31</sup>
- 1.30 While the Government has already commenced looking at how to unlock the economic, social and environmental potential of Northern Australia through its White Paper process, the Committee expects that its findings and recommendations will contribute to the Government's policy development in this area.

## The Green Paper

- 1.31 As part of the White Paper process, on 10 June 2014, the Government released its *Green Paper on Developing Northern Australia*. The Green Paper sought to 'facilitate feedback and further debate on the opportunities, risks, challenges and priority policy options to drive growth across the region', thereby ensuring that the White Paper 'provides a comprehensive, considered and clearly defined pathway for the longer term development of northern Australia'.<sup>32</sup>
- 1.32 Submissions to the Developing Northern Australia White Paper Taskforce were invited from the public, with a deadline of 8 August 2014.
- 1.33 The Green Paper took into account the evidence the Committee had received through its submissions and hearings, and through this identified opportunities and barriers to development for Northern Australia. The

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30 Hon. Tony Abbott MP, Prime Minister of Australia, Media Release, 28 February 2014, 'Northern Australia White Paper Underway', <[www.pm.gov.au/media/2014-02-28/northern-australia-white-paper-underway-0](http://www.pm.gov.au/media/2014-02-28/northern-australia-white-paper-underway-0)> July 2014.

31 Hon. Warren Truss MP, Minister for Infrastructure and Regional Development, Media Release 10 June 2014, 'Government Moving to Develop Northern Australia', <[www.minister.infrastructure.gov.au/wt/releases/2014/june/wt084\\_2014.aspx](http://www.minister.infrastructure.gov.au/wt/releases/2014/june/wt084_2014.aspx)> July 2014. The Chair of the Advisory Group is the Hon. Shane Stone AC QC, former Chief Minister of the Northern Territory. Other members are Mr Wayne Bergmann, Mr Jack Burton, Dr Ken Chapman, Professor Sandra Harding, Ms Noeline Ikin, Mr David Menzel, Mr Nicholas Paspaley AC, Mr Trent Twomey, Mr Ken Warriner AM and Mr Djawa Yunupingu.

32 Australian Government, *Green Paper on Developing Northern Australia*, Canberra, 2014, p. vi.

Green Paper set out six policy directions to develop Northern Australia, including:

- delivering economic infrastructure;
- improving land use and access;
- improving water access and management;
- promoting trade and investment, and strengthening the business environment;
- fostering education, research and innovation; and
- enhancing governance.<sup>33</sup>

1.34 With the release of the Green Paper, the Committee has sought to incorporate, relevant information from the policy discussion paper in this Report. The Committee has undertaken this approach with a view to highlighting areas of proposed policy where it can add value, without duplication, to the work undertaken by the Government in preparation of its White Paper.

## About the Inquiry

### Objectives and Scope

1.35 The Committee has been tasked by the Parliament to consider policies for developing parts of Australia which lie north of the Tropic of Capricorn spanning Queensland, Western Australia, and the whole of the Northern Territory.<sup>34</sup>

1.36 The terms of reference to the inquiry specifically asked the Committee to:

- examine the potential for development of the region's mineral, energy, agricultural, tourism, defence and other industries;
- provide recommendations to:
  - ⇒ enhance trade and other investment links with the Asia-Pacific;
  - ⇒ establish a conducive regulatory, taxation and economic environment;
  - ⇒ address impediments to growth; and
  - ⇒ set conditions for private investment and innovation; and

33 Australian Government, *Green Paper on Developing Northern Australia*, Canberra, 2014, p. 43.

34 The Committee has also received submissions from Central Australia (Alice Springs) which is just below the Tropic of Capricorn. The Committee subsequently decided to include the Alice Springs region within the scope of the inquiry.

- identify the critical economic and social infrastructure needed to support the long term growth of the region, and ways to support planning and investment in that infrastructure.
- 1.37 The Committee was also tasked to present to the Parliament its recommendation for a White Paper which would detail government action needed to be taken to implement the Committee's recommendations, setting out how the recommendations were to be implemented, by which government entity they were to be implemented, a timetable for implementation and how and when any government funding would be sourced.
- 1.38 The Committee was uniquely tasked by the Parliament to conduct its inquiry in parallel with the Government's Northern Australia White Paper process, and also identify a list of priority projects and actions, including costings and timetables for implementation – a role, usually and more appropriately undertaken by the Executive Government.
- 1.39 In regard to its terms of reference, the Committee has sought to identify a range of opportunities, projects and impediments that should be addressed to promote the economic development of Northern Australia. Where available, the costing of projects has been included in this report.

## Inquiry Conduct

- 1.40 The Committee adopted the inquiry into the development of Northern Australia on 11 December 2013. Correspondence advising of the inquiry and inviting submissions were sent to a wide range of stakeholders, including Commonwealth, State and Territory Ministers (Western Australia, Queensland and the Northern Territory), local councils, peak bodies in business, agriculture, resources, the community sector and local government, Aboriginal and Torres Strait Islander groups, and universities.
- 1.41 The Committee received 352 submissions and 99 exhibits, which are listed at Appendixes A and B respectively. The Committee held 27 public hearings in the Australian Capital Territory, Northern Territory, Queensland and Western Australia. The Committee also conducted 15 days of inspections. A list of witnesses who appeared before the Committee and the public hearings held is at Appendix C.
- 1.42 Submissions and transcripts of evidence are available from the Committee website at: [www.aph.gov.au/jscna](http://www.aph.gov.au/jscna)
- 1.43 As part of the inquiry, the Committee has undertaken an extensive program of travel, comprising hearings and inspections in a range of locations across Northern Australia. Given its reporting timeframe, the

Committee has endeavoured to hear from as many people and visit as many places as practicable. Public hearings held and inspections undertaken are listed below:

<b>Public Hearings Held</b>	
<b>Date</b>	<b>Place</b>
21 March 2014 15 July 2014 25 August 2014	Canberra, ACT
31 March 2014	Mackay, Qld
1 April 2014	Bowen, Ayr, Qld
2 April 2014	Townsville, Qld
3 April 2014	Mount Isa, Qld
7 April 2014	Perth, WA
8 April 2014	Tom Price, WA
9 April 2014	Karratha, WA
10 April 2014	Port Hedland, WA
28 April 2014 29 April 2014	Cairns, Qld
30 April 2014	Thursday Island, NT
5 May 2014	Broome, WA
7 May 2014	Kununurra, WA
19 May 2014	Alice Springs, NT
20 May 2014 18 August 2014 19 August 2014	Darwin, NT
21 May 2014	Nhulunbuy, NT
22 May 2014	Katherine, NT
30 May 2014 20 June 2014	Brisbane, Qld
2 July 2014	Georgetown and Normanton Qld
3 July 2014	Weipa, Qld

<b>Inspections Conducted</b>	
<b>Date</b>	<b>Place</b>
1 April 2014	<b>Airlie Beach, Qld</b> - Abel Point Marina, Port of Airlie and Shingley beach. <b>Bowen</b> - Abbot Point Coal Terminal and Pacific Reef Fish
2 April 2014	<b>Townsville, Qld</b> - Townsville Port Authority and James Cook University – Macroalgal Biofuels and Bioproducts Project Site
3 April 2014	<b>Mount Isa, Qld</b> - Buchanan Park, Mt Isa Mines Surface Tour
8 April 2014	<b>Paraburdoo, WA</b> - local shopping centre and hospital
9 April 2014	<b>Karratha, WA</b> - Dampier Port Authority
10 April 2014	<b>Port Hedland, WA</b> - Port Hedland Port Authority and town environs
29 April 2014	<b>Cairns, Qld</b> - Mosquito Research Facility, Sir Robert Norman Building, James Cook University, Cairns Campus
1 May 2014	<b>Cairns, Qld</b> - Aerial inspection of the proposed Nullingga Dam site
6 May 2014	<b>Broome, WA</b> - Kimberley Training Institute, Aquaculture Centre, Broome Port Authority, GoGo Station, Fitzroy Crossing and Marninwarntikura Fitzroy Women’s Resource Centre Aboriginal Corporation
7 May 2014	<b>Kununurra, WA</b> - Port of Wyndham
8 May 2014	<b>Kununurra, WA</b> - Ord River Project, Lead and Zinc Mine Site and proposed sugar mill, TFS sandalwood plantation and nursery, Ewin Family Day Care Centre and Kununurra High School
19 May 2014	<b>Alice Springs, NT</b> - Remote Livestock Management System
21 May 2014	<b>Borroloola, NT</b> - Bing Bong Loading Facility
22 May 2014	<b>Darwin, NT</b> - ConocoPhillips Darwin Liquefied Natural Gas Plant
1 July 2014	<b>Richmond, Qld</b> - Flinders River and the O’Connell Creek Cropping Site, Commercial Farming in the Flinders and Gilbert Rivers – Silver Hills Farm. <b>Georgetown, Qld</b> - Kutchera Station, Etheridge Shire (Farming enterprise) and Forest Home Station, Etheridge Shire (Guar plantation)

## Report Structure

- 1.44 This report is focussed on identifying the opportunities for, and impediments to, the economic development of Northern Australia. The report draws attention to the projects which have been identified in the evidence presented, highlighting priority actions for government through recommendations.
- 1.45 Chapter 2 examines opportunities for the development of Northern Australia. Most of these opportunities are based on private sector

investment in a range of industries, but the chapter also identifies scope for government action to promote economic growth and development in Northern Australia. The opportunities centre on the strengths of Northern Australia in resources, agriculture and tourism, but also include areas such as research and education, medicine and social amenity, with an increasing emphasis on developing expertise relevant to the growing populations of the world's tropical zone.

- 1.46 Chapter 3 addresses proposals for the development of the capital infrastructure necessary to achieve the opportunities outlined in Chapter 2 and to also overcome the impediments to development described in Chapter 4. The focus is on the development of roads, rail, ports, water infrastructure and power, but also highlights a number of more visionary proposals for infrastructure development, especially in rail and water. Chapter 3 also provides an overview of a number of agricultural development proposals in Northern Australia.
- 1.47 Chapter 4 examines the impediments to development in Northern Australia, particularly the need to grow the population and overcome gaps in economic and social infrastructure. Chapter 4 also highlights issues of affordability; problems surrounding taxation, land tenure and approvals processes; and the need for greater standardisation of governance and regulation across the North.
- 1.48 Chapter 5 contains the Committee's recommendations together with supporting comment. Chapter 5 begins with a series of priority recommendations which are designed to act as development enablers. The remaining recommendations are grouped according to the chapters in which topics are discussed.

# Economic and Social Opportunities to Develop Northern Australia

## Overview

- 2.1 This chapter commences with an overview of the unique geography and demography of Northern Australia and proceeds with a broad discussion of the opportunities for developing Northern Australia, building on issues presented in the Government's *Green Paper on Developing Northern Australia*. A number of innovative ideas presented in evidence are also discussed which extend the range of potential activities in the North, while others relate to economic sustainability.

## Geography and Demography

- 2.2 As noted in Chapter 1, the Committee has defined Northern Australia as the area above the Tropic of Capricorn but for the purposes of this inquiry it includes all of the Northern Territory. This is an area comprising almost half of Australia's land mass and has diverse and unique landscapes ranging from tropical rainforests, wetlands, to grassland savannah and desert. It supports a rich biodiversity with many endemic species.
- 2.3 Northern Australia also includes offshore islands as diverse as the Torres Strait Islands to Christmas and the Cocos Islands in the Indian Ocean.
- 2.4 Northern Australia has seven World Heritage Sites. These were declared because of their inherent natural and scientific values.<sup>1</sup> Kakadu and

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<sup>1</sup> The Great Barrier Reef, the Wet Tropics of Queensland, Kakadu National Park, Uluru-Kata Tjuta, Ningaloo Coast, Purnululu National Park, Riversleigh Australian Fossil Mammal Site.

Uluru-Kata Tjuta are also on the World Heritage List because of their cultural values.

- 2.5 The northern climate is dominated by a humid wet season from October to April (average maximum temperatures above 33 degrees centigrade) followed by a cooler less humid dry season (averaging 30 degrees centigrade in the far north and mid-20s in the south). Some 60 per cent of Australia's rainfall falls in Northern Australia and is concentrated along the northern coastal regions – some areas experience over 1000 mm of rain. Rainfall decreases further south and west with the Pilbara and Alice Springs experiencing low annual rainfall of less than 350 mm.<sup>2</sup>
- 2.6 Over the past century Northern Australia has warmed by between 0.7 and 0.9 degrees centigrade and this trend is expected to continue. Rainfall too has changed:
- Since 1970, rainfall has increased by about 30 to 50 mm each decade in parts of the Northern Territory and northern Western Australia. Conversely, eastern and central Queensland have seen a drying trend of the same amount each decade for the same period.<sup>3</sup>
- 2.7 Whether this change will continue is unclear.<sup>4</sup>
- 2.8 Living in this environment is a small population of just over 1 million people (five per cent of Australia's total population) residing mainly along the coastline of north-east Queensland and in Darwin. Elsewhere the region is sparsely populated.<sup>5</sup>
- 2.9 The demography of Northern Australia is significantly different from that of the rest of Australia:
- population growth has been 1.9 per cent over the past decade – compared with 1.5 per cent national average (this varies, however, with some areas exceeding and other areas being much less than the national average);<sup>6</sup>
  - 22 per cent of the population is less than 15 years old; only 3.7 per cent are aged 75 and over – compared to 19 per cent and 6.3 per cent nationally; and

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2 Australian Government, *Green Paper on Developing Northern Australia*, Canberra 2014, p. 5.

3 Australian Government, *Green Paper on Developing Northern Australia*, Canberra 2014, p. 6, citing CSIRO, 2012, *Climate Change Science Information Paper: Australian Rainfall – Past, Present and Future*.

4 Australian Government, *Green Paper on Developing Northern Australia*, Canberra 2014, p. 6.

5 Australian Government, *Green Paper on Developing Northern Australia*, Canberra 2014, p. 2.

6 Australian Government, *Green Paper on Developing Northern Australia*, Canberra 2014, p. 2.

- over 16 per cent of the population identifies as Aboriginal and Torres Strait Islander – compared to 3 per cent nationally.<sup>7</sup>
- 2.10 The Northern Australian Aboriginal and Torres Strait Islander population is much younger than the non-indigenous population and is growing at a faster rate.<sup>8</sup>
- 2.11 In summary, Northern Australia is a diverse and distinctive geographic region with a different demographic to that of Australia generally. This offers unique advantages, but also presents significant challenges.

## Aboriginal and Torres Strait Islander Engagement

- 2.12 The Committee acknowledges and recognises that Aboriginal and Torres Strait Islanders have rights as Traditional Owners and/or Native Title holders over significant areas of Northern Australia, both land and sea. In addition the Committee respects the centrality of Aboriginal and Torres Strait Islanders' language and culture. The Committee acknowledges that any future development of Northern Australia will require the engagement of Aboriginal and Torres Strait Islander peoples, not only as land owners but as participants and potentially partners and leaders in the development process.
- 2.13 The Committee recognises that outside of the major metropolitan centres, Aboriginal and Torres Strait Islander peoples are a clear majority of the population and the largest landholders. This is particularly the case for remote communities, which are dispersed widely across Northern Australia.
- 2.14 Many of those who live in these communities live in poverty, have poor educational and health outcomes and few employment opportunities. In addition many live in communities where there are chronic housing shortages and where roads, other infrastructure, telecommunications and health services are wanting. It is not the purpose of this Committee to inquire into these matters and it notes that the responsibility for them rests across governments. Nevertheless, it is apparent that if Aboriginal and Torres Strait Islander people are to participate equally in the development of the North these fundamental measures of poverty and disadvantage need to be addressed.
- 2.15 The Committee notes that the Aboriginal and Torres Strait Islander population of Northern Australia remain largely as an untapped source of

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7 Australian Government, *Green Paper on Developing Northern Australia*, Canberra 2014, p. 5.

8 Australian Government, *Green Paper on Developing Northern Australia*, Canberra 2014, p. 5.

labour in a region where there have historically been chronic labour shortages. However, it is apparent that unless and until there is a dramatic improvement in educational and training outcomes for Aboriginal and Torres Strait Islander people in the region, then it is unlikely that they will have significant penetration of or be in demand generally in the broader labour market.

- 2.16 The Committee acknowledges and has heard evidence of significant Aboriginal employment programs which have been developed by and for Aboriginal and Torres Strait Islander communities. Land and sea rangers are a standout in this regard as is the western Arnhem land initiative on carbon farming.
- 2.17 The Committee noted the engagement of Aboriginal and Torres Strait Islanders across the North with various industry sectors, particularly the agricultural, pastoral, mining, tourism as well as the fishing industries, both recreational and commercial.
- 2.18 The Committee also noted the high level of engagement of Aboriginal and Torres Strait Islander people across the North with Aboriginal and Torres Strait Islander organisations, among them Land Councils, resource centres and health and legal services as well as providers of other services, including housing. The Committee understands that these organisations, grounded in the community, are often the most significant employers of Aboriginal and Torres Strait Islander people within the region and that they provide important pathways for training and employment.
- 2.19 The Committee has also been privileged to see the desire by some Aboriginal and Torres Strait Islander people, even in the more remote communities, to set up and run small businesses. The Committee was able to observe the success that can be achieved when an Aboriginal or Torres Strait Islander business targets Aboriginal or Torres Strait Islander workers as their workforce. Rusca Brothers, referred to later in this report, are a standout in this regard.
- 2.20 Land tenure is an issue which has been raised by many, particularly by non-Aboriginal and Torres Strait Islander Australians, during the course of the inquiry. Some of this concern has been expressed around perceived delays in native title processes or because of an apparent inability to access land held as inalienable freehold title under the Northern Territory Aboriginal Land Rights (Northern Territory) Act (ALRA). However, there was also strong evidence from both the Northern (NLC) and Central Land Councils (CLC) disputing assertions around the ALRA title pointing to commercial and private leases agreements under section 19 of the Act. There was recognition, particularly by the NLC, that there had been administrative issues which had caused some delays in the processing of

leases in the past, but that this was now no longer the case. The Committee heard no evidence that Aboriginal people were seeking to alter the underlying inalienable freehold title over Aboriginal land in the Northern Territory and given statutory recognition under the ALRA. On the contrary, evidence from the Land Councils in the Territory was that Traditional Owners were happy to use the current provisions of the Act for both commercial and private development proposals.

## Trade

- 2.21 The Green Paper commented that ‘by 2050 Asia could account for half of global output, trade and investment’. As a consequence of rapid industrialisation and urbanisation in Asia, demand for resources will increase. Also, it is projected that by 2020 ‘more than half of the world’s middle class will be in Asia [and] will demand better quality goods and a wider range of services, creating export opportunities.’<sup>9</sup>
- 2.22 The proximity of Northern Australia to Asia provides an opportunity to take advantage of this anticipated growth. Northern Australia already makes a significant contribution to Australia’s trade efforts. The Department of Foreign Affairs and Trade (DFAT) advised:
- Australia’s trade in goods and services reached a new high in 2013, with two-way trade growing to \$645 billion (from \$624 billion in 2012). Minerals and fuels, especially iron ore and coal, play a vital role in Australia’s economic success, making up around half of the nation’s exports (\$157 billion in 2013). Northern Australia is a key driver of this export sector – in 2013, northern Australia was responsible for over two-thirds of Australia’s minerals and fuels exports.<sup>10</sup>
- 2.23 Further information is provided in the Green Paper which noted that in 2013, 55 per cent of Australia’s total exports by sea (\$121 billion) was through northern ports. Figure 8 in the Green Paper provides information on the value of various commodities exported through Northern Australian ports in 2012–13. This indicates that about 80 per cent comprised coal, petroleum, gas, and crude materials such as iron ore and uranium.<sup>11</sup>

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9 Australian Government, *Green Paper on Developing Northern Australia*, Canberra 2014, p. 18.

10 DFAT, *Submission 163*, p. 4.

11 Australian Government, *Green Paper on Developing Northern Australia*, Canberra 2014, pp. 10, 11.

- 2.24 During the inquiry, the Committee received evidence of plans and proposals to upgrade a number of ports in Northern Australia. Such upgrades would increase the amount and variety of trade through those ports. Detailed information is included in Chapter 3.
- 2.25 The DFAT advised that Northern Australia also attracted significant foreign investment – the ‘majority of foreign direct investment in Australia’s mining industry in 2012 (totalling \$206 billion) focused on the northern states.’<sup>12</sup>
- 2.26 Much of the opportunities identified in the rest of this chapter, if realised, will directly contribute to Australia’s trade with the rest of the world.

## Resources Sector

- 2.27 The Green Paper commented that Northern Australia contained:
- ... a number of the world’s largest resource provinces and mines, including the Pilbara iron ore province, Bowen Basin coal province, Argyle Diamond Mine, Mount Isa lead-zinc province and the world’s largest manganese mine at Groote Eylandt. ... there are vast quantities of bauxite at Gove in the Northern Territory and Weipa on Cape York in Queensland.<sup>13</sup>
- 2.28 There are also phosphate mines near Mount Isa and on Christmas Island.<sup>14</sup>
- 2.29 The Green Paper adds that:
- \$24 billion worth of projects have been completed;
  - \$231 billion of projects have been committed;
  - \$147 billion are at the feasibility stage; and
  - \$81 billion have been publicly announced.<sup>15</sup>
- 2.30 Despite this high level of activity, Northern Australia provides significant additional opportunities for the resources sector. The Association of Mining and Exploration Companies stated that Northern Australia is highly prospective for a range of minerals and that the area remains ‘significantly under explored.’ Further, outside of a few key centres, Northern Australia is ‘devoid of key infrastructure that could be

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12 DFAT, *Submission 163*, p. 4.

13 Australian Government, *Green Paper on Developing Northern Australia*, Canberra 2014, p. 7.

14 Geoscience Australia, *Australian Atlas of Minerals Resources, Mines and Processing Centres, Phosphate* <[www.australianminesatlas.gov.au/aimr/commodity/phosphate.html#phosphate](http://www.australianminesatlas.gov.au/aimr/commodity/phosphate.html#phosphate)> August 2014.

15 Australian Government, *Green Paper on Developing Northern Australia*, Canberra 2014, p. 7.

reasonably be expected to turn the minerals prospectively into operating mines.’<sup>16</sup>

2.31 The Australian Petroleum Production and Exploration Association (APPEA) advised that Australia’s total gas resources were estimated at 819 trillion cubic feet; oil reserves were estimated at 5656 million barrels.<sup>17</sup> Potential areas in Northern Australia identified in evidence were:

- Northern Territory – six onshore basins with estimated potential reserves of 240 trillion cubic feet of ‘unconventional gas’;<sup>18</sup>
- the Browse Basin, Western Australia – possibly comparable to the North West Shelf,<sup>19</sup> with potentially ‘14.9 [trillion cubic feet] of dry gas and 441.2 million barrels of condensate’;<sup>20</sup>
- the Canning Basin, Western Australia – potentially ‘the sixth or seventh largest deposit of shale gas in the world’;<sup>21</sup> and
- the Kidson Sub-Basin, Western Australia – with the potential for significant oil reserves.<sup>22</sup>

2.32 There is also the imperative to extend existing mines, especially where they are crucial to the viability of nearby towns. Two examples were provided to the Committee:

- the extension of bauxite mining near Weipa through the development of the South of Embley deposit – this would have a mine life of about 40 years;<sup>23</sup> and
- extending the life of the existing Mount Isa copper, lead and zinc mine to 2060 through expanded mining and concentrate production.<sup>24</sup>

2.33 The potential for mining development to stimulate regional growth was highlighted in discussion of the Galilee Basin near Bowen in Northern Queensland.

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16 Mr Graham Short, National Policy Officer, *Committee Hansard*, Perth, 7 April 2014, p. 59.

17 APPEA, *Submission 242*, pp. 3, 4.

18 Northern Territory Government, *Submission 92.2*, p. 3.

19 Mr Paul Martin, Deputy Chief Executive Officer, Shire of Broome, *Committee Hansard*, Broome, 5 May 2014, p. 17.

20 Woodside, *Browse FLNG* <[www.woodside.com.au/our-business/browse/Pages/default.aspx](http://www.woodside.com.au/our-business/browse/Pages/default.aspx)> June 2014.

21 Mr Martin Pritchard, Executive Director, Environs Kimberley, *Committee Hansard*, Perth, 7 April 2014, p. 7.

22 Dr Roger Higgins, *Committee Hansard*, Port Hedland, 10 April 2014, p. 22.

23 Mr Brad Welsh, Manager, Community Relations, Rio Tinto Alcan, *Committee Hansard*, Weipa, 3 July 2014, p. 35.

24 Mr David Rynne, Director of Economics and Infrastructure, Queensland Resources Council, *Committee Hansard*, Brisbane, 20 June 2014, p. 16.

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- 2.34 The Galilee Basin region covers an area of approximately 247 000 km<sup>2</sup> and contains one of the world's largest inferred resources of high-volatile, low-sulphur thermal coal. Unlike the Bowen Basin, this resource has not yet been exploited. The Queensland Government advises that infrastructure investments of over \$20 billion for up to 10 years will be required before this resource can be marketed.<sup>25</sup>
- 2.35 The Whitsunday region, near both the Bowen and Galilee Basins, currently derives 25 per cent of its GDP from mining. The Whitsunday Regional Council notes that improved rail infrastructure from the West, through the Whitsunday region and connecting with developments at Abbot Point, would be fundamental to provide a 'pit to port' solution for the production, transportation and export of coal product across the North.<sup>26</sup> The Northern Queensland Bulk Ports recommended development of port facilities at Abbot Point and at Mackay to provide 'unique long-term solutions to underpin the economic growth of Northern Australia'.<sup>27</sup>
- 2.36 As well as opening up new projects or extending mine life there is the opportunity to leverage Australia's involvement in gas energy resource production.
- 2.37 Involvement in the emerging technology of floating liquefied natural gas plants (FLNG) was seen by ConocoPhillips as presenting a significant opportunity for Australia to 'become a global leader in LNG development, through the delivery of support services.' ConocoPhillips added:
- ... Darwin is well positioned to create engineering and procurement centres of research excellence through the North Australian Centre for Oil and Gas at Charles Darwin University.<sup>28</sup>
- 2.38 The possibility of using existing natural gas supplies to reduce dependence on imported diesel was raised by Mobile LNG. The proposal was to liquefy natural gas taken from existing gas pipelines at four LNG hubs and transport it to end users via specialised tanks using existing transport networks. The LNG would be used in 'power stations or liquid fuel for shipping, mine-haul vehicles, heavy duty vehicles, road transport and rail locomotives.' Mobile LNG suggested that such a system could achieve significant cost savings:
- ... reductions in the cost of living through cheaper fuel are in the order of 20 to 40 per cent, largely depending on the treatment of
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25 Premier of Queensland, *Submission 219*, pp. 10, 22.

26 The ongoing expansion of this facility is estimated to increase the current 50Mtpa capacity to 190Mtpa. Whitsunday Regional Council, *Submission 140*, p. 2.

27 North Queensland Bulk Ports, *Submission 57*, p. 9.

28 ConocoPhillips, *Submission 137*, p. 5.

the diesel fuel rebate. [It would] improve Australia's export competitiveness at the same time as reducing our carbon footprint and increasing energy security.<sup>29</sup>

- 2.39 In addition to mining traditional commodities, new minerals are being prospected which have the potential to leverage new downstream manufacturing.
- 2.40 Northern Minerals advised that it had three heavy rare earth element exploration projects in the East Kimberley and Tanami regions, one of which had the potential to 'define a mineral resource of 28 084 tonnes of total rare earth oxide.'<sup>30</sup> Currently the plan was to ship the oxide offshore for refining, but there was an opportunity for downstream processing in Australia.<sup>31</sup> Northern Minerals also drew attention to the creation in China of a vertically integrated supply chain exploiting Chinese control of the supply of rare earths. This had resulted in a 'specialist industry in Baotou that provides significant employment and local economic development opportunities in the region.'<sup>32</sup> Products include MRI scanners which sell for approximately \$1 million.<sup>33</sup>
- 2.41 Other products can arise using the waste from the mining and gas industries.
- 2.42 The Chamber of Minerals and Energy of Western Australia told the Committee that many gas fields remain undeveloped because of their carbon dioxide emissions or carbon dioxide content and that there would be a 'huge benefit' if that gas could be put into new processes.<sup>34</sup>
- 2.43 An example was provided by ConocoPhillips who told the Committee that helium was extracted from the waste carbon dioxide from its LNG plant in Darwin.<sup>35</sup> More speculative was the research described by Curtin University for carbon dioxide waste streams to be converted to methane (natural gas) using solar energy and rare earth catalysts. Such technology, Curtin University advised, could be available in 10 years.<sup>36</sup> Carbon

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29 Mr Andrew White, Managing Director, *Committee Hansard*, Perth, 7 April 2014, p. 13.

30 Northern Minerals, *Submission 98*, pp. 1-2.

31 Mr George Bauk, Managing Director and Chief Executive Officer, *Committee Hansard*, Perth, 7 April 2014, p. 66.

32 Northern Minerals, *Submission 98*, p. 5.

33 Mr George Bauk, *Committee Hansard*, Perth, 7 April 2014, p. 66.

34 Mr William Witham, Manager North West, *Committee Hansard*, Perth, 7 April 2014, p. 66.

35 Mr Robin Antrobus, General Manager, Government and Public Affairs, *Committee Hansard*, Perth, 7 April 2014, p. 65.

36 Mr Boyd Milligan, Adjunct Senior Research Fellow, Curtin University Sustainability Policy Institute, *Committee Hansard*, Perth, 7 April 2014, pp. 9-10

dioxide gas is also being used to grow algae in a project run by the James Cook University (JCU).<sup>37</sup>

- 2.44 Two further examples of wastes becoming an asset were provided to the Committee:
- Karratha and Districts Chamber of Commerce and Industry advised that mine dewatering had resulted in the irrigation production of sorghum for cattle feed in areas in the Pilbara;<sup>38</sup> and
  - a company developed by the Ashburton Aboriginal Corporation was converting used cooking oil from mining camps into bio diesel and selling it to Rio Tinto for use in their 'drill and blast' activities.<sup>39</sup>

## Primary Production Sector

- 2.45 The Green Paper provided an overview of the primary production activity in Northern Australia, including the pastoral, agricultural, and fisheries and aquaculture industries, and commented on opportunities to expand the sector. The Green Paper also noted that a ministerial working group has been created to:

... look at the merits of already well developed proposals for new and existing dams, as well as other water infrastructure options such as storing water in underground aquifers or water reuse.<sup>40</sup>

## Pastoral Industry

- 2.46 The Commonwealth Scientific and Industrial Research Organisation (CSIRO) advised that the beef industry is the nation's second largest agricultural industry and that 45 per cent of the 28 million national herd is in Northern Australia. As well, over 90 per cent (690 000 head) of live cattle exports are from Northern Australia.<sup>41</sup>
- 2.47 Herd numbers or productivity could be increased by:
- Restricting cattle to small paddocks with drinking trough water for short periods and then moving them to fresh paddocks. Beetaloo Station near Katherine, Northern Territory (NT), has doubled its 40 000 herd by this method and expected to increase herd numbers to 200 000.

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37 JCU, *Submission 251*, p. 4.

38 Mr John Lally, Chief Executive Officer, *Committee Hansard*, Karratha, 9 April 2014, p. 27.

39 Dr Stuart Gunzburg, Enterprise and Research and Development Manager, *Committee Hansard*, Tom Price, 8 April 2014, p. 17.

40 Australian Government, *Green Paper on Developing Northern Australia*, Canberra 2014, pp. 9, 28.

41 CSIRO, *Submission 108*, p. 8.

The practice preserves the pasture cover, increasing water holding capacity and decreasing weed infestation.<sup>42</sup>

- The Committee notes the CSIRO report on small-scale irrigation, utilising groundwater, opportunities for the Northern Australia beef industry. The report commented that a high proportion of pastoral properties in the North may have the suitable soils and water availability to grow forage on-property. This could drive positive change to beef production systems and boost productivity.<sup>43</sup> An example of such a system was shown to the Committee when it visited GoGo Station, Fitzroy Crossing, Western Australia (WA). Forage sorghum was being grown through pivot irrigation as well as by rain-fed cultivation. Cattle were ‘finished off’ on this sorghum before being moved off the property to market. The Committee was also shown a large undeveloped area with potential for further cropping.
- The use of water pumped from Rio Tinto’s Pilbara Marandoo Mine has enabled the Hamersley Agriculture Project. The Project uses 20 gigalitres per year pumped from the mine to irrigate 840 hectares under hay production. The resulting annual production of 30 000 tonnes of hay supply Rio Tinto’s pastoral stations in the Pilbara.<sup>44</sup>
- Improving herd quality through finding a market for unproductive cattle. The Australian Agricultural Company is opening an abattoir in Darwin which will include processing of older unproductive cows, thereby reducing the herd age and increasing productivity.<sup>45</sup>
- A similar operation is proposed near Broome in the first instance to produce manufacturing beef from cattle that are too old or unsuitable for live export. The Broome project aims also to provide local processing of cattle that have been finished using irrigated crops. The vision is to value add locally and introduce additional market options besides live exports.<sup>46</sup>

2.48 The viability of establishing an abattoir in north-west Queensland has been assessed by the North-West Queensland’s Strategic Development Study Working Group. The aim would be to ‘process local beef cattle to minimise live cattle transport costs.’ It commented that there was potential

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42 Major General Hon. Michael Jeffery, Chairman, Outcomes Australia – Soils for Life, *Committee Hansard*, Perth, 7 April 2014, p. 46.

43 CSIRO, *Mosaic Irrigation for the Northern Australian Beef Industry – An Assessment of Sustainability and Potential, Synthesis Report*, December 2013, p. 9.

44 ABC Landline, 21 May 2013, *Making Hay* <[www.abc.net.au/landline/content/2013/s3741731.htm](http://www.abc.net.au/landline/content/2013/s3741731.htm)> August 2014.

45 Mr Jason Strong, Managing Director, *Committee Hansard*, Brisbane, 30 May 2014, p. 71.

46 Mr Jack Burton, Yeeda Station, *Committee Hansard*, Broome, 5 May 2014, p. 62.

for 100 000 head per annum, but this could increase if there was expanded irrigation in the Flinders and Gilbert Rivers:

There is currently high demand for cattle from existing abattoirs. However the reduced transport costs and carcass shrink, and the potential Meat Standards Australia (MSA) premium benefits (combined benefits estimated at around \$4 million per annum) would place the local facility in a stronger competitive position to receive North-West cattle.<sup>47</sup>

2.49 The assessment concluded that while the project was currently ‘marginally viable’, it could improve with:

- Increasing demand in the Asian market
- Increased number of head
- Synergies from integrated grazing, processing, and distribution
- Increased regional collaboration and branding (differentiate North-West product and achieve a price premium)
- Establishing a ‘carcass works’ model (e.g. quartering only) to reduce labour and input requirements.<sup>48</sup>

2.50 There may also be the potential to increase the harvesting of Northern Australia’s feral animals such as camels. The Ngaanyatjarra Council stated that there were some 200 000 to 300 000 feral camels and that it was exporting thousands of camels a year to North Africa:

... we try and average 250 camels a week while we are mustering, and we try and muster 10 months of the year. They are selling into North Africa, and they have a very strong market there. One thing I have learned about the camel business is we don’t have to create a market; there is a huge market for camel meat.<sup>49</sup>

2.51 The Council added that it wished to build its annual capacity from 10 000 to 20 000 and to construct holding paddocks to even out the numbers it could supply over the year.<sup>50</sup>

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47 North-West Queensland’s Strategic Development Study Working Group, *North-West Queensland’s Strategic Development Study, the Final, May 2014*, pp. 57, 58.

48 North-West Queensland’s Strategic Development Study Working Group, *North-West Queensland’s Strategic Development Study, the Final, May 2014*, p. 58.

49 Mr Alexander Knight, Manager, Land and Culture, *Committee Hansard*, Alice Springs, 19 May 2014, pp. 23, 24.

50 Mr Alexander Knight, *Committee Hansard*, Alice Springs, 19 May 2014, p. 24.

## Horticulture and Agriculture Industry

### Horticulture

- 2.52 Growcom, which represents Queensland fruit and vegetable growers, provided production figures for northern Queensland. These amounted to over \$600 million worth (almost \$725 million if central Queensland is included).<sup>51</sup> Growcom told the Committee that there were significant opportunities for developing existing growing areas in every major region in north Queensland.<sup>52</sup> There was a need to focus on exports for future growth, however, because growth opportunities in the domestic market were limited.<sup>53</sup>
- 2.53 In the Northern Territory production amounted to \$180 million annually:
- ... the Northern Territory is home to a substantial Vietnamese farming community. [The] Vietnamese produce around \$60 million in mangoes and Asian vegetables. Theirs is a story of small family operations which have grown into strong businesses through determined development, gains and losses, but eventual sustainability and growth. Their model of business is typical of the success stories in our region.<sup>54</sup>
- 2.54 The Northern Territory Farmers Association advised that 'further growth in horticultural crops will come from focused research such as export mangoes.'<sup>55</sup>

### Cropping

- 2.55 The CSIRO advised that there was currently 135 000 hectares of irrigated agriculture in Northern Australia, but with at least 17 million hectares of suitable soil the 'availability of water suggests that a much greater area is physically possible.'<sup>56</sup> This is likely to be an underestimate – CSIRO stated:
- When you focus on a catchment or two at a time we tend to find that the water and soil resources are greater than you would determine by taking a broad look across all of the north. So, to put it in a nutshell again, the more you look the more you tend to find.<sup>57</sup>

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51 Growcom, *Submission 99*, p. 3.

52 Ms Rachel Mackenzie, Chief Advocate, *Committee Hansard*, Brisbane, 30 May 2014, p. 46.

53 Ms Rachel Mackenzie, *Committee Hansard*, Brisbane, 30 May 2014, p. 45.

54 Northern Territory Farmers Association, *Submission 166*, p. 2.

55 Northern Territory Farmers Association, *Submission 166*, p. 3.

56 CSIRO, *Submission 108*, p. 10.

57 Dr Peter Stone, Deputy Director, *Committee Hansard*, Brisbane, 30 May 2014, p. 15.

- 2.56 As an example, CSIRO drew attention to its study of the Flinders and Gilbert project which identified ‘over 1000 gigalitres of water resources that could be captured, stored and used in those two catchments’, and ‘around 11 million hectares of irrigable soil’.<sup>58</sup>
- 2.57 Pinnacle Pocket Consulting, while emphasising that it was not being critical of the CSIRO study, also argued that the amount of water and suitable land area identified in the study was underestimated.<sup>59</sup>
- 2.58 The CSIRO’s submission identified crops which might successfully be grown in the North:
- cotton – there were 600 000 hectares potentially available in 21 catchments;
  - grain and the pasture legumes, especially soy bean, to supply Indonesian markets (there were strong benefits in rotating with sugarcane production);
  - sugarcane for both sugar and for ethanol; and
  - wheat – high yields were possible when grown with adequate moisture.<sup>60</sup>
- 2.59 The Australian Bureau of Agricultural and Resource Economics and Sciences (ABARES) added to this list:
- coarse grains for servicing the pig and poultry sectors in China and Southeast Asia; and
  - guar – a food additive and an organic base for fracking in the coal seam gas industry.<sup>61</sup>
- 2.60 The opportunity for sugarcane was highlighted by Canegrowers who, referring just to Queensland, stated:
- Sugar production around the world is expected to increase by 65 per cent over the next 20 years ...
- There are 1.5 million hectares suitable for sugarcane production that were identified by the Queensland land audit. If all of that land were to be produced, the Australian industry would increase by 400 per cent, we would be the second-largest sugar producer in the world and we could be looking at developing 100 000 jobs in western Cape York ...

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58 Dr Peter Stone, *Committee Hansard*, Brisbane, 30 May 2014, p. 15.

59 Pinnacle Pocket Consulting, *Submission 231.1*, p. 1.

60 CSIRO, *Submission 108*, p. 10.

61 Ms Patricia Gleeson, Senior Economist, *Committee Hansard*, Canberra, 21 March 2014, p. 33.

Australia is in a unique position where we can increase our production. Brazil, Indonesia, India, Thailand are reaching the limits of their physical capacity. We are not.<sup>62</sup>

- 2.61 During the inquiry, the Committee inspected the Flinders–O’Connell Irrigation Scheme proposal at Richmond, and the Etheridge Integrated Agriculture Project (EIAP) at Georgetown, Qld, and was advised of a potential project in north-west Queensland.
- 2.62 The Richmond proposal involved ‘a weir in the Flinders River which diverted water into a 200 000 ML storage.’ All the water would be used for irrigation before the temperatures rose in the summer and caused excessive evaporation. Richmond Shire Council advised that a diverse range of crops could be grown on the black soils in the area.<sup>63</sup>
- 2.63 At Georgetown it was proposed to divert ‘less than 10 per cent’<sup>64</sup> of the Gilbert catchment flood flows from the Einasleigh and Etheridge Rivers into a two million ML off-river storage.<sup>65</sup> Integrated Food and Energy Developments Pty Ltd (IFED) stated that the storage would ‘hold 3½ years worth of water.’<sup>66</sup> This water would be used to trickle tape irrigate 65 000 hectares of sugarcane and guar bean. The project would also incorporate other infrastructure such as an electricity co-generation plant, primary processing plants, as well as the aquaculture of red claw crayfish.<sup>67</sup>
- 2.64 Concerns have been raised about the sustainability of the IFED project and these are discussed later in the chapter.
- 2.65 The Committee was also advised by the Napranum Aboriginal Council of some of 130 000 hectares of land in the Billy’s Lagoon area, north-west Queensland which was suitable for sorghum and other grains. An earlier project in the area had not proceeded because of the *Wild Rivers Act 2005* and the *Vegetation Management Act 1999*.<sup>68</sup>

## Forestry

- 2.66 The CSIRO advised the Committee that the Australian forestry industry’s 2020 vision paper ‘clearly identified significant opportunities for

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62 Mr Jonathan Pavetto, Policy Officer, *Committee Hansard*, Brisbane, 30 May 2014, p. 22.

63 Councillor John Wharton, Mayor, *Committee Hansard*, Normanton, 2 July 2014, p. 12.

64 Mr David Hassum, Director, IFED, *Committee Hansard*, Brisbane, 20 June 2014, p. 13.

65 IFED, *Submission 81*, p. 12.

66 Mr David Hassum, *Committee Hansard*, Brisbane, 20 June 2014, p. 13.

67 IFED, *Submission 81*, p. 12; *Submission 81, Exhibit 75: Integrated Business Model EIAP – Project Components*, p. 1.

68 Councillor Philemon Mene, *Committee Hansard*, Weipa, 3 July 2014, pp. 2–3.

expansion of the forestry industry in Northern Australia' and cited lower land costs as an advantage.<sup>69</sup>

- 2.67 The TFS Corporation, a company growing sandalwood plantations, stated that it had about 7600 hectares of plantation and planned to increase this area to 22.5 thousand hectares over 15 years.<sup>70</sup> One hectare of plantation when harvested at 15 years would be expected to produce over 300 kilograms of sandalwood oil at a value of \$1.6 million.<sup>71</sup> Because of its high value product, TFS Corporation considered itself to be an economic driver of development:

... when you purchase a parcel of land the percentage of soil suitable for sandalwood is not the whole parcel of land.

... we are only interested in that piece of soil which we can grow our sandalwood on but because of its high value we can provide the infrastructure for the development and those people who grow melons, chia or whatever can get the benefit of that and become sublessees to us. We see that as a win-win, we see that trees and food can go together, but where you have got a high end value product like sandalwood it becomes an economic driver.<sup>72</sup>

- 2.68 Other forestry operations were drawn to the Committee's attention by African Mahogany Australia (AMA) which advised that it had some 14 000 hectares of African mahogany plantations in the Douglas Daly region, Northern Territory. Sustainable harvesting of 200 000 tonnes per annum was due to commence in 2017. It was predicted that the timber would sell for \$4000 per tonne.<sup>73</sup>
- 2.69 The AMA also pointed to plantations of acacia on the Tiwi Islands which were just beginning commercial production and were providing 100 jobs.<sup>74</sup>
- 2.70 Further opportunities were suggested through producing biopellets from woody weeds. (The Committee is not suggesting that woody weeds be grown in plantations, but that processing such plants is a way of controlling these pests and provides an example of adding value to forestry by-products.)

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69 CSIRO, *Submission 108*, p. 10.

70 Hon. Christopher Ellison, Advisory Director, *Committee Hansard*, Perth, 7 April 2014, pp. 40, 42.

71 TFS Corporation, *Submission 250*, p. 15.

72 Hon. Christopher Ellison, *Committee Hansard*, Perth, 7 April 2014, p. 43.

73 AMA, *Submission No. 158*, pp. 1, 2.

74 AMA, *Submission No. 158*, p. 3.

- 2.71 Harvesting Sunshine, quoting research carried out in 1998, advised that *Mimosa pigra* could be processed 'to produce a useful fuel gas, and that the gas can be converted to electricity using commercially available system components.'<sup>75</sup>
- 2.72 A similar project was raised by Pioneer Corporation Pty Ltd which proposed to convert the woody weed prickly Acacia, *Acacia nilotica*, into wood briquettes and torrefied briquettes.<sup>76</sup> These would be used as a feedstock for electricity generation. Pioneer Corporation estimated that over 100 million tonnes of biomass was available in Northern Queensland covering some 7.5 million hectares of grazing land. It proposed to 'clear large areas of infestation and create significant new industries throughout the region', such as electricity generation, biochar and methanol production. Forestry estates would be established to replace heavy acacia infestations.<sup>77</sup>

## Carbon Farming

- 2.73 Northern Australia has a large proportion of savannah country which is prone to seasonal fires. Carbon farming involves early dry season controlled burning to pre-empt late-season hot wildfires. There is a net reduction of carbon emissions because early season cold fires produce half the carbon dioxide emissions of late season hot fires.
- 2.74 As an example, 28 000 square kilometres of the western Arnhem Land escarpment is managed as an offset to ConocoPhillips's liquefied natural gas plant in Darwin. Each year it has delivered 'way over the 100 000 tonnes of abatement' that was required.<sup>78</sup>
- 2.75 Other benefits identified by the North Australian Indigenous Land and Sea Management Alliance (NAILSMA) were:
- the employment of a substantial number of Aboriginal and Torres Strait Islanders;<sup>79</sup>
  - employment leading to the creation of a 'work ready' labour force;
  - the creation of systems of governance to manage the income from the project;

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75 Harvesting Sunshine, *Submission 52*, p. 11.

76 Pioneer Corporation Pty Ltd, *Submission 21*.

77 Etheridge Shire Council, *Exhibit 84: Report, Pioneer Corporation Pty Ltd, Converting Prickly Acacia from Weed of National Significance to Sustainable Fuel and Energy*, pp. 4, 5, 9, 10.

78 Mr Jeremy Russell-Smith, Consultant, NAILSMA, *Committee Hansard*, Darwin, 19 August 2014, p. 37.

79 Mr Jeremy Russell-Smith, *Committee Hansard*, Darwin, 19 August 2014, p. 38.

- the ability of Aboriginal and Torres Strait Islander peoples to reinvest this income into other enterprises, such as tourism,<sup>80</sup> and
- improvements in biodiversity.<sup>81</sup>

## Fisheries and Aquaculture

2.76 The CSIRO advised that fisheries and aquaculture was worth \$232 million to the Northern Australian economy during 2006–07, and had grown by around 14 per cent ‘over the last five years’.<sup>82</sup> Australia has a significant advantage compared to other aquaculture nations because its product is known to be of high quality.

2.77 The CSIRO also commented that:

Wild fisheries appear to be managed sustainably, and the 2009 Northern Australia Land and Water Science review indicated little potential to increase yield.<sup>83</sup>

2.78 The viability of some commercial fisheries are under pressure because of fishing zone closures. Mackay Reef Fish Supplies contested the basis of some decisions:

There is the Coral Sea closure that just went through. There was no research done on that. The Gulf of Carpentaria, you are looking at that again. There was no scientific research done on the spotted mackerel of Bowen. That was done purely politically. And if anybody was involved in the Great Barrier Reef Marine Park fiasco, we were shunted pretty heavily on that, although we worked with GBRMP in various areas but the paper just got turned over.<sup>84</sup>

2.79 Regarding aquaculture, however, CSIRO indicated there was potential to increase on-land pond aquaculture developments:

Recent CSIRO advances in tropical aquaculture technology, together with emerging commercial interest in large-scale prawn farming (~\$1 billion potential value) indicate a strong trajectory for the growth of tropical aquaculture in northern Australia. Research has identified significant potential for the development of large-scale, saltwater pond aquaculture in coastal regions of northern

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80 Mr Peter Whitehead, Carbon Farming Contractor, NAILSMA, *Committee Hansard*, Darwin, 19 August 2014, p. 39.

81 Mr Jeremy Russell-Smith, *Committee Hansard*, Darwin, 19 August 2014, p. 42.

82 CSIRO, *Submission 108*, p. 11.

83 CSIRO, *Submission 108*, p. 12.

84 Mr David John Caracciolo, Director, *Committee Hansard*, Mackay, 31 May 2014, p. 16.

Australia, (about 528 000 hectares in NT, 594 000 hectares in Qld and 516 000 hectares in WA).<sup>85</sup>

- 2.80 Further, there had been ‘significant advances in environmental management technology’ in the marine aquaculture sector which would enable saltwater aquaculture to ‘play a much more significant role in responding to the huge demand for high-quality seafood from Asian markets.’<sup>86</sup>
- 2.81 The Committee notes the recent Western Australia Environmental Protection Authority approval for a Kimberley Aquaculture Development Zone north-west of Derby. It is expected that the 2000 hectares zone could produce up to 20 000 tonnes of finfish like barramundi per year.<sup>87</sup> The Port Hedland Chamber of Commerce and Industry stated that aquaculture projects in the zone were now subject to a 21-day approval process.<sup>88</sup>
- 2.82 Seafarms Group Ltd advised the Committee that it was developing Project Sea Dragon in Northern Australia:
- ... to meet the growing global demand for seafood at a scale that enables it to leverage Australia’s comparative advantages in biosecurity, marine science, access to key raw materials and expertise in large scale resource and agricultural development.<sup>89</sup>
- 2.83 At full-scale, production would amount to ‘over 100 000 tonnes of high-quality, black tiger prawns on grow-out farms comprising approximately 10 000 hectares.’
- The total [capital expenditure] is in excess of AUD\$1.2 bn and the project would employ some 1400 [full-time equivalents] in the Project’s key operational centres of Darwin, Kununurra and the farm site in western Northern Territory.<sup>90</sup>
- 2.84 In Queensland there is considerable potential to expand aquaculture from the present 700 hectares production area. The Australian Prawn Farmers Association, however, conveyed its frustration at being constrained in its plans to expand and thereby create an additional 200 jobs and increase revenues from \$70 million to \$412 million.<sup>91</sup>

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85 CSIRO, *Submission 108*, p. 12.

86 CSIRO, *Submission 108*, pp. 12–13.

87 ABC Rural, *Kimberley Aquaculture Zone given Environmental Green Light*, <[www.abc.net.au/news/2014-02-18/kimberley-aquaculture-zone/5267608](http://www.abc.net.au/news/2014-02-18/kimberley-aquaculture-zone/5267608)>June 2014.

88 Mr Owen Hightower, Vice-President, *Committee Hansard*, Port Hedland, 10 April 2014, p. 18.

89 Seafarms Group Ltd, *Submission No. 287*, p. 1.

90 Seafarms Group Ltd, *Submission No. 287*, p. 1.

91 Australian Prawn Farmers Association, *Submission No. 271*, p. 2.

- 2.85 Besides traditional aquaculture such as fish and prawns, the Committee was told about two innovative projects which could herald two new directions for aquaculture.
- 2.86 During its visit to the IFED project the Committee was briefed on the proposal to grow redclaw crayfish. Redclaw is native to the Gilbert River system and can command \$20–32 a kilogram. Redclaw production is integrated into the proposed IFED project and is an example of a potential new industry which could be integral to agricultural irrigation projects:
- Redclaw consume bacteria, protozoa and algae which grow in the pond and decompose organic matter. Bagasse (as bales placed in the pond), blood and bone and biologically loaded treated water and other by-products from the bio-processing precinct will provide feedstock which will be supplemented by stock feed supplied as pellets. The nutrient rich water from the ponds will then be irrigated onto sugar cane and guar bean.<sup>92</sup>
- 2.87 A second potential industry is highlighted by research being undertaken by the JCU. At the Centre for Macroalgal Resources and Biotechnology in Townsville, carbon dioxide is being used as a feedstock in the production of macro algae:
- In this process the algal biomass can be used to produce renewable fuels (biocrude), biomass energy, algal meal as an animal feedstock, functional food and feeds, as well as biochar and fertilisers.<sup>93</sup>
- 2.88 The technology, which could use carbon dioxide from a variety of sources such as coal-based power stations and natural gas facilities, is at the commercialisation stage:
- Outcomes have resulted in the implementation of pilot-scale culture at multiple sites. Our next step is to support the development of an intensive industry hub to deliver innovative and sustainable tropical agriculture systems through the commercialisation of our technology.<sup>94</sup>
- 2.89 The use of algae to create biofuel was highlighted at the August 2014 Congress of the International Association for Plant Biotechnology in

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92 IFED, *Exhibit 50: Redclaw*, pp. 1–2.

93 JCU, Centre for Macroalgal Resources and Biotechnology, *Exhibit 51: Research, Development and Implementation*, p. 1.

94 JCU, Centre for Macroalgal Resources and Biotechnology, *Exhibit 51: Research, Development and Implementation*, p. 2.

Melbourne. Oil derived from algae has been successfully used to fuel aircraft jet engines.<sup>95</sup>

## Tourism Sector

2.90 Austrade stated that the future for Northern Australia was not as a mass-market tourist destination, but instead was a region which offered unique experiences and unique products:

It does have areas of unique natural beauty. It does have unique cultural attractions that cannot be found anywhere else in the world. So it does have a number of unique selling points that can help differentiate it from other places around the world ...<sup>96</sup>

2.91 Austrade added that the Government was working with State and Territory governments and industry on a tourism 2020 strategy which was seeking to 'double the amount of overnight visitor expenditure in Australia from a baseline of \$70 billion in 2009 to between \$115 billion and \$140 billion by 2020.' The key strategy was to 'move Australia into offering higher quality product.'<sup>97</sup>

2.92 There are two components of the tourism sector in Australia: domestic tourism; and international tourism. Tourism Tropical North Queensland stated that domestic tourism was a large component in the Cairns region amounting to some 67 per cent of visitors.<sup>98</sup>

2.93 While domestic tourism is very important to Northern Australia the Committee focuses on international tourism because of its high value potential and importance to Australia's balance of trade.

2.94 The Tourism and Transport Forum (TTF) advised:

Northern Australia's proximity to Asia continues to present a significant opportunity to capitalise on the increasing propensity of these countries to travel, with Darwin representing one of the closest hubs for international and connecting services. Cairns is closer to Indonesia than it is to Sydney, while Broome sits on the doorstep of Malaysia and Singapore and is in China's time zone. ... While China has seen the most significant growth ... there has

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95 Sydney Morning Herald, *Algae-Based Biofuels a Sustainable Way to Fly*, [www.smh.com.au/national/education/algaebased-biofuels-a-sustainable-way-to-fly-20140814-103zm9.html](http://www.smh.com.au/national/education/algaebased-biofuels-a-sustainable-way-to-fly-20140814-103zm9.html) > August 2014.

96 Mr Nicolas Dowie, Assistant General Manager, Tourism Policy Branch, *Committee Hansard*, Canberra, 21 March 2014, p. 63.

97 Mr Nicolas Dowie, *Committee Hansard*, Canberra, 21 March 2014, p. 63.

98 Mr Alex de Waal, Chief Executive Officer, *Committee Hansard*, Cairns, 28 April 2014, p. 12.

been significant growth from a number of other Asian markets, including India, Indonesia, Malaysia and Korea.<sup>99</sup>

- 2.95 Cummins Economics, while recognising the potential value of the Asian market, cautioned that other markets should not be overlooked:

Largely unnoticed however, has been the spread in European visitation from the traditional UK, Germany, Switzerland and Scandinavian sources to southern and central Europe. Potential advances in the future also seem likely to come from Eastern Europe, Russia and the Middle East.<sup>100</sup>

- 2.96 The submission from the Northern Territory Government identified tourism as its largest economic sector and biggest employer – it was worth \$1.5 billion annually to the local economy. It added there was potential to achieve a \$2.2 billion contribution to the Northern Territory economy by 2020.<sup>101</sup>

- 2.97 The Queensland Government also noted tourism growth potential:

From Queensland’s perspective, there is strong tourism growth potential for high value tourism businesses such as nature-based, eco-tourism and adventure tourism activities, particularly surrounding: self-drive four-wheel drive adventuring, sport fishing, wildlife spotting, exploring land and waterscape features, cultural activities, historic sites, and the natural environment.<sup>102</sup>

- 2.98 Cruise shipping is a major component of the North Queensland tourism market. Ports North stated that cruise ship visits to Cairns were projected to grow ‘to more than 180 by 2025, delivering \$436 million over the next 25 years.’<sup>103</sup>

- 2.99 Further, the north of Western Australia was identified by Australia’s North West Tourism as being ‘well-placed geographically to capitalise from the opportunity to encourage further cruise ship visits’ because of its close proximity to Southeast Asia which was ‘one of the world’s busiest cruise regions’.<sup>104</sup>

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99 TTF, *Submission 237*, p. 9.

100 Cummings Economics, *Exhibit 76: Australia’s Tropical North – Initial Challenges, Historical Development, Current Progress and Future Prospects*, p. 163.

101 Northern Territory Government, *Submission 92*, p. 13.

102 Queensland Government, *Submission 219*, p. 30.

103 Mr Brett Moller, Chairman, *Committee Hansard*, Cairns, 28 April 2014, p. 21.

104 Australia’s North West Tourism, *Submission 262*, p. 5.

- 2.100 Australia's North West Tourism added that there was opportunity to grow the adventure cruise market along the Kimberley coast without changing port infrastructure because smaller ships were involved.<sup>105</sup>
- 2.101 Advance Cairns stated that major investment in tourist infrastructure was required to maintain competitiveness particularly in the premium end of the market.<sup>106</sup>
- 2.102 The Committee is aware of several developments along the Queensland coast aimed at the premium tourist:
- Great Keppel Island which includes '750 eco-resort villas and 300 eco-resort apartments';
  - proposals to develop a '300 room, five-star resort with fine dining and recreational facilities' at Yeppoon;<sup>107</sup> and
  - Aquis Project – a Great Barrier Reef resort proposed for Yorkeys Knob budgeted at over \$8 billion and including eight luxury hotels catering for up to 12 000 guests. The resort complex would include a championship golf course, theatres and casinos.<sup>108</sup>
- 2.103 Re-opening the casino at the Christmas Island Resort has been raised by the owner of the resort, Soft Star Pty Ltd. A casino would assist the economic viability of the territory and the development of non-casino tourism through increased flight activity. While phosphate mining will continue for the next 20 years there is a need to diversify the economy as the detention centre activity declines. Soft Star added that when the casino operated between 1993 and 1998 it had employed almost 400 staff, about one third being permanent residents of Christmas Island. The casino had been mothballed but could be reopened at relatively short notice.<sup>109</sup>
- 2.104 At the tourist activity level, cultural tourism is an important component. The Godinymayin Yijard Rivers Arts and Culture Centre stated:
- Indigenous culture is a major draw card for a large proportion of international tourists as well as a significant number of domestic visitors. While there is a small section of the market that is interested in fully immersive Indigenous cultural experiences, there is a much larger proportion looking for easily accessible, affordable but still authentic and engaging experiences.<sup>110</sup>

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105 Mr Glenn Chidlow, Chief Executive Officer, *Committee Hansard*, Broome, 5 May 2014, p. 44.

106 Advance Cairns, *Submission 69*, p. 6.

107 Capricorn Enterprise, *Submission 17.1*, p. 4.

108 Aquis Great Barrier Reef Resort: Project Overview <[www.aquiscasino.com/project-overview](http://www.aquiscasino.com/project-overview)> July 2014.

109 Soft Star Pty Ltd, *Submission 310*, p. 1.

110 Godinymayin Yijard Rivers Arts and Culture Centre, *Submission 269*, p. 3.

- 2.105 Lirrwi Tourism advised that it was planning to provide visitors to Arnhem Land with ‘diverse Aboriginal experiences’, and was developing new tours aimed at high yield markets including:
- women’s experiences to appeal to corporate customers and independent travellers;
  - expeditionary cruise ships and air touring groups focusing on the communities of Yirrkala and Galiwinku;
  - art tours targeting collectors of Aboriginal art which would visit the art centres of major Arnhem Land communities; and
  - sport fishing tours involving contemporary and traditional fishing techniques hosted by Yolngu guides.<sup>111</sup>
- 2.106 A similar enterprise is being operated by the Northern Territory Indigenous Tours which caters for small groups at the high end of the tourist market – in particular visitors tend to be interested in the Aboriginal perspective of contemporary Australia:
- ... a lot of people also want to know about the politics of Aboriginal people in Australia. We tend to talk a lot more about that compared to the flora and fauna in the Territory.<sup>112</sup>
- 2.107 Industrial tourism is also an emerging market. The Committee notes that the Hoochery Distillery in Kununurra operates daily tours of the rum distillery. Sugar mills also often conduct tours of their operations.
- 2.108 Mackay Tourism stated that there was also growing interest in mining tours and that ‘the chance for a visitor to experience an operational mine is a huge attraction’:
- It is a small but growing niche market that has potential. When governments are discussing potential mine developments, tourism could be brought to the table to put into their heads the question, ‘Have you considered tourism opportunities?’ even if they are training up a private tour company to run the tours on their behalf and they train them in their own workplace safety procedures. I have seen that work in other areas.<sup>113</sup>
- 2.109 Similar sentiments were expressed by the Shire of Ashburton which stated that tourists could:
- ... have a look at the Burrup, have a look at iron ore trains, see them loaded, see the ships in the ports – everything ... We were at Fortescue Metals opening the other night and they had all the

111 Lirrwi Tourism, *Submission 286*, pp. 5, 64.

112 Ms Tess Atie, Managing Director, *Committee Hansard*, Darwin, 19 August 2014, p. 3.

113 Mr Schwer, General Manager, *Committee Hansard*, Mackay, 31 May 2014, pp. 31, 32.

Chinese there, they had the Japanese there, the Singaporeans there.  
All our ore goes there. I am sure we could attract the tourists from  
China and Japan.<sup>114</sup>

- 2.110 The Committee was also told of tours at the Barramundi Discovery Centre in Karumba where visitors could look at the 'various stages of the hatchery process.'<sup>115</sup> The Committee suggests that similar tours could be arranged for other aquaculture projects.
- 2.111 Recreational fishing is also a potential growth area. The Amateur Fishermen's Association of the NT (AFANT) commented that such tourism was 'one of the largest growth industries in the Territory', and that popular recreational fishing areas such as the Daly River and King Ash Bay had experienced 'growth in the order of 4 to 10 times'.<sup>116</sup>
- 2.112 Opportunities to engage Aboriginal communities on Cape York Peninsula in providing recreational fishing services has been explored by the Cape York Sustainable Futures. Its research found there was considerable interest from Aboriginal people in becoming involved in this aspect of the tourism industry.<sup>117</sup>
- 2.113 In northern Queensland recreational fishing is booming. There are tensions however with commercial fisheries which is in decline in deference to recreational fishing. Debbie's Seafood told the Committee:
- ... the recreational fishers are in no way a small group. Decisions seem to be made to suit them. The snapper is one which has gone through in the last 18 months. Snapper needed protection but because there is no commercial fishery on snapper, there was no-one else to point the finger at except the recreational sector and that just got thrown out and thrown aside.<sup>118</sup>
- 2.114 Mackay Reef Fish Supplies added there was a requirement for commercial fishers in the Barrier Reef Fishery to document details of their catch so that the Great Barrier Reef Marine Park Authority could manage the fish stock. In contrast, there was little control on the recreational fishing sector:

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114 Councillor Kerry White, Shire President, *Committee Hansard*, Tom Price, 8 April 2014, p. 4.

115 Mr Oliver Pring, Director of Corporate Services, Carpentaria Shire Council, *Committee Hansard*, Normanton, 2 July 2014, p. 4.

116 AFANT, *Submission 266*, p. 3.

117 Cape York Sustainable Futures, *Submission 212, Appendix 10, Identifying Indigenous Business Opportunities in the Recreational Fishing Tourism Industry on Cape York Peninsula*.

118 Mr Mark Ahern, Manager, *Committee Hansard*, Mackay, 31 May 2014, p. 16.

There are thousands of boats in the recreational sector and people are supposed to catch four fish each, or six fish, whatever it is. Who knows what they catch?<sup>119</sup>

- 2.115 In conclusion, Northern Australia's tourism sector is underperforming. Tourism Northern Territory stated that 'since 2000 we have seen international visitation drop by 51.3 per cent at Kakadu and by in excess of 35 per cent at Uluru.'<sup>120</sup> This view was shared by TFF which stated:

... a tenth of international visitors to Australia make their way to the Great Barrier Reef, northern Australia's other drawcards record far lower scores. The greater Port Douglas area, including Cape Tribulation and the Daintree, features in around four per cent of international visitors' itineraries, with only a slightly smaller number visiting either the Whitsunday Islands or Fraser Island.

... Uluru, only persuades three per cent of international visitors to make the trip to see the rock and Kata Tjuta ... only one per cent visit either Kakadu or Litchfield national parks. WA's key northern attractions, Ningaloo Marine Park and Purnululuonly (Bungle Bungles), capture less than a third of one per cent respectively of international tourists.

While the images of these iconic natural assets are often used to attract international visitors to Australia, the powerful marketing pull of the major cities, Sydney and Melbourne, ultimately delivers them a far greater share of international visitors than regional areas. The challenge for northern Australia is to convert the enormous recognition of its natural icons into greater visitation numbers.<sup>121</sup>

## Manufacturing Sector

- 2.116 The Green Paper noted that 'much of the success of Northern Australia's economy had been tied to the mining and energy sector', but that 'reliance on a single industry (especially one prone to boom and bust cycles) poses risks'. It advocated diversification of the economy and proceeded to

119 Mr David John Caracciolo, Director, *Committee Hansard*, Mackay, 31 May 2014, p. 16.

120 Mr Tony Mayell, Chief Executive Officer, *Committee Hansard*, Darwin, 20 May 2014, p. 78.

121 TFF, *Submission 237*, p. 10.

identify opportunities beyond mining and resources, such as agriculture and tourism.<sup>122</sup>

- 2.117 The creation of special economic zones (SEZs) could be a way to diversify Northern Australia's economy by encouraging broader industry investment. Traditionally, SEZs have targeted manufacturing rather than the 'development of extractive industries such as agriculture and resources'.<sup>123</sup>

## Special Economic Zones

- 2.118 Several regions were identified in submissions – including the Pilbara<sup>124</sup>, the Kimberley<sup>125</sup> and the Tennant Creek/Barkly Region of the Northern Territory<sup>126</sup> – identified as possible locations for a SEZ. North Queensland Airports advocated creating an SEZ 'particularly in and around airports',<sup>127</sup> and proposed Cairns as a preferred site.<sup>128</sup>
- 2.119 As part of its detailed analysis of the benefits of special economic zones, Australians for Northern Development and Economic Vision (ANDEV) argued that 'the optimal policy is to create one SEZ across all of Northern Australia with one SEZ agency established as a one-stop shop agency for State, Territory and Federal laws'.<sup>129</sup>
- 2.120 The particular features of the suggested SEZs varied between proposals, but included:
- reduced State/Territory and Federal taxation;
  - streamlined regulatory requirements;
  - reduced foreign investment thresholds across all sectors, excluding defence; and
  - tax incentivised infrastructure bonds to attract Australian and overseas capital into infrastructure projects.<sup>130</sup>
- 2.121 ANDEV suggested that the major benefits of SEZs, 'as proven across the world in successful SEZs' included:
- driving economic growth, jobs, income tax revenues, and exports;

122 Australian Government, *Green Paper on Developing Northern Australia*, Canberra 2014, p. 25.

123 Chamber of Commerce and Industry of Western Australia, *Submission 160*, p. 6.

124 Pilbara Regional Council, *Submission 25*.

125 Broome Chamber of Commerce and Industry, *Submission 125*, pp. 12–14.

126 Tennant Creek Regional Economic Development Committee, *Submission 100*, p. 2.

127 Mr Kevin Brown, Chief Executive Officer, North Queensland Airports, *Committee Hansard*, Cairns, 28 April 2014, p. 5.

128 North Queensland Airports, *Submission 185*, p. 17.

129 ANDEV, *Submission 147*, p. 3.

130 ANDEV, *Submission 147*, p. 3.

- attracting major private investments from overseas capital markets;
  - creating partnerships on investments/projects with neighbouring nations thereby cementing foreign relations;
  - developing under-utilised resources and increasing returns on investments;
  - strengthening existing settlements and creating new viable permanent settlements; and
  - increasing employment opportunities for Aboriginal communities.<sup>131</sup>
- 2.122 The Broome Chamber of Commerce and Industry (BCCI) supported the creation of a SEZ for the Kimberley and was confident that this would ‘over a period of 20 years, more than repay the short term loss of revenue to governments.’<sup>132</sup>
- 2.123 Several submissions did not favour the creation of SEZs. The Institute of Chartered Accountants Australia observed that:
- ... the use of tax incentives to create ‘economic zones’ in one part of the country creates tax competition within our national income tax system (with attendant constitutional concerns) and leads to similar requests elsewhere from those outside the eligibility boundary.<sup>133</sup>
- 2.124 The Chamber of Commerce and Industry of Western Australia (CCIWA) also opposed the creation of a SEZ, stating that it:
- ... simply creates distortions across factor markets and results in inefficiencies in the allocation of resources across the broader economy. [Also] regional development and sustainable economic growth would be tied to the continuation of the special conditions associated with the SEZ. There is also little evidence to support the notion that SEZs are a viable, successful policy option in other jurisdictions around the world.<sup>134</sup>
- 2.125 The CCIWA noted that SEZs typically occurred in developing countries ‘with significant government oversight and control over economic activity’ and often resulted in ‘investment, taxation and employment conditions which are similar to a developed country, such as Shenzhen in China’.<sup>135</sup>

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131 ANDEV, *Submission 147*, p. 4.

132 BCCI, *Submission 125*, p. 14.

133 Institute of Chartered Accountants Australia, *Submission 126*, p. 2.

134 CCIWA, *Submission 160*, p. 6.

135 CCIWA, *Submission 160*, p. 6.

- 2.126 The Chamber of Commerce and Industry Queensland (CCIQ) was also unsupportive of SEZs, but suggested that ‘in the short term there is a case to afford some degree of preferential tax treatment to lure business to that area’. CCIQ was adamant, however, that the preferential treatment of an area such as an SEZ should not be permanent, nor even medium term.<sup>136</sup>
- 2.127 The Green Paper acknowledged the benefit of SEZs but noted the implications for other parts of the country. It raised a further constraint—The Constitution:
- For example, federal taxation cannot discriminate between states (or within states) and preference cannot be given to one state (or part of a state) over another in laws or regulations of trade, commerce or revenue.<sup>137</sup>
- 2.128 The Green Paper commented however that the merits of SEZs in Northern Australia needed to be carefully examined.<sup>138</sup>

## Other Potential Manufacturing Initiatives

- 2.129 The Iron Boomerang project, if realised, could provide leverage for manufacturing in northern Queensland and the Pilbara, Western Australia. The proponents of this project believe that this innovative ‘outside the square’ concept would place iron ore smelters in both regions, with coal supplied by rail from Queensland and iron ore supplied by rail from the Pilbara.<sup>139</sup> Further details are provided in Chapter 3.

## Medical Sector—Rapid Response to Disasters

- 2.130 The Committee has received evidence from the National Critical Care and Trauma Response Centre (NCCTRC) about its ability to respond to disasters both in Australia and overseas.
- 2.131 The NCCTRC was established following the Bali terrorist attack in 2005. It provides ‘a rapidly deployable, well-trained team of nurses, allied health professionals, logisticians and doctors who can respond to particular disasters’ and are drawn from across Australia and New Zealand.<sup>140</sup>

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136 Mr Nick Behrens, General Manager Advocacy, *Committee Hansard*, Brisbane, 30 May 2014, p. 10.

137 Australian Government, *Green Paper on Developing Northern Australia*, Canberra, 2014, pp. 55–6.

138 Australian Government, *Green Paper on Developing Northern Australia*, Canberra, 2014, pp. 55–6.

139 East West Lines Parks Ltd, *Submission 6*.

140 Dr Leonard Notaras, Chief Executive, Department of Health, NT, *Committee Hansard*, Darwin, 19 August 2014, p. 31.

- 2.132 Depending on the size of team required to be deployed, a response to an emergency can be mounted within 24 hours. NCCTRC described the process in responding to Cyclone Haiyan which impacted the Philippines city of Tacloban in November 2013:
- ... we were activated by the interdepartmental emergency task force at 11 am on Monday, and we had the full team assembled in Darwin by midnight that night. All the equipment was at RAAF Base Darwin by 0100 hours that night. The delay then became access to the Tacloban city airport.<sup>141</sup>
- 2.133 The NCCTRC conducts regular training exercises for potential new medical personnel as well as to provide refresher training. It is also in discussion with WA Health and INPEX to provide a disaster medical cache in Broome and at RAAF Truscott to enable a local rapid disaster response to, for example, oil rig disasters.<sup>142</sup>

## Research and Education Sector

- 2.134 The Green Paper notes that Northern Australia has 'six universities, a number of research institutes and centres, more than 200 registered training organisations and approximately 50 technical and further education institutions.'<sup>143</sup> The Green Paper also identified the concept of 'tropical economy' as an idea worth exploring:
- As part of one of the world's few developed countries that includes the tropics, northern Australia businesses and institutions can meet the needs of tropical markets ...
- Several institutions are actively engaged in the tropical economy.<sup>144</sup>

## Opportunities for Research Collaboration

- 2.135 With the expertise currently in Northern Australia's institutions there is a significant opportunity for collaboration to create research hubs.
- 2.136 Support for positioning northern Australia 'as a training hub for health professionals for Australia's near neighbours (eg: Papua New Guinea,

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141 Dr Nicholas Coatsworth, Acting Executive Director, *Committee Hansard*, Darwin, 19 August 2014, p. 33.

142 Dr Nicholas Coatsworth, *Committee Hansard*, Darwin, 19 August 2014, p. 33.

143 Australian Government, *Green Paper on Developing Northern Australia*, Canberra 2014, p. 13.

144 Australian Government, *Green Paper on Developing Northern Australia*, Canberra 2014, p. 24.

- Solomon Islands, Timor and Indonesia' was provided by the Greater Northern Australia Regional Training Network (GNARTN).<sup>145</sup>
- 2.137 The value of co-location of expertise was espoused by Charles Darwin University (CDU):
- ... you create not only a critical mass and you share the costs and opportunities from expensive infrastructure ... When you put students in that environment with young, absorbing minds, you create an incredibly exciting place where they want to engage, network and see new opportunities.<sup>146</sup>
- 2.138 The Menzies School of Health Research added that it was important to base the research locally because local researchers were the people who would work with government, and communities and health services and 'really understand things and are committed to making a difference.'<sup>147</sup>
- 2.139 The Menzies School stated that it was seeking to establish, in collaboration with CDU, a Northern Australia Centre of Research Excellence:<sup>148</sup>
- We want to build a cohort of leaders in Indigenous health research and young Indigenous researchers ... We want to build on our established partnerships with colleagues and health services in Malaysia and Indonesia to really have a fundamental impact on issues like malaria, tuberculosis and other issues in our region.<sup>149</sup>
- 2.140 The Menzies School added that it was crucial that there also was collaboration with JCU, Baker IDI Central Australia and Telethon in Perth.<sup>150</sup>
- 2.141 The JCU is to be the base of the newly created Australian Institute of Tropical Health and Medicine (AITHM). The Queensland Government advised the Committee that it had committed \$42 million towards the AITHM which had been matched by the Commonwealth Government. There would be three campuses in Townsville, Cairns and the Torres Strait. The AITHM 'will focus on tropical infectious diseases, chronic disorders with high prevalence in the tropics and health services in tropical, regional, rural and remote communities'.<sup>151</sup>

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145 GNARTN, *Submission 144*, p. 9.

146 Professor Simon Maddocks, Vice-Chancellor, *Committee Hansard*, Darwin, 20 May 2014, p. 47.

147 Professor Alan Cass, Director, *Committee Hansard*, Darwin, 20 May 2014, p. 42.

148 Menzies School of Health Research, *Submission 55, Attachment A: Northern Australia Centre For Research Excellence, Driving the North Australia Agenda: Engagement with Asia and Developing Indigenous Leadership*.

149 Professor Alan Cass, *Committee Hansard*, Darwin, 20 May 2014, p. 40.

150 Professor Alan Cass, *Committee Hansard*, Darwin, 20 May 2014, p. 42.

151 Queensland Government, *Submission 219*, p. 33.

- 2.142 The Committee's attention was drawn to a proposal for a northern agricultural co-operative research centre (CRC) by the Rural Industries Research and Development Corporation (RIRDC). The main focus of the proposal was to build confidence for capital investment, reducing business risks and develop enterprises in the North. The critical focus of the proposed CRC was to:
- identify products which could grow in the North and which had competitive advantage for selling into Asia;
  - encourage agricultural industries that could competitively supply into Asia;
  - conduct research on land and water planning;
  - work with jurisdictions around harmonising policy, addressing the legislative issues, and promoting a more coherent development opportunity across the North; and
  - work with Aboriginal and Torres Strait Islander communities and developing opportunities for them.<sup>152</sup>
- 2.143 The RIRDC stated that the bid was 'a strong consortium with the support of the Western Australian, Queensland and Northern Territory governments, CSIRO, and the northern universities.' The consortium would need to contribute \$50 million over 10 years to match a similar contribution from the Commonwealth.<sup>153</sup>
- 2.144 The Committee notes that the Central Queensland University (CQU) has a high reputation for agricultural research being ranked at a '5' which is well above the world standard.<sup>154</sup>
- 2.145 A further example of collaboration was provided by the Australian Institute of Marine Science (AIMS) which advised the Committee that it had agreements forming hubs of marine science expertise in Townsville, Darwin, and Perth. A key goal of these hubs was the development of early career scientists.<sup>155</sup>

## Opportunities for Sports Research and Tourism

- 2.146 An opportunity to create a centre catering for elite sports training research and medical facilities has been raised by the Cairns Business and Sporting Group. It suggested that Cairns was in a good position, because of the

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152 Ms Anwyn Lovett, Acting Managing Director, *Committee Hansard*, Canberra, 21 March 2014, p. 36.

153 Ms Anwyn Lovett, *Committee Hansard*, Canberra, 21 March 2014, pp. 37, 39.

154 Australian Research Council, *University Results*, <[www.arc.gov.au/era/outcomes\\_2012/Institution/CQU](http://www.arc.gov.au/era/outcomes_2012/Institution/CQU)> August 2014.

155 AIMS, *Submission 106*, p. 8.

availability of accommodation, to compete with the three tropical sports acclimatisation training centres in Kuala Lumpur, Hong Kong, and Singapore.<sup>156</sup>

The climate of Far North Queensland is perfectly suited to acclimatisation training for teams preparing to travel overseas to play in SE Asia, as well as being perfectly suited to train athletes in preparation for the 2006 Olympic Games to be held in Rio de Janeiro.<sup>157</sup>

- 2.147 The proposed complex would include a '20 000 seat rectangular stadium, 500 seat hockey stadium, 300 seat netball stadium and the Tobruk Aquatic Centre', and had the potential to significantly increase the numbers of visitors to Cairns.<sup>158</sup>

## Opportunities for Education and Training

### Tertiary Education Sector

- 2.148 The Green Paper commented that there were opportunities for universities to increase their overseas student enrolments because of Asia's proximity to Northern Australia and the growing Asian middle class's desire for a world-class education.<sup>159</sup>

- 2.149 The Queensland Government advised that JCU continued to expand with campuses at Townsville, Cairns, Mount Isa and internationally. CQU was established in Rockhampton, Mackay, and Cairns and had plans for expansion:

Northern Queensland Tertiary education institutions are well established in attracting international students for university TAFE and English language education, as well as domestic students. Tertiary education, dentistry, and tropical disease research are regional specialities.<sup>160</sup>

- 2.150 A similar message was provided by the Northern Territory Government which advised that CDU had experienced:

... a 25 per cent increase in enrolments over the past two years. In 2013 CDU recorded a 300 per cent increase in international student enrolments compared to 2006; a statistic in sharp contrast to the

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156 Cairns Business and Sporting Group, *Exhibit 9: Sports Tourism and Sports Medicine Infrastructure Plan October 2011*, p. 5.

157 Cairns Business and Sporting Group, *Exhibit 94*: p. 5.

158 Cairns Business and Sporting Group, *Exhibit 94*: p. 4.

159 Australian Government, *Green Paper on Developing Northern Australia*, Canberra 2014, p. 25.

160 Queensland Government, *Submission 219*, p. 35.

national trend. The number of international students now exceeds 1100 from 57 countries.

- 2.151 In contrast, University of Notre Dame Australia was reducing its Broome campus. It stated that it was refocusing 'the campus into a hub for professional training for teachers, nurses and other health professionals.'<sup>161</sup> It was closing its higher education courses because of declining enrolments, the inability to find appropriately qualified staff, and 'the fact that the cost of delivery was not matched by government funding.'<sup>162</sup> It was, however, intending to invest more resources into its Nulungu Research Centre.<sup>163</sup>
- 2.152 On the domestic front, CQU was enthusiastic about its merger in mid-2014 with the Central Queensland Institute of Technical and Further Education (TAFE). The merger:
- ... will increase our capacity to deliver a variety of post-secondary education services not only to the Central Queensland region but also more broadly across our complete footprint.<sup>164</sup>
- 2.153 The CQU recognised that developing Northern Australia required providing education and training to local communities which themselves would never be able to sustain a TAFE or university because of the lack of economies of scale.<sup>165</sup> Consequently, it was developing a model of distance education, but one which involved a physical presence:
- Most distance education means lecture notes online and you fill out a few multiple-choice questions. What we have realised is that good education in communities in regional Australia actually requires you to have a presence there. CQU has pioneered what we call a distance support model, where we do provide the best content in the world online but we partner with local communities to develop study centres that may have only one or two staff and service a community of maybe a couple of thousand people.<sup>166</sup>
- 2.154 The need for access to tertiary education for the local population in the North was enthusiastically put to the Committee by Ms Jan Ford who suggested that 'the universities of the future are different from the

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161 Professor Celia Hammond, Vice Chancellor, *Committee Hansard*, Perth, 7 April 2014, p. 1.

162 Professor Celia Hammond, *Committee Hansard*, Perth, 7 April 2014, p. 2.

163 Professor Celia Hammond, *Committee Hansard*, Perth, 7 April 2014, p. 1.

164 Professor Jozua Viljoen, Pro Vice Chancellor, *Committee Hansard*, Mackay, 31 May 2014, p. 22.

165 Professor William Dawson, Director, Appleton Institute, *Committee Hansard*, Mackay, 31 May 2014, pp. 22-3.

166 Professor William Dawson, *Committee Hansard*, Mackay, 31 May 2014, p. 23.

universities of the past' and that there could be centres of excellence in regional towns.<sup>167</sup>

### E-Learning

2.155 There is significant opportunity for institutions in the North to use the new digital technology to broaden their reach and the experiences they offer. CQU commented that the traditional model of the university was changing:

What we are starting to see internationally is the globalisation of content. Content will come from the best person in the world to teach that topic ... the traditional model of university is not going to exist in 50 years from now. We are starting to see a proliferation of different models and different ways of servicing people with the best content in the world.<sup>168</sup>

2.156 The JCU stated that it was 'increasingly leveraging the online environment to support quality face-to-face learning experiences.' Nevertheless, about 60 per cent of its students were the first in the family to go to university. Consequently, they needed support to transition to an online learning environment and this would often 'require student access to designated study centres to access support from skilled learning advisers.'<sup>169</sup>

2.157 Both CQU and the University of Notre Dame Australia recognised the value of retaining face-to-face teaching to provide the social aspects of learning.<sup>170</sup>

2.158 An example of e-learning was provided by the Mount Isa Centre for Rural and Remote Health, JCU. It stated that the Cloncurry Shire Council had contributed to a learning centre in Cloncurry where nursing students, medical students and pharmacy students could access their lectures while living in or visiting Cloncurry for their clinical placements. The mixed model using technology and providing local support and working with local practitioners had created a local workforce in Cloncurry.<sup>171</sup>

2.159 Internationally, JCU advised it was collaborating with the University of the South Pacific and the Commonwealth of Learning to deliver 'learning

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167 Ms Jan Ford, Spokesperson, Port Hedland Community Progress Association, *Committee Hansard*, Port Hedland, 10 April 2014, p. 29.

168 Professor William Dawson, *Committee Hansard*, Mackay, 31 May 2014, p. 27.

169 Professor Robyn McGuiggan, Pro-Vice-Chancellor, Faculty of Law, Business and the Creative Arts, *Committee Hansard*, Townsville, 2 April 2014, pp. 13, 14.

170 Professor William Dawson, *Committee Hansard*, Mackay, 31 May 2014, p. 27; Professor Celia Hammond, *Committee Hansard*, Perth, 7 April 2014, p. 5.

171 Professor Sabina Margaret Knight, Director, *Committee Hansard*, Mount Isa, 3 April 2014, pp. 25-6.

services to communities and organisations, through the Pacific, on a digital platform.’ JCU concluded:

When we look at the opportunities from a research point of view, a teaching-and-learning point of view and a commercialisation point of view, I think a great deal of that opportunity rests on what can be done internationally.<sup>172</sup>

## Secondary Education Sector

2.160 There is also the opportunity to attract international students at the secondary education level.

2.161 Kormilda College is an independent school in Darwin which offers the International Baccalaureate Diploma and has boarding facilities for 230 Aboriginal children.<sup>173</sup> It stated that it drew its Aboriginal students from 35 remote area communities who were funded under ABSTUDY.<sup>174</sup> The College endeavoured to enrol several students from a particular community and provided mentoring by older students from that community. Initially there was flexibility with the length of time new students stayed each term:

... they will come in for a shorter time than other students and then they will go home because they are really homesick. But they get home and within three or four days they are ringing us to say they want to come back. So they come back the next term and they stay a little bit longer. It is a bit of a yoyo for the first 12 months but then they settle down.<sup>175</sup>

2.162 Kormilda College was also involved in an extracurricular sports program run by the Clontarf Foundation. This had resulted in a hundred per cent retention of students who were involved in the program.<sup>176</sup>

2.163 The College was considering dividing into two constituent schools:

... a day school, the Darwin International Grammar School, catering for students with a focus on a recognised international, high-quality educational preparation program for university, and the Kormilda Trade Training Academy of Excellence with a

172 Professor Chris Cocklin, Senior Deputy Vice-Chancellor, *Committee Hansard*, Cairns, 28 April 2014, p. 45.

173 Kormilda College, *Submission 174*, pp. 4, 6.

174 Dr Helen Spiers, Principal, *Committee Hansard*, Darwin, 18 August 2014, p. 64.

175 Dr Helen Spiers, *Committee Hansard*, Darwin, 18 August 2014, p. 68.

176 Dr Helen Spiers, *Committee Hansard*, Darwin, 18 August 2014, p. 70.

specialist focus on Intensive English and Mathematics classes and post-school further learning or job readiness.<sup>177</sup>

- 2.164 The plan would enable the expansion of both the number of international students as well as the number of Aboriginal boarding students.<sup>178</sup> Aboriginal students would transfer to the International School when they were academically ready.<sup>179</sup>

### Vocational Education Sector

- 2.165 The Green Paper noted that there were 'more than 200 registered training organisations and approximately 50 TAFE institutions' in Northern Australia.<sup>180</sup>
- 2.166 During its visit to Broome, the Committee inspected the Kimberley Training Institute and was impressed by the range of courses offered and the quality of training. The Committee also experienced being in the simulator which was used for training maritime pilots for the ports of Broome, Dampier, Port Hedland and Wyndham. It is also used to model port design.
- 2.167 Northern Australia's proximity to the Asia-Pacific region creates opportunities to provide TAFE services internationally. The Queensland Government advised that partnerships had already been created with 'a number of countries in the Asia-Pacific, including China and Papua New Guinea' and that:

TAFE Queensland will continue to grow its business in the Asia-Pacific region to increase its international student market and to establish strong ties with Australia's key trading and business partners.<sup>181</sup>

- 2.168 While TAFE institutes offer a range of courses, they often do not provide the specialist courses required by industry.<sup>182</sup>
- 2.169 Indeed, Cambridge Gulf Ltd stated that specialist training was often done in-house:

I believe the TAFE here works pretty well. We have the TAFE and Kimberley Group Training; we have a couple of really decent

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177 Kormilda College, *Submission 174*, p. 9.

178 Mr Peter Jones, *Committee Hansard*, Darwin, 18 August 2014, p. 65; Dr Helen Spiers, *Committee Hansard*, Darwin, 18 August 2014, p. 66.

179 Mr Peter Jones, Chair of the Board, *Committee Hansard*, Darwin, 18 August 2014, p. 63.

180 Australian Government, *Green Paper on Developing Northern Australia*, Canberra 2014, p. 13.

181 Queensland Government, *Submission 219*, p. 40.

182 Mrs Barbara O'Driscoll, Chairperson, Newman Chamber of Commerce and Industry, *Committee Hansard*, Perth, 7 April 2014, p. 20.

training institutions here. Over at the port, even though they are good training institutions, we generally take care of our training in-house – we have very specific needs, so we will bring the trainer up ... Also the small business centre does a lot of business related training, customer service training and that sort of thing for the business community.<sup>183</sup>

- 2.170 The Queensland Government, however, has moved to improve responsiveness to the skills and trading needs of industry by creating TAFE Queensland. It advised that:

TAFE's new commercial structure will ensure a holistic view of TAFE across the State, including North Queensland, recognising the diverse needs of the various communities throughout the region.<sup>184</sup>

- 2.171 Further, the Queensland Government stated the proposed amalgamation of the Barrier Reef, Mount Isa and Tropical North Queensland TAFEs would enable the provision of greater coverage and broader scope of services to local communities.<sup>185</sup>

- 2.172 A recent initiative of JCU has been the establishment of the Northern Clinical Training Network based in Cairns, Townsville, and Mackay. This aims to provide:

A seamless transition between medical undergraduate, junior doctor and early vocational training ... and to remove barriers between stages of training, creating a critical mass of clinical teaching infrastructure and to support development of clinical research and scholarship in the north.<sup>186</sup>

- 2.173 Despite the existence of TAFE and other training organisations in Northern Australia, research by Ninti One Ltd indicated that:

... training and qualifications are not a pre-requisite to engagement in employment in remote Australia has 44 per cent of all employees have not completed a certificate or higher qualification.<sup>187</sup>

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183 Mr Anthony Chafer, Chief Executive Officer, *Committee Hansard*, Kununurra, 7 May 2014, p. 18.

184 Queensland Government, *Submission 219*, p. 35.

185 Queensland Government, *Submission 219*, p. 35.

186 Northern Clinical Training Network, *Our Purpose, Vision and Aspirations* <[www.nctn.net.au/nctnweb/about-us-header/our-purpose](http://www.nctn.net.au/nctnweb/about-us-header/our-purpose)> August 2014.

187 Ninti One Ltd, *Submission 88*, p. 4.

2.174 As noted above, training is often provided in-house. An example was provided to the Committee by the Rusca Brothers Group which has Theiss, Santos, Leighton and Glencore as clients:

These types of groups basically do not want to have the training done on their sites. There is a safety concern. Obviously it is a large cost to house them on site. We said: 'We've done it all in house ourselves. We train them on our own sites, our local jobs. We have a bit of a stepping stone, where they work in our civil branch. It might be low productivity, where they are actually learning the ropes, and they get to be able to move into these other pastures and take up a job with one of the larger tier 1 companies that we currently have some long-term contracts with.'<sup>188</sup>

## Government Sector

2.175 The Green Paper noted that the public sector plays a major role in Northern Australia:

Public administration, education, healthcare and social assistance accounted for almost 30 per cent of total Northern Australian employment in 2011. The Australian Defence Force has a long-standing and substantial presence, with over 15 200 service personnel and public servants based in the north, including Alice Springs. There are also 6000 other Australian Government employees across northern Australia.<sup>189</sup>

2.176 While the Green Paper raised the opportunity to co-locate 'local, state and national government services, giving communities and business better access to government',<sup>190</sup> it did not canvass potential opportunities to relocate sections of the Commonwealth Public Service or Defence assets to the North.

## Public Service

2.177 The City of Townsville argued that elements of several Federal Departments should be relocated to Townsville. This included elements of:

- Department of Foreign Affairs and Trade (South East Asia and Pacific trade and international policy sections) – Townsville was

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188 Mr Robert Rusca, Managing Director, *Committee Hansard*, Darwin, 20 May 2014, p. 53.

189 Australian Government, *Green Paper on Developing Northern Australia*, Canberra 2014, p. 9.

190 Australian Government, *Green Paper on Developing Northern Australia*, Canberra 2014, p. 63.

‘geographically closer to Port Moresby than it is to Brisbane or Canberra [and] relocation would facilitate greater regional trade and closer diplomatic ties’;

- Department of Resources, Energy and Tourism – it ‘should be in a region which makes a significant contribution to the Australian economy through tourism and minerals processing and export’;
- AusAID and the Departments of Environment, Defence and Agriculture – they ‘would benefit from the expertise developed [in Townsville] and could facilitate international improvements through aid programs and other exchanges’; and
- ‘Defence, [Defence Materiel Organisation], Transport and Infrastructure, Customs.’<sup>191</sup>

2.178 Relocation could be encouraged, the City of Townsville argued, by ‘offering faster career progression in regional areas and moving executive level positions to the region’, and by ‘establishing and prioritising Departmental graduate programs in regionally located Departments for intakes from both regional and non-regional areas’.<sup>192</sup>

2.179 The Liberal National Party Northern Development Policy Committee suggested an opportunity was also presented by the merger of the Department of Immigration and Border Protection with the Australian Customs and Border Protection Service. It suggested locating the new combined agency in Cairns.<sup>193</sup>

## Defence

2.180 Currently, there are a significant number of defence force bases across the North,<sup>194</sup> and these support many companies which service their needs:

Commercial servicing, especially of naval and border services of vessels and to a lesser extent surveillance aircraft, has played a role in supporting the development of maritime and aviation servicing capability with wider regional economic benefits.<sup>195</sup>

2.181 The *Defence White Paper 2013*, released in May 2013, was intended to complement the *Australia in the Asian Century White Paper* and the *National*

191 City of Townsville, *Submission 170*, p. 8.

192 City of Townsville, *Submission 170*, p. 9.

193 Ms Robyn Quick, Chair, *Committee Hansard*, Brisbane, 20 June 2014, p. 28.

194 Details are provided in *Australian Defence Force Posture Review, Annex B, Map of ADF Facilities, Training Areas, Selected Civil Ports and Offshore Resources* <[www.defence.gov.au/oscdf/adf-posture-review/docs/base\\_map.pdf](http://www.defence.gov.au/oscdf/adf-posture-review/docs/base_map.pdf)> January 2014.

195 Cummings Economics, *Exhibit 76: Australia’s Tropical North Initial Challenges, Historical Development, Current Progress and Future Prospects*, p. 170.

*Security Strategy* and to be seen as a statement of the then Australian Government's priority regarding security and prosperity, and 'on maintaining a strong Australian Defence Force to meet Australia's national security challenges'.<sup>196</sup>

- 2.182 The White Paper identified an inherent tension in locating Australian Defence Force bases – 'population and industry support factors tend to influence a south and south-east disposition, while strategic factors are weighted towards the north and north-west disposition.'<sup>197</sup> Its review of ADF posture concluded that Australia's strategic environment did not require widespread changes to the location of ADF bases, but instead concluded that some bases and training areas needed upgrades:

These upgrades are largely longer-term in nature. They mostly relate to improving the capacity of ADF bases, facilities and training areas to support future capabilities, particularly in Australia's north and west, and to sustain high tempo operations in northern Australia and our approaches, the immediate neighbourhood and wider Indo-Pacific region.<sup>198</sup>

- 2.183 The paper proceeded to identify several airbases,<sup>199</sup> and naval bases<sup>200</sup> particularly in the north and west which needed upgrading. As well, it heralded an assessment of 'the capacity of the logistics supply chain to meet strategic fuel and explosive ordnance requirements in northern Australia', and identify 'potential improvements to the north and north-west Australian fuel network system'.<sup>201</sup>
- 2.184 The value of relocating major elements of the Navy from Sydney to the existing base at Cairns and improving naval facilities in Darwin and in the Pilbara/Kimberley area was raised by Cummings Economics. Major benefits would be in strategic positioning in the North as well as contributing to the build-up of a maritime servicing capacity which would be positioned to earn export income from the wider Asia/Pacific region. It would also strengthen potential interaction with the defence forces of neighbouring countries as well as meeting any future threats and dealing with environmental emergencies such as that caused by volcanic eruptions tsunamis and cyclone damage.<sup>202</sup>
- 2.185 Such a view was supported by Cairns Regional Council which said:
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196 *Defence White Paper 2013*, p. 1.

197 *Defence White Paper 2013*, p. 47.

198 *Defence White Paper 2013*, p. 47.

199 Air force bases included Curtin, Darwin, Learmonth, Tindal, Scherger, and Townsville.

200 Darwin and Townsville were identified to facilitate large amphibious ship operations.

201 *Defence White Paper 2013*, pp. 50, 51.

202 Cummings Economics, *Exhibit 76*: p. 170.

We do not want all our Defence people sitting in the southern part of Australia ready to reinvent the Brisbane Line. We want them up in the north here where most of their work is, both in terms of strategic military importance and also aid to countries north of us when they have natural disasters. Our response to that is normally fairly quick from here. We have the Army and the Air Force in Townsville, we have the Navy in Cairns and the Navy in Darwin. Darwin and Cairns must rate as the two most common-sense places to be looked at in terms of the further growth of naval facilities.<sup>203</sup>

- 2.186 An example of the possibility of moving defence assets to the North was provided by Advance Cairns which suggested that HMAS *Choules* be relocated north to HMAS *Cairns* when the first Canberra Class Amphibious Assault Ship (LHD<sup>204</sup>) became operational.<sup>205</sup>
- 2.187 The Cairns Regional Council commented that the Cairns naval base was ‘a very high employment multiplier’ because of the servicing and maintenance of naval and Customs vessels and also of some 22 Pacific Island patrol boats. It had been told by Cummings Economics that ‘the employment multiplier effect for a naval base is 5.27.’<sup>206</sup>
- 2.188 The development of a new naval base with heavy industrial maintenance facilities was also recommended by the Australian Industry & Defence Network-NT (AIDN-NT).<sup>207</sup> This would enable expansion into the maintenance and repair of other steel hulled vessels in Darwin.<sup>208</sup>
- 2.189 ANDEV argued that such a base should be located in Exmouth, WA. This was because Exmouth was ‘located within short distance of strategic offshore infrastructure’; it was ‘the only location with all-weather road connections via the Northwest Coastal Highway’; and it was ‘already well supported by defence infrastructure’, namely RAAF Base Learmonth. ANDEV suggested establishment costs could be met by downsizing existing facilities in south east Australia.<sup>209</sup>
- 2.190 ANDEV commented that such a base in the north west would contribute significantly to the regional economy. It cited research indicating that

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203 Councillor Bob Manning, Mayor, *Committee Hansard*, Cairns, 28 April 2014, p. 15.

204 Landing Helicopter Dock

205 Mr Trent Twomey, Chair, *Committee Hansard*, Cairns, 28 April 2014, p. 4.

206 Councillor Bob Manning, Mayor, *Committee Hansard*, Cairns, 28 April 2014, p. 14.

207 AIDN-NT, *Submission 117*, p. 3.

208 Mr Arthur Boyd, President, *Committee Hansard*, Darwin, 18 August 2014, p. 57.

209 ANDEV, *Submission 147, Attachment E: Northern Defence Posture: Securing Our Natural Resources*, p. 14.

Townsville's defence community had contributed over 10 per cent of the regional GDP.<sup>210</sup>

- 2.191 Similar concerns regarding the vulnerability of Australia's North West was also expressed by the Shire of Roebourne which suggested that there was 'growing evidence that the Pilbara needs a greater military presence' because of the need to protect 'resource industry infrastructure in the Pilbara, and off our coast'.<sup>211</sup>
- 2.192 The Department of Defence (Defence) argued that it was in fact increasing its presence in the North rather than increasing its bases. It cautioned that it was unwise to 'put all your assets in one place and then find the operation is in another area of Northern Australia.'<sup>212</sup>
- 2.193 Defence added:
- it was more costly to position its personnel in the North and that, like corporate organisations, it had to 'balance the number of people [it moved] with the budget';<sup>213</sup>
  - it needed an industrial base to support its bases – it was having difficulty 'with skilled personnel in Darwin being able to maintain the current patrol boat fleet';<sup>214</sup>
  - in responding to events in the Pacific and Indian Oceans, Sydney and Learmonth, Exmouth were actually closer than Cairns and Derby;<sup>215</sup>
  - it was strategically unsound 'to put all your assets right in the area where the humanitarian response may be required because they may be affected' by that particular crisis;<sup>216</sup>
  - the resources industry in Western and Northern Australia were more concerned about domestic security issues – issues for police and their own security organisations – than external threats;<sup>217</sup>
  - in the north-west of Australia there was a significant unseen security presence – 'on any given day there are seven patrol boats, a couple of

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210 R Welters and A Delisle, *A Holistic Analysis of the Socio-economic Impact of the Australian Defence Organisation and its Interaction with the City of Townsville*, JCU, 2009.

211 Mr Peter Long, President, *Committee Hansard*, Karratha, 9 April 2014, p. 2.

212 Air Marshal Mark Binskin, *Committee Hansard*, Canberra, 21 March 2014, p. 24.

213 Air Marshal Mark Binskin, Vice Chief of the Defence Force, *Committee Hansard*, Canberra, 21 March 2014, p. 24.

214 Air Marshal Mark Binskin, *Committee Hansard*, Canberra, 21 March 2014, p. 27.

215 Air Marshal Mark Binskin, *Committee Hansard*, Canberra, 21 March 2014, p. 24.

216 Air Marshal Mark Binskin, *Committee Hansard*, Canberra, 21 March 2014, p. 25.

217 Air Marshal Mark Binskin, *Committee Hansard*, Canberra, 21 March 2014, p. 26.

major fleet units out patrolling out towards Christmas Island, back towards Darwin and into the Arafura Sea';<sup>218</sup> and

- security organisations are always looking for indicators and warnings about terrorist operations which would be complex operations to conduct, and which would prompt a whole of government response.<sup>219</sup>

2.194 Cummings Economics also drew attention to long-term benefits arising from defence bases in the North:

The northern cities that have had a strong defence presence now include a significant number of residents who were in the defence services ...the contribution of ex-naval personnel to the build-up of Cairns' maritime servicing sector has been important.<sup>220</sup>

2.195 The Defence White Paper also drew attention to the rotational deployment of over 1000 United States Marines to Northern Australia in 2014 and enhanced Australia-US Air Force cooperation which was expected to result in 'increased rotations of US Air Force aircraft to northern Australia.'<sup>221</sup>

2.196 A Deloitte Access Economics assessment of the economic impact of the US Marine rotation concluded that the Northern Territory gross state product would increase by \$5.6 million in 2014. The estimate was based on an expenditure of \$4.5 million by the US Marine Corps and \$3.2 million in individual Marines' combined personal expenditure. It was estimated that Australian tax revenues would increase by \$1.09 million and that Northern Territory tax revenues would increase by almost \$200 000.<sup>222</sup>

## Social Infrastructure

2.197 Increased broadband connectivity across Northern Australia presents opportunities to use new communications technology to deliver services, improve access to existing services, and undertake innovative research which could impact on social infrastructure and liveability.

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218 Air Marshal Mark Binskin, *Committee Hansard*, Canberra, 21 March 2014, p. 26.

219 Air Marshal Mark Binskin, *Committee Hansard*, Canberra, 21 March 2014, p. 26.

220 Cummings Economics, *Exhibit 76*: p. 170.

221 *Defence White Paper 2013*, p. 57.

222 Deloitte Access Economics, *Economic Impact of the Rotation of 1100 US Marines and Associated Equipment in Northern Australia. Report for the Department of Defence. 10 April 2013*, pp. i, ii.

## Tele-health

- 2.198 The introduction of broadband creates an opportunity to develop tele-health services in the North. The Mount Isa Centre for Rural and Remote Health considered tele-health was 'past pedal radio but not much past rad-phone stage yet.' It was at 'the precipice of things changing.'<sup>223</sup>
- 2.199 GNARTN emphasised the importance of a digitally connected Northern Australia:
- ... tele-health based services and education offer the greatest opportunity to improve health services access when this works with local communities – that is, Aboriginal medical services and state and other health service providers and education providers. So we are saying a joined up northern Australia is critical to improvement.<sup>224</sup>
- 2.200 The CRANAplus expressed the same view:
- The essential role telecommunications play and the importance of the shared electronic health platform cannot be underestimated in their function to improve health outcomes. Likewise, it may finally provide an opportunity for the collection of accurate health data. As much remote health care is not provided through traditional MBS or PBS mechanisms, there is a dearth of accurate information on which to make informed population health-planning decisions.<sup>225</sup>
- 2.201 The GNARTN advised there were a range of services being developed across the North and they were providing the opportunity for tele-health services to link health practitioners to specialists in larger centres. Most major towns and communities in WA, NT and Queensland now had access to such tele-health services.<sup>226</sup>
- 2.202 It also provided the opportunity to develop lead centres, for example, 'Darwin to be a cancer centre, a centre of excellence or a lead centre, and the Queensland to be a lead centre in tropical diseases, and WA something else.'<sup>227</sup> There was also the potential for linkage to an emergency tele-health service such as that linking Perth to WA's 'remote wheat belt and inland.'<sup>228</sup>

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223 Professor Sabina Margaret Knight, *Committee Hansard*, Mount Isa, 3 April 2014, p. 27.

224 Ms Melissa Vernon, Chair, *Committee Hansard*, Broome, 5 May 2014, p. 26.

225 Mr Christopher Cliffe, Chief Executive Officer, *Committee Hansard*, Alice Springs, 19 May 2014, p. 50.

226 Ms Melissa Vernon, *Committee Hansard*, Broome, 5 May 2014, p. 28.

227 Ms Melissa Vernon, *Committee Hansard*, Broome, 5 May 2014, p. 26.

228 Ms Melissa Vernon, *Committee Hansard*, Broome, 5 May 2014, p. 28.

2.203 There are, unfortunately, limitations to the ability of those living in Northern Australia to benefit from the new technologies. Broadband for the Bush Alliance cautioned:

High-speed broadband and telecommunications offer an opportunity to shrink the distance and isolation of remote and northern Australians. But unless remote and northern Australians are part of the digital and telecommunications-enabled world the north will not be able to develop, further population will not be able to be attracted and people will leave.

The reality is that much of northern Australia will need to rely on satellite telecommunications, which is not as good as the telecommunications their city cousins will enjoy, and has inherent limitations.<sup>229</sup>

We have a town in Queensland that the local health board wants to nominate for the tele-health trial, but it is only on satellite so it is impossible.<sup>230</sup>

## Improving Liveability in the Tropics

2.204 Broadband for the Tropics (BftT) – a volunteer working committee drawn from organisations in Townsville, Cairns, and Mackay proposed three projects to improve liveability in the North:

- Living in the Tropics – designed to ‘educate the community about wide scale benefits of applying ICT to tropical living’;
- Business in the Tropics – designed to ‘build the cultural change necessary for adoption of modern cloud-based ICT services’ for disaster recovery strategies, effective remote office communications, and building industry clusters; and
- Energy and Water Management in the Urban Tropics – designed to ‘develop the tools and systems needed to gather the essential background data sets on tropical cities’ to enable re-engineering tropical city models to reduce costs of construction and long-term maintenance, and to create better tropical urban environments.<sup>231</sup>

2.205 The third project involved collecting ‘real-time water consumption, temperature both inside and outside roofing as well as energy use in 5000 homes across northern Queensland’. This information would be used by Townsville City Council to:

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229 Mr John Huigen, Chief Executive Officer, *Committee Hansard*, Alice Springs, 19 May 2014, p. 54.

230 Mr Ray Heffernan, Member, *Committee Hansard*, Alice Springs, 19 May 2014, p. 57.

231 BftT, *Submission 18, Attachment D: Tropical Innovation Project Outlines*, pp. 3, 4, 5.

... improve walkability in the tropics by understanding where to build shade and shelter structures, plant trees and improve urban accessibility. Designers will use the data set to understand the real world performance of homes and spaces and redesign them for higher level of thermal comfort and lower running costs ...

The outcome of this project will then become the template for urban design throughout tropical Australia and exportable throughout the tropical world.<sup>232</sup>

- 2.206 The BftT reiterated that there was potential to export the ‘tropical products and systems developed through the tropical innovation project to other tropical zones in the world’, especially as tropical countries were looking to move towards a market-based economy.<sup>233</sup>
- 2.207 There was also the opportunity to create a tropical knowledge and innovation centre to bring together academia, students, and business and to solve problems with innovative solutions. Business would get very low-cost or free ideas, and engaging younger people in problem solving would result in medium term culture change.<sup>234</sup>
- 2.208 A possible model for such a centre is the Desert Knowledge Precinct which the Committee visited for its Alice Springs public hearing. The Precinct brings together organisations and ‘identifies key projects that contribute to a social, economic and environmentally sustainable future for desert Australia.’<sup>235</sup> It has recently been elevated to a statutory authority by the South Australian Government.<sup>236</sup>

## Aboriginal and Torres Strait Islander Engagement

- 2.209 The Northern Australian population includes an untapped significant pool of labour – Aboriginal and Torres Strait Islander people.
- 2.210 Ninti One Ltd believed that:
- ... based on population number, occupation and ownership of land ... the success of Northern Australia development will ultimately depend on increased Aboriginal participation in the economy.<sup>237</sup>

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232 BftT, *Submission 18, Attachment D*, p. 6.

233 Mr Geoffrey Harkness, Committee Member, *Committee Hansard*, Townsville, 2 April 2014, p. 31.

234 Professor Ian Atkinson, Committee Member, *Committee Hansard*, Townsville, 2 April 2014, p. 33.

235 *Desert Knowledge Australia*, <[www.desertknowledge.com.au/Home](http://www.desertknowledge.com.au/Home)> July 2014.

236 *Desert Knowledge Australia Set for Reinvigoration*, <[www.desertknowledge.com.au/News/Desert-Knowledge-Australia-Set-For-Reinvigoration](http://www.desertknowledge.com.au/News/Desert-Knowledge-Australia-Set-For-Reinvigoration)> July 2014.

237 Ninti One Ltd, *Submission 88*, p. 4.

- 2.211 Ninti One Ltd's submission provided demographic information:  
Northern Territory population comprises 30% of Aboriginal and Torres Strait Islander people and in some areas of Northern Australia like in Cape York 60% or in the Kimberley over 50%. The Aboriginal and Torres Strait population in Northern Australia is fast growing with half its population under 24 years in remote communities, which means that by 2050 it is likely that there will be more Aboriginal people living in Northern Australia than non-Aboriginal people. Aboriginal and Torres Strait Islander employment rates are low in remote communities with the employment to population ratio at about 45%. Aboriginal and Torres Strait Islander participation in the largest industry sectors in Northern Australia, namely mining, agriculture, government services and tourism, is low.<sup>238</sup>
- 2.212 This was supported by the Queensland Government which stated that unemployment rates ranged 'from 16.9 per cent in the Northern Peninsula Area to 62.1 per cent in Yarrabah.'<sup>239</sup>
- 2.213 Kormilda College commented on the challenge of improving Aboriginal workforce participation:  
... low levels of functional literacy and numeracy of many Indigenous school leavers which limit their capacity for taking up the work and educational opportunities which may be available. It is also impeded by the low completion rates of vocational and adult educational training courses for Indigenous students.<sup>240</sup>
- 2.214 The College is working to address this issue by using an accelerated literacy program developed by the CDU.<sup>241</sup> It was a method which could be adapted for VET courses through to science education.<sup>242</sup>
- 2.215 The Committee also received evidence from Rio Tinto Alcan of the success of the Western Cape College in Weipa which has increased the number of Aboriginal year 12 graduates from zero in 2001 to 28 in 2003 and substantially increased its Aboriginal attendance. Rio Tinto Alcan also drew attention to its school-to-work program with the College:  
The program provides school-based traineeships, apprenticeships and scholarships to ensure that local students have strong career prospects, both within and beyond our business.<sup>243</sup>

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238 Ninti One Ltd, *Submission 88*, p. 4.

239 Queensland Government, *Submission 219*, p. 35.

240 Kormilda College, *Submission 174*, p. 13.

241 Dr Helen Spiers, Principal, *Committee Hansard*, Darwin, 18 August 2014, p. 66.

242 Dr Helen Spiers, *Committee Hansard*, Darwin, 18 August 2014, p. 71.

2.216 The Committee was told by the Western Cape Regional Partnership Agreement that Aboriginal people have a desire to participate in the workforce for a number of reasons:

I meet with and talk to a vast and very diverse group of Indigenous people. And the aspirations are not so different, in terms of, parents still want their kids to have jobs; parents themselves want to have jobs; parents want their kids to go to schools ... it was very rarely to make money, or profit margins ... but it was often to leave something to their children, or to have some opportunities to perhaps safeguard their country. It is better to be working out on your country – working in rehabilitation, seed collection, fishing; a whole lot of things that you feel you are actually part of rather than divorced from. So it is a very different view of economic development ... But it is still economic development.<sup>244</sup>

2.217 Employing Aboriginal and Torres Strait Islander workforce will not only benefit communities in developing local skills and providing income but also enables companies to reduce overhead expenses associated with fly-in, fly-out workers.<sup>245</sup> An example was provided by the Napranum Aboriginal Shire Council which is building houses in Napranum, Weipa at a saving of around \$70 000 per house:

... the Federal Government allocated \$450 000 per house and the contractor is going for around \$420 000 ... We are able to deliver them from around \$350 000 ...

The saving is because there is no big profit for the council, and there are the other issues I have told you about, such as salaries and wages. If you get the tradesmen from Cairns or Melbourne or somewhere, they ask for premium rates. When we get them from here they are at home, so they do not need any additional accommodation or a living-away-from-home-allowance.<sup>246</sup>

2.218 The Committee is aware of several highly successful Aboriginal owned companies based in Northern Australia, two of which have adopted slightly different strategies in boosting Aboriginal employment.

2.219 Rusca Brothers seeks to source Aboriginal workers from communities near its worksites. For example, when it built a mine service road for Western

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243 Mr Jim Singer, General Manager, Communication and External Relations, *Committee Hansard*, Weipa, 3 July 2014, p. 32.

244 Ms Liz Logan, Co-ordinator, *Committee Hansard*, Weipa, 3 July 2014, pp. 27–8.

245 Queensland Government, *Submission 219*, p. 36.

246 Mr Amos Njaramba, Chief Executive Officer, *Committee Hansard*, Weipa, 3 July 2014, p. 7.

Desert Resources, it included trainee workers from the nearby Borroloola community:

It was 170 kilometres through some of the roughest terrain in the Roper Bar area down to the port. During that time, we were on site from 18 months to two years and we had probably 250 people working for us. Out of those we had 50 per cent Indigenous. Out of those people we had a large number of people who had never worked before from Borroloola community and from the Roper Bar region.<sup>247</sup>

2.220 An outcome of the project was the permanent employment of 16 Aboriginal people from Borroloola to load and operate the iron ore loading facility at Bing Bong Port.<sup>248</sup>

2.221 Rusca Brothers adopts a close mentoring role with its trainee workers and retains 'around 90 or 95 per cent' of its trainees:

The reality is that if somebody is going to leave, we put in a huge amount of effort to keep them. It might be that they go on a little short-term break, but the reality is that we are still touching base with them and we want them back to the [training] centre and then back out to the jobs.<sup>249</sup>

2.222 The company also has a finance section to look after the needs of its workforce even to the extent of arranging two bank accounts for them and ensuring 'that at the end of the day there is money for the direct debits and there are banking opportunities when they are financing cars.' Rusca Brothers has also invested in developing a 100 block housing subdivision at Humpty Doo so it could offer 10 of its workers a housing and land package. A second 100 lot subdivision will have 20 blocks set aside for its workers.<sup>250</sup>

2.223 Another Aboriginal owned company, Northern Project Contracting (NPC) partners with local businesses hoping to leave a legacy of expertise. Originally a drilling contracting company, it is now seeking to diversify as demand for its drilling services from Century Mine declines:

Northern Project Contracting is 100 per cent Indigenous owned by the Waanyi people, who are predominately around Gregory and Doomadgee. It was set up around 10 years ago as a commercial vehicle to drive economic development for that particular language group ...

247 Mr Robert Rusca, *Committee Hansard*, Darwin, 20 May 2014, p. 53.

248 Mr Robert Rusca, *Committee Hansard*, Darwin, 20 May 2014, p. 53.

249 Mr Robert Rusca, *Committee Hansard*, Darwin, 20 May 2014, p. 53.

250 Mr Robert Rusca, *Committee Hansard*, Darwin, 20 May 2014, p. 56.

We turnover approximately \$20 million and 65 per cent of our employees are Indigenous people. As Century is closing, our strategy now is really to distribute our services through a community partnership model, which is where we work with other Indigenous community groups who have similar aspirations to the Waanyi people and help them develop economic opportunities that they may not have been able to develop because of a lack of experience.<sup>251</sup>

2.224 Besides drilling contracting, NPC has a building construction partnership with the Marra Worra Worra, received a commitment from the Department of Defence for a \$10 million building contract, and is seeking to assist Aboriginal communities to export beef into the Chinese market. It is also seeking to diversify into agriculture.<sup>252</sup>

2.225 Many Aboriginal people live in small remote communities distant from major development projects. These people do not necessarily wish to travel to development sites and in fact could provide a stable long-term local workforce. The Northern Land Council (NLC) cautioned that over-reliance on any one particular sector to drive development presented risks and that a vibrant and productive Northern Australia should feature economic activity in a number of diverse industries. The NLC commented that governments and private sector proponents should:

... realise the important role of small, locally based 'niche' industries, such as arts and crafts or ecotourism enterprises – as a driver of local employment and economic development. Collectively, these types of industries can be as important to Aboriginal communities as large-scale developments, which in some cases present risks of delivering royalties and other benefits mostly outside of the community or region they are based in.<sup>253</sup>

2.226 An example of local Aboriginal employment opportunities was provided by NAILSMA which commented that the western Arnhem Land carbon farming project employed on an annual basis up to 400 people.<sup>254</sup>

2.227 Further, a joint project sponsored by Cape York Sustainable Futures and the Australian Government Fisheries Research and Development Corporation has sought to identify Aboriginal business opportunities in the recreational fishing and tourism industry on Cape York Peninsula. It

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251 Mr Bradley Jackson, Managing Director, *Committee Hansard*, Normanton, 2 July 2014, p. 18.

252 Mr Bradley Jackson, *Committee Hansard*, Normanton, 2 July 2014, p. 18.

253 NLC, *Submission 165*, p. 9.

254 Mr Jeremy Russell-Smith, Consultant, *Committee Hansard*, Darwin, 19 August 2014, p. 38.

found that there was a wider range of potential activities besides recreational fishing:

While the cultural aspect would provide a major marketing point for any indigenous business, proposed lodges, camping areas and tours would create enterprises that also involved ecotourism, bird watching and history related activities.<sup>255</sup>

- 2.228 It is clear to the Committee that Aboriginal and Torres Strait Islander Communities have the potential and desire to become involved in the development of Northern Australia in both larger scale projects and smaller local niche business activities. Development of such small-scale businesses would diversify the economy and provide a hedge against the boom and bust cycles of a resource-based economy.

## Sustainability

- 2.229 There have been a significant number of reports into and attempts at developing Northern Australia – see Chapter 1. The Committee is concerned, therefore, that this report does not become one in a long list of reports proposing ways to develop the North. The Committee is encouraged, therefore, by the Government’s resolve to achieve an outcome through the White Paper and beyond.
- 2.230 The key issue in the Committee’s opinion is that any proposal for change must be sustainable – economically, socially, and environmentally.

## Economic Sustainability

- 2.231 This chapter has highlighted several projects which present significant opportunities to develop Northern Australia. That these projects have not proceeded is in part because they have yet to meet the criterion of economic viability.
- 2.232 The Committee agrees with the view that the development of the North should largely be through private sector investment and ingenuity rather than government intervention. If projects are to have long-term viability they must be economically sound and provide an appropriate return to investors without government subsidy.
- 2.233 This is not to say that the provision of infrastructure enablers where government traditionally has had a financial role should not be supported. Often the provision of economic enablers such as key transport, water and

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255 Cape York Sustainable Futures, *Submission 212, Appendix 10: Identifying Indigenous Business Opportunities in the Recreational Fishing Tourism Industry on Cape York Peninsula*, p. 8.

energy infrastructure will open the way to the private sector to invest in development projects.

- 2.234 Increasing the number of viable development projects in Northern Australia will draw people to the North. This population increase will in turn increase the demand for, and economic viability of social infrastructure such as schools, hospitals, and service sector businesses.
- 2.235 There are a variety of impediments to creating economically viable development opportunities and these are discussed in detail in Chapter 4.

## Environmental Sustainability

- 2.236 Concerns have been raised with the Committee that various development projects in Northern Australia had potential to adversely impact the environment.

## Harbour Dredging

- 2.237 Dredging for the proposed South of Embley bauxite project at Weipa was a concern for the Gulf of Carpentaria Commercial Fishermen's Association. It stated that it was likely to lose about 20 per cent of its resource area for grey mackerel and Spanish mackerel.<sup>256</sup>
- 2.238 The Mackay Conservation Group argued that dredging activities at Abbot Point would impact on the Great Barrier Reef through the dispersal of material from the offshore dredging dump site onto the Reef. It proposed that the dredged material should be deposited on land.<sup>257</sup>
- 2.239 North Queensland Bulk Ports Corporation, responsible for Abbot Point, responded that marine material exposed to air on land potentially suffered acid sulphate build-up. It acknowledged that this problem could be managed, but at a cost of between \$140–400 million depending on the location chosen (this compared to \$40 million for offshore disposal). It predicted that its offshore disposal site at 40 metres deep would not be subject to re-suspension of dumped material even in heavy cyclonic events.<sup>258</sup>
- 2.240 The Committee notes that recently there has been a suggestion that the dredge spoil be dumped in a disused salt works near Bowen.<sup>259</sup>

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256 Mr Gary Ward, Chairman, *Committee Hansard*, Georgetown, 2 July 2014, p. 30.

257 Mrs Patricia Julien, Research Analyst, *Committee Hansard*, Mackay, 31 May 2014, p. 37.

258 Mr Bradley Fish, Chief Executive Officer, *Committee Hansard*, Mackay, 31 May 2014, p. 42.

259 The Australian, 30 August 2014, *Fix found to reef fears over Abbot Point dredging*, <[www.theaustralian.com.au/national-affairs/state-politics/fix-found-to-reef-fears-over-abbot-point-dredging/story-e6frgczx-1227041833763](http://www.theaustralian.com.au/national-affairs/state-politics/fix-found-to-reef-fears-over-abbot-point-dredging/story-e6frgczx-1227041833763)> September 2014.

- 2.241 The Committee notes that the issue of dredging at Abbot Point has resulted in ongoing vigorous debate and comprises part of the terms of reference for an inquiry into the Great Barrier Reef being conducted by the Senate Environment and Communications References Committee. That committee is due to report in early September 2014.

### Mining Developments

- 2.242 The Mackay Conservation Group opposed coal mining in the Galilee Basin because it, and associated railway works, would result in loss of biodiversity and dust pollution from open coal rolling stock. It was also critical of the environmental offsets program because under the program offsets had a limited life so there was the potential for a particular offset to be used more than once.<sup>260</sup>

### Use of Water

- 2.243 Concerns have been raised about the IFED mixed broad acre agriculture proposal near Georgetown:
- that it was unviable because it was using soils which were ‘quite unsuitable because of its shallow and infertile nature’;<sup>261</sup>
  - its water allocation had the potential to use all the water allowed for the Gilbert River catchment, thereby denying water for other potential irrigation projects on the good soils in the catchment;<sup>262</sup> and
  - its use of water could adversely impact the prawn industry in the Gulf of Carpentaria – as an example, it was alleged that damming the Ord River had adversely affected prawn harvests.<sup>263</sup>
- 2.244 The Committee notes that detailed soil testing in the proposed IFED irrigation precinct has yet to be done.<sup>264</sup>
- 2.245 Regarding the second point, IFED stated that it proposed to use ‘less than 10 per cent of the flood flows out of the Gilbert catchment’ and that it only diverted water when the rivers were in flood.<sup>265</sup>
- 2.246 Regarding the potential impact on fisheries due to restricting water flow, CSIRO stated:

260 Mrs Patricia Julien, Research Analyst, *Committee Hansard*, Mackay, 31 May 2014, pp. 34, 35.

261 Mr Greg Ryan, Gilbert River Working Group Committee, *Committee Hansard*, Georgetown, 2 July 2014, p. 21.

262 Mr Greg Ryan, *Committee Hansard*, Georgetown, 2 July 2014, p. 22.

263 Mr Andrew Prendergast, General Manager, Prawn Division, Austral Fisheries, *Committee Hansard*, Georgetown, 2 July 2014, pp. 30, 33.

264 Mr Greg Ryan, *Committee Hansard*, Georgetown, 2 July 2014, p. 28.

265 Mr David Hassum, *Committee Hansard*, Brisbane, 20 June 2014, p. 13.

It is not simply the amount of fresh water coming into estuaries that determines their value as fishery breeding grounds; it is the timing, when it comes in. So the reference to the impact of the Ord River scheme is that it is continually releasing water during the dry season, and that is diluting the estuarine environment, so that it does not become salty enough for certain things to happen. At other times of year, in other places, restricting the amount of fresh water going into the estuary would have a negative impact on the breeding of a range of fishery species. It is not simply a matter of saying: 'Is holding back water, or releasing water, into estuaries good or bad?' The answer is: it depends on the dynamics of the fishery and when the water is being released or when it is being held back.<sup>266</sup>

2.247 The Committee sought further information from Griffith University.

2.248 The key points in Griffith University's submission were that the wet-dry tropical rivers had highly variable flows between seasons, and between years. Consequently their species had become highly adapted to the conditions, with the result that:

Changes in flow as a result of water extraction are therefore highly likely to have significant effects on species inhabiting these systems. In order to minimise effects, the following issues need to be kept in mind:

- The need for longitudinal connectivity of rivers from estuaries to headwaters to allow fish species to migrate
- Continued floodplain and saltflat flooding for extended periods during the wet season to maintain critical habitat and food sources for fish species
- Minimising barriers on floodplains that may restrict flow and species movement
- Maintaining early wet season flows to reduce hypersaline conditions in estuaries that have developed over the dry season
- Freshwater flows bring nutrients to the nutrient-depauperate coastal waters, fuelling the productivity of these waters.<sup>267</sup>

2.249 Further, the use of mean annual flow amounts for water allocation was inappropriate – the median values were more meaningful. For example, for the Gilbert River:

January mean values are 91 564 ML while median values are 14 943 ML. So under a scenario of, for example, ~35% of mean annual flow extracted, this would mean that in 40% of years all or

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266 Dr Peter Stone, *Committee Hansard*, Brisbane, 30 May 2014, p. 20.

267 Professor Michele Burford, Australian Rivers Institute, *Submission 307*, p. 1.

almost all of the water would be extracted ... leaving nothing for the functioning of the river that year.<sup>268</sup>

- 2.250 The sustainable use of aquifers was raised by CSIRO. It identified some 120 000 hectares in Northern Australia which could be sustainably irrigated using 'fill and spill aquifers' – those that renew themselves annually.

One of the challenges in using groundwater resources is that a lot of aquifers have very slow water dynamics. So if you remove a lot of water in a decade, the impacts of that might not become apparent for many decades. That poses something of a challenge to sustainably managing those aquifers. It becomes much simpler if the aquifers respond to water addition and subtraction very quickly. Basically, you can tell how that aquifer is handling the various water inputs and outputs pretty easily.<sup>269</sup>

- 2.251 The CSIRO also drew attention to the Great Artesian Basin Sustainability Initiative (GABSI). This was designed to address the uncontrolled release of water from the Great Artesian Basin through a cap and pipe program. The program had the aim of preserving volumes of water in the aquifer, but more importantly it was preserving the groundwater pressure.<sup>270</sup> Funding for the program had been cut before it had been completed.
- 2.252 The Committee notes the recent announcement by the Minister for the Environment, that as part of the approval process for the Carmichael Coal Mine project in the Galilee Basin, 730 GL of water were to be 'returned to the Great Artesian Basin every year for five years.'<sup>271</sup>
- 2.253 The Committee concludes that large-scale extraction of water from the river systems and aquifers in Northern Australia needs to be preceded by thorough scientific evaluation.

## Conservation Benefits

- 2.254 Not all possible developments in Northern Australia have potential to adversely affect the environment. Indeed some have the potential to contribute to conservation. As noted above, the opportunity to harvest feral animals such as camels, and use introduced woody weeds as a

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268 Professor Michele Burford, *Submission 307*, p. 2.

269 Dr Peter Stone, *Committee Hansard*, Brisbane, 30 May 2014, p. 17.

270 Dr Peter Stone, *Committee Hansard*, Brisbane, 30 May 2014, p. 18.

271 Hon. Greg Hunt MP, Minister for the Environment, *Media Release, Strictest Conditions on Carmichael Coal Mine Project*, 28 July 2014,

<[www.environment.gov.au/minister/hunt/2014/mr20140728.html?utm\\_source=mins&utm\\_medium=rss&utm\\_campaign=feed](http://www.environment.gov.au/minister/hunt/2014/mr20140728.html?utm_source=mins&utm_medium=rss&utm_campaign=feed)> July 2104.

biofuel feedstock could significantly improve the environment. In addition, carbon farming assists in improving biodiversity.

## Biosecurity

- 2.255 Broadscale agriculture relying on monoculture, and increased concentrations of stock animals, because of live exports, raises the possibility of outbreaks and proliferation of pests and diseases. The Department of Agriculture stated:
- Our favourable pest and disease status underpins the agriculture sector's ability to export, and effective management of biosecurity ensures that we can maintain the status ... Northern Australia's remoteness and a relative lack of development have provided a natural barrier to exotic pests and diseases. More economic activity and movement of people and materials in Northern Australia will increase the risk of pests and diseases being introduced and spreading throughout Australia. Increased biosecurity efforts will be required, involving collaboration across governments, industry and communities.<sup>272</sup>
- 2.256 The Department stated that targeted surveillance was the key to ensure pests and diseases did not enter or establish themselves, and in maintaining access for Australia's agricultural produce to international markets. It drew attention to its Northern Australia Quarantine Strategy which engaged Aboriginal and Torres Strait Islander communities in actively managing biosecurity. It noted that the Strategy had '40 fee-for-service contracts' equating to 'approximately 10 full-time equivalents' worth of contract services for delivery by third party Aboriginal and Torres Strait Islander rangers.'<sup>273</sup>
- 2.257 The Weipa Town Authority, nevertheless, was concerned at recent quarantine staff reductions. It stated that staffing in the Cape York region had been halved to one officer. It considered that five staff would be needed to provide adequate quarantine coverage.<sup>274</sup>
- 2.258 Similar views were expressed by the Wet Tropics Management Authority:
- ... the [biosecurity] system, as such, is intellectually sound, but I fear that it is under resourced. All the biosecurity officials I meet

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272 Ms Sally Standen, Assistant Secretary, Governance Division, *Committee Hansard*, Canberra, 21 March 2014, p. 29.

273 Department of Agriculture, *Submission 238*, pp. 16, 17.

274 Mr Richard Noonan, Deputy Chair, *Committee Hansard*, Weipa, 3 July 2014, p. 15.

are very dedicated to the cause, but nevertheless things continue to slip through.<sup>275</sup>

## Conclusion

2.259 In this chapter, the Committee has identified in broad terms the opportunities for developing Northern Australia and discussed some specific projects. Following Chapters provide more detail on specific projects and identify some of the impediments to Northern Australia's development.

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275 Mr Andrew Maclean, Executive Director, *Committee Hansard*, Cairns, 28 April 2014, p. 55.

## Development Proposals

### Overview

- 3.1 The Committee has received many proposals for major capital infrastructure developments which would require direct government funding for facilitation.
- 3.2 This chapter lists these proposals and briefly identifies preconditions needed for them to proceed. The proposals are listed by category, then alphabetically. The projects described in this chapter are priority-listed in Chapter 5.

### Road Infrastructure Proposals

- 3.3 Roads are the vital connection for service delivery and the transport of produce between regional towns and centres across the nation. The condition of roads in the North is variable, with many being unsealed, or partially sealed, and subject to seasonal flooding.<sup>1</sup>

### National Highways and Major Arterial Roads

- *Bruce Highway* – upgrading for flood mitigation, safety and capacity improvement north and south of Mackay and the provision of a dual carriageway between Edmonton and Gordonvale would sustain major developments north of Cairns and secure access to southern ports during severe weather events.<sup>2</sup> Federal funding of \$6.7 billion has been allocated

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1 Australian Government, *Green Paper on Developing Northern Australia*, Canberra 2014, p. 33.

2 Mr Andre Wessells, Interim Chief Executive Officer, Regional Development Australia (RDA) Mackay–Isaac–Whitsunday, *Committee Hansard*, Mackay, 31 March 2014, pp. 1–2; Mr Tim Miles, Chair, Mackay Region Chamber of Commerce, *Committee Hansard*, Mackay, 31 March

for upgrades over 10 years which include \$3 billion for north Queensland.<sup>3</sup>

- **Central Arnhem Highway** – Katherine to Nhulunbuy, Northern Territory – upgrading, with further upgrades of the Stuart Highway, would support community and industry development after the closure of Rio Tinto Alcan’s bauxite refinery in late 2014.<sup>4</sup>
- **Great Northern Highway** – Pilbara and Kimberley region to Port Hedland, Western Australia – upgrading would improve the Pilbara-Kimberley road network. Federal funding of \$307.8 million has been allocated for upgrading.<sup>5</sup>
- **Hann Highway** – between Lynd Junction and Hughenden, Queensland – upgrading an unsealed 105 km section, and 35 km on the Torrens Creek to Aramac Road, would provide a continuous sealed route from Cairns to Melbourne via Bourke, in central West New South Wales, at an estimated cost of \$150 million. This would reduce travel time from the North to Melbourne by two days, diverting traffic from the heavily used Bruce Highway coastal route, and enable the use of triple (multi-combination) road trains.<sup>6</sup>
- **Outback Highway** – Laverton, Western Australia to Winton, north Queensland, via Alice Springs and Boulia – upgrading 1700 km would enhance regional productivity, consolidate the mining and freight sector, improve market access in remote shires and Aboriginal communities, and establish a new adventure self-drive tourism route. Federal funding of \$33 million has been allocated for upgrading 230 km.<sup>7</sup>
- **Peninsula Development Road** – Weipa to Bamaga, Cape York – upgrading would improve access to land for agriculture and markets for primary produce, with enhanced prospects for viable economic development in remote Aboriginal and Torres Strait Islander

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2014, p. 54; Mr Trent Twomey, Chair, Advance Cairns, *Committee Hansard*, Cairns, 28 April 2014, pp. 3, 4.

3 Hon. Warren Truss MP, *Submission 239*, p. 3; Premier of Queensland, *Submission 219*, p. 66.

4 Mr Djawa Yunupingu, Traditional Owner, Gumatj Aboriginal Corporation and Miwatj Employment and Participation (MEP) Ltd, *Committee Hansard*, Nhulunbuy, 21 May 2014, p. 1.

5 Chamber of Minerals and Energy, *Submission 93*, p. 22; Hon. Warren Truss MP, *Submission 239*, p. 3.

6 Flinders Shire Council, *Submission 12.1*, pp. 1-2; Councillor Greg Jones, Mayor, Flinders Shire Council, *Committee Hansard*, Townsville, 2 April 2014, p. 17; *Exhibit 86: Etheridge Shire and Flinders Council Project – Upgrade of Hann Highway (Pave and Seal)*.

7 Ms Helen Lewis, General Manager, Outback Highway Development Council, *Committee Hansard*, Alice Springs, 19 May 2014, p. 11.

communities.<sup>8</sup> Funding is being allocated for road and infrastructure upgrades in the Cape York region.<sup>9</sup>

- ***Roper, Stuart and Barkly, Plenty and Sandover Highways*** – Mataranka, central Northern Territory to Mount Isa, central Queensland – upgrading of these roads would support development of the region’s oil, gas and mining and cattle industries. An estimated \$2 billion is required for road upgrades and associated infrastructure.<sup>10</sup>
- ***Tanami Road*** – Halls Creek to Yuendumu – upgrading a 750 km section at an estimated total cost of up to \$1 billion would provide a freight corridor from the Kimberley region to southern markets, reduce mining operating costs, secure strategic defence interests, and improve safety and access for tourism. Federal funding of \$110 000 is required to assess the feasibility of development as a toll road.<sup>11</sup>
- ***The Savannah Way*** – Cairns to Broome through Cape York’s Gulf Country – also known as the Gulf Developmental Road, upgrading and sealing would improve safety, stimulate tourism-related development, community renewal, and improve access for biosecurity control and strategic defence interests.<sup>12</sup>

## Other Arterial Roads

- ***Buntine Road, Barkly and Murrniji Stock Routes, Duncan and Buchanan Highways*** – linking Carpentaria Shire, Queensland, to the Stuart Highway in the Northern Territory’s Barkly and Victoria River regions, then west to the Kimberleys in Western Australia and south to South Australia – these roads are core arterial routes for northern region beef producers. Upgrading of unsealed and worn tar surfaces in the network would enable year-round road access and reduce travel times resulting in benefits for the cattle industry and tourism.<sup>13</sup> Federal funding would be required for the road upgrade, at a cost of around \$900

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8 Cairns Regional Council, *Submission 40*, p. 11.

9 Hon. Warren Truss MP, *Submission 239*, p. 3.

10 Hon. Adam Giles MLA, Chief Minister, Northern Territory Government, *Committee Hansard*, Darwin, 20 May 2014, pp. 9, 10; Association of Mining and Exploration Companies Inc., *Submission 182*, p. 5.

11 Shire of Halls Creek, Tanami Action Group, Kimberley Cattlemen’s Association and Central Kimberley Chamber of Commerce, *Submission 103*, p. 3.

12 Gulf Savannah Development Inc., *Submission 33*, pp. 2–3; RDA Far North Queensland and Torres Strait Inc., *Submission 56*, p. 7; Research Australasia, *Submission 39*, pp. 3–4; Burke Shire Council, *Submission 16*, p. 4.

13 Mr Troy Setter, Chief Executive Officer, Consolidated Pastoral Company Pty Ltd (CPC), *Committee Hansard*, Darwin, 19 August 2014, pp. 8–9; Mr David Warriner, President, Northern Territory Cattlemen’s Association; *Committee Hansard*, Darwin, 19 August 2014, p. 22.

million for the Northern Territory arterial network.<sup>14</sup> Provision of a cattle transfer and trucking yard on the route south of Alice Springs or near Port Augusta would improve driver safety and animal health, at an estimated cost of \$3 to \$5 million.<sup>15</sup>

- ***Burke Development Road*** – Normanton to Cloncurry, Carpentaria Shire, Queensland – upgrading 60 km of the old ‘Beef Road’ with a new bridge over the Flinders River would provide maximum benefit to the industry for minimum investment.<sup>16</sup>
- ***Cape Leveque Road*** – Broome to Dampier Peninsula, Western Australia – sealing 80 km would support new tourism opportunities and investment in regional Aboriginal communities.<sup>17</sup>
- ***Clermont-Alpha and Peak Downs Roads, and Bowen Developmental Road*** – Galilee and the Bowen Basin area, central/north Queensland – upgrading these roads to mitigate against flooding would support mining developments, improve export access for fresh produce in the Whitsunday region and enhance tourism.<sup>18</sup> Upgrading the highway between Clermont and Roma would allow large road trains to travel north to south, thereby reducing freight costs and heavy vehicle traffic on the Bruce Highway.<sup>19</sup>
- ***Kakadu Roads*** – Northern Territory – providing all-year access for safe transit throughout the national park would assist the tourism industry.<sup>20</sup>
- ***Kata Tjuta-Docker River Road*** – Northern Territory – upgrading would enable wet weather access, improve safety and facilitate development of the camel meat and tourism industries.<sup>21</sup>
- ***Kuranda Range Road*** – Cairns and the Atherton Tablelands – providing a dual carriageway route would remove a major road bottleneck and improve freight transfer and facilitate tourism development.<sup>22</sup>

14 Estimates at 2005. Exhibit 99: Northern Territory Cattlemen’s Association, *NT Road Network Brief 2005*, p. 4.

15 CPC, *Submission 312*, p. 4; Ms Tracey Hayes, Chief Executive Officer, Northern Territory Cattlemen’s Association, *Committee Hansard*, Darwin, 19 August 2014, pp. 22–23; Mr Setter, CPC, *Committee Hansard*, Darwin, 19 August 2014, p. 9.

16 Carpentaria Shire, *Submission 7*, p. 5.

17 Shire of Broome, *Submission 240*, p. 5.

18 Councillor Anne Baker, Mayor, Isaac Regional Council and Mr Scott Waters, Chief Executive Officer, Whitsunday Regional Council, *Committee Hansard*, Mackay, 31 March 2014, pp. 7–8, 13.

19 Commonwealth Scientific and Industrial Research Organisation (CSIRO), *Submission 108*, p. 17.

20 Mr Anthony Hayes, Global Managing Director, AAT Kings, *Committee Hansard*, Darwin, 20 May 2014, p. 79.

21 Mr Alexander Knight, Manager, Land and Culture, Ngaanyatjarra Council, *Committee Hansard*, Alice Springs, 19 May 2014, p. 24.

- ***Tom Price, Karratha and Karijini Roads*** – Pilbara region, Western Australia – sealing for improved access and safety. Sealing the last 10 km before Karijini would develop eco-tourism in the Karijini National Park.<sup>23</sup>
- ***Weipa–Bertiehaugh Road*** – Western Cape, Queensland – a new 50 km road and causeway would complete a loop road from the central cape through Weipa to improve access and stimulate the local tourism industry.<sup>24</sup>

## New Major Roads

- ***Douglas–Daly and Litchfield to Darwin Loop*** – would create a loop road through Kakadu to Pine Creek, Edith Falls, Katherine Gorge, then back to Darwin bypassing the Stuart Highway. The link would facilitate new tourism investment and agricultural ventures throughout the region.<sup>25</sup>
- ***Port of Karumba to Cardwell*** – would connect the north-west Cape to the north-east coast of Queensland via green corridors and provide improved access to developed areas, existing roads and an alternative safe route during flooding.<sup>26</sup>
- ***West–East link, Pilbara to south Tanami Road*** – would provide a more direct route from Port Hedland via Marble Bar and Telfer to Alice Springs, and provide access to potential hydrocarbon and mineral provinces.<sup>27</sup>

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22 Councillor Tom Gilmore, Mayor, Mareeba Shire Council, *Committee Hansard*, Cairns, 29 April 2014, p. 8; Chamber of Commerce and Industry Queensland (CCIQ), *Submission 107*, p. 13, Cairns Regional Council, *Submission 40*, p. 11.

23 Mr Rhys Edwards, Vice Chairman, Tom Price and Paraburdoo Business Association, *Committee Hansard*, Tom Price, 8 April 2014, p. 11.

24 Mr Richard (Stretch) Noonan, Deputy Chair, Weipa Town Authority, *Committee Hansard*, Weipa, 3 July 2014, pp. 10, 15; Mr Vance Wallin, President, Western Cape Chamber of Commerce, *Committee Hansard*, Weipa, 3 July 2014, pp. 19, 24–5.

25 Mr Steven Rose, Member, Katherine Region, Chamber of Commerce Northern Territory, *Committee Hansard*, Katherine, 22 May 2014, p. 38.

26 Great GreenWay Tourism, *Submission 80*, p. 1.

27 The route would be 299 km of sealed road from Port Hedland, 1326 km east on unsealed tracks to the sealed section of the Tanami Road, 117 km to the Stuart Highway (sealed road), and 20 km south to Alice Springs, or a further 48 km along Stuart Highway to join the Plenty Highway. Dr Roger Higgins, *Committee Hansard*, Port Hedland, 10 April, 2014, pp. 21–3; Port Hedland Dental Care, *Submission 203*, pp. 4–5.

## Rail Infrastructure Proposals

3.4 The Committee has received several proposals for major rail infrastructure to enhance freight efficiency by linking primary production and mining centres with ports.

- ***Darwin–Alice Springs Upgrade*** – the construction of the rail link in 2004 has opened opportunities for the mining sector. It was noted, however that the single rail line does not have heavy-load bearing capacity and there is limited capability to meet expanded freight demands. To support growth, passing lanes are required on the rail link and bulk handling facilities at Darwin’s multi-user port should be upgraded to address loading bottlenecks.<sup>28</sup>
- ***Link Tennant Creek to Mount Isa, Extension to Townsville Port*** – in addition to the upgrade of the Adelaide–Darwin line, the long planned extension of the rail line through Tennant Creek to Mount Isa, with further construction west from Katherine railhead to the Kimberleys, would complete a trans-north rail artery for tourism and produce. The 600 km Tennant Creek to Mount Isa link would provide alternative and direct access to markets north of Darwin for minerals or primary produce and enhance regional mining development around Wonorah near Tennant Creek and Burketown in Queensland. Further investment would be required to extend the existing eastern rail corridor direct to Townsville Port, to address existing bottlenecks associated with its present conclusion at Stuart, a suburb just west of Townsville.<sup>29</sup>
- ***Port Carpentaria Rail Project*** – linking Cloncurry via Normanton to a new offshore loading facility west of Karumba. A possible additional link would be from Mount Isa north to Gunpowder. The export of minerals through the proposed Gulf of Carpentaria port facility would be more efficient than through Townsville Port, enabling that port to be redeveloped and possibly replaced with a new deep water port nearby at Cape Cleveland. The projected cost was \$1.5 billion.<sup>30</sup>
- ***Project Iron Boomerang*** – an east–west transcontinental corridor accommodating a 3370 km heavy haul railway linking Queensland’s

28 Mr Greg Bicknell, Chief Executive Officer, Chamber of Commerce Northern Territory, *Committee Hansard*, Darwin, 18 August 2014, pp. 34-5; Northern Territory Government, *Submission 92*, p. 5

29 Mount Isa and Townsville Economic Zone (MITEZ) Inc, *Submission 32*, p. 4; Tennant Creek Regional Economic Development Committee, *Submission 100*, pp. 1-4; Northern Territory Government, *Submission 92.2*, p. 5; Mr Glendon Graham, Chief Executive Officer, MITEZ, *Committee Hansard*, Mount Isa, 3 April 2014, pp. 3-5.

30 Mr David Fletcher, Chief Executive Officer, Carpentaria Rail, *Committee Hansard*, Mount Isa, 3 April 2014, pp. 28, 29.

Bowen Basin and the Pilbara mining region with iron ore smelters at each end. Coal from the east would be railed to a new smelter at Newman, Western Australia and iron ore from the west would be railed to another smelter at Abbot Point, Queensland. The rail project would cost \$18 billion and be funded through foreign investment, although Government facilitation was sought. The corridor would be available as a multi-user services corridor.<sup>31</sup>

- *Triangular Link Mount Isa-Karumba-Townsville* – this would establish a key transport corridor for major mining, cattle and agricultural development in the Gulf Country region of Queensland.<sup>32</sup>

## Regional Transport Hubs

3.5 Some regional communities anticipated that new road and rail infrastructure could host service corridors and transform population centres into regional service and transport hubs. Possible sites for regional hub planning and investment included:

- *Cloncurry* – situated at the junction of several highways in north-west Queensland – a rail extension to Cloncurry from the proposed Tennant Creek to Townville transport corridor would provide a regional service centre for mining and minerals processing, for the beef cattle industry and for the development of an industrial precinct.<sup>33</sup>
- *Katherine* – located on the road corridor between the Northern Territory and Western Australia and the rail corridor between Darwin and Adelaide – the town will benefit from the planned Stage 3 extension of the Ord irrigation development into the Northern Territory.<sup>34</sup> Upgrading existing and new road and rail infrastructure at the Katherine rail head would establish the town as a major transport/intermodal freight hub and gateway to Darwin. Implementation of a heavy vehicle movement strategy and development of a CBD bypass with second bridge crossing would address current and future development needs.<sup>35</sup>

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31 East West Lines Park Ltd, *Submission 6*, pp. 2–8; Mr Shane Condon, Project Founder and Managing Director, Project Iron Boomerang, East West Line Parks Limited, *Committee Hansard*, Brisbane, 20 June 2014, p. 37.

32 Ms Lara Wilde, Chief Executive Officer, Gulf Savannah Development, *Committee Hansard*, Cairns, 28 April 2014, p. 36.

33 MITEZ Inc., *Submission 32*, pp. 3–4, 12.

34 Northern Territory Planning Commission, *Submission 58*, pp. 4–5.

35 Mrs Neroli Dickens, Director, Works and Services; Deputy Chief Executive Officer, Katherine Town Council, *Committee Hansard*, Katherine 22 May 2014, p. 8.

- **Tennant Creek** – on the Stuart Highway, south of the intersection with the Barkly Highway and 1000 km south of Darwin and 500 km north of Alice Springs – the town could function as logistical hub on a rail and services corridor. This could include a gas pipeline and possible connection to the national electricity grid between Tennant Creek and Mount Isa, with a new railway line between Tennant Creek and Kununurra in Western Australia.<sup>36</sup> The Northern Territory Planning Commission was developing a new strategic land-use plan for Tennant Creek to facilitate industry diversification.<sup>37</sup>
- **Townsville** – an existing key transport hub on the north Queensland coast – investment in increased rail connectivity to the Townsville Port and associated regional ports in Lucinda and Karumba, would meet increasing freight demand.<sup>38</sup> Upgrading the access road to Townsville Port to accommodate triple road trains would benefit the Gulf Country livestock trade.<sup>39</sup>

## Ports and Airports

3.6 Across Northern Australia access to sea and airports are vital for industries and communities, which are more dependent on them for import and export of products and services than are other parts of Australia.<sup>40</sup>

### Sea Ports

3.7 Ports may be developed privately to meet the needs of a specific industry, or be funded through partnership with governments to enable multi-user access.<sup>41</sup>

### New Ports and Significant Upgrades

- **Abbot Point Port** – re-development of the port, which is near Bowen Basin, as a multi-commodity deep water port with rail infrastructure and associated industry precinct.<sup>42</sup>

36 Tennant Creek Regional Economic Development Committee, *Submission 100*, p. 1.

37 Northern Territory Planning Commission, *Submission 58*, p. 5, and *Attachments E & F: Tennant Creek Land Use Framework*.

38 RDA Townsville and North West Queensland Committee, *Submission 54*, p. 3, 54, *Attachment B: 'Draft Regional Roadmap 2013-16'*, p. 19.

39 Councillor John Wharton, Mayor, Richmond Shire Council, *Committee Hansard*, Georgetown, 2 July 2014, p. 10.

40 Australian Government, *Green Paper on Developing Northern Australia*, Canberra 2014, p. 33.

41 North Queensland Bulk Ports, *Submission 57*, p. 7.

- **Darwin Harbour Upgrade and New Port**—scoping is needed for expanded shipping facilities at East Arm Wharf, a new port at Middle Arm, and rail extension to a further new port at Glyde Point. Cost estimates are \$350 million for a new bulk berth, \$15 million for a hardstand area and refrigerated containers, with \$12 million for a new container crane. These upgrades would support growth in the oil, gas and mining industries and facilitate freight movements throughout Asia.<sup>43</sup> A fuel bunkering facility with new cruise berths would support tourism.<sup>44</sup>
- **Bulk Minerals Port, Gulf of Carpentaria** – part of the Carpentaria Rail proposal, the new facility would be located near the Port of Karumba. The project would comprise a deep water offshore loading facility with a 40 km trolley tramway and an artificial loading island. Onshore facilities would include a balloon loop and rail unloader with dedicated covered storage for port. The port would initially service the mining industry, with an annual loading capacity of five to 10 million tonnes. Construction of a further modern facility at Cape Cleveland near Townsville would enable re-development of the historic Townsville Port site as an eco-marine leisure precinct. The project would require State and Federal government facilitation.<sup>45</sup>
- **Marine Support Facility, Beagle Bay**—a joint partnership between the engineer/developers and the Djabera Djabera Native Title holders to develop a low cost onshore wharf facility servicing the floating liquefied natural gas (FLNG) facility at Browse Bay. The project would have a heavy load out capability without expensive dredging by utilising the hydraulic capacity of Kimberley tides. The current facility and development site is 100 nautical miles away from Browse Bay and could cover excess capacity at Broome, Karratha, Port Hedland or Darwin ports. Upgrades of 130 km of road and basic marine infrastructure would be required to progress this port development. Government facilitation of this smaller project would significantly enrich the local economy.<sup>46</sup>

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42 Mr Scott Waters, Whitsunday Regional Council, *Committee Hansard*, Mackay, 31 March 2014, pp. 10–11; North Queensland Bulk Ports, *Submission 57*, pp. 4, 8–9; Premier of Queensland, *Submission 219*, p. 21.

43 Mr Gary Nairn, Northern Territory Planning Commission, *Committee Hansard*, Darwin, 20 May 2014, p. 19; Hon. Adam Giles MLA, Northern Territory Government, *Committee Hansard*, Darwin, 20 May 2014, pp. 9, 10.

44 Tourism and Transport Forum, *Submission 237*, p. 5.

45 Carpentaria Rail, *Submission 65*, pp. 1–2, *Attachment A: Project Update 3 Carpentaria Rail, Port Carpentaria Railway Project*, p. 3.

46 Beagle Bay Marine Pty Ltd, *Submission 211*, pp. 1–2, 4, 9.

- **Port Hedland Multi-cargo Development** – planned for the inner harbour at Lumsden Point, two new general cargo berths and the development of a ‘Pilbara Fabrication and Services Common User Facility’ would provide for offshore shipping service and repair. Outer harbour development, formerly progressed as a dual project with BHP, would require private investment.<sup>47</sup> Federal seed funding would enable progression of the Pilbara Common User project.<sup>48</sup>

### Regional Ports—Queensland

- **Karumba Port** – currently used for the transshipment of zinc ore via a pipeline from Century Mine (closing in 2015), an upgraded port with deep water access and an offshore direct loading/unloading facility would support high volume trade between Queensland’s Gulf region and Asia.<sup>49</sup> Upgraded onshore refuelling, watering and loading facilities would develop the commercial fishing industry.<sup>50</sup>
- **Mackay Port** – upgrade of existing multi-use facilities at Mackay Port was identified as critical to sustainable development of diversified markets in the region.<sup>51</sup>
- **Mapoon, Aurukun and Mourilyan Ports** – upgraded infrastructure, ports associated rail and road infrastructure, would support production increases in the sugar industry in these remote western Cape York communities.<sup>52</sup>
- **Port of Cairns** – a major upgrade of maritime infrastructure including wharf expansion, barge ramp facilities and a heavy lift container crane to enable increased trade with Papua New Guinea and south-west Pacific nations.<sup>53</sup> Channel expansion would enable berthing of large cruise ships by 2025, potentially generating \$436 million over the next 25 years. The port also has capacity to further accommodate the development of HMAS Cairns.<sup>54</sup>
- **Townsville Port and Gladstone Ports** – planning and upgraded port infrastructure for these key regional ports, with associated investment in

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47 Mr John Finch, General Manager, Operations; and Harbour Master, Port Hedland Port Authority, *Committee Hansard*, Port Hedland, 10 April 2014, pp. 2-3.

48 Town of Port Hedland, *Submission 217*, p. 8.

49 Gulf Savannah Development Inc., *Submission 33*, pp. 2-3.

50 Mr Gary Ward, Chairman, Gulf of Carpentaria Commercial Fishermen’s Association, *Committee Hansard*, Georgetown, 2 July 2014, p. 31.

51 North Queensland Bulk Ports, *Submission 57*, pp. 4, 8-9.

52 Canegrowers, *Submission 209*, pp. 10-11.

53 Cairns Regional Council, *Submission 40*, p. 13.

54 Mr Brett Moller, Chairman, Ports North, *Committee Hansard*, Cairns, 28 April 2014, p. 21.

access roads and rail, would sustain current economic activity and support future development and growth.<sup>55</sup>

- **Weipa Port** – a deep water port on the Western Cape, the facility is currently used predominantly for export of bauxite by Rio Tinto.<sup>56</sup> Government investment in a new jetty and marina precinct would provide post mining opportunities for yacht and cultural tourism, and stimulate the recreational and commercial fishing industries.<sup>57</sup> Upgraded and extended loading infrastructure would support the regional timber, live cattle and agricultural industries, and facilitate new mining ventures.<sup>58</sup>

### Regional Ports—Western Australia

- **Port of Wyndham** – requires an upgrade with development of a new barge loading facility in close proximity to the existing wharf. Dredging and docking would cater for larger ships and provide immediate benefits to the community, compared with an alternative proposal to establish a new port at a deep water location.<sup>59</sup>
- **Exmouth Boat Harbour** – built for recreation and fishing, the facilities currently service the oil and gas industry. Government investment is required to upgrade to a multi-user deep anchorage port for naval shipping, to support expansion of Learmonth defence facilities and establish a second-tier supply base in marine servicing for the minerals industry.<sup>60</sup>
- **Broome Port** – Federal funding or private investment of up to \$425 million is required to fund extensions to the wharf.<sup>61</sup> Further upgrades would accommodate larger cruise ships, with a proposed jetty-to-jetty boardwalk and marina complex establishing the town as a tourism destination.<sup>62</sup>

55 CCIQ, *Submission 107*, p. 13; Tracy Lines Consulting, *Submission 216*, pp. 9–10.

56 Premier of Queensland, *Submission 219*, p. 27.

57 Mr Philemon Mene, Mayor, Napranum Aboriginal Shire Council, *Committee Hansard*, Weipa, 3 July 2014, p. 4; Mr Vance Wallin, Western Cape Chamber of Commerce, *Committee Hansard*, Weipa, 3 July 2014, pp. 19, 22, 24.

58 Mr Peter McCulkin, Chair, Cape York Sustainable Futures, *Committee Hansard*, Cairns, 29 April 2014, pp. 32–3; and see North Queensland Bulk Ports, *Submission 57*, p. 7.

59 Mr Anthony Chafer, Chief Executive Officer, Cambridge Gulf Limited, *Committee Hansard*, Kununurra, 7 May 2014, pp. 11–12.

60 Mr Bill Price, Chief Executive Officer, Shire of Exmouth, *Committee Hansard*, Karratha, 9 April 2014, pp. 30–1; Mr Michael Hood, Deputy President, Shire of Exmouth, *Committee Hansard*, Karratha, 9 April 2014, pp. 35–6.

61 Broome Chamber of Commerce, *Submission 125*, p. 3, pp. 8–9.

62 Australia's NorthWest Tourism, *Submission 262*, pp. 5–6.

## Regional Ports—Northern Territory

- **Bing Bong Port** – servicing the McArthur River zinc lead and Roper iron ore mining industries, an upgrade of port facilities, with use of transshipment (bulk barge loading) and improved access to other industries, could open opportunities for direct regional export of livestock and produce to Indonesia.<sup>63</sup>
- **Nhulunbuy (Gove) Port** – on the Gulf of Carpentaria, Gove is a deep water port with bulk handling facilities servicing Rio Tinto Alcan’s bauxite mining. As part of its transition plan for alumina plant curtailment, the company will open its general cargo terminal and other assets to multi-user access. Government investment in upgrades to the port and road infrastructure will enable expansion for commercial fishing, aquaculture and off shore oil and gas exploration and extraction across the Arnhem and Barkly regions.<sup>64</sup>

## Airports

- 3.8 While there are 20 airports located in Northern Australia, flights within the region are limited without connecting from cities further south. Given the distances to be travelled, more fuel must be carried which reduces passenger and freight carriage and impacts on costs and efficiency.<sup>65</sup>
- 3.9 Regional councils called for Federal investment to enable upgrading of air landing strips and installation of refuelling facilities to support larger carriers, both domestic and international.

## Airport Upgrades—Queensland

- **Karumba Airport** – a centre for the seafood industry, Karumba’s airport has no commercial service with all flights leaving from Normanton. Installation of refuelling facilities at the airport would reduce costs for the industry and attract air freight and commercial flights.<sup>66</sup>
- **Mareeba Airstrip** – part of the plan for future development of the Mareeba–Dimbulah region, the upgrade of airport terminals, with

63 Mr William Witham, Manager North West, Chamber of Minerals and Energy of Western Australia, *Committee Hansard*, Perth, 7 April 2014, p. 69; Association of Mining and Exploration Companies Inc., *Submission 182*, p. 6; Mr Julian Malnic, *Submission 207*, p. 1.

64 Mr Djawa Yunupingu, Gumatj Aboriginal Corporation and MEP, *Committee Hansard*, Nhulunbuy, 21 May 2014, p. 1; East Arnhem Regional Economic Development Committee, *Submission 283*, pp. 2-3, 4, 6.

65 Australian Government, *Green Paper on Developing Northern Australia*, Canberra 2014, p. 33.

66 NPF Industry Pty Ltd, *Submission 85*, pp. 9-10.

resurfacing and extension of the air strip, would accommodate light aircraft and freight.<sup>67</sup>

- ***Proserpine Airport*** – an upgrade to facilitate direct international carriers was an identified priority both for tourism development in the Queensland’s Whitsunday region and for local growers to export fresh produce direct to Asian markets.<sup>68</sup>
- ***Thangool Airport Expansion Project*** – expansion and upgrade of Thangool Airport to comply with Federal aviation regulations would alleviate existing capacity constraints. The upgrade was regarded as a regional economic priority for Central Queensland.<sup>69</sup>

### Airport Upgrades—Western Australia

- ***Broome International Airport*** – has the facilities to support international flights but services domestic flights within the same facility. An upgraded capacity would not only support direct international tourism but also reduce isolation and attract labour into the region.<sup>70</sup>
- ***Learmonth Airport*** – a joint civil and defence facility, the airport is the gateway to the Ningaloo Marine Park, Cape Carnarvon, Western Australia. Located near Exmouth and on the flight route between Perth and Broome, there is no direct flight to Learmonth from Broome. An upgrade of domestic airport facilities would increase capacity for regular passenger transport (RPT) services to the Gascoyne mining region, and enable direct flights to and from other tourism destinations in Northern Australia.<sup>71</sup>
- ***Onslow Airport*** – a smaller remote airport in the Pilbara region, Onslow has a new port purpose-built by Chevron to accommodate its interests in the regional hydrocarbon industry.<sup>72</sup> Funds from Chevron and a state government grant recently enabled an upgrade of the airport facilities to accommodate regional charter flights.<sup>73</sup> Formal negotiations for a return Perth/Gascoyne/ Pilbara air service route, to include Onslow, Karratha,

67 Mr Joe Moro, President, Mareeba Chamber of Commerce, *Committee Hansard*, Cairns, 28 April 2014, p. 41.

68 Whitsunday Regional Council, *Submission 140*, pp. 2–3.

69 Regional Development Australia Fitzroy and Central West Inc., *Submission 46*, pp. 17, 18.

70 Broome Circle Inc. *Submission 82*, p. 8; Broome Chamber of Commerce and Industry, *Submission 125*, p. 5; Broome International Airport, Master Plan, <[www.broomeair.com.au/corporate/bia-master-plan/](http://www.broomeair.com.au/corporate/bia-master-plan/)> July 2014 .

71 Visitors to Ningaloo must fly from Broome return to Learmonth via Perth. Shire of Exmouth, *Submission 109*, pp. 2–3.

72 Mr Steve Lewis, Chief Executive Officer, Dampier Port Authority, *Committee Hansard*, Karratha, 9 April 2014, p. 23.

73 Mr Neil Hartley, CEO, Shire of Ashburton, *Committee Hansard*, Tom Price, 8 April 2014, p. 3.

and for Exmouth a work-site direct service would support further offshore oil, gas and mining sector development.<sup>74</sup>

- **Port Headland Airport** – is an international airport with direct weekly flights to Brisbane, Melbourne and Bali, and also servicing the Pilbara region.<sup>75</sup> A \$105 million master plan for re-development as an A-grade International Airport to support mining and tourism would require a Federal investment of \$34 million. The plan incorporates a 50 hectare site for establishment of a permanent defence base.<sup>76</sup>

### Airport Upgrades—Northern Territory

- **Katherine Civilian Airport Upgrade** – RPT services to Katherine community are at risk due to major investment in defence capacity at RAAF Base Tindal, with the airbase now being operated solely by the Federal Government. Funding is required to provide security and tarmac upgrades to support civil air services, with Council requiring \$4-5 million to resume operation.<sup>77</sup> Federal investment in the provision of emergency fire services to a Category 5 international service standard would also support proposals for Katherine to function as an alternative airport to Darwin for international flights.<sup>78</sup>

### Airport Business Precincts

3.10 Some airport upgrade proposals incorporated associated port and business precinct development, in anticipation of enhanced tourism intake and direct export capacity to markets in Asia.

### Queensland

- **Cairns Airport and Enterprise Precinct** – a major tourism gateway, the airport has capacity to freight beef, dairy and horticulture produce direct to Asia. Cairns Airport has approval for development of two precincts: an Aviation Enterprise Precinct and a Commercial Enterprise Precinct. Estimated construction costs are \$921 million, which would contribute \$829 million to Cairns' Gross Regional Product. Government investment

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74 Shire of Exmouth, *Submission 109*, Attachment C: *Economic Development Opportunities for the Gascoyne Region associated with Resource Sector Investment and Expansion Gascoyne Pilbara Project*, November 2011, p. iii.

75 Port Headland International Airport <[www.porthedlandairport.com.au/](http://www.porthedlandairport.com.au/)> August 2014.

76 Town of Port Hedland, *Submission 217*, pp. 7-8.

77 Mrs Neroli Dickens, Katherine Town Council, *Committee Hansard*, Katherine, 22 May 2014, p. 8; Mr Steven Rose, Katherine Region, Chamber of Commerce Northern Territory, *Committee Hansard*, Katherine, 22 May 2014, pp. 36-7.

78 Mr Tony Mayell, Chief Executive Officer, Tourism Northern Territory, *Committee Hansard*, Darwin, 20 May 2014, p. 86; Northern Territory Airports Pty Ltd, *Submission 171*, pp. 2-3.

in private partnerships would allow upgrade of cargo facilities, for example, by establishing an irradiation treatment facility for export of mangoes and lychees.<sup>79</sup>

- ***Mackay Airport and Multimodal Integrated Transport Hub*** – servicing the Whitsunday tourism region and the mining industry at Bowen and Galilee Basins, approval of the Mackay Airport Land Use Plan would facilitate development of the airport precinct as a Central Queensland multimodal integrated transport hub. The development would provide direct commercial opportunities for new passenger air services, freight and logistics, health care services as well as primary industries, the mining and resources industries, building and construction and retail.<sup>80</sup>
- ***Rockhampton Airport, Defence Precinct and Freight Hub*** – upgraded in 2007, the airport has facilities to support large passenger and freight aircraft, including the Boeing 747 passenger craft, the Antonov 124 freighter and the C5 Galaxy military aircraft. The airport has potential to expand domestic services by re-allocation of current defence usages to increased FIFO, charter services and passenger movements. Adjoining land could accommodate a new military defence precinct for expansion of Shoalwater Bay training exercises and provide storage facilities for air freight of Fitzroy Agricultural Corridor produce.<sup>81</sup> Re-classification as an international airport would establish the precinct as an international tourism, defence and air freight hub for the region.<sup>82</sup>
- ***Townsville Airport Hub Expansion*** – there is potential to support a direct international service out of Townsville to Denpasar, a regional airport hub with a capacity for 25 million passengers and connections to Asia.<sup>83</sup> Federal implementation of a regional aviation plan to manage competing industry and business uses of the Townville and the Cairns International Airport would support strategic development. Upgrades and initiatives to attract international airlines to Townsville Airport, such as through reduction of migration fees, may also support growth.<sup>84</sup>
- ***Whitsunday Coast Airport and Export/Enterprise Precinct*** – an upgrade and extension of the airport runway to enable mid-haul and large-haul

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79 North Queensland Airports, *Submission 105*, pp. 4–5, 10, 12–13, 15, 17.

80 North Queensland Airports, *Submission 105*, pp. 8–9, 12–14, and see Mr Stephen Schwer, General Manager, Mackay Tourism, *Committee Hansard*, Mackay, 31 March 2014, p. 31.

81 Councillor Tony Williams, Deputy Mayor, and Mr Rick Palmer, Manager Economic Development, Rockhampton Regional Council, *Committee Hansard*, Brisbane, 20 June 2014, pp. 19–20; Rockhampton Regional Council, *Submission 10.1*, pp. 3–4.

82 Capricorn Enterprise, *Submission 17*, p. 5.

83 Mr Kevin Gill, Chief Operating Officer, Townsville Airport, *Committee Hansard*, Townsville, 2 April 2014, p. 29.

84 CCIQ, *Submission 107*, p. 13.

aircraft would support international tourism while providing additional export capabilities. Plans for brownfield and greenfield development at the 430 hectares airport site, with potential expansion to 1000 hectares, could incorporate an international standard export facility and precinct.<sup>85</sup> Incorporating expansion of the Whitsunday Coast Airport into a wider regional aviation master plan would support this development.<sup>86</sup>

## Western Australia

- ***Derby Airport Logistics Hub*** – upgrading Derby airport as a logistics hub, with the Derby Wharf development, would secure long-term capacity for passenger transfer and material supply to the oil, gas and resources industry, and support agriculture and aquaculture development. The airport currently relies on the Curtin airbase for passenger and freight transferal. The upgrade of Defence capacity at Curtin airbase by the Federal Government makes investment in civilian services at Derby Airport a regional development priority.<sup>87</sup>

## Northern Territory

- ***Darwin Airport Upgrade, Second Airport and Export Hub*** – a major redevelopment plan is in place to transform Darwin city, harbour and airport facilities. This includes a second airport site at Middle Arm to supplement current Defence services based at Darwin Airport.<sup>88</sup> A private sector proposal envisions Darwin Airport as a major international class freight trans-shipping hub with associated development at Kimberley Airport, Kununurra, providing a regional trans-shipping hub for smaller commercial and freighter aircraft. Estimated cost of the Darwin proposal is \$30 million with the anticipated completion date being late 2015.<sup>89</sup>

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85 Mr Scott Waters, Whitsunday Regional Council, *Committee Hansard*, Mackay, 31 March 2014, pp. 8, 13.

86 RDA Mackay-Isaac-Whitsunday, *Submission 145*, p. 4.

87 See Shire of Derby, *Submission 196*, pp. 16–17; Mr Stephen Gash, Chief Executive Officer, Shire of Derby/West Kimberley, *Committee Hansard*, Broome, 5 May 2014, pp. 21–2.

88 City of Darwin, *Submission 42*, p. 3; Mr Gary Nairn, Chairman, Northern Territory Planning Commission, *Committee Hansard*, Darwin, 20 May 2014, p. 19.

89 The Darwin airport concept includes an 'International Standard' perishable and general freight/cargo handling facility, with executive offices, display and promotional facilities and in Flight Catering Centre integrated with an extended passenger terminal. Construction Technology Consulting Group (CTCG), *Submission 236*, pp. 1–10, 15.

## Water Infrastructure Proposals

- 3.11 Northern Australia has high levels of rainfall but with extremely variable volumes from season to season and year to year.<sup>90</sup> The Committee received several proposals for harnessing a more sustainable supply of the North's water resources.
- 3.12 Proposals for water infrastructure comprised:
- large and small scale in-stream dams or weirs, with associated off-stream storage;
  - large scale pipelines or channels to conduct captured water to areas of need; and
  - desalination plants to provide water independent of rainfall.
- 3.13 Proposals for management of ground water involved:
- systems for replenishment or storage of water in aquifers; and
  - the capture and utilisation of water extracted during mining (mine dewatering).
- 3.14 A number of water catchment proposals incorporated plans for large or smaller scale irrigation schemes with associated industry development. Some projects were extensions of established schemes, such as the Ord-East Kimberley Expansion project. Others were new greenfield developments.

## Water Capture and Storage Infrastructure

- 3.15 The construction of in-stream water storage is capital intensive, with investors usually recovering costs over the long term through water allocation fees.<sup>91</sup> The viability of a particular development depends on a range of factors, including whether the end cost of the water is acceptable to the user. This necessitates careful evaluation of projects and funding models by governments and industry partners.<sup>92</sup>
- 3.16 Construction of larger scale in-stream dams can be a lengthy process given the costs, associated land acquisition and necessary approvals to be acquired. Weirs are smaller structures and may require less capital. While

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90 Australian Government, *Green Paper on Developing Northern Australia*, Canberra 2014, 'Approach to the White Paper', p. x.

91 North West Queensland Strategic Development Working Group, *North West Queensland Strategic Development Study*, AEC Group, May 2014, p. 12.

92 The Government has established a ministerial working group, chaired by the Minister for Agriculture, to identify ways to accelerate investment in water infrastructure and identify priorities for Government investment. Australian Government, *Green Paper on Developing Northern Australia*, Canberra 2014, p. 28.

these provide less control over water flows, they can divert excess water into larger dams, into other off-stream storage or provide direct feeds for irrigation.<sup>93</sup>

## Major Dams and Upgrades

- ***Burdekin Falls Dam Upgrade, Burdekin River*** – the Burdekin Falls Dam supports the Burdekin–Haughton Water Supply irrigation area which has an agricultural production valued at \$500 million per annum. Constructed in 1987, the dam is one of the largest in Queensland having a 1.8 million ML capacity, and an unallocated yield of 100 000 ML. Implementation of Phase 2, raising the dam wall, would increase capacity to support mining and agriculture diversification on the mid coast region of north Queensland.<sup>94</sup> The dam also has potential for base load hydropower production to supply the region.<sup>95</sup>
- ***Charleston Dam, Delaney River*** – near Forsayth in Queensland’s Gulf Country, the proposed dam would improve water security for the town and nearby Georgetown. The project would include provision of a new reticulated water treatment plant at Forsayth. Federal funding for necessary research and due diligence is required to solicit state government approvals and funding. The proposal will support regional growth by improving town amenity and provide economic stimulus to the tourism and recreational sports industries.<sup>96</sup>
- ***Cloncurry Dam, Cave Hill*** – formulated in 1977, the proposal was recently evaluated in the Commonwealth Scientific and Industrial Research Organisation (CSIRO) study of the Flinders catchment area (February 2014). The project would establish a dam at Cave Hill, south of Cloncurry on the Cloncurry River, capable of storing 248 GL with a yield of 40 GL per year at an estimated storage cost of \$249 million.<sup>97</sup> The Cloncurry Weir, constructed in 2013, would divert water to the dam. Projected benefits would be an increased supply of town water, potential

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93 For a comparative case study of the suitability of dams and weirs see CSIRO, *An Overview Report to the Australian Government from the CSIRO Flinders and Gilbert Agricultural Resource Assessment, part of the North Queensland Irrigated Agriculture Strategy*, December 2013; and Dr Peter Stone, Deputy Director, CSIRO Sustainable Agricultural National Research Flagship, *Committee Hansard*, Brisbane, 30 May 2014, p. 18.

94 Burdekin Shire Council, *Submission 15*, p. 1; Councillor Bill Lewis, Mayor, Burdekin Shire Council *Committee Hansard*, Bowen, 1 April 2014, p. 2.

95 Meridian Energy Australia Pty Ltd and Powershop Australia Pty Ltd, *Submission 184*, p. 3.

96 *Exhibit 86: Etheridge Shire Council, Charleston Dam Presentation*; Councillor Will Attwood, Mayor, Etheridge Shire Council, *Committee Hansard*, Georgetown, 2 July 2014, p. 4.

97 The CSIRO considered the business case for the dam was not strong. CSIRO, *Flinders Catchment Report: the Flinders and Gilbert Agricultural Resource Assessment Catchment Report for the Flinders Catchment*, North Queensland, 6 February 2014, pp. 277–8.

development of a feed lot and abattoir, and expansion of the mining industry.<sup>98</sup>

- **Green Hills Dam, Gilbert River**—one of two possible dams identified by the CSIRO review of the Gilbert agricultural precinct, the Green Hills Dam would be closer to irrigable land and the most water efficient. The dam could potentially store 227 GL and yield 172 GL at the dam wall, with 85 per cent reliability, for an estimated construction cost of \$335 million.<sup>99</sup> The dam would support growth in mixed agricultural projects in the Gilbert Farming Precinct (discussed below).<sup>100</sup> Both public and private sector investment is regarded as crucial to expand irrigation in the region.<sup>101</sup>
- **Lake Argyle Dam Upgrade, Ord River**—is required to support expansion of the Ord–East Kimberley River Expansion Project (discussed below). Lake Argyle currently has a total capacity of 11 700 GL, with annual gross inflows are over 4500 GL of which 300 GL is made available for irrigation under current allocations. A further 400 GL is allocated for the second stage of the Ord River irrigation scheme.<sup>102</sup> Preliminary designs propose construction of a new high spillway wall without upgrades to the main dam wall. Federal government funding of \$80 million is required to secure private investor confidence in future Ord development. In addition, an estimated \$150 million investment is needed for construction of new bridge over the Ord River. Federal funding of \$10 million has supported design, approvals and allocation of a highway reserve to date.<sup>103</sup>
- **Nullinga Dam, Walsh River**—first proposed in the early 1950s for development of the Mareeba–Dimbulah Irrigation Area, current planning for urban water and irrigation purposes comprises three case

98 Councillor Andrew Daniels, Mayor, Cloncurry Shire Council, *Committee Hansard*, Mount Isa, 3 April 2014, p. 18; Mr Glendon Graham, MITEZ Inc., *Committee Hansard*, Mount Isa, 3 April 2014, pp. 1–2.

99 The proposed dam site is 15 km from the land compared with 70 km to the proposed Dagworth Dam on the Etheridge River, with 15 per cent of water loss compared with half, and leveraging only 15 per cent of river water compared with 19 per cent. CSIRO, *Agricultural Resource Assessment for the Gilbert Catchment: An Overview Report to the Australian Government from the CSIRO Flinders and Gilbert Agricultural Resource Assessment, Part of the North Queensland Irrigated Agriculture Strategy*, December 2013, p. 8.

100 Mr Ken Fry, Forest Home Station, *Committee Hansard*, Georgetown, 2 July 2014, pp. 20, 24–5.

101 Australians for Northern Developing and Economic Vision (ANDEV), *Submission 147, Attachment C*, p. 8.

102 Various sources cited in Mr Ian Marshall, *Submission 11, Attachment A: 'The Water Project—the Development and Marketing of the North-West's Water into the State's Mining Sector'*, Presentation by Ian Marshall, 27 September 2013, p. 5.

103 Department of Regional Development, Western Australia, *Submission 121*, pp. 1–2.

studies at storage volumes of 168 000, 364 000 and 491 000 ML. The proposed dam site is on the Walsh River within Mareeba Shire, about 55 km south-west of Cairns and 24 km south-south-west of Mareeba. The dam would enable expansion of the agricultural industry in the Mareeba–Dimbulah Irrigation Area and further west across the Atherton Tableland, with potential for hydro–electric generation.<sup>104</sup>

- ***Urannah Dam, Broken River*** – in planning since the 1960s the dam is proposed for a high rainfall area on the Broken River off the Clarke Ranges, 100 km to the west-north-west of Mackay and 60 km south-south-west of Proserpine in Queensland.<sup>105</sup> With a catchment of 1.5 million ML the dam has potential to provide augmented water to the Collinsville Power Station, to supply 10 000 ML to the coal mining industry, and to irrigate around 20 000 hectares in the Mackay-Whitsunday region by gravity feed. A conservative cost estimate was upward of \$215 million.<sup>106</sup>

### Weir construction

- ***Flinders River Weir/ O’Connell Creek Water Storage Project*** – in planning since 1999, the project is part of the Flinders O’Connell Cropping Proposal for mixed agricultural development in Queensland’s Gulf Country. The weir would divert Flinders River high water flows into a 200 000 ML off-stream water storage facility on the O’Connell Creek, a tributary about 25 km from the town of Richmond. Designed as a gravity system, the storage facility would have a wall and spillway for overflow back into the Flinders.<sup>107</sup> Recent cost estimates from CSIRO for the total development (discussed below) are \$230 million, with ongoing operation costs for storage and water diversion at approximately \$2.3 million per year.<sup>108</sup>
- ***Lower Fitzroy River Infrastructure Project*** – subject to assessment in 2012, the project aims to support agricultural development on the proposed Fitzroy Agricultural Corridor (discussed below). The proposal

104 Councillor Bob Manning, Mayor, Cairns Regional Council and Mr Trent Twomey, Advance Cairns, *Committee Hansard*, Cairns, 28 April 2014, pp. 2–3; Mr Joe Moro, Mareeba Chamber of Commerce, *Committee Hansard*, Cairns, 28 April 2014, p. 39.

105 Mr Jason Costigan MP, Member for Whitsunday, Queensland Parliament, *Committee Hansard*, Mackay, 31 March 2014, p. 20.

106 Based on 2001 estimates of \$150 million. Mr David Nebauer, Chairman, Economic Development Strategic Advisory Group, Whitsundays Marketing and Development, *Committee Hansard*, Bowen, 1 April 2014, pp. 4–5.

107 Councillor John Wharton, Mayor, Richmond Shire Council, *Committee Hansard*, Georgetown, 2 July 2014, p. 12, and *Exhibit 8: Flinders River/O’Connell Creek Cropping Proposal*.

108 CSIRO, *An Overview Report to the Australian Government from the CSIRO Flinders and Gilbert Agricultural Resource Assessment*, December 2013, p. 8.

is to raise the dam wall at Eden Bann Weir and build a new weir at Rookwood near Riverslea, respectively located about 50 km north-west and south-west of Rockhampton.<sup>109</sup> The potential for large scale horticultural development of fruiting crops for export to Asia has stimulated interest in the project and associated infrastructure upgrades to support development.<sup>110</sup>

## Water Transfer Infrastructure

- ***Connors River Dam and Pipeline***— proposal to construct a 373 662 ML dam on Connors River near Mount Bridgett, 110 km east of Moranbah and 70 km south of Sarina, with a pipeline from the dam to Moranbah. The government owned corporate SunWater Ltd recommended construction of the project to commence in 2012, primarily to supply the Galilee Basin coal mines and local communities.<sup>111</sup> In July 2012, the project was put in abeyance due to changing client investment horizons.<sup>112</sup> The Urannah Dam, referred to above, was cited as the alternative option to alleviate pressures on ground water and provide water security to townships and the cattle industry in this region.<sup>113</sup>
- ***Diamantina River Tunnel/Canal and Tully/Herbert Rivers Hydro Generation***— a proposal to deliver water and power to outback areas of Queensland and Northern New South Wales, with potential for agricultural sales through development partners. The project would involve diversion of flood waters lost to the Gulf of Carpentaria by drilling a 10 km long tunnel or by combination of tunnel, elevated canal and pipeline into the Diamantina River. Power would be generated by construction of two to three 600–1000 MW hydro electricity generators and several pump stations on the Tully and Herbert Rivers. The project

109 The statutory government corporate SunWater Ltd and local water authority Gladstone Area Water Board prepared an Environmental Impact Statement (EIS) for the site. See Capricorn Enterprises, *Submission 17*, p. 6; Queensland Government, Department of State Development, Infrastructure and Planning, Lower Fitzroy River Infrastructure, Project Overview <[www.dsdp.qld.gov.au/assessments-and-approvals/lower-fitzroy-river-infrastructure-project.html](http://www.dsdp.qld.gov.au/assessments-and-approvals/lower-fitzroy-river-infrastructure-project.html)> July 2014.

110 Mr Rick Palmer, Manager Economic Development, Rockhampton Regional Council, *Committee Hansard*, Brisbane, 20 June 2014, pp. 19–20.

111 Queensland Government, Department of State Development, *Infrastructure and Planning Connors River Dam and Pipelines, Project Overview* <[www.dsdp.qld.gov.au/assessments-and-approvals/connors-river-dam-and-pipelines.html](http://www.dsdp.qld.gov.au/assessments-and-approvals/connors-river-dam-and-pipelines.html)> July 2014.

112 SunWater Making Water Work, 'SunWater Discontinues Work on Connors River Dam and Pipelines Project', *Media Release*, 27 July 2012 <[www.sunwater.com.au/about-sunwater/media-room/latest-news/latest-news/2012/sunwater-discontinues-work-on-connors-river-dam-and-pipelines-project](http://www.sunwater.com.au/about-sunwater/media-room/latest-news/latest-news/2012/sunwater-discontinues-work-on-connors-river-dam-and-pipelines-project)> July 2014; Councillor Anne Baker, Mayor, Isaac Regional Council, *Committee Hansard*, Mackay, 31 March 2014, p. 12.

113 LNP Northern Development Policy Committee, *Submission 70*, p. 10.

would be funded and constructed by the Beijing based company China Power with Australian partners. Government guarantees for repayment through water sales or a production levy, facilitation of land access/easements and a consultancy fee are required.<sup>114</sup>

- ***Elliot Main Channel Extension*** – proposal to extend the existing Elliot Channel 117 km through 12.7 km of the Burdekin River irrigation area to supply growers on the coastal plain south of Bowen in the vicinity of Mt Inkerman, Home Hill, and Gumlu (Molongle Creek). The project would involve construction of a channel and pipeline from the northern mouth of the Burdekin River, providing 30 000 hectares of new agricultural land and securing water for Abbot Point mining. Presently distributing water from the Burdekin Falls Dam, the channel would facilitate supply of water allocations from a future Urannah Dam. Federal funding or facilitation for private sector development would be required.<sup>115</sup>
- ***Gulf of Carpentaria Dam and Pipeline*** – would involve construction of a catchment dam in the monsoon belt near the southern coast of the Gulf of Carpentaria, with a pipeline to the south through outback Queensland to Lake Maraboon near Emerald, and then to the Warrego River headwaters. The river flows into the Murray–Darling system south-west of Bourke in New South Wales where a holding dam would be built. Small discharge dams may need to be constructed at ingress points into the Murray–Darling system as terminals for the pipeline(s). The transfer of water over 1700 km through arid areas of Australia would provide regional greening and open opportunities for growth at an estimated total cost of less than \$20 billion, or \$2.3 billion per year for the first four years of a ten year project.<sup>116</sup>
- ***Might and Power Project*** – involves the construction of a 2100 km gravity feed pipeline from the Southern Highlands of Papua New Guinea (PNG) to the headwaters of the Murray–Darling near Augathella, Central Queensland. The proposal would enable transfer of 6–8GL of water per day, with pump stations to enhance flows at specific points. Initial funding of \$20 million would be provided by the joint partners Might and Power Australia and the PNG government (PNG Water).<sup>117</sup> When operational the Australian Government would purchase water from the PNG government for on-selling to farmers. Suggested benefits

114 Mr Bob and Mrs Ute Elliot, *Submission 265*, pp. 1–4.

115 Burdekin Shire Council, *Submission 15*, pp. 1–2; Mr David Nebauer, Whitsundays Marketing and Development, *Committee Hansard*, Bowen, 1 April 2014, pp. 4, 5–6.

116 Mr Lou Madjeric, *Submission 285*, pp. 2, 10–13.

117 Might and Power Australia, *Submission 220*, p. 1.

of the project would be in provision of an inexhaustible supply of cost efficient water, without the impact of dams.<sup>118</sup>

- ***North to South Water Transfer Plan*** – this proposal involves construction of a tunnel and canal for transfer of water stored in the Hells Gate Dam and Burdekin Falls Dam in North Queensland to Tocumwal in Southern NSW. The tunnel from the Herbert to the Burdekin River would deliver 11 800 GL for irrigation per annum. The canal would run from the Burdekin Falls Dam to Charleville then east to St George. A minor route variation would provide water by gravity feed to Charleville. Federal funding of \$9 billion for the main canal, with an extra \$2–3 billion for a subsidiary canal, would initially be required, with water allocations for agricultural development paying for construction long term. The project would allow for industry and associated service delivery/infrastructure development along the canal corridor. Private and government partnerships for construction were recommended.<sup>119</sup>
- ***'The Water Project', Pilbara*** – would involve construction of an open pipeline/water channel to more effectively utilise Ord water resources and reduce pressure on artesian water for mining and agricultural development. The project would encompass power generation (solar or wind turbines) and mine dewater recycling to establish a forestry project for production of biofuel.<sup>120</sup> Estimated costs for the total project of \$24.75 billion would be recovered by sale of tradeable water rights at a cost of \$24 750 per one million, 1 ML units over 55 years. Federal investment of \$6.5 million would progress Stage 1 of the project comprising a literature review, due diligence and the business case, including sourcing of private investment partners. The sale of the water rights would fund the construction.<sup>121</sup>

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118 Mr Fred Ariel, Chairman, Might and Power Australia and Mr Philip Moya, First Secretary to the Hon. Francis Awesa, Minister for Works and Implementation, Papua New Guinea, *Committee Hansard*, Cairns, 28 April 2014, pp. 66–71.

119 The average delivered water cost from the main canal to Tocumwal would be approximately \$135 per ML; entering the Murray river at Wentworth, average water costs along the Warrego would be \$61 per ML. Water cost estimates are based on United States Federally funded models with capital costs paid back at 2.5 per cent per annum over 50 years and canal operators paying for all operational costs. See T Bowring and Associates Pty Ltd, *Submission 19*, pp. 1-2, 3 and *Attachment A: Map*.

120 Mr Ian Marshall, *Submission 11, Attachment A*, pp. 1, 21–5, 34–8, and *Attachment B: Economic Rationale as to the Reasons for the Water Project*, pp. 2, 11–12.

121 Mr Ian Marshall, Private Capacity, *Committee Hansard*, Perth 7 April 2014, p. 33, Mr Ian Marshall, *Submission 11, Attachment A*, pp. 1, 29.

## Desalination plants

- 3.17 Desalination can be an expensive way to increase water supply. In arid regions, however, the potential to generate a source of fresh water independent of rainfall may provide opportunities for development and growth.<sup>122</sup>
- 3.18 Desalination was seen as a viable option in the Pilbara, for example, which is entirely reliant on rainfall for its water supply.<sup>123</sup> Proposals for plants in the region included:
- **Burrup Peninsula** – a desalination plant with the potential to supply up to 15 GL of water per annum has been in planning since 2010, when the Western Australian Government dedicated funding of \$370 million for its development. The project was postponed following rainfall in the area and the establishment of the Bungaroo bore field. Construction of the plant would provide a sustainable water source. It was considered that the energy intensive nature of the process may, however, have implications for power supply in the region.<sup>124</sup> This may be resolved by use of renewable energy on an ‘interconnected transmission network and moving away from non-renewable energy, which will become more expensive and scarce within a matter of decades.’<sup>125</sup>
  - **City of Karratha** – a desalination plant to service Karratha and Dampier was identified as one of the Pilbara Shire Council’s ‘Infrastructure Priorities to 2015’. Construction of the plant would support of population growth and regional development.<sup>126</sup>
  - **Shire of Roebourne** – an integrated development combining desalination plants, solar energy and evaporative hedges, seawater based green-houses (adapted to cater for cyclones) is proposed to enable year round growth of commercial quantities of cheap, high-quality, pesticide-free vegetables, making agriculture a prime industry sector in the region.<sup>127</sup>

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122 Mr Alastair Watson, *Submission 4, Attachment A: ‘Food Security in Australia: Fallacies, Fantasies, Fancies, Foibles and Furphies’*, p. 6; East West Line Parks Ltd, *Submission 6, ‘Case Study: Making Fresh Water More Readily Available’*, p. 35.

123 Curtin University Sustainability Policy (CUSP) Institute, *Submission 253, Attachment A: J Green, P Newman and J Mitchell, Pilbara 2050, Ensuring the Long Term Viability of the Pilbara*, CUSP Institute, April 2014, p. 53.

124 CUSP Institute, *Submission 253, Attachment A*, p. 53.

125 CUSP Institute, *Submission 253, Attachment A*, p. 67.

126 Pilbara Regional Council, *Submission 25, Table 4*, p. 15.

127 Shire of Roebourne, *Submission 72*, p. 9.

## Ground Water Management

- 3.19 The Government's Green Paper refers to the potential for storing water in underground aquifers or for water reuse to stimulate development in the North.<sup>128</sup>
- 3.20 The Northern Australian Land and Water Taskforce supports the view that ground water will be an important resource for potential development in the region, estimating that there is 600 GL of ground water available for this purpose.<sup>129</sup>
- 3.21 The majority of resource projects in the North currently meet water demands through ground water from the vast aquifers of the region. Reliance on this ground water however may not be sustainable.<sup>130</sup> Consequently, careful planning and management is required to support future development.<sup>131</sup>

## Aquifer Management

- 3.22 In addition to proposals for major water infrastructure, the Committee received suggestions for infrastructure upgrades and other proposals to better manage and sustain ground water sources. Specific suggestions included:
- ***Great Artesian Basin, Capping and Rehabilitation*** – the Great Artesian Basin (GAB) spans 1.7 million km<sup>2</sup> of largely arid and semi-arid land west of the Great Dividing Range, providing water across the region.<sup>132</sup> The GAB Sustainability Initiative has managed and maintained bore infrastructure since July 1999, with work jointly funded by the Commonwealth, State and pastoral owners. Due to expansion in numbers and degeneration, around 22 per cent of the bores now urgently require capping and rehabilitation. The current estimate for this repair is over \$84 million, including \$32 million of State and Federal Government funding under the cost-share arrangement.<sup>133</sup>

128 Australian Government, *Green Paper on Developing Northern Australia*, Canberra 2014, pp. 9, 28.

129 Australian Academy of Science, *Submission 113*, p. 2.

130 In the Pilbara iron ore mining region in Western Australia, 85 per cent of mines rely on ground water. Mr Ian Marshall, *Submission 11, Attachment A*, pp. 13, 16; Chamber of Minerals and Energy, *Submission 93*, p. 21.

131 Australian Academy of Science, *Submission 113*, p. 2; National Water Commission (NWC) *Submission 123*, pp. 2, 7; Dr Peter Stone, CSIRO Sustainable Agricultural National Research Flagship, *Committee Hansard*, Brisbane, 30 May 2014, pp. 17–18.

132 RDA Townville and North West Queensland, *Submission 54, Attachment A*, p. 38.

133 A total of 185 to 215 uncontrolled bores, including 20 per cent possible new bores flowing again plus 10 additional bores in the corrosive zone, and 5.5 thousand km of bore drains

- ***Storage of Water, Gilbert River Formation Aquifer*** – studies by hydrologists indicate the potential to replenish this aquifer near Hughenden and store up to 20 000 GL without the evaporation losses of above ground dams, estimated at 21 to 25 per cent per annum in Northern Queensland. Given the degree of permeability to support flows, this aquifer water storage has potential to drought proof regional farms and towns in the region as well as those further south.<sup>134</sup>

## Mine Dewatering

- 3.23 Mine dewatering is the process of extracting water from a mine to allow for mineral extraction. Regulations require that extracted ground water first be used to mitigate any environmental impacts, and then applied in the mining camp. Any surplus water is to be returned to aquifers or watercourses, although this practice has become less acceptable.<sup>135</sup>
- 3.24 Policy review of the requirements for the use of surplus dewatering in Western Australia will allow for usage in horticulture developments or potentially as town water.<sup>136</sup> Obstacles are the varying quality of the surplus water, which may have high levels of toxins, and economical disincentives to miners who may choose to evaporate off surplus water rather than treat it or dispose of it appropriately.<sup>137</sup>
- 3.25 Projects using surplus mine dewatering for agricultural developments included:
- ***Pilbara Hinterland Agricultural Development Initiative*** – a joint project between the Department of Agriculture and Food, the Pilbara Development Commission and Department of Regional Development, Western Australia. Three projects are proposed under the initiative. The Pathways to the Pilbara Irrigation Development project aims to change mining management and treatment of some 160 GL of surplus mine dewater for use in large scale irrigated agriculture in the Pilbara. Associated projects focus on cropping for fodder and biofuel. The initiative is currently funded for \$12.5 million under the Western Australia Government's Royalties for Regions program.<sup>138</sup>

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require attention. Councillor Bill Bode, Flinders Shire Council, *Committee Hansard*, Townsville, 2 April 2014, p. 18.

134 T Bowring and Associates Pty Ltd, *Submission 19*, p. 2.

135 Government of Western Australia Department of Water, *Strategic Policy 2.09: Use of Mine Dewatering Surplus*, May 2013, p. 1; CUSP Institute, *Submission 253, Attachment A*, p. 54.

136 Government of Western Australia Department of Water, *Strategic Policy 2.09: Use of Mine Dewatering Surplus*, May 2013, p. 2.

137 Mr Ian Marshall, *Committee Hansard*, Perth 7 April 2014, p. 34.

138 Hon. Terry Redmond MLA, Minister for Regional Development; Lands; Minister Assisting the Minister for State Development, Government of Western Australia, *Submission 161*,

- ***Pilbara Carbon Sequential Tree Farm*** – is part of the ‘Water Project’ described in the water transfer section above. This aspect of the proposal involves using diluted mine dewater to establish tree crops suitable for carbon sequestration and eventual harvesting for biofuel. The process would involve transfer of an estimated 400 GL of mine dewater south from the Fortescue River using the open pipeline/water channel planned for construction by sale of water rights. The transfer would provide for passive reduction in total dissolved solids, with further dilution by fresh water allowing for broad acre irrigation of the trees using a subterranean dripper system.<sup>139</sup>

## Agricultural Development Schemes

- 3.26 A total of 183 million hectares of land in Northern Australia is currently used for agricultural purposes, including cropping and pastoral activities.<sup>140</sup>
- 3.27 Water availability is key to realising the potential to expand and diversify agricultural activity. The Committee was informed of a range of intensive agricultural developments in planning or proposed for Northern Australia.

## Queensland

- ***Billy’s Lagoon*** – an area of 130 000 hectares around Billy’s Lagoon, near Weipa, has been identified as suitable for agriculture, with potential crops including cassava, berries, soybean, sorghum and other grain crops. Expansion of the cattle industry in the region, combined with fodder cropping and guar, has investment interest secured from India and markets in China. Earlier projects in the area had not proceeded because of prohibitions under the *Wild Rivers Act 2005* and the *Vegetation Management Act 1999*.<sup>141</sup>
- ***Etheridge Integrated Agricultural Project (EIAP)*** – Stage 1 of a proposal for a broad acre mixed agribusiness development on the Gilbert River, in the Gulf Country. The project would use off-stream river storage and

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‘Attachment 1: Case Studies – Major Northern Australian projects undertaken by the Western Australian Government’, p. 3; CUSP Institute, *Submission 253, Attachment A*, p. 30.

139 Mr Ian Marshall, *Committee Hansard*, Perth, 7 April 2014, pp. 34–5.

140 Department of Agriculture, *Submission 238*, p. 3.

141 Councillor Philemon Mene, *Committee Hansard*, Weipa, 3 July 2014, pp. 2–3; Councillor Philemon Mene and Mr Amos Njaramba, Chief Executive Officer, Napranum Aboriginal Shire Council, *Committee Hansard*, Weipa, 3 July 2014, pp. 7–8.

water diversion, as against sourcing water from the proposed Green Hills Dam.<sup>142</sup> The EIAP would include 65 000 hectares of dry tape irrigated cropping land, large scale water capture and storage infrastructure and primary processing facilities on site. The initial production will be in raw sugar, guar gum and aquaculture, with potential for cattle and associated by-products.<sup>143</sup> The proponent (Integrated Food and Energy Developments Pty Ltd – IFED) will invest \$15 million over three years for the project design and development, with the total \$2 billion cost funded by private sector investment. It is suggested that Government facilitation through taxation and other incentives, and negotiation of land and water allocations, would be required for the project to proceed. Federal funding could also enable local Aboriginal people to invest in the project.<sup>144</sup>

- ***Fitzroy Agricultural Corridor (FAC)*** – is an area of about 10 km between the junction of the Dawson and McKenzie Rivers and forming the Fitzroy River and the Fitzroy River Barrage. The FAC comprises five precincts and is projected to focus on intensive livestock industries, particularly beef cattle feedlots. The proposed Eden Bann and Rookwood weir developments would support intensive agriculture and large-scale horticultural orchards for macadamias and mandarins in this area and in the Fitzroy Basin region. Products of the FAC would be processed in the adjoining Gracemere-Stanwell Industrial Corridor. Federal funding and access to unused town water allocations would facilitate initial development.<sup>145</sup>
- ***Flinders O’Connell Creek Cropping Proposal*** – would utilise the water directed into off-stream storage by the Flinders Weir Project in the Gulf Country’s Shire of Richmond, as discussed above. The project has potential to support 15 to 20 000 hectares of arable cropping land through irrigation using flood, centre pivots and trickle systems, with substantial areas also suitable for dry-land cropping. Potential crops include cotton, rice, chickpeas, mung beans, sorghum, maize, wheat, soybeans, guar, adzuki beans and fodder crops, and will also support the cattle industry, the core industry in the region. State government investment of \$136 million, including \$10 million for a cotton gin, or rice and pulse factory, has been discussed. Private funding is actively being

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142 Mr David Hassum, Director, IFED, *Committee Hansard*, Brisbane, 20 June 2014, p. 13.

143 IFED, *Submission 81*, pp. 1, 12; *Exhibit 75: Block Diagram Business Model, Red Claw and Guar briefings*.

144 IFED, *Submission 81*: 3, p. 1; IFED, *Submission 81*, pp. 5–9, 11.

145 Mr Rick Palmer, Rockhampton Regional Council, *Committee Hansard*, Brisbane, 20 June 2014, pp. 19–20, and Rockhampton Regional Council, *Submission 10*, pp. 1–3, 5.

sought with overseas investors interested.<sup>146</sup> Access to State water allocations will determine the project's feasibility.<sup>147</sup>

- ***Gilbert River Farming Precinct*** – in planning for 15 years, the proposal envisions mixed agricultural development with grazing along the Gilbert River. Potential crops such as bananas, citrus, mangoes, rice, peanuts, fodder crops and sandalwood would be grown using water from the proposed Green Hills Dam.<sup>148</sup> Successful cultivation of crops over 50 years also supports the potential expansion of present day market gardening through river irrigation.<sup>149</sup> Federal funding is needed to develop infrastructure to expand agriculture in the region.<sup>150</sup> Resolution of water license issues and State government controlled power and water storage matters is required to facilitate this development.<sup>151</sup>
- ***Southern Atherton Tablelands/Mareeba-Dimbulah Development Areas*** – development of the Atherton Tablelands as a 'clean green' food bowl is part of a regional plan for the expansion of the mining, tourism and the knowledge development industries.<sup>152</sup> There is also potential to develop around 10 000 hectares of the 40 000 in the Mareeba-Dimbulah irrigation area for intensive agriculture, potentially pineapples, sugar cane or citrus. Agriculture is expected to provide the mainstay of development in the region. Both areas will require land clearing, improved access to water and infrastructure upgrades of key regional roads to enable development.<sup>153</sup>
- ***Wet and Dry Agricultural Projects Cape York*** – the Hopevale Banana Enterprise indicates the potential for horticultural developments to deliver local Aboriginal communities benefits that support wider economic development. At a total cost of is \$6.3 million, the project has 44.74 hectares under cultivation and employs 32 Aboriginal people fulltime.<sup>154</sup> It was suggested that the Cape York region requires a

146 Councillor John Wharton, Mayor, Richmond Shire Council, *Committee Hansard*, Georgetown, 2 July 2014, pp. 13-14; and *Exhibit 8: Flinders River/O'Connell Creek Cropping Proposal*.

147 Mr Brendan Mcnamara, Chairman, Flinders River Agricultural Precinct, *Committee Hansard*, Mount Isa, 3 April 2014, pp. 8-10

148 Etheridge Shire Council, *Submission 232*, p. 3.

149 Mr Ken Fry, Forest Home Station, *Committee Hansard*, Georgetown, 2 July 2014, pp. 20, 24-5.

150 ANDEV, *Submission 147, Attachment C*, p. 8.

151 Etheridge Shire Council, *Submission 232*, p. 3.

152 Tablelands Futures Corporation, *Submission 162*, pp. 2-3.

153 Mr Joe Moro, Mareeba Chamber of Commerce, *Committee Hansard*, Cairns, 28 April 2014, pp. 39-41.

154 Funding was provided State and Federal Government, the Shire Councils and the Indigenous Land Corporation and Indigenous Business Australia. See Indigenous Land Corporation, *Submission 157*, p. 5, and 'Attachment B', p. 17.

catchment by catchment assessment equivalent to that conducted for the Flinders and Gilbert Rivers to facilitate further development of wet and dry agriculture. Reform of Native Title, Queensland's land tenure arrangements and of Strategic Environmental Area (SEA) restrictions would enable Aboriginal land holders to pursue identified development opportunities.<sup>155</sup>

## Western Australia/Northern Territory

- **Ord–East Kimberley Expansion Project, Stages 2 and 3**—in planning since 2009, the project will double the size of the Ord Irrigation Scheme, extending it into the Northern Territory. A Memorandum of Understanding (MoU) between Government partners for the project was signed in 2012. Stage 2 involved release of 13 400 hectares for expansion into the Goomig Lands and Knox Plains, near Kununurra.<sup>156</sup> The project included a National Partnership Agreement which saw the Australian Government contribute \$195 million toward social and community infrastructure and partner with the Western Australian Government through its Royalties for Regions program which has invested \$322 million in the irrigation expansion. The Western Australian Government has invested \$301 million to create common user infrastructure (irrigation channels, drains, roads etc.) over the period 2010–13. Stage 3 infrastructure will enable the further expansion of 15 000 hectares into the Northern Territory. An additional 30 000 hectares on the Cockatoo Sands, near Kununurra in Western Australia, is also subject to due diligence with a five-year development horizon.<sup>157</sup> The selected developer, Kimberley Agriculture Investment Pty Ltd has entered into an agreement to invest \$700 million to establish large scale sugarcane production, with potential ancillary industries in power, biofuel and stock feed under lease tenure. Delayed approvals for the Knox Plains and other designated lands were cited as risks to this investment.<sup>158</sup> The

155 Cape York Institute for Policy and Leadership, *Submission 87*, pp. 4–5; Cape York Natural Resource Management and Terrain Regional Natural Resource Management, *Submission 189*, pp. 11–12.

156 Agreement between the Federal, Western Australian and Northern Territory Governments at the Northern Australia Ministerial Forum on 23 November 2012. See Australian Government, Department of Infrastructure and Development, 'The Ord' <[www.regional.gov.au/regional/ona/ord.aspx](http://www.regional.gov.au/regional/ona/ord.aspx)> July 2014; Government of Western Australian, Department of Agriculture and Food, 'Ord River Irrigation Expansion Stage 2— Goomig farmlands— Outcome' <[www.agric.wa.gov.au/resource-assessment/ord-river-irrigation-expansion-stage-2-%E2%80%93-goomig-farmlands?page=0%2C1](http://www.agric.wa.gov.au/resource-assessment/ord-river-irrigation-expansion-stage-2-%E2%80%93-goomig-farmlands?page=0%2C1)> July 2014.

157 Hon. Terry Redmond MLA, Minister for Regional Development; Lands; Minister Assisting the Minister for State Development, Government of Western Australia, *Submission 161*, 'Attachment 1: Case studies', p. 1.

158 Kimberley Agriculture Investment Pty Ltd, *Submission 278*, pp. 1–3.

Northern Territory Government is financing settlement of Native Title and Sacred Site matters for Stage 3.<sup>159</sup> Federal Government assistance for this, and further crop/usage research and exclusion of future Federal funding from the GST process would aid the development.<sup>160</sup>

## Western Australia

- *Fitzroy Valley Agricultural Precinct* – an intensive irrigation project proposed for the Fitzroy River Valley around Fitzroy Crossing, Western Australia, approximately 260 km south east of Derby and 400 km east of Broome. The State Government has committed \$130 million to assist in the development of intensive agriculture throughout the West Kimberley including the Fitzroy Valley, and to the Knowsley Agricultural Area near Derby. It was suggested that development of this area should be included by the Federal Government in the implementation of the National Indigenous Economic Development Strategy.<sup>161</sup> Transport infrastructure upgrades and equipment would be required to progress this project.<sup>162</sup>
- *La Grange Aquifer Irrigation Development* – the La Grange Aquifer is located south of Broome, near Bidgyadanga, within the Kimberley region. Bidgyadanga is the largest Aboriginal community in Western Australia. The Karajarii people hold Native Title on the land which currently produces \$10 million annually in watermelons, pumpkins, sweet corn and beans. The West Australian Government has allocated \$5.1 million for assessment of the potential to expand horticulture in La Grange using water from the aquifer.<sup>163</sup> This development would require machinery, resources and supplies, as well as the upgrade of the freight corridor to south eastern markets.<sup>164</sup>

## Northern Territory

- *Douglas-Daly-Mataranka Catchment Proposal* – approximately 200 km from Katherine, the Douglas and Daly River region requires a road

159 Hon. Adam Giles MLA, Northern Territory Government, *Committee Hansard*, Darwin 20 May 2014, p. 12.

160 Northern Territory Government, *Submission 92*, p. 9; *Submission 92.2*, p. 4.

161 Shire of Derby West Kimberley, *Submission 196*, pp. 3, 9, 20.

162 Shire of Derby West Kimberley, *Submission 196*, pp. 21, 25; Shire of Halls Creek, Central Kimberley Chamber of Commerce, Kimberley Cattlemen's Association and the Tanami Action Group, *Submission 103*, p. 3; Mr Phillip Hamms, Chair, Tanami Action Group, *Committee Hansard*, Kununurra, 7 May 2014, p. 35.

163 Broome Chamber of Commerce and Industry, *Submission 125*, p. 6.

164 Shire of Halls Creek, Central Kimberley Chamber of Commerce, and Kimberley Cattlemen's Association and the Tanami Action Group, *Submission 103*, p. 3.

upgrade to open up land on the Daly Aquifer for prime agriculture development, potentially as the Territory's 'mini Ord'. This development would provide economies of scale for the Katherine and Douglas-Daly agricultural regions, as well as opening opportunities for the forestry, tourism and mining industries. Federal and Territory Government support is requested to achieve sustainable economic growth across the Katherine Douglas-Daly region.<sup>165</sup>

## Power Generation

3.28 Regional development requires an adequate production of base load power and reliable access to it. Unfortunately energy supply in Northern Australia is unreliable with regular 'brown outs' (periods of power reduction). Stronger grid connections are required.<sup>166</sup>

### Base Load Power

3.29 Several major infrastructure projects were proposed to meet current and anticipated base load power demand in the developing North.

- **Coal-Fired Power Station, North Queensland** – Northern Queensland does not currently have a base load capacity electricity supplier following decommission of the 180 MW coal-fired Collinsville Power Station site near Townsville.<sup>167</sup> A base load power station was proposed for Pentland, on the Galilee Basin. Pentland would combine base-load coal with bagasse (green mass) power generation, supplied by increased sugar production in the Burdekin region.<sup>168</sup> Redevelopment of the Collinsville site using clean technology was also proposed, advantages being the existing connecting infrastructure and the location: near local coal sources and industry developments, with access to the gas pipeline and augmented water supply from the proposed Urannah Dam.<sup>169</sup> An approved 50 MW solar farm adjacent to the site provided opportunities

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165 Mr Steven Rose, Katherine Region, Chamber of Commerce Northern Territory, *Committee Hansard*, Katherine, 22 May 2014, pp. 8, 12.

166 The Far North Queensland Regional Organisation of Councils, *Submission 53*, p. 2; Etheridge Shire Council, *Submission 232*, p. 3.

167 Liberal National Party Northern Development Policy Committee, *Submission 70*, pp. 12–13.

168 Councillor Wharton, Richmond Shire Council, *Committee Hansard*, Georgetown, 2 July 2014, pp. 10, 13; Far North Queensland Regional Organisation of Councils, *Submission 53*, p. 2; MITEZ Inc. *Submission 32*, pp. 7, 8.

169 Mr Danial Rochford, Chief Executive Officer, and Mr David Nebauer, Whitsundays Marketing and Development, *Committee Hansard*, Bowen, 1 April 2014, pp. 2–4.

to diversify production.<sup>170</sup> It was suggested that a development of this type in the Townsville region would deliver an immediate net benefit of \$2.7 billion to Northern Australia, primarily due to the reduction in electricity prices.<sup>171</sup>

- **Hydro Plant Burdekin Falls Dam** – the proposed 52 MW power station would generate approximately 150 GW hours of renewable base load electricity annually, sufficient to power 30 000 plus homes. With \$1 billion invested, the private developer of this scheme sought stable policy on renewable energy to safeguard the project and support its duplication across the North.<sup>172</sup>
- **Hydro Project Tully–Millstream (Kareeya B)** – proposed in the 1990s, this project would generate approximately 600 MW, with relatively minimal clearing and flooding of 150 hectares given power generation capacity. The project would address the growing massive power deficit in the region and reduce reliance on supplies external to the State.<sup>173</sup>
- **National Electricity Grid Connectivity** – there was strong advocacy for the Federal Government to support expansion of the national electricity grid into key regional developments areas, such as the north-west Gulf Region in Queensland.<sup>174</sup>
- **Pilbara Interconnected Grid** – The Pilbara currently gets its power from a range of public and private sources, some of which are connected on a local grid – the North West Interconnected System – and others as isolated generators. There is concern that the diverse and competing ownership of power generators is hampering development in the region. The Pilbara Interconnected Grid would bring all privately and publicly owned power stations into a single grid. This would facilitate diversification of economic activity, provide for population growth and allow for industrial development. It would also extend mine longevity and enable a range of costs efficiencies in maintenance and transportation.<sup>175</sup> It was estimated that the lack of grid connection in the

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170 For comparison, Rockhampton’s Stanwell Power Station, Queensland’s largest power station, utilises land, water, geothermal and wind resources for supply to the national grid. Capricorn Enterprise *Submission 17*, p. 11; Whitsunday Regional Council, *Submission 140*, p. 4.

171 City of Townsville, *Submission 170*, p. 4.

172 Meridian Energy Australia Pty Ltd and Powershop Australia Pty Ltd, *Submission 184*, pp. 3–5.

173 Liberal National Party Northern Development Policy Committee, *Submission 70*, p. 13.

174 Councillor Will Attwood, Etheridge Shire Council, *Committee Hansard*, Georgetown, 2 July 2014, p. 5

175 CUSP Institute, *Submission 253, Attachment A*, pp. 56–64; Ms Jemma Green, Research Fellow, Sustainability Policy Institute, Curtin University, *Committee Hansard*, Perth, 7 April 2014, p. 12.

Pilbara presently costs the Shire of Roebourne approximately \$700 million a year.<sup>176</sup>

## Electricity Co-generation and Biofuels

3.30 A range of proposals would support localised power production through co-energy generation of electricity by the sugar industry or use of biofuels.

- **Electricity co-generation** – modern sugar mills are designed to co-generate electricity. Mackay canegrowers have a 30-year regional development plan to expand cane production from eight million tonnes to 20 million tonnes within 20 years. The plan includes construction of two new ‘super mills’ designed for high grade sugar, ethanol and electricity generation, with 50 per cent of the annual income in sugar.<sup>177</sup> A proposal for construction of a sugar mill in the Herbert region is currently being funded by local farmers. The proposed mill would have a generating capacity of approximately 110 MW from green waste, with between 65-80 MW available for export to the grid. Federal funding was sought for duplication of the project to achieve critical mass.<sup>178</sup> A strong renewable energy market with consistent policy was cited as essential for the viability of these and other regional developments.<sup>179</sup> As already noted, Stages 2 and 3 of the Ord River irrigation expansion will predominately be put into sugar production, with co-generation a potential outcome.<sup>180</sup>
- **Biofuels** – innovative proposals for the production of biofuels included thermal processing of municipal solid wastes and the clearance of the Prickly Acacia (*Acacia nilotica*), a declared weed, to generate a new biofuel. The thermal processing technology involves the gasification of waste (industrial, commercial or wet and hazardous wastes) at high temperatures for conversion into a gas for clean generation of electricity. Government facilitation of waste and by-product markets and incentives to drive small energy generation projects would benefit the industry.<sup>181</sup> The prickly acacia project involves clearance of some 7.5 million hectares of the introduced woody weed and processing to produce energy for

176 Mr Peter Long, President, Shire of Roebourne, *Committee Hansard*, Karratha, 9 April 2014, p. 2.

177 Mr Andrew Capello, Chairman, Board of Directors, Mackay Sugar Limited, *Committee Hansard*, Mackay, 31 March 2014, pp. 62-5.

178 Mr Anthony Castorina, Director, North Queensland Bio-Energy Corporation Ltd, *Committee Hansard*, Cairns, 28 May 2014, p. 61.

179 Mr Andrew Capello, Mackay Sugar Limited, *Committee Hansard*, Mackay, 31 March 2014, pp. 62-65; Mr Anthony Castorina, North Queensland Bio-Energy Corporation Ltd, *Committee Hansard*, Cairns, 28 May 2014, p. 61.

180 Kimberley Agriculture Investment Pty Ltd, *Submission 278*, pp. 1-3.

181 Eco Energy Ventures, *Submission 105*, pp. 3-4, 8.

small scale remote power stations. The proponent has contracts with the Queensland Government for weed clearance and sale of the by-products, but legal frameworks are required for negotiation with private landholders. Private investment in the project was being sought.<sup>182</sup>

## Gas Supply

- 3.31 Australia's North has enormous gas reserves which could provide a cost effective domestic energy supply.<sup>183</sup>
- ***Unconventional Gas Resources*** – Australia has significant potential to exploit coal seam and shale gas resources north of the Tropic of Capricorn for low cost unconventional gas production (for conversion to liquefied natural gas – LNG), with potential to reduce greenhouse gas emissions.<sup>184</sup> Queensland has pioneered the coal seam gas LNG export industry, with the first shipments on track for 2014. Government partnerships with industry would facilitate further exploration and establishment of LNG plants in Northern Queensland and in the Northern Territory.<sup>185</sup> The LNG industry advocated for provision of cost maintenance mechanisms, and regulatory reforms and market incentives to realise export and domestic energy development potential.<sup>186</sup>
  - ***Gas Pipelines*** – a number of proposals were made to extend, tap or construct new gas pipelines to remote regions. In the Pilbara an underground pipeline was proposed to address domestic needs by linking the Canning Basin gas fields to existing domestic gas pipelines in the Pilbara. A more ambitious project would develop a natural gas pipeline network for the West Kimberley, with links to the East Kimberley.<sup>187</sup> Another pipeline under consideration would link Alice Springs to Moomba in the Northern Territory to connect production with south-east markets by extending the existing gas line.<sup>188</sup> In Katherine,

182 Pioneer Corporation Pty Ltd, *Submission 21, Attachment A: Government Brief Converting Prickly Acacia from Pest to Sustainable fuel; and Attachment C: The Opportunity to Convert a 'Declared Weed of National Significance' into a Viable Feedstock for New Value Added Industries.*

183 CSIRO, *Submission 108*, p. 7.

184 CSIRO, *Submission 108*, p. 7; Clean Energy Finance Corporation, *Submission 204*, p. 18.

185 Premier of Queensland, *Submission 219*, p. 22; Northern Territory Government, *Submission 92.2*, p. 3; MMG Ltd, *Submission 22, Attachment A, MMG's Submission to the Coalition's 2030 Vision for Developing Northern Australia*, p. 2.

186 APPEA, *Submission 242*, p. 4.

187 Broome Chamber of Commerce and Industry Inc., *Submission 125*, p. 10; Mr Anthony (Tony) Proctor, President, Broome Chamber of Commerce and Industry, *Committee Hansard*, Broome, 5 May 2014, pp. 35–6.

188 Hon. Adam Giles MLA, Northern Territory Government, *Committee Hansard*, Darwin, 20 May 2014, p. 9; Northern Territory Government, *Submission 92.2*, p. 3.

access to gas allocations from the existing pipeline would support local businesses.<sup>189</sup>

- **National Gas Grid Development** – infrastructure linking the Northern Territory gas pipeline to the Eastern gas grid was identified as a priority to capitalise on the Territory’s unconventional gas resources. The pipeline link from Alice Springs to Moomba would be part of the project. Additional proposals for development of west–east links in a national gas grid includes a pipeline from Tennant Creek to Mount Isa and the consideration of a gas line from Darwin to LNG developments near the Aboriginal centre of Wadeye in Western Australia, and on through to New South Wales.<sup>190</sup> The APA Group (a major natural gas infrastructure business) has invested \$2 million in a feasibility study into the gas grid development. Additional support from the Federal Government was sought.<sup>191</sup>
- **Smaller Scale LNG Hubs** – a proposal to establish four LNG hubs (small liquefaction plants that produce LNG from gas pipelines) in Darwin, Port Hedland, Adelaide and Kalgoorlie would directly supply the mining sector, as well as remote communities and the marine transport sector. Off-grid power could be generated by small scale power stations using the LNG delivered in canisters by road, achieving cost reductions between 20 and 40 per cent.<sup>192</sup>

## Wind, Solar and Wave Power

3.32 Wind, solar and wave power could provide affordable domestic power, with benefits for remote communities in particular, and some potential to supplement national grid supplies. Proposals for these technologies included:

- **Forsyth Wind Farm** – a major wind energy project planned for the south-east of Georgetown, in the Gulf Region of Queensland. The Council has approved construction of up to 30 wind turbines, with an installed capacity of 75MW, on two pastoral stations. There is an Indigenous Land Use Agreement (ILUA) with the Ewamian Native Title holders for the development. The project will supply electricity direct to the Ergon Energy’s Townsville to Georgetown 132 KW transmission line.

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189 Mr Ewan Crook, Member, Katherine Region, Chamber of Commerce Northern Territory, *Committee Hansard*, Katherine, 22 May, p. 38.

190 Mr John Williams, External Relations and Communications Manager, ENI Australia, *Committee Hansard*, Darwin, 19 August 2014, pp. 16–18.

191 Northern Territory Government, *Submission 92.2*, p. 3.

192 Mr Andrew White, Managing Director, Mobile LNG, *Committee Hansard*, Karratha, 9 April 2014, pp. 13, 16.

Retention of the Renewable Energy Target (RET) would provide regulatory certainty for the project.<sup>193</sup> Other proposals for wind technology included the Mount Emerald Wind Farm, on Springmount Station near the Herberton Range in Queensland, and on Horne Island (Nguruapai) in the Torres Strait.<sup>194</sup>

- ***Solar Innovation for Aboriginal and Torres Strait Islander Communities*** – solar power provides particular utility in remote communities which are often reliant on expensive non-renewable supplies of diesel to provide light and power.<sup>195</sup> Alice Springs has developed as a ‘solar city’ and business centre for remote renewable innovation.<sup>196</sup> The solar powered Bushlight program is one local initiative, providing affordable 24 hour reliable power for 130 remote Aboriginal communities. Government support for research and innovation in the sector would stimulate micro-business diversification, and secure Aboriginal and Torres Strait Islander engagement.<sup>197</sup>
- ***Solar Photo Voltaic (PV) Technology and Solar Grid*** – Cook Shire, Cape York, plans to install a 24 MW grid connected to Solar PV technology by Lyon Infrastructure to feed directly into the power supply. Along with solar, the Shire Council is promoting wind and hydro generation projects to reduce imports on State supplies. It was suggested that tax offsets and/or financial incentives would encourage investment in economic development and innovation in the region.<sup>198</sup>
- ***Solar Power Tower with Thermal Energy Storage*** – the Pilbara region prioritises development of renewable energy.<sup>199</sup> A priority for Port Headland is the construction of a ‘Concentrated Solar Power Tower with Thermal Energy Storage’ to supply 75 000 homes with renewable energy over a 50 year period. Federal support for a funding model similar to the

193 Mr Frank Boland, Senior Development Manager, Infigen Energy Development Pty Ltd, *Committee Hansard*, Georgetown, 2 July 2014, pp. 15, 17–18.

194 Tablelands Wind Turbine Action, *Submission 83*, p. 2; Mr Joe Moro, Mareeba Chamber of Commerce, *Committee Hansard*, Cairns, 28 April 2014, p. 42; Councillor Napau Pedro, Mayor, Torres Shire Council, *Committee Hansard*, Thursday Island (Waiben), 30 April 2014, p. 8.

195 Centre for Appropriate Technology, *Submission 133*, p. 4.

196 One of seven solar cities selected under the Federal Government’s Solar Cities Program in 2008. Alice Solar City Energy Champions, ‘Alice Springs shines as a Solar Test Tube for Australia and the World’, 2013, <[www.alicesolarcity.com.au/alice-springs-shines-a-solar-test-tube-australia-and-world](http://www.alicesolarcity.com.au/alice-springs-shines-a-solar-test-tube-australia-and-world)> August 2014.

197 Dr Bruce Walker, Chief Executive, Centre for Appropriate Technology, *Committee Hansard*, Alice Springs, 19 May 2014, pp. 35, 37–9; Ninti One Ltd, *Submission 88*, pp. 4–5.

198 Cook Shire Council, *Submission 86*, pp. 2–3.

199 See Pilbara Regional Council, *Submission 25*, ‘Table 4: Pilbara Infrastructure Priorities to 2015’, p. 15.

State Government's Royalties for Regions program or Northern Towns Development Fund would help facilitate this project.<sup>200</sup>

- **Wave Technologies** – Australia's extensive coastlines hold potential to utilise the ocean's energy for power generation.<sup>201</sup> Some coastal communities reported interest in developing wave technologies to supplement local energy supplies. Derby is reviewing proposals for a Tidal Power Station, using new vertical wave power technology suited to power generation in the West Kimberley's high tidal zones. The supply would be adequate to support light industrial developments.<sup>202</sup> In the Torres Strait Islands, which are surrounded by fast flowing currents, the delivery of power by buoyant actuators (using Carnegie wave energy) in combination with hybrid devices for wind and solar energy was being investigated.<sup>203</sup>

## Conclusion

- 3.33 Many of the proposals discussed in this chapter face serious impediments and would require significant government investment to proceed. The impediments to developing Northern Australia are discussed in detail in Chapter 4.

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200 Town of Port Hedland, *Submission 217*, pp. 3–4.

201 The Australian Network of Environmental Defender's Offices (ANEDO), *Submission 205*, p. 28.

202 Broome Chamber of Commerce and Industry, *Submission 125*, p. 5; Burke Shire Council, *Submission 16*, p. 3.

203 Kaurareg Aboriginal Land Trust (KALT), *Submission 127*, p. 4.

## Impediments to Development

- 4.1 The evidence presented to the Committee during the course of the inquiry has identified a significant range of obstacles to the development of Northern Australia. Many of these impediments will be addressed by the development of the economic and social infrastructure identified in earlier chapters. Others will require specific policy prescriptions of their own. Broadly, these impediments fall into the following categories:
- population;
  - absence of capital infrastructure;
  - absence of social infrastructure;
  - affordability – especially with regard to development costs, power costs and insurance;
  - government – especially in regard to taxation, land tenure, approvals processes and air transport regulation; and
  - the need for standardisation across jurisdictions.
- 4.2 The small size of the population of Northern Australia, and its wide dispersal outside the handful of major centres, exacerbated by the lack of participation by much of the Aboriginal community in the economy, is perhaps the key impediment to be overcome. This will require not only the development of economic and social infrastructure to encourage population growth but the redress of disincentives for people to settle in the North, particularly outside major centres. In this regard, as well as other measures, the Committee has taken a close look at fly-in, fly-out (FIFO) arrangements, the impact that they are having in regional and remote communities, and ways to redress that impact.
- 4.3 In addition, there is the added complexity that Northern Australia cannot be viewed as a homogenous whole, but rather a series of regions facing their own challenges and opportunities. In its report *Rethinking the Future*

of *Northern Australia's Regions*, the Regional Australia Institute identified three distinct regions:

1. Northern cities – Darwin, Mackay and Rockhampton) do not share the constraints of the north as a whole and are competitive in their own right. Significant growth is most likely to occur in this group over time regardless of the development approach taken by policy makers.
2. A diverse group of mid-size towns – Amongst the diverse mid-size towns of the north are a mixture of situations driven by location and industry:
  - For those places close to the northern cities, the barriers to further development are lowered by the existing concentration of people, infrastructure and other economic resources
  - Mining centres feature some of the strongest economic fundamentals of any region in Australia. Yet, their wider competitiveness profiles are often poor, resources and has not yet translated into broader, sustainable, long term competitive strengths for these regions
  - Intensive agriculture regions (e.g. Queensland, Katherine and the Ord River Irrigation Area) which have opportunities emerging in Asia, and
  - Tourist hubs such as Broome, Alice Springs and Whitsunday.
3. The very remote pastoral areas and remote Indigenous communities which include many of the least economically competitive LGAs in the country.<sup>1</sup>

4.4 The Regional Australia Institute noted that a strategy for the development of Northern Australia 'must explicitly recognise these differences in situation and opportunity to be successful'.<sup>2</sup>

## Population

4.5 The demographics of Northern Australia are one of its defining characteristics and principal constraints on development. Northern Australia consists of almost fifty per cent of the Australian land mass, but only five per cent of the population. The population is largely concentrated along the north-east coast of Queensland, Darwin and a few

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1 Regional Australia Institute, *Rethinking the Future of Northern Australia's Regions*, November 2013, pp. 6-7.

2 Regional Australia Institute, *Rethinking the Future of Northern Australia's Regions*, November 2013, p. 7.

other major centres. Outside these areas, the population is sparsely settled.<sup>3</sup> The Australian Government's Green Paper noted that:

Outside the major cities, mining, energy, agricultural and tourism activities in the north are serviced by regional towns. Some are almost entirely dependent on these sectors for their ongoing viability. A small number of people live in rural and remote communities, many of which are Indigenous. These communities face many challenges, particularly around infrastructure and access to services.<sup>4</sup>

- 4.6 It should be noted though that while the population is sparsely distributed that there are sizeable townships and settlements across Northern Australia, that lack development and where the population is overwhelmingly Aboriginal or Torres Strait Islander communities. It should also be noted that these communities are growing rapidly as a result of high birth rates and improved infant and child mortality. As noted elsewhere in this report the populations in these communities remain a largely untapped labour source.
- 4.7 The Committee recognises the difficulties confronted by the residents of the Indian Ocean Territories of Christmas and the Cocos (Keeling) Islands as a result primarily of their isolation and distance from the Australian mainland. The Committee acknowledges that these communities have needs that place particular requirements on the Australian Government.
- 4.8 The Committee understands that there are high costs associated with living in these communities as a result of the high cost of transport and freight and that these costs are obstacles to the development of tourism in the Indian Ocean Territories.
- 4.9 The Committee is mindful of the need to ensure that people who live in the Indian Ocean Territories have as far as possible the same level of access to, and quality of services, as other Australians.
- 4.10 The evidence presented to the Committee highlighted the importance of population as a constraint on development and the need for population growth. In its submission, the Commonwealth Department of Agriculture stated that:

The north's small population reduces the extent to which industries, and society, can build a critical mass of soft (skills,

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3 Australian Government, *Green Paper on Developing Northern Australia*, Canberra, 2014, p. 2.

4 Australian Government, *Green Paper on Developing Northern Australia*, Canberra, 2014, p. 5.

networks, labour, etc.) and hard (transport, communications, energy, etc.) infrastructure.<sup>5</sup>

- 4.11 The Chamber of Commerce and Industry of Western Australia (CCIWA) believed that the very low population base of the region made the ‘development of sustainable industries difficult’,<sup>6</sup> and that ‘ultimately, the development of sustainable communities and industry will require a greater population’.<sup>7</sup> This, however, presented a conundrum – which was to come first, the population or the development:

This is the most significant challenge to further development of northern Western Australia. Without employment opportunities and access to appropriate economic opportunities and social infrastructure, there is little prospect of an increase in the region’s population significant enough to open up broader development. At the same time, low levels of population mean there is little incentive to develop the necessary economic and social infrastructure required to support development.<sup>8</sup>

- 4.12 The Queensland Government emphasised the need to provide employment to promote population growth, noting that ‘a range of non-economic factors play a role in determining where people live but most households ultimately require access to employment opportunities’. The Queensland Government believed that ‘the existing distribution of North Queensland’s population and established regional industry strengths provide a solid base for future population and jobs growth’.<sup>9</sup>

- 4.13 In its submission, the Northern Regional Development Australia (RDA) Alliance argued that ‘we can’t just chase increasing the population of northern Australia for the sake of it at the expense of lifestyle and liveability’:

If we are to increase the population of northern Australia, there needs to be a real focus on preserving our lifestyle and building liveability in urban and regional communities, with a real focus on housing and insurance affordability and securing the basics like water quality and affordability and energy supply.

- 4.14 The submission suggested that ‘perhaps a population plan is needed’.<sup>10</sup>

5 Department of Agriculture, *Submission 238*, p. 13.

6 CCIWA, *Submission 160*, p. 1.

7 CCIWA, *Submission 160*, p. 4.

8 CCIWA, *Submission 160*, p. 5.

9 Premier of Queensland, *Submission 219*, p. 44.

10 Northern RDA Alliance, *Submission 190*, p. 6.

- 4.15 For Flinders Shire Council, the challenge being faced by communities in North West Queensland was arresting long-term population decline and addressing the impacts this was having on communities in the region:

Over the period 2002 to 2012, the combined resident populations of the Councils of Burke, Carpentaria, Cloncurry, Doomadgee, Etheridge, Flinders, McKinlay and Richmond, fell from 12 690 in 2002 to 12 225 in 2012. These local governments represent some 18 per cent of the total area of Queensland but only around 0.27 per cent of the State's total population of some 4.6 million. It is understood that some 70 to 80 people have left Hughenden in 2013 and suspected inward migration to Hughenden has been a fraction of this. Flinders Shire Council has lost approximately 9 per cent of its population over the period 2002 to 2012. Richmond Shire Council has lost approximately 22 per cent of its resident population of the same period.<sup>11</sup>

- 4.16 The Council argued that 'population drives everything; quality of education and health services, lifestyle opportunities, social capital, commercial and industrial business activity'. It believed that 'continual loss of population leads to loss of confidence and ultimately the whole question of community sustainability becomes a focus'. It was critical, therefore, 'that issues around population decline are addressed and policies developed to make it attractive to live and work in rural and remote areas'.<sup>12</sup>

## Absence of Capital Infrastructure

- 4.17 Deficiencies in economic infrastructure are a significant barrier to the development of Northern Australia. In its submission, the Western Australian Government noted that opportunities for development in the resources and agriculture sectors would be dependent on the development of economic and social infrastructure to realise their full potential.<sup>13</sup>
- 4.18 In its submission, the Queensland Government stated that 'facilitating provision of appropriate infrastructure is a key consideration in terms of fostering sustainable economic growth in northern Australia'. It noted that

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11 Flinders Shire Council, *Submission 12*, p. 2.

12 Flinders Shire Council, *Submission 12*, p. 2.

13 Hon. Terry Redman MLA, Minister for Regional Development; Lands, Western Australia, *Submission 161*, pp. 3, 4.

'lack of adequate infrastructure can mean that the costs of doing business in these areas can be higher' and that the 'vast distances between centres can also mean that the cost of providing and maintain infrastructure can also be significant'.<sup>14</sup>

- 4.19 As an example of lack of adequate infrastructure, the Queensland Government cited the largely unsealed Peninsula Development Road, 'which serves as the main artery connecting the Cape York region'. It observed that 'during the wet season road access may be cut for months due to seasonal flooding, saturation of pavement and subsequent repairs'.<sup>15</sup>
- 4.20 The submission highlighted other issues, such as the 'vast areas of Northern and Western Queensland unconnected to the state's electricity distribution network'; the ongoing water supply challenges in many areas; and the 'lack of access to adequate fixed and mobile broadband infrastructure'.<sup>16</sup> The seasonality of water availability was considered a 'limitation specific to the region'.<sup>17</sup>
- 4.21 In its submission, Engineers Australia Northern Division highlighted the infrastructure deficit in the Northern Territory, including the 'lack of sealed roads, adequate water supply, sewerage systems and power supply networks'.<sup>18</sup> Engineers Australia urged a 'strategic approach to developing infrastructure at all levels of Government', noting that:
- If development in the North is to be encouraged, short-term subsidies may need to be considered alongside sustained capital investment in infrastructure projects to deliver increased economic activity and capacity.<sup>19</sup>
- 4.22 Poor road infrastructure and access was highlighted as a critical issue across Northern Australia. In its submission, the Northern Territory Cattlemen's Association stated that eighty per cent of the roads in the Northern Territory are unsealed:
- This provides a major challenge for the movement of people, livestock and equipment at certain times of the year resulting in a loss of productivity, sales and growth. For the northern part of the NT this is usually on an annual basis for all or part of the wet

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14 Premier of Queensland, *Submission 219*, p. 50.

15 Premier of Queensland, *Submission 219*, p. 50.

16 Premier of Queensland, *Submission 219*, p. 51.

17 Premier of Queensland, *Submission 219*, p. 51.

18 Engineers Australia Northern Division, *Submission 311*, p. 16.

19 Engineers Australia Northern Division, *Submission 311*, p. 20.

season. This is a major barrier to business and the people who live and work in the north.<sup>20</sup>

- 4.23 The Cattlemen's Association noted that 'infrastructure development will need to include planning for new and innovative vehicle configurations, weights and lengths'. Road specifications would 'need to be upgraded to handle current weights and configurations, let alone any increased demands'.<sup>21</sup>
- 4.24 In its submission, the Consolidated Pastoral Company Pty Ltd (CPC) urged funding for the maintenance of key transport routes to prevent them becoming 'rivers in the wet and corrugated nightmares in the dry'.<sup>22</sup> CPC proposed the creation of a special infrastructure taskforce 'to identify opportunities and develop priorities for strategic investment in Northern Australia road and rail networks', especially beef transport corridors.<sup>23</sup>
- 4.25 Mr Djawa Yunupingu, a Traditional Owner from Nhulunbuy, identified roads as the main impediment to development in East Arnhem Land:

The Central Arnhem Highway is not up to the task right now. Although governments have upgraded the road and built new bridges, the road is still very unsafe and not suitable for the kinds of traffic we need to move people and goods around and outside of the region ...

We are calling on governments to invest in our region by making the highway an all-weather road. This will help tackle the perception that Arnhem Land is not open for visitors or business.<sup>24</sup>

- 4.26 In its submission, the Shire of Ashburton highlighted the problem with road access in the Pilbara:

The Pilbara covers a vast area with hundreds of kilometres between towns. The Tom Price-Karratha Road is currently a gravel/natural surface road (of differing standards) and recommended for travel by 4WD. Sealing this road would provide access to health, government, education and business services in Karratha for communities including Tom Price, Paraburdoo, Wakathuni, Bellary and Newman. A sealed, direct road would

20 Northern Territory Cattlemen's Association, *Submission 270*, p. 10.

21 Northern Territory Cattlemen's Association, *Submission 270*, p. 11.

22 CPC, *Submission 312*, p. 6.

23 CPC, *Submission 312*, p. 7.

24 Mr Djawa Yunupingu, Traditional Owner, Gumatj Aboriginal Corporation and Miwatj Employment and Participation (MEP) Limited, *Committee Hansard*, Nhulunbuy, 21 May 2104, p. 1.

also open up the access to Karijini National Park, Millstream-Chichester National Park and surrounds, supporting a developing tourist sector.<sup>25</sup>

- 4.27 The Shire of Ashburton noted that ‘other road and rail networks require significant upgrade to mitigate the effects of wet weather events on the transport industry which connects the northern region with ports and export trade points’, and observed that ‘this would be a critical factor for all northern regions of Australia, particularly as the economy grows’.<sup>26</sup>
- 4.28 The need for investment in rail infrastructure was also raised in the evidence presented to the Committee. In its submission, the Chamber of Commerce and Industry Queensland (CCIQ) highlighted deficiencies in the region’s rail network, noting that:
- it currently does not operate as a viable alternative to road transport;
  - rail freight is already managed to capacity; and
  - long transport times and frequency of service are a deterrent to passengers and, in turn, business activity.
- 4.29 The CCIQ suggested ‘better use of existing rail corridors, exploring the feasibility of additional services, and seeking expressions of interest from the private sector to fund improvements to the region’s rail infrastructure’.<sup>27</sup> Engineers Australia Northern Division recommended that Government investigate the feasibility of rail links to the east and west.<sup>28</sup>
- 4.30 The absence of power infrastructure was seen as a crucial barrier to economic growth by the Government of Western Australia, which stated that:
- The substantial cost of power connection in Northern Australia is a barrier to investment. Assistance to reduce headworks costs would stimulate business and assist local governments. Assistance to develop renewable energy would also reduce overall power costs, particularly for the most remote users.<sup>29</sup>
- 4.31 In its submission, the Australian Agricultural Company (AACo) stated that the ‘lack of adequate power infrastructure in many parts of Northern Australia is a major disincentive to investment’. It noted that ‘on several

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25 Shire of Ashburton, *Submission 24*, p. 1.

26 Shire of Ashburton, *Submission 24*, p. 2.

27 CCIQ, *Submission 107*, p. 13.

28 Engineers Australia Northern Division, *Submission 311*, p. 22.

29 Hon. Terry Redman MLA, Minister for Regional Development; Lands, Western Australia, *Submission 161*, p. 14.

occasions in recent years AACo has investigated key infrastructure – such as cotton gins – but declined to proceed due to the fact that only single-phase power was available in the region’. It observed that access to power in Northern Australia was ‘generally contingent on being in the immediate vicinity of resource projects’ and that ‘outside of the immediate mining grids, much of Northern Australia still generates power by burning diesel fuel’.<sup>30</sup>

- 4.32 The AACo supported investment in renewable energy as part of the solution to Northern Australia’s power needs, stating:

The Government should also retain and expand incentives for renewable energy generation. The Clean Energy Finance Corporation – which the current Government has said it will disband – last year co-funded a \$900 000 project to install solar units across 15 AACo properties in North Queensland. This will help AACo reduce its grid consumption by about 30 per cent and reliance on expensive diesel generation, substantially reducing costs and improving competitiveness. Similar rural and remote-based renewable energy projects are essential where power generation is patchy or inadequate.<sup>31</sup>

- 4.33 The importance of the digital economy to the development of Northern Australia was also highlighted in the evidence presented to the Committee, as were the shortcomings of the existing communications networks.

- 4.34 Mr John Huigen, Chair of the Broadband for the Bush Alliance, stated that ‘high-speed broadband and telecommunications offer an opportunity to shrink the distance and isolation of remote and northern Australians’, but that ‘unless remote and northern Australians are part of the digital and telecommunications-enabled world the north will not be able to develop, further population will not be able to be attracted and people will leave’. Mr Huigen observed that ‘the reality is that much of northern Australia will need to rely on satellite telecommunications, which is not as good as the telecommunications their city cousins will enjoy, and has inherent limitations’, and noted that ‘fixed and mobile coverage is not as good in remote Australia, either’.<sup>32</sup>

- 4.35 Highlighting the impact of the limitations in digital services in remote communities, Mr Huigen observed that:

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30 AACo, *Submission 264*, p. 8.

31 AACo, *Submission 264*, p. 8.

32 Mr John Huigen, *Committee Hansard*, Alice Springs, 19 May 2014, p. 54.

There are numerous anecdotes about bright-eyed and bushy-tailed doctors turning up to remote areas and getting on the next plane back because they cannot do Facebook or use their mobile phones. So, considering the terms of reference of this committee and considering the northern Australia vision, I suppose, which is to attract people and grow the economy and the population, there is just a baseline expectation, and unless that expectation is planned for then it is going to be a struggle to have a development agenda move forward.<sup>33</sup>

4.36 Mr Huigen believed that ‘that there needs to be a concerted strategic plan around broadband and telecommunications for remote Australia, including for northern Australia. If you forget it, it will have consequences that will not be positive.’<sup>34</sup>

4.37 The Broadband for the Bush Alliance advocated recognition of the role of both fixed and mobile technologies to address the North’s digital divide. It recommended Government facilitate this by:

- Recognising that fixed and mobile services are both equally important parts of the solution;
- Taking account of existing communications infrastructure in remote and rural Australia and explore how to best use it, in conjunction infrastructure expansion activities;
- Applying the extended zone approach to mobile calls for greater affordability;
- Building the capacity of remote and rural Australians to participate effectively with the digital economy; and,
- Develop ‘last mile’ solutions to meet local needs.<sup>35</sup>

4.38 In its submission, Ninti One argued that ‘the current lack of reliable and affordable telecommunications in Northern Australia will impend on future growth and competitiveness of the region’.<sup>36</sup> Cape York Natural Resource Management Ltd stated that while ‘communication via internet has substantially reduced much of the “tyranny of distance” for Cape York’s regional and remote centres’, these communities had ‘some of the greatest needs for access to new technologies in order to maintain a level of competitiveness’. Improvement in communications was seen as

33 Mr John Huigen, *Committee Hansard*, Alice Springs, 19 May 2014, p. 56.

34 Mr John Huigen, *Committee Hansard*, Alice Springs, 19 May 2014, p. 54.

35 Quoted in Ninti One Ltd, *Submission 88*, pp. 5–6.

36 Ninti One Ltd, *Submission 88*, p. 6.

- catalytic 'in that it will substantially shift the attractiveness of living and working and building the future of northern Australia'.<sup>37</sup>
- 4.39 The Northern Territory Government suggested that to achieve digital equity and efficiencies in the North, a unified policy and approach between service providers and governments must be achieved. It advised it had independently implemented fibre optic connections to 34 communities, providing mobile phone and internet access along the pathway, with a range of satellite systems servicing other communities.<sup>38</sup>
- 4.40 Shortcomings in physical infrastructure were acknowledged in the Australian Government's Green Paper. It stated that 'a lack of appropriate infrastructure flows through to the broader economy and society', and that 'inadequate or inefficient roads, railway networks and ports increase the cost of doing business and can limit the development of export supply chains'. This made it more difficult to 'attract and retain workers, families and visitors'.<sup>39</sup>
- 4.41 The Green Paper noted, however, that the 'competition for public and private infrastructure funding nationally and the smaller population size in the north can make it harder to build a case for infrastructure spending'.<sup>40</sup> Moreover, weather played a significant factor in the cost of constructing and maintaining infrastructure.<sup>41</sup>
- 4.42 The Green Paper highlighted the reliance of industries and communities in the North upon the road network, 'with few alternative routes', and the inevitable constraints placed on underdeveloped road infrastructure.<sup>42</sup> Limited rail options put further pressure on the road network, while limited air services meant that 'it is virtually impossible to fly directly within the region without stopping in cities further south'.<sup>43</sup> The Green Paper noted that 'inefficiencies in and around ports and airports will become an increasing barrier to development in the north as industries expand and realise new markets'.<sup>44</sup>

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37 Cape York Natural Resource Management Ltd, *Submission 198*, p. 21.

38 Hon. Adam Giles MLA, Chief Minister, Northern Territory Government, *Committee Hansard*, Darwin, 20 May 2014, pp. 16, 17.

39 Australian Government, *Green Paper on Developing Northern Australia*, Canberra, 2014, p. 31.

40 Australian Government, *Green Paper on Developing Northern Australia*, Canberra, 2014, p. 31.

41 Australian Government, *Green Paper on Developing Northern Australia*, Canberra, 2014, p. 33.

42 Australian Government, *Green Paper on Developing Northern Australia*, Canberra, 2014, p. 33.

43 Australian Government, *Green Paper on Developing Northern Australia*, Canberra, 2014, p. 33.

44 Australian Government, *Green Paper on Developing Northern Australia*, Canberra, 2014, p. 34.

- 4.43 The Green Paper recognised the ‘lack of reliable, affordable energy’,<sup>45</sup> and ‘a lack of reliable access to water can impede economic development across northern Australia’, and that a combination of factors ‘has limited the development of water resources in northern Australia’. It stated that ‘water is simply not used as effectively or efficiently as it could be’.<sup>46</sup>
- 4.44 The limitations of communications infrastructure in Northern Australia was also highlighted by the Green Paper, the North enjoying ‘less coverage of mobile and broadband services compared to southern Australia’.<sup>47</sup> The Green Paper observed that:
- Without reliable broadband, northern Australian businesses are less able to access wider markets through online commerce or pursue flexible working arrangements. Limited access to applications such as cloud computing and videoconferencing also make it harder to collaborate and compete.<sup>48</sup>
- 4.45 A potential model to address rural infrastructure deficiencies is provided by the recently announced US Rural Infrastructure Opportunity Fund. A national co-operative bank serving rural America provided US\$10 billion as seed funding. It is anticipated that ‘the new fund will allow a wide variety of new participants, including pension funds, endowments, foundations, and other institutional investors’ to invest in rural development. The aim of the Opportunity Fund is to enhance access to capital for rural infrastructure projects and accelerate the process of rural infrastructure improvement.<sup>49</sup>

## Absence of Social Infrastructure

- 4.46 The importance of social infrastructure – those institutions and facilities contributing to personal wellbeing and lifestyle, such as health, education, sport and culture – was repeatedly emphasised in the evidence presented to the Committee. In its submission, the Australian Petroleum Production and Exploration Association (APPEA) stated that ‘the importance of the quality of lifestyle on offer cannot be underestimated as a key factor in

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45 Australian Government, *Green Paper on Developing Northern Australia*, Canberra, 2014, p. 34.

46 Australian Government, *Green Paper on Developing Northern Australia*, Canberra, 2014, p. 36.

47 Australian Government, *Green Paper on Developing Northern Australia*, Canberra, 2014, p. 34.

48 Australian Government, *Green Paper on Developing Northern Australia*, Canberra, 2014, p. 34.

49 The White House, Office of the Press Secretary, 24 July 2014, *Increasing Investment in Rural America*. <[www.whitehouse.gov/the-press-office/2014/07/23/fact-sheet-increasing-investment-rural-america](http://www.whitehouse.gov/the-press-office/2014/07/23/fact-sheet-increasing-investment-rural-america)> August 2014.

attracting and retaining residents to the Northern Australia'.<sup>50</sup> Likewise, it was frequently noted that the absence of social infrastructure was a serious impediment to development.

4.47 In its submission, the CCIQ highlighted the importance of social infrastructure to the business community in North Queensland:

Regarding social infrastructure, feedback from the business community highlights the limited provision and inequity of access to housing, education, health, emergency and other community facilities. This affects the lifestyles of business owners and directly influences their staff attraction and retention strategies. People are the key consideration for businesses when making decisions on expansion and relocation. Furthermore, people are attracted to areas of high economic growth because of increased job opportunities and a growing population, in turn, creates additional demand for goods and services. This correlation between population and economic growth needs to be recognised in planning for social infrastructure.

4.48 The CCIQ suggested 'investigating locations that best support a range of social infrastructure and giving priority to facilities that will have maximum impact in supporting access to jobs'. The CCIQ urged a consistent approach across levels of government and across communities in the region.<sup>51</sup>

4.49 The Northern Territory Cattlemen's Association observed that 'living, working and flourishing in northern Australia requires dedication and commitment beyond what is generally encountered by most Australians'. It was an environment that presented 'a range of social, economic and physical challenges'. Incentives were needed 'for families to live and endure in northern Australia', and this required 'investment in the social and economic infrastructure to support education, health, affordable housing and telecommunications'.<sup>52</sup>

4.50 In its submission, Advance Cairns stated that 'enhancing human and social capital must be at the centre of development plans for Northern Australia'. Advance Cairns noted findings by the Regional Australia Institute that 'Northern Australia is well below the national average for indicators of competitiveness in human capital'. Advance Cairns believed that 'meeting the social infrastructure needs of communities across

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50 APPEA, *Submission 242*, p. 11.

51 CCIQ, *Submission 107*, p. 14.

52 Northern Territory Cattlemen's Association, *Submission 270*, p. 13.

Northern Australia is therefore going to take a very concerted effort and substantial investment', stating:

Regional social services must be appropriately resourced to meet a growing demand on health and social services and the sector must be engaged from the very beginning in development and planning processes.

Education and training institutions needed to be supported to develop new and innovative ways of delivering learning outcomes, particularly for disadvantaged students or those in very remote locations.

Further development of skilled local workforces, supplemented by targeted regional migration, will increase regional capacity to respond to opportunities and diversify local and regional economies.

4.51 Advance Cairns emphasised that 'development of the service sector needs to be integrated across all service industries to help make regional development more sustainable, particularly as industries become highly technical and less mechanical'.<sup>53</sup>

4.52 Limited educational opportunities were highlighted as a major impediment to development in the evidence presented to the Committee. Professor Drew Dawson of Central Queensland University told the Committee:

At the moment we see, for example, that there is a huge brain drain. We cannot get people to go to remote and regional communities and those people cannot keep their kids there. In a sense there is a whole generation of people who are being lost. Our best and brightest in many of those communities are going back to the capital cities because they cannot get an education, and we lose a lot of those people.<sup>54</sup>

4.53 Ms Kirsty Forshaw of the Kimberley Cattlemen's Association highlighted the problems accessing education faced by families in remote areas and the difficult choices they had to make. She explained:

It is getting harder for a lot of families to educate their kids if they are past the school bus run. It is then a matter of whether they have to free up their own time to teach their kids, or employ a home tutor. In the time I have been doing it I am starting to see

53 Advance Cairns, *Submission 69*, p. 12.

54 Professor Drew Dawson, Director, Appleton Institute, Central Queensland University, *Committee Hansard*, Mackay, 31 March 2014, p. 23.

that it is putting a lot of families off. So when we talk about developing regional areas I think education is a very important thing because it encourages families and long-term residents to the area. Otherwise we will end up with a lot more transient people. As I guess most of us know, as parents our main concerns are where you move your family to, if your kids are going to be educated and what happens if you get hurt. I think education is pretty important.<sup>55</sup>

4.54 Housing was another significant issue for people in the North. The Lord Mayor of Darwin stated that ‘if you do not have affordable housing, then the people who are coming into the city looking for opportunities are actually not going to achieve it’. She urged investment in social housing and venture housing: ‘where people pay a discounted rate on their buildings to achieve homeownership’.<sup>56</sup>

4.55 The Lord Mayor also highlighted the need for better sports facilities, noting the absence of ‘a FINA [International Swimming Federation] compliant pool within the Territory’. She also emphasised the need to use sport to better engage with the Asian region:

I believe that one of the big things about engaging in Asia is sport. Sport is a really interesting activity in Asia. Two of the major sports are badminton and table tennis. Popular opinion is that everybody follows the soccer. Sure, everybody follows the soccer, but they do not necessarily play soccer. If we are talking about people who are engaging in sport, badminton and table tennis are it. Darwin does not have a permanent and fit-for-purpose home for either of those sports. That has been a recent problem within this community.<sup>57</sup>

4.56 The Lord Mayor noted that ‘those are just some examples of what is missing, but we are talking about things like community halls and childcare centres’:

We are landlord to seven community childcare centres. All are at capacity. All are between 25 and 30 years old and require upgrades, particularly to meet the needs of the new national quality framework. These things need investment.<sup>58</sup>

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55 Ms Kirsty Forshaw *Committee Hansard*, Kununurra, 7 May 2014, p. 40.

56 Councillor Katrina Fong Lim, *Committee Hansard*, Darwin, 20 May 2014, p. 6.

57 Councillor Katrina Fong Lim, *Committee Hansard*, Darwin, 20 May 2014, p. 6.

58 Councillor Katrina Fong Lim, *Committee Hansard*, Darwin, 20 May 2014, p. 6.

- 4.57 The importance of arts and culture to the development of Northern Australia was also emphasised in the evidence presented to the Committee. Access to cultural experiences and the performing arts was seen as vital to promoting liveability. In its submission, the Australia Council for the Arts stated:
- There is growing recognition that the arts have a unique but integral part to play in the cultural, economic and social infrastructure of communities worldwide ... Artistic activity has the capacity to enhance the development of industries by attracting new residents and visitors as well as sustaining communities. Any consideration of policies for developing the parts of Australia which lie north of the Tropic of Capricorn should take into account the wide range of artistic practice and activity that already exists across the region and how this can be galvanised to support sustainable, culturally vibrant communities.<sup>59</sup>
- 4.58 The JUTE Theatre Company, from Cairns, believed that ‘a focus on the development of a thriving arts industry is critical to any thinking about the future of Northern Australia’. It argued that the arts sector ‘should not be seen as an entertaining consequence of a developing community’, but rather ‘as the litmus test for the quality, maturity and liveability of that society’.<sup>60</sup>
- 4.59 The importance of the cultural centre to a town such as Katherine was highlighted in the evidence of Mr Craig Lambert, Chairman of the Godinymayin Yijard Rivers and Culture Centre. He stated:
- I suppose art and culture really underlie many other aspects of a town, and the town of Katherine was also dysfunctional, disjointed, in many other respects. There was no cohesion between groups. This centre has developed as a remedy for that for this town, to actually bring a lot of what were disparate groups together and to give them a focal point.<sup>61</sup>
- 4.60 The dominance of mining interests in some towns creates particular problems. Towns such as Nhulunbuy and Weipa are company towns, where the land, housing and infrastructure are company owned. The local councils are company entities, unable to access the Financial Assistance Grants available to other local councils. In Western Australia, the towns of

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59 Australia Council for the Arts, *Submission 176*, p. 3.

60 JUTE Theatre Company, *Submission 62*, p. 2.

61 Mr Craig Lambert, Chairman, Godinymayin Yijard Rivers and Culture Centre, *Committee Hansard*, Katherine, 22 May 2014, p. 24.

Tom Price and Paraburdoo are not company towns but suffer from an incomplete normalisation, where utilities and company domination of land ownership constrains the development and diversification of the towns. When the mine closes, or the refinery in the case of Nhulunbuy, these communities face an acute crisis. Nhulunbuy now faces a substantial loss of population due to the closure of the refinery there, with inevitable flow-on effects for the provision of services. There is considerable uncertainty as to the future, as the community relies on the ‘normalisation’ of the town – its conversion into an ordinary local government area – which in turn depends upon the intentions of governments and traditional owners (the town is held by the company under lease from the Traditional Owners).<sup>62</sup>

4.61 Weipa faces similar challenges. Normalisation would significantly improve the position of the community, but the land and infrastructure of the town would still be owned and controlled by the company, limiting what local government could do to grow the town and diversify the economy. The town is still completely dependent on the company.<sup>63</sup>

4.62 The challenge of being a company dominated town was highlighted by Councillor Kerry White of Ashburton Shire in Western Australia. Looking at the availability of land for housing in Tom Price and Paraburdoo, she noted that:

We do have challenges. We do not have the availability of land. You saw when we went down to the golf club that little bit of land that was lazy land. The rest of this town is virtually under mining lease. Until Rio Tinto release it, we cannot do anything about it. You do not get LandCorp coming in here wanting to release 200 blocks. Somebody has to put the money up. Chevron have put the money up in Onslow to do the development there, half the money. They had to buy half the blocks to get LandCorp to come in to do the development. Here it would be exactly the same. LandCorp just do not come in here and say, ‘We’re going to do blocks for 100 houses.’ Unless mining companies are backing them by putting up the money, we cannot go anywhere and the shire cannot do this.<sup>64</sup>

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62 Mr Shawn Kidner, Chief Executive Officer, Nhulunbuy Corporation Limited, *Committee Hansard*, Nhulunbuy, 21 May 2014, pp. 5–7; Ms Jo-Anne Scarini, Project Director, Gove Transition, Rio Tinto, *Committee Hansard*, Nhulunbuy, 21 May 2014, pp. 24–5.

63 Mr Ian McNamara, Chair, Weipa Town Authority, *Committee Hansard*, Weipa, 3 July 2014, p. 13; Mr Jim Singer, General Manager, Communications and External Relations, Rio Tinto Alcan Bauxite and Aluminium, *Committee Hansard*, Weipa, 3 July 2014, pp. 38–9.

64 Councillor Kerry White, Shire President, *Committee Hansard*, Tom Price, 8 April 2014, p. 7.

4.63 The result, according to Mr Neil Hartley, Ashburton Shire's Chief Executive Officer, was a severe constraint on development:

There is limited demand in Tom Price because nobody is waiting for the development. In Perth you have pent-up demand. We cannot have pent-up demand in a place where there is nowhere to stay while you are 'penting up'. It is very difficult to prove that there is demand because there are not people crammed into caravan parks and those sorts of places. It is a really unusual economic environment. You do not come to Tom Price unless you have a job and you cannot stay unless you have a house.<sup>65</sup>

4.64 There was also concern that mining companies were drawing on the resources of local communities, particularly through use of FIFO workforces, without adequate return. Community facilities were being utilised by people who were not paying for their upkeep. Workers were using accommodation without contributing to rates, inflating the cost of housing without contributing income to the local community.<sup>66</sup>

4.65 Social infrastructure issues were equally important for the development of Aboriginal and Torres Strait Islander communities. In its submission, the Indigenous Land Corporation stated that 'social infrastructure is critical to enabling individuals and communities to effectively realise economic development opportunities'. The Corporation noted that 'the most significant infrastructure gaps exist in remote and regional Indigenous communities', including:

- provision of adequate housing – linked to land tenure reform
- communications – mobile services and broadband
- ensuring appropriate access to basic services such as secure power and water supply and waste management
- access to health, education and social support.<sup>67</sup>

4.66 The Indigenous Land Corporation highlighted Aboriginal employment as a critical issue, noting that 'the current low levels of Indigenous employment in the north are a key impediment to the development of the region'. It believed that 'appropriate investment in proven training and real employment is an essential partner to the provision of social

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65 Mr Neil Hartley, *Committee Hansard*, Tom Price, 8 April 2014, p. 7.

66 Ms Jan Ford, Port Hedland Community Progress Association, *Committee Hansard*, Port Hedland, 10 April 2014, p. 26; Mr Peter Long, President, Shire of Roebourne, *Committee Hansard*, Karratha, 9 April 2014, p. 10; Shire of Roebourne, *Submission 72*, p. 30; Jemma Green et al., *Pilbara 2050: Ensuring the Long-term Viability of the Pilbara*, Curtin University, April 2014, p. 41.

67 Indigenous Land Corporation, *Submission 157*, p. 8.

infrastructure to enable Indigenous people to effectively participate in economic development'.<sup>68</sup>

- 4.67 Mr Ian Trust, Executive Director of the Wunan Foundation, noted that his organisation was interested in three areas – education, housing and employment – but that the 'biggest issue we have here is the number of Aboriginal people who are unemployed'. He stated:

We think that the economic development of northern Australia is directly tied to Aboriginal and social development. Without opportunities and jobs, we are going to see an increase in social dysfunction and continuing poverty, and that will impact on the town in terms of kids not going to school. Issues with kids not being controlled at night and so on in the towns and the region will probably escalate if we do not start doing something in this regard.<sup>69</sup>

- 4.68 Mr Rick Fletcher, Chief Executive Officer of the Kalano Community Association, emphasised the importance of housing in Aboriginal communities:

Our biggest social infrastructure need continues to be housing, the expansion of our living areas as our population grows, and the need for short-term accommodation facilities for visitors to Katherine who end up sleeping rough in the river corridor and the public spaces of the town. We see our social base as a critical platform for the growth and development of our economic activity in our community, as it provides the labour we need to develop businesses.<sup>70</sup>

- 4.69 The Australian Government's Green Paper acknowledged the problems with providing social infrastructure and the consequent impact on liveability. The Green Paper noted that:

Beyond location and climate, other factors influence where people choose to live, including housing, access to hospitals and schools, healthcare and communication services. The availability of other amenities is also influential, such as cafes, restaurants, retail outlets, parks, playgrounds, sporting and cultural facilities – particularly for families and skilled professionals.<sup>71</sup>

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68 Indigenous Land Corporation, *Submission 157*, p. 10.

69 Mr Ian Trust, *Committee Hansard*, Kununurra, 7 May 2014, p. 22.

70 Mr Rick Fletcher, *Committee Hansard*, Katherine, 22 May 2014, p. 2.

71 Australian Government, *Green Paper on Developing Northern Australia*, Canberra, 2014, p. 31.

- 4.70 The Green Paper observed that ‘parts of northern Australia can struggle to provide and maintain quality services and amenities – especially in rural and remote communities’, and that ‘these conditions can act as a barrier to economic participation within local communities and as a barrier for those wishing to take up economic opportunities elsewhere’.<sup>72</sup> The Green Paper observed that ‘rural and remote communities in the north also have a higher proportion of Indigenous people who continue to face significant social and economic disadvantage’.<sup>73</sup> The Green Paper stated that ‘economic development is a critical means of addressing such disadvantage’. It noted that ‘there may also be elements of the transfer system which affect decisions to find and accept work’.<sup>74</sup>

## Affordability

- 4.71 Affordability is a major issue in Northern Australia. High development costs, largely as a result of remoteness and the need to import most inputs, have serious impacts upon residents and businesses. The need to mitigate weather risks can add to the cost of development. There is a high cost of service delivery to small and dispersed populations outside the main centres. The cost of power and water impacts on the cost of doing business and living standards in a range of sectors, as does the availability and affordability of insurance.

## Cost of Living

- 4.72 In its submission, the Western Australian Government noted the high cost of living in the Pilbara and Kimberley ‘with the cost of living in the Pilbara region being 18.6 per cent higher than in Perth’ or ‘an additional annual expense of \$14 767 for a worker on an average wage in Port Hedland, assuming the full wage is spent’. The WA Government observed that ‘the Kimberley region’s cost of living is 14.7 per cent higher than Perth and the Gascoyne region 10 per cent higher than Perth’.<sup>75</sup>
- 4.73 The Mayor of Port Hedland, highlighted the cost of living issues facing her community, stating:

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72 Australian Government, *Green Paper on Developing Northern Australia*, Canberra, 2014, p. 31.

73 Australian Government, *Green Paper on Developing Northern Australia*, Canberra, 2014, p. 31.

74 Australian Government, *Green Paper on Developing Northern Australia*, Canberra, 2014, p. 38.

75 Hon. Terry Redman MLA, Minister for Regional Development; Lands, Western Australia, *Submission 161*, p. 9.

I am not sure if you filled up your car at the service station here, but unleaded fuel is up near the high \$1.80s to \$1.90. If you were to enjoy the hospitality of our local restaurants and catch a taxi from Port Hedland to south Hedland that is a \$50 one-way taxi trip. We do not have public transport. To buy a loaf of bread, you are looking at close to \$3. If you were to look at your supermarket basket and see what you can buy in Perth for \$50 and what you can buy here for your family for \$50, you would find there is bugger all, to be honest, in your supermarket basket here. We need to be looking at those things. As much as you are getting higher wages and good packages up here, the problem is the cost of living. The cost of a small flat white at the cafe here is \$5.<sup>76</sup>

4.74 Darwin faced similar problems, with the cost of living flowing through to wage costs for business. Mr Ricki Bruhn, City of Palmerston, noted that council workers from South Australia were attracted by the higher wages offered in Darwin only to be put off by the cost of living: 'They come up here but the differential in housing and day-to-day living makes a big difference.'<sup>77</sup>

4.75 Housing costs were a major issue. In its submission, the Queensland Government stated:

The provision of housing and associated infrastructure is difficult throughout north Queensland due to high construction cost of new housing and the poor condition of older housing stock. This in turn can make it difficult to attract staff to remote areas to work in schools, hospitals, child care and other social service industries. Similarly high construction costs make it uncommercial for industry to undertake major commercial and retail developments in these communities.<sup>78</sup>

4.76 The Mayor of Flinders Shire, advised that housing construction costs in his region were in the order of '\$300 000 to \$400 000 for a standard size house', a factor of freight costs and the need to build cyclone rated dwellings.<sup>79</sup> The Queensland Government noted that 'one of the main challenges in providing infrastructure in North Queensland, especially in the more remote parts of the region, is the comparatively high cost of construction'. The Queensland Government stated that 'distance, coupled with the availability and accessibility of building materials and limited

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76 Councillor Kelly Howlett, *Committee Hansard*, Port Hedland, 10 April 2014, p. 11.

77 Mr Ricki Bruhn, Chief Executive Officer, *Committee Hansard*, Darwin, 18 August 2014, p. 18.

78 Premier of Queensland, *Submission 219*, p. 57.

79 Councillor Greg Jones, *Committee Hansard*, Townsville, 2 April 2014, p. 20.

availability of local expertise and labour, is the most significant factor contributing to higher costs.’<sup>80</sup> Similar problems were identified in Darwin, where the shortage of land released for housing development was also identified as a significant factor in rising costs.<sup>81</sup>

- 4.77 The cost of housing in the Pilbara has increased rapidly over recent years and now outstrips Perth. A report done by RDA Pilbara, noted that:

For each town, the Average House Price has increased from 2001 to 2012 – the increase for the Pilbara has been between 331% for Karratha (30% per annum), 618% (55% per annum) for Port Hedland, 1367% (120% per annum) for Newman and 547% (50%) for other towns including Onslow.

This compares with the increase for Perth over the same period of 127%.<sup>82</sup>

- 4.78 Rents have also increased sharply (although are now declining in some centres):

Average Weekly Rents have increased in the Pilbara towns of Karratha, Newman and Port Hedland by over 300% (43% per annum) in the period between 2005 and 2012.

This compares with an average median weekly rental increase of 99% in Perth over the same period.<sup>83</sup>

- 4.79 The report stated that ‘more needs to be done to “normalise” costs’ but that ‘this is not easy’:

... construction costs in the Pilbara are exceptionally high and will be difficult to reduce, given the need for cyclone rating, transport costs of materials, and professional and technical service costs. Land availability also is constrained due to a number of factors including flooding, native title and rate of release to market.<sup>84</sup>

- 4.80 Estimated construction costs in the Pilbara were 55%–65% higher than in Perth, a result of distance, high labour costs (‘50% higher than Perth excluding flights and accommodation’), high accommodation costs, high material costs and more rigorous standards to meet flooding and cyclone

80 Premier of Queensland, *Submission 219*, p. 14.

81 Dr Graeme Suckling, Chief Executive Officer, Urban Development Institute of Australia, *Committee Hansard*, Darwin, 18 August 2014, pp. 21–3.

82 RDA, Pilbara, *Exhibit 29: The Cost of Doing Business in the Pilbara*, May 2013, p. 23

83 RDA, Pilbara, *Exhibit 29*, p. 23.

84 RDA, Pilbara, *Exhibit 29*, p. 23.

issues ('this adds 30% to structural steel tonnages and 400% to 600% to concrete footing volumes').<sup>85</sup>

- 4.81 The price of water, power and fuel also added to the cost of living. It was noted that 'in 2013 Onslow's water price was 286% higher than the Perth price', whilst Karratha (45%) and Port Hedland (33%) 'were also much higher'. Water costs in Newman were lower (95% of the Perth price).<sup>86</sup> Fuel prices were considerably higher in the Pilbara than Perth,<sup>87</sup> while electricity prices, though lower than Perth's, had been rising at a faster rate, had nearly caught up and were expected to overtake them.<sup>88</sup>
- 4.82 Ms Morag Lowe, a real estate agent from Port Hedland, believed that 'historically high and the continuing escalating costs of maintaining property in the region' – power for essential cooling, property insurance, high maintenance costs – made housing 'unaffordable for the average family, regardless of acquisition cost'.<sup>89</sup>

## Cost of Power

- 4.83 The cost of power was cited as a major impediment to development in Northern Australia. In its submission, the Western Australian Government noted that:

The substantial cost of power connection in Northern Australia is a barrier to investment. Assistance to reduce headworks costs would stimulate business and assist local governments. Assistance to develop renewable energy would also reduce overall power costs, particularly for the most remote users.<sup>90</sup>

- 4.84 Similarly, the Queensland Government identified the reliability and cost of electricity – 'traditionally generated in South East Queensland' – as an issue for North Queensland. Transmission distances and limited private market competition increased the cost of energy in North Queensland, inhibiting business development and expansion. Reliability was also an issue in more remote areas due to reliance on diesel operated generators, some communities not being supplied by the main grid. The Queensland Government noted that:

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85 RDA, Pilbara, *Exhibit 29*, p. 37.

86 RDA, Pilbara, *Exhibit 29*, p. 30.

87 RDA, Pilbara, *Exhibit 29*, p. 34.

88 RDA, Pilbara, *Exhibit 29*, p. 31.

89 Ms Morag Lowe, *Submission 135*, p. 7.

90 Hon. Terry Redman MLA, Minister for Regional Development; Lands, Western Australia, *Submission 161*, p. 14.

A number of potential energy projects that would support the development of North Queensland have been identified although any new energy generation projects would need to be funded by the private sector. Recent falls in the demand for electricity, uncertainty in relation to the Renewable Energy Target and the possibility that significant transmission infrastructure could be required, make it a difficult environment for investment into new energy generation in North Queensland.<sup>91</sup>

- 4.85 In its submission, Ports North stated that ‘the cost and availability of reliable energy are critical in supporting regional industrial growth’. It noted, however, that:

With ongoing deregulation of the electrical industry and electrical line loss between southern power generators and the northern region will see significant growth in electrical costs in the future and this will have an impact on the general population and will severely impact the competitiveness of northern industries. A number of potential mining operations, particularly in the North West Mineral Province, require cost effective energy to develop.<sup>92</sup>

- 4.86 The Mayor of Townsville thought that ‘the key impediment for us is electricity’. She gave the example of building a meatworks in Northern Australia:

The cost to run chillers here in Queensland is one-third more than it is in New South Wales. Woolworths built their new chiller complex in Lismore because it was far cheaper to do that than build it in Queensland to supply south-east Queensland and even right up to the north. That is an impediment to bringing those sorts of things here. Part of that impediment is the way the AER [Australian Energy Regulator] applies costs, especially in Northern Australia. We just do not have the economies of scale. If you apply full-cost pricing for your transmission costs and things like that, it is a huge impediment for business to develop in Northern Australia. Those transmission costs are between 20 and 30 per cent more than anywhere else. How does industry survive?<sup>93</sup>

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91 Premier of Queensland, *Submission 219*, p. 23.

92 Ports North, *Submission 66*, p. 4.

93 Councillor Jennifer Hill, *Committee Hansard*, Townsville, 2 April 2014, p. 10.

## Insurance

- 4.87 The affordability and availability of insurance was highlighted as a significant barrier to the development of Northern Australia in the evidence presented to the Committee. There was a consistent refrain that insurance costs were becoming prohibitive and insurance products less accessible due to the limited number of insurers operating in the north.
- 4.88 Prior to Cyclone Yasi in 2011, there had been intense competition in the insurance market in North Queensland. Risk was under-priced and premiums set at unsustainably low levels, leading to a number of insurers withdrawing from the market, and leaving remaining insurers with a high level of exposure to risk. The result was restrictions on the writing of new business and a steep increase in insurance premiums across the region.<sup>94</sup>
- 4.89 In its submission, the City of Townsville stated that the ‘cost and availability of insurance in North Queensland inhibits investment and increases costs for businesses and residents’. The submission compared annual insurance premiums for a single storey brick house (with standard security) built in 1990, with a sum insured of \$350 000 and contents of \$80 000, for selected locations in Brisbane and North Queensland, noting that premiums for Brisbane (Ferny Hills) were \$1957.16, for Townsville \$4581.42, and Cairns \$9190.16.<sup>95</sup> It noted that:
- Only a small number of insurers are engaged in the market in North Queensland, and potential mergers and acquisitions will reduce competitiveness further. In addition, some insurers refuse to insure certain properties based on location – for example the area may be deemed an island risk (i.e. including Magnetic Island) or the risk of flood/cyclone/natural disaster is considered too high.<sup>96</sup>
- 4.90 Ms Lowe identified similar concerns in Western Australia. Her submission noted that the cost of insurance was ‘a significant and rapidly rising cost of living expense in the North’, and that ‘this region has seen an increase of up to 500% in Strata Insurance over the past 4/5 years and individual premiums of over \$10 000 per annum are becoming the new norm’. She urged the Government to ‘work with the Insurance Industry to create solutions to this unsustainable situation, and acknowledge that this is not

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94 House of Representatives Standing Committee on Social Policy and Legal Affairs, *In the Wake of Disasters. Volume 2: The Affordability of Residential Strata Title Insurance*, Parliament of Australia, Canberra, March 2012, pp. 37–8, 43, 46–7; see also, Australian Government Actuary, *Second Report on Strata Title Insurance Price Rises in North Queensland*, May 2014, p. 3.

95 City of Townsville, *Submission 170*, p. 10.

96 City of Townsville, *Submission 170*, p. 10.

“price-gouging” by the sector but indicative of a fundamental shift in the region’s risk profile’. The alternative was increasingly unaffordable housing.<sup>97</sup>

- 4.91 In evidence to the Committee, Mrs Karen May, a member of the Mackay Region Chamber of Commerce, described her experience with recent sharp rises in insurance costs:

We are just a small franchise business in Sarina, which is 30 minutes south of Mackay. The previous year’s premium was \$7000 to insure just my stuff – not the building that is in that shop along with your breakdowns and those sorts of insurances. It went from \$7000 to \$14 000 in one hit. That was the increase in the 12-month premium from last year to this year. I happen to be treasurer of the RSL club in Sarina. Their insurance went from \$25 000 to \$40-odd thousand in one year. There is only one person that would insure the RSL club and I think I had two options to get my insurance.<sup>98</sup>

- 4.92 Similar findings were reported by Mr Nick Behrens, CCIQ, who stated:

The median increase in insurance costs each year for business is in the order of 20 per cent, but some businesses – and I do not over-exaggerate – have had an increase in their insurance bill in Far North Queensland of 2500 per cent. It really has been a significant shock to the operation of their business.

- 4.93 Mr Behrens identified the seeming market failure occurring in North Queensland, with insurance companies ‘seeking to withdraw from that market ... either by discontinuing insurance policies or by ratcheting up insurance prices to the point where it is no longer affordable for that business to reinsure’. Mr Behrens stated that ‘we are now seeing instances where some businesses are deliberately underinsuring their assets or, very dangerously, not insuring their assets at all’.<sup>99</sup>

- 4.94 In its submission, the Queensland Government noted that, ‘if not addressed, the high cost of insurance premiums [is] likely to hinder or slow economic development within the Northern Australia region’.<sup>100</sup>

- 4.95 In their evidence to the Committee, however, insurers highlighted the risk profile of North Queensland as the key factor in rising insurance costs. In its submission, the Insurance Australia Group (CGU and NRMA) highlighted the costs of cyclones and floods in North Queensland:

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97 Ms Morag Lowe, *Submission 135*, p. 8.

98 Mrs Karen May, *Committee Hansard*, Mackay, 31 March 2014, p. 58.

99 Mr Nick Behrens, General Manager Advocacy, *Committee Hansard*, Brisbane, 30 May 2014, p. 9.

100 Premier of Queensland, *Submission 219*, p. 44.

NQ has experienced a number of high frequency, high impact events including: Tropical Cyclone Larry (2006), Tropical Cyclone Yasi (2011), Storms and Floods of Oswald (2013), and the Mackay Floods (2008). While Queensland has long been exposed to natural hazards, the frequency of extreme weather events and their level of destruction appear to have risen significantly since 2006. The Australian and Queensland Governments have incurred over \$7.5 billion in reconstruction and recovery costs related to the 2010–11 Queensland floods and Cyclone Yasi. Insurers have paid out more than \$3.7 billion to policyholders for the same events.<sup>101</sup>

4.96 Insurance Australia Group noted that ‘the high incidence of natural perils in the NQ region is reflected in a higher share of national claims from NQ compared to its contribution to national premiums’:

As a result, NQ has experienced an increase in premiums to offset the rise in the cost of natural peril claims costs, claims inflation (which reflect the high risk of weather events), reinsurance costs as well as the prediction of future risk (the amount insurers are likely to pay out in claims in future).<sup>102</sup>

4.97 The submission identified a range of strategies to reduce risks, including:

- better understanding of natural hazards, including mapping and data;
- improved building standards;
- risk-appropriate planning and land use;
- investment in hazard mitigation;
- better management of post-disaster reconstruction;
- community education;
- better information about insurance products; and
- insurance product innovation.<sup>103</sup>

4.98 In its submission, Suncorp made similar points, observing insurance ‘cannot fully manage all risks’:

A risk can only be insured against when the loss is unexpected, the premium is affordable and the likelihood of catastrophic losses is low. Reinsurance is also required to ensure natural disaster claims can be paid when they do occur.<sup>104</sup>

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101 Insurance Australia Group, *Submission 235*, p. 6.

102 Insurance Australia Group, *Submission 235*, p. 3.

103 Insurance Australia Group, *Submission 235*, pp. 12–15.

104 Suncorp, *Submission 151*, p. 2.

- 4.99 Suncorp highlighted the benefits of risk mitigation, citing the example of Charleville and Roma, where flood mitigation measures had significantly reduced flood risk, allowing insurers to reduce premiums.<sup>105</sup> Insurance Australia Group also noted the work being undertaken to improve the resilience of strata title properties in North Queensland by CGU, funding building risk assessments for individual properties with recommendations for improvements to reduce the risk rating.<sup>106</sup>
- 4.100 Allianz Australia highlighted the weather risk component of insurance costs in North Queensland, particularly relating to floods and/or cyclones, stating that ‘average premiums between North Queensland and elsewhere involving multiples of 2.5 times reasonably reflect differences in risk’. Allianz Australia noted, however, that ‘this conclusion becomes harder to sustain in light of evidence that some homeowners face premiums of ten or fifteen times those of other Australians’, and that ‘at such extreme levels, premiums cease to act as an appropriate price signal’.<sup>107</sup>
- 4.101 As a means of spreading the risk from weather events in North Queensland, Allianz suggested a reinsurance pool, explicitly subsidised through a levy, similar to that provided by the Australian Reinsurance Pool Corporation, which manages terrorism related risks. Allianz noted that:
- The provision of subsidised reinsurance for cyclones and floods would remove the high level of uncertainty associated with insurers’ exposure to these events and the concentration risks that limit their appetite for business in areas such as Nth Queensland.<sup>108</sup>
- 4.102 The Australian Government has acknowledged the issue of extreme weather events in the North, both in terms of the toll such events can take on infrastructure and the impact on insurance costs. The Productivity Commission has been tasked to undertake an inquiry into national disaster funding arrangements. The Government has also released a discussion paper addressing the high cost of home and strata title insurance in North Queensland.<sup>109</sup> The discussion paper highlights the role of risk factors in increasing insurance costs, particularly the risk of extreme weather events such as cyclones, and the need for mitigation of

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105 Suncorp, *Submission 151*, p. 4; Mr Stephen Jeffery, Executive Manager for Home Insurance, Suncorp, *Committee Hansard*, Brisbane, 30 May 2014, p. 55.

106 Insurance Australia Group, *Submission 235*, p. 24.

107 Allianz Australia, *Submission 293*, pp. 5–6.

108 Allianz Australia, *Submission 293*, pp. 13–14.

109 Australian Government, *Green Paper on Developing Northern Australia*, Canberra, 2014, p. 30.

those risks. It identifies three options for addressing the cost and availability of insurance, including:

- help consumers to compare insurance products by developing an insurance information and comparison website (or an insurance ‘aggregator’);
- promote resilience of strata title buildings by facilitating engineering assessments of strata title properties in North Queensland; and/or
- expand North Queensland insurance markets by encouraging participation by foreign insurers.<sup>110</sup>

4.103 In the 2014–15 Budget, the Australian Government announced measures to address insurance costs. The Government will provide up to \$12.5 million over three years from 2014–15 to the Queensland Government to provide grants to bodies corporate to undertake engineering assessments of strata title properties in North Queensland. The assessments are to identify risks that can be mitigated. The Government will also provide funding over four years (including a capital component) to the Department of the Treasury to develop an insurance comparison website on strata title and home building and contents insurance offerings in North Queensland.<sup>111</sup>

## Regulatory Environment

4.104 There are a number of areas directly related to government regulation that have been cited as impediments to the development of Northern Australia. These include taxation, land tenure arrangements, approvals processes and air transport regulation.

4.105 The Committee has received a considerable amount of evidence on ways in which the taxation system might be adjusted to promote economic development. Much of this focussed on FIFO (fly-in, fly-out) and DIDO (drive-in, drive-out) employment arrangements. FIFO supports particular activities and many specific work sites – often mines or mine site operations (i.e. rail). FIFO and DIDO have been a feature of northern economic development for over 30 years and have become increasingly important to business continuity across Northern Australia. FIFO and DIDO have many advantages. Yet there is a growing concern that FIFO

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110 Australian Government, *Addressing the High Cost of Home and Strata Title Insurance in North Queensland*, Discussion Paper, 9 May 2014.

111 Australian Government, *Budget Paper No. 2, Part 2: Expense Measures*, Treasury.

and DIDO may create a transient workforce, often limiting workers' economic and social participation in the communities in which they work. This has been raised as an issue for places with an already low population base.

- 4.106 Land tenure arrangements can affect security of investment and options for development. Lengthy approvals processes can add to the time and cost of development and impede outcomes. For example, proponents of new aquaculture enterprises have undertaken expensive and onerous compliance processes to meet high environmental standards, but have nonetheless failed to gain approvals for their operations. The viability and costs of regulations and/or security compliance of small regional airports and small regional airlines also impedes the development of regional communities. These are all products of existing legal regimes and therefore matters for government.

## Approval Processes

- 4.107 Lengthy and complex approvals processes, particularly in relation to environment approvals, have been identified as a significant impediment to the development of Northern Australia. In its submission, the Chamber of Minerals and Energy (CME) of Western Australia stated:

Development Assessment and Approval (DAA) processes present one of the single biggest challenges facing "greenfield" resource project development in Northern Australia. Duplication between federal and state approvals, time delays and complexity of process are all contributing to the increasing costs of resource projects in Northern Australia.<sup>112</sup>

- 4.108 The Chamber argued that reform was needed to 'consolidate the myriad of regulatory processes to improve environmental outcomes, business and investor certainty and to restore community confidence in the transparency of the assessment'. Growth and investment in Northern Australia required an 'approvals system framework which allows for effective and efficient decision making'.<sup>113</sup>

- 4.109 The CCIQ highlighted the impact of regulation on small and medium enterprises, stating:

Red tape is felt more severely by small and medium businesses that do not have the depth of resources to undertake compliance. This burden is intensified for businesses in Northern Queensland

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112 CME of Western Australia, *Submission 93*, p. 9.

113 CME of Western Australia, *Submission 93*, p. 9.

because of the region's socio-economic and environmental regulations that are extremely complex to navigate. Small businesses often have to engage consultants at significant costs to satisfy regulatory requirements.

- 4.110 The CCIQ gave examples of the regulatory burden, including a caravan park and camping business in North Queensland that spent around \$97 000 per annum and an average of nearly 30 hours per week on compliance activities. CCIQ argued that 'reducing red tape is a cost effective/revenue neutral way of stimulating regional growth'.<sup>114</sup>
- 4.111 In evidence before the Committee, North Queensland Bulk Ports Corporation (NQBPC) argued that gaining approval for expanding or building new port projects had become 'unnecessarily difficult due to duplicative and overlapping administrative processes' and the intrusion of issues not directly related to the environmental impact of port development. NQBPC argued that environmental standards 'should be enhanced', but that 'they need to be streamlined in regulatory processes' with 'balanced and appropriate compliance initiatives'. NQBPC urged reform, including 'a government commitment to the application of environmental laws in the manner intended', and suggested 'an audit into unnecessary port green tape including duplication between constituencies'.<sup>115</sup>
- 4.112 Perhaps the most serious regulatory impediment presented to the Committee related to aquaculture. In its submission, the National Seafood Industry Alliance (NSIA) noted that:
- While aquaculture in southern waters has increased in value (thanks largely to increased production of salmonids in Tasmania), it speaks volumes for the state of the aquaculture industry in tropical waters that no new prawn farm has been approved or built in Australia in the past 13 years.<sup>116</sup>
- 4.113 The NSIA stated that the 'major obstacles to the development of Australian aquaculture are red and green tape, and convoluted legislation emanating from overlapping agencies which often have conflicting aims'. It noted that 'the current legislation in most States does not define clear pathways, parameters and actionable timeframes for sustainable aquaculture growth'. It argued that 'while safeguarding the marine

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114 CCIQ, *Submission 107*, p. 7.

115 Mr Bradley Fish, Chief Executive Officer, *Committee Hansard*, Mackay, 31 March 2014, p. 41.

116 NSIA, *Submission 155*, p. 3.

environment is vitally important, aquaculture proposals should not be blocked by environmental criteria that are simply unreasonable’.

- 4.114 The NSIA believed that ‘harmonisation of aquaculture policy and regulatory requirements across States and Territories is needed, as a precursor to an improved legislative and policy environment that encourages aquaculture development’.<sup>117</sup>
- 4.115 An example of the problem was presented to the Committee when it visited the Pacific Reef Fish facility outside Ayr in North Queensland. The company showed the Committee a large volume of paperwork for an Environmental Impact Statement that had taken fifteen years to develop and cost several million dollars to produce. Nonetheless, the proponent stated that the project was still unable to proceed despite all the scientific evidence supporting it and others like it.
- 4.116 In its submission, the Queensland Government acknowledged that ‘investors have in the past been deterred by over-regulation in Queensland that resulted in long, drawn out project development approvals’.<sup>118</sup> However, it also highlighted its commitment ‘to reducing duplication in environmental regulatory processes, while ensuring environmental protection’, including streamlining Commonwealth and State environmental regulation:
- An agreement between the Commonwealth of Australia and the State of Queensland relating to Environmental Impact Assessment would reduce the current duplication of environmental assessments and approvals between the Commonwealth and the State. These issues are of particular relevance in the North given the number of proposals undergoing impact assessment. This may reduce assessment times and the burdens placed on proponents through dealing with multiple levels of government and multiple approval processes.<sup>119</sup>
- 4.117 Likewise, the Western Australian Government noted the need for Commonwealth, State and Territory governments to ‘co-operate in streamlining environmental approvals, by eliminating duplication through assessment and approval and through bilateral agreements’.<sup>120</sup>

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117 NSIA, *Submission 155*, p. 3.

118 Premier of Queensland, *Submission 219*, p. 59.

119 Premier of Queensland, *Submission 219*, p. 42.

120 Hon. Terry Redman MLA, Minister for Regional Development; Lands, Western Australia, *Submission 161*, p. 6.

- 4.118 The Government's Green Paper acknowledged stakeholder concern about government regulation causing delays and costs and reducing incentives for private investment. The Green Paper highlighted recent work by the Productivity Commission that has 'found that environmental assessment processes can cause delays and involve a range of costs, including those relating to administration and compliance'. The Green Paper also noted, however, the Government's commitment to a 'one-stop-shop for environmental approvals' that 'will simplify the approvals process for businesses, lead to swifter decisions and improve Australia's investment climate, while maintaining high environmental standards'.<sup>121</sup>

## Taxation

- 4.119 Much has been made in the evidence presented to the Committee for the need for taxation reform to provide incentives or remove disincentives for growth in Northern Australia. Mr Peter Long, President of the Shire of Roebourne, told the Committee:

We also encourage taxation reform – to simplify our system and also to incentivise taxpayers working in remote areas such as ours. We do not expect extraordinary or large tax breaks to bring people to our region. However, it is important that we continue to provide some incentives to ensure we have access to the workers we require to continue to service our local industries. For businesses, we recognise the difficulties in providing specific regionally based tax incentives. However, we believe significant reform could be made to enhance and encourage investment and innovation within our region.<sup>122</sup>

- 4.120 In its submission, the APPEA highlighted the potential impact of taxation arrangements on the resources sector:

The oil and gas industry in Australia faces an array of taxes, charges and fees in relation to petroleum activities. Fiscal imposts include resource taxes (including the petroleum resource rent tax [PRRT], petroleum royalties and production excise), company income tax and a wide variety of other taxes, fees and charges. Tax systems and settings that are not administratively efficient and internationally competitive can have a significant impact on project economics and investment decisions.<sup>123</sup>

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121 Australian Government, *Green Paper on Developing Northern Australia*, Canberra, 2014, p. 39.

122 Mr Peter Long, *Committee Hansard*, Karratha, 9 April 2014, p. 2.

123 APPEA, *Submission 242*, p. 15.

- 4.121 The APPEA indicated several concerns, including:
- Critical income tax issues, including maintaining the immediate deductibility of exploration for income tax purposes and committing to retain the existing statutory effective life caps for oil and gas assets.
  - The new PRRT arrangements for onshore operations are imposing a significant additional layer of administrative complexity and uncertainty on companies, as well as potentially complicating future investment decisions. APPEA proposes that the Government introduce a tax free threshold on a barrel of oil equivalent basis for new onshore petroleum projects.
  - Resource taxes in the form of excise and royalties on production and taxes on profits can, in some cases, have as large an impact on project economics as company tax. APPEA proposes that the Australian Government removes the crude oil and condensate production excise regime from all onshore areas in recognition of the ongoing reporting and compliance burdens involved in administering a tax that is unlikely to be payable on current onshore discoveries. This is further reinforced by the fact that PRRT now applies to all onshore petroleum production.<sup>124</sup>
- 4.122 The Minerals Council of Australia (MCA) believed that ‘repeal of the carbon tax (including full reinstatement of fuel tax credits for off-road vehicles for mining) and the Minerals Resource Rent Tax (MRRT) will help to secure the next wave of investment in Northern Australia by removing unnecessary burdens on industry’. This would ‘increase exports, secure jobs and continue to support the minerals industry’s contribution to government revenues’.<sup>125</sup>
- 4.123 The MCA noted that ‘the combination of State and Territory royalties with Federal company tax means Australia is a relatively high tax jurisdiction for mining with an average tax ratio in excess of 40 per cent’. Industry tax rates had increased in recent years, ‘largely due to royalty increases on coal and iron ore’. MCA stated that ‘benchmarking the international competitiveness of tax and royalty arrangements remains critical if Northern Australia is to attract new minerals resource investment’.<sup>126</sup>
- 4.124 Integrated Food and Energy Developments Pty Ltd (IFED) believed that ‘our current tax regime is an impediment to attracting large amounts of capital to fund Greenfield developments’<sup>127</sup> and suggested two reforms.

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124 APPEA, *Submission 242*, p. 15.

125 MCA, *Submission 122*, p. 8.

126 MCA, *Submission 122*, p. 8.

127 IFED, *Submission 81*, p. 7.

The first was Early Stage Venture Capital Limited Partnerships (ESVCLPs):

An ESVCLP is a tax structure introduced to entice early stage risk capital into emerging technologies. Money invested into ESVCLPs is not tax deductible on the way in but returns from ESVCLPs are tax exempt in the fund. The ESVCLP program is aimed at stimulating Australia's early stage venture capital sector. It makes available to fund managers that pool investors' capital a world class structure for venture capital funds.

- A venture capital fund registered as an Early Stage Venture Capital Limited Partnership receives flow-through tax treatment – that is, it is not a taxing point.
- Investors (limited partners) in an Early Stage Venture Capital Limited Partnership are exempt from tax.
- The manager is entitled to claim their carried interest in the fund on capital account rather than revenue.<sup>128</sup>

4.125 The second reform was to extend the concept of the Managed Investment Trust (MIT) to agricultural developments such as the Etheridge Integrated Agriculture Project (EIAP) which 'do not fit the eligibility criteria for the current MIT regime'. IFED noted that 'MITs were introduced to attract patient capital, particularly from overseas investors':

MITs allow for reduced withholding tax on distributions to overseas investors ... the concept of withholding tax concessions should be adopted for overseas investors supporting large scale greenfield development in Northern Australia.<sup>129</sup>

4.126 The IFED also suggested the creation of a Northern Agriculture Development Trust. Proposed eligibility criteria included:

1. Capital Expenditure must exceed \$500m;
2. Expenditure must include enduring infrastructure (e.g. water storage) and/or primary processing facilities (e.g. cotton gin, sugar mill, packing sheds);
3. Must be Greenfield – (e.g. conversion of grazing country to intensive irrigation); and
4. Proponent must have a legal interest in the land (e.g. an option agreement).<sup>130</sup>

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128 IFED, *Submission 81*, p. 8.

129 IFED, *Submission 81*, p. 8.

130 IFED, *Submission 81*, pp. 8-9.

- 4.127 The CCIQ supported holistic tax reform, including ‘transforming the Federal-State fiscal relationship and changing the rate and scope of the GST’ as a basis for more targeted reforms such as ‘reduction to the corporate tax rate, phasing out payroll tax and removing duty on business transactions’.<sup>131</sup>
- 4.128 The CCIQ noted the existence of the Zone Tax Offset for persons working in remote areas and suggested ‘as an initial step, investigating options to increase this benefit and refine the eligibility designed to improve skills and labour in Northern Australia’. CCIQ also suggested that ‘if additional zone tax concessions are considered for Northern Australia’ they focus on:
- national taxes (e.g. company tax rate, personal income tax and fuel tax) acknowledging limits of the constitution on differential tax rates between states,
  - eligibility criteria that is carefully designed and strictly monitored,
  - a transparent process for linking tax advantages with key performance indicators,
  - temporary application of zone concessions (e.g. up to 5 years), and
  - administrative arrangements that streamline the business tax reporting requirements.<sup>132</sup>
- 4.129 The Zone Tax Offset is one of the principal areas of tax reform identified in the evidence presented to the Committee. The offset is ‘applied against taxable income for individuals who live in specified zones of Australia’:

The zone tax offset varies depending on whether an individual is in zone A, zone B or a special zone. Zone A attracts a base amount of \$338 a year. Zone B attracts \$57 a year. If you are in a special area of either zone A or zone B, it is \$1173 a year. A special area is one which is more than 250 kilometres away from a town of 2500 people based on the population of that town in the 1981 census ...<sup>133</sup>

In addition to the base amount of the zone tax offset, people who are eligible for that offset cannot get an additional percentage of relevant rebate amounts. These are for things like the dependent spouse tax offset, the child-housekeeper tax offset and a whole range of others. Members of zone A and members of the special

131 CCIQ, *Submission 107*, pp. 6–7.

132 CCIQ, *Submission 107*, p. 7.

133 Mr Robert Donnelly, Chief Advisor, Personal and Retirement Income Division, Treasury, *Committee Hansard*, Canberra, 21 March 2014, p. 45.

areas of either zone A or zone B are entitled to 50 per cent of those relevant offset amounts. If you are in zone B but not in a special area, you are entitled to 20 per cent. Collectively those offsets can be quite a significant incentive or tax concession for people living and working in remote areas.<sup>134</sup>

4.130 The available dependent offsets included:

- Dependent invalid      \$2535
- Dependent carer        \$2535
- First child under 21    \$376
- Other child under 21    \$282
- Sole parent              \$1607
- Student (under 25)     \$376<sup>135</sup>

4.131 Treasury advised that ‘the criterion under which you become eligible for zone tax offset is that you must have been living or residing in the zone for 183 days or more within the financial year to which your tax return relates’.<sup>136</sup>

4.132 In evidence submitted to the Committee, Treasury gave the example of a sole parent with two dependent students working in Darwin for 187 days in the year. ‘John’ was eligible for the Zone A offset, or \$338 plus 50 per cent of any relevant rebate (50 per cent of \$2359 – consisting of \$1607 (sole parent rebate), plus 2 x \$376 (student rebates)), or a total of \$1518.<sup>137</sup>

4.133 Treasury noted that the Zone Tax Offset is provided under 79A of the *Income Tax Assessment Act 1936*, and is intended ‘to assist residents of rural and remote areas with high living costs, remoteness and uncongenial conditions associated with these areas’.<sup>138</sup> The ‘offset and its predecessors have been around since just after the Second World War and have not significantly changed based on regions since 1981’. Treasury suggested that ‘there is some question about whether the current areas within each of those zones are still the areas to which you would like to attract economic activity’.<sup>139</sup>

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134 Mr Robert Donnelly, *Committee Hansard*, Canberra, 21 March 2014, pp. 45–6.

135 Treasury, *Submission 306*, p. 4.

136 Mr Robert Donnelly, *Committee Hansard*, Canberra, 21 March 2014, p. 47.

137 Treasury, *Submission 306*, p. 3.

138 Ms Tanya Constable, Chief Advisor, Personal and Retirement Income Division, *Committee Hansard*, Canberra, 15 July 2014, p. 1.

139 Mr Robert Donnelly, *Committee Hansard*, Canberra, 21 March 2014, p. 45.

- 4.134 Estimates of the value of the offset if it had been indexed ranged from \$7000 to \$8000 for Zone B to \$20 000 for people living in the special areas of either Zone A or B.<sup>140</sup> The Australian Taxation Office advised, however, that an exact translation of the value over time was difficult owing to changes to the offset (from deduction to rebate in 1975) and changes to income tax rates (which have been substantially reduced over time).<sup>141</sup>
- 4.135 The declining value of the Offset was highlighted by the Pilbara Regional Council, which stated that the 'current Personal Income Tax Zone Offset does not adequately reflect the cost of living in the Pilbara region', and recommended that the offset be increased to \$5000 for a single person and \$8000 for persons with a dependent spouse or relative.<sup>142</sup>
- 4.136 In addition to the Zone Tax Offset, Treasury advised that 'there are a range of Fringe Benefits Tax (FBT) exemptions and concessions which apply to employers. They include exemptions predominantly around housing and transportation.'<sup>143</sup> There is, for example, 'an exemption for remote area housing and a reduction in taxable value for remote area housing assistance':
- Where an employer provides a house to someone in a remote area, then that is FBT exempt, and where they provide something akin to rental assistance then that gets a 50 per cent FBT concession. There is a 50 per cent concession on remote area holiday benefits. So if someone is taking a holiday from a remote area at the expense of the employer, there is a 50 per cent FBT concession on that. There is also an exemption for transport to oil rigs and for remote area employees in certain circumstances.<sup>144</sup>
- 4.137 The remote area housing exemption is subject to conditions:
- the accommodation must be located in a remote area;
  - the employee must be employed in a remote area for the entire period of residency;
  - providing free or subsidised accommodation must be necessary because of the following reasons:
    - ⇒ the nature of the business is such that employees are liable to move frequently from one residential location to another;

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140 Ms Tanya Constable, *Committee Hansard*, Canberra, 15 July 2014, p. 2.

141 Mr Mike Ingersoll, Assistant Commissioner, Small Business Individual Taxpayers, Australian Taxation Office, *Committee Hansard*, Canberra, 15 July 2014, p. 12.

142 Pilbara Regional Council, *Submission 25*, p. 19.

143 Mr Robert Donnelly, Treasury, *Committee Hansard*, Canberra, 21 March 2014, p. 46.

144 Mr Robert Donnelly, Treasury, *Committee Hansard*, Canberra, 21 March 2014, p. 47.

- ⇒ there is insufficient suitable residential accommodation otherwise available at or near the place of work; or
  - ⇒ it is customary for employers in that industry to provide free or subsidised accommodation for employees; and
  - the arrangement must be *bona fide*.<sup>145</sup>
- 4.138 The 50 per cent reduction in the taxable value of certain housing assistance provided to an employee applies where the employer:
- pays or reimburses interest on a housing loan;
  - sells a house with interest-free or low interest instalments;
  - sells a house below value;
  - pays a fee for an option to purchase a house from an employee;
  - reimburses an employee for expenses connected with a home; or
  - pays/reimburses rent.<sup>146</sup>
- 4.139 There is also an exemption for meals for primary production employees in remote areas. The concession is provided for meals provided on working days to employees of primary producers who are carrying on business in remote areas. That makes them exempt from FBT.<sup>147</sup>
- 4.140 Transportation costs for FIFO workers are FBT exempt, as are other employment related costs – meals, utilities, laundry, entertainment.<sup>148</sup> Such expenses are also immediately tax deductible for the employer.<sup>149</sup>
- 4.141 Eligibility for remote area exemptions is defined by proximity to ‘eligible urban areas’. Remote areas are not at a location in, or adjacent to, an eligible urban area. An eligible urban area is an urban centre with a census population of not less than 28 000 in an area described in Schedule 2 to the *Income Tax Assessment Act 1936* or an urban centre with a census population of not less than 14 000 not situated in an area described in Schedule 2 to the *Income Tax Assessment Act 1936*. A location that is adjacent to an eligible urban area is a location that is situated less than 40 km, by the shortest practicable surface route, from the centre point of an eligible urban area with a census population of less than 130 000, or situated less than 100 km, by the shortest practicable surface route, from

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145 Treasury, *Submission 306.1, Answers to Questions on Notice*, pp. 2–3.

146 Treasury, *Submission 306.1, Answers to Questions on Notice*, p. 3.

147 Mr Robert Donnelly, Treasury, *Committee Hansard*, Canberra, 21 March 2014, p. 47.

148 Mr Glenn Smith, Director, Private Groups and High Wealth Individuals, Australian Taxation Office, *Committee Hansard*, Canberra, 15 July 2014, pp. 5–6.

149 Mr Tony Poulakis, Assistant Commissioner, Private Groups and High Wealth Individuals, Australian Taxation Office, *Committee Hansard*, Canberra, 15 July 2014, p. 9.

the centre point of an eligible urban area with a census population of not less than 130 000. Populations are defined by the 1981 census.<sup>150</sup>

- 4.142 In evidence presented to the Committee, the MCA stated that the current taxation arrangements – the Zone Tax Offset for personal income taxpayers, and the FBT arrangements for FIFO workers – were ‘broadly appropriate’, and that there was no need for any special new tax incentives to get ‘people to live and work in certain areas’. The MCA suggested some alteration of the Zone Tax Offset to bring it up to date.<sup>151</sup> With regard to the Fringe Benefits Tax, the MCA stated:

The point of the FBT system is to tax private benefits. We would not see flying to and from work as a private benefit; that is a necessary part of doing business, a necessary part of taking workers to remote areas. So we would think that the current arrangements are appropriate with respect to work camps and transportation.<sup>152</sup>

## Tax and FIFO

- 4.143 The tax treatment of FIFO workers is one of the most controversial issues raised in evidence before the Committee. In its submission, the Pilbara Regional Council stated that ‘the current FBT system generates a direct disincentive for companies to hire permanent residents’ and encouraged FIFO and DIDO operations.<sup>153</sup> The Mayor of Port Hedland told the Committee:

I would like to see the federal government look into ways that we can disincentive companies from adopting FIFO practices, particularly for long-term to permanent operational workforces. I think that is something that really needs to be addressed. If we are going to be serious about having people living here and making their home in Northern Australia, we have to do that.<sup>154</sup>

- 4.144 The Mayor urged the need to look at ‘the remote area FBT concessions ... but also the current zone tax offset for the Pilbara. We really need to look at whether that can be indexed, particularly for the cost of setting pressures that are here in the Pilbara.’<sup>155</sup>

150 *Fringe Benefits Tax Assessment Act 1986*, s. 140; Mr Robert Donnelly, *Committee Hansard*, Canberra, 21 March 2014, p. 47.

151 Mr James Sorahan, Director, Taxation, *Committee Hansard*, Canberra, 21 March 2014, p. 54.

152 Mr James Sorahan, *Committee Hansard*, Canberra, 21 March 2014, p. 54.

153 Pilbara Regional Council, *Submission 25*, p. 19.

154 Councillor Kelly Howlett, *Committee Hansard*, Port Hedland, 10 April 2014, p. 10.

155 Councillor Kelly Howlett, *Committee Hansard*, Port Hedland, 10 April 2014, p. 11.

4.145 In evidence before the Committee, Mr Rhys Edwards, Vice Chairman, Tom Price and Paraburdoo Business Association, noted that one of the advantages of mining camps over residential accommodation was the lower up-front capital cost and the shorter-term tax write-off benefits:

Accommodation camps would be an accelerated depreciation tax write-off, versus residential property and construction. Also, your annual goings such as basically the food, the cleaning, the accommodation – all the running costs of the camps – are immediately deductible every year, and you are not meeting that as an up-front cost, whereas the cost impost for building residential is up front. You are paying it in advance, and it is a much slower time to recuperate the tax advantages of spending that money up front.<sup>156</sup>

4.146 Residential buildings are considered capital works, and can generally be depreciated at 2.5 per cent per annum (where they are income producing), whereas temporary housing is considered to be plant and equipment, subject to immediate deduction or depreciation over the expected life of a project (for example, 20 per cent per annum).<sup>157</sup>

4.147 Possible solutions to the problems of making the building and development of residential properties in the North more attractive to the mining industry included making residential housing tax deductible up-front instead of amortised tax write-offs; confining tax offsets to remote Australia; and limiting tax concessions to expenditure programs over a set amount, 'to attract the dollars to be spent within the townships and not on mining camps'.<sup>158</sup>

4.148 Mr Edwards also argued for restrictions upon where mining camps could be located, stating:

The guidelines showed that on any mining lease the state can approve transient worker accommodation. Unfortunately, this does not happen in consultation with the local government at ground level. One of our recommendations is that transient worker accommodation within a 60-kilometre radius of a populated township not be allowed. Temporary construction camps are okay on a maximum-period basis. This would

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156 Mr Rhys Edwards, *Committee Hansard*, Tom Price, 8 April 2014, p. 15.

157 Treasury, *Submission 306.1*, Answers to Questions on Notice, p. 5.

158 Mr Rhys Edwards, *Committee Hansard*, Tom Price, 8 April 2014, p. 11.

discourage fly in fly out camp accommodation and running mine operations that are located in proximity to an existing township.<sup>159</sup>

- 4.149 Addressing these issues in its evidence to the Regional Australia Committee's FIFO inquiry, the Pilbara Regional Council urged changes to FBT, 'to allow FBT exemption only where the FIFO is to non-metropolitan areas within the same state as the mine or the project being undertaken'. The Council noted that:

Changes in tax policy, specifically FBT has had a dramatic and significant impact on the practices used by mining companies and it has spawned the FIFO phenomenon. It would be assumed that at the time the changes were implemented there was little opportunity to have foreseen the consequences and impacts these changes were to have on regional communities.<sup>160</sup>

- 4.150 Pilbara Regional Council also recommended changes to the Zone Tax Offset, restricting the definition of 'resident' to 'permanent residents residing continuously in an area and those eligible to be enrolled are enrolled at that address'.<sup>161</sup>
- 4.151 The Australian Government acknowledged the controversy surrounding FIFO in its Green Paper, which noted that 'the Government is considering the recommendations of the 2013 House of Representatives Standing Committee on Regional Australia's Inquiry into the use of FIFO workforce practices in regional Australia'.<sup>162</sup>
- 4.152 The report of the House of Representatives Standing Committee on Regional Australia, *Cancer of the Bush or Salvation for Our Cities?*, examined the impact of FIFO work practices on regional Australia, observing that 'there can be no doubt to anyone who has visited regional communities such as Karratha and Moranbah that the prevalence of this practice is having a profound impact on communities'.<sup>163</sup> The Committee noted that 'there is significant concern that taxation measures are driving the move to FIFO workforce practices'.<sup>164</sup> The primary issues of concern raised were:

159 Mr Rhys Edwards, *Committee Hansard*, Tom Price, 8 April 2014, p. 10.

160 Small Business Centre West Pilbara, *Exhibit 68: Pilbara Regional Council Submission to the Inquiry into 'Fly-in, Fly-out' (FIFO) Workforce Practices in Regional Australia*, p. 10.

161 Small Business Centre West Pilbara, *Exhibit 68*, p. 10.

162 Australian Government, *Green Paper on Developing Northern Australia*, Canberra, 2014, p. 39.

163 House of Representatives Standing Committee on Regional Australia, *Cancer of the Bush or Salvation for Our Cities?*, Parliament of Australia, Canberra, February 2013, p. 113.

164 House of Representatives Standing Committee on Regional Australia, *Cancer of the Bush or Salvation for Our Cities?*, Parliament of Australia, Canberra, February 2013, p. 113.

- the capacity of companies to write-off FIFO expenses as a cost of production;
- the application of Fringe Benefits Tax (FBT) favouring the development of work camps over community investment;
- the application of living away from home allowance to FIFO workers despite the workplace being in close proximity to an existing community; and
- the appropriateness and application of the zone tax offset.<sup>165</sup>

4.153 The Regional Australia Committee made a number of recommendations concerning the tax treatment of FIFO, with a view to improving the perceived imbalance in favour of FIFO employment over local workers, including that:

- the Government review the *Fringe Benefits Tax Assessment Act 1986* to examine the:
  - ⇒ removal of impediments to the provision of residential housing in regional communities;
  - ⇒ removal of the exempt status of fly-in, fly out/ drive-in, drive-out work camps that are co-located with regional towns; and
  - ⇒ removal of the exempt status of travel to and from the workplace for operational phases of regional mining projects;<sup>166</sup>
- the Government review the *Fringe Benefits Tax Assessment Act 1986* to:
  - ⇒ remove the general exemption for fly-in, fly-out/ drive-in, drive out workers from the 12-month limit of payment of the living away from home allowance;
  - ⇒ enable specific exemptions for construction projects that have a demonstrated limited lifespan; and
  - ⇒ enable specific exemptions for projects in remote areas where the fly-in, fly-out/ drive-in, drive out work practice is unavoidable;<sup>167</sup>
- the Government review the Zone Tax Offset arrangements to ensure that they are only claimable by permanent residents of a zone or special area;<sup>168</sup> and

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165 House of Representatives Standing Committee on Regional Australia, *Cancer of the Bush or Salvation for Our Cities?*, Parliament of Australia, Canberra, February 2013, p. 114.

166 House of Representatives Standing Committee on Regional Australia, *Cancer of the Bush or Salvation for Our Cities?*, Parliament of Australia, Canberra, February 2013, p. 119.

167 House of Representatives Standing Committee on Regional Australia, *Cancer of the Bush or Salvation for Our Cities?*, Parliament of Australia, Canberra, February 2013, p. 122.

- the Government review the Zone Tax Offset to ensure:
  - ⇒ that it provides reasonable acknowledgement of the cost of living in remote Australia;
  - ⇒ that the zones are based on a contemporary measure of remoteness;
  - ⇒ that the zones are based on up-to-date census figures; and
  - ⇒ that it includes a mechanism for regular review to ensure that the offset reflects accurate population figures.<sup>169</sup>

## Land Tenure

4.154 In the evidence presented to the Committee, land tenure arrangements have been identified as a serious impediment to the economic development of Northern Australia. In its submission, Cairns Regional Council noted that:

At present there are major inconsistencies and limitations in tenure arrangements which preclude investment in the underlying land and resources, with the resultant detrimental impact on employment and community wellbeing.<sup>170</sup>

4.155 A research paper jointly authored by CSIRO, James Cook University and the Cairns Institute argued that the ‘case for improving tenure arrangements in northern Australia is compelling’, but also noted that the ‘challenge in doing so is substantial, requiring cross jurisdictional co-operation and national investment in R&D and data management’.<sup>171</sup> The paper identified a range of significant tenure-related barriers to investment, including:

- underlying complexity of tenures and entitlements on a given area of land;
- the capacity for investors to manage across multiple tenures and jurisdictions and resolve disputes efficiently;
- the absence of coordinated tenure administration and advice; and

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168 House of Representatives Standing Committee on Regional Australia, *Cancer of the Bush or Salvation for Our Cities?*, Parliament of Australia, Canberra, February 2013, p. 124.

169 House of Representatives Standing Committee on Regional Australia, *Cancer of the Bush or Salvation for Our Cities?*, Parliament of Australia, Canberra, February 2013, p. 126.

170 Cairns Regional Council, *Submission 40*, p. 8.

171 CSIRO, *Land Tenure in Northern Australia: Opportunities and Challenges for Investment*, June 2013, p. 12.

- the limits of some types of tenure to allow owners to leverage land assets for capital and development purposes.<sup>172</sup>
- 4.156 The paper identified three avenues of reform:
- increase consistency and reduce complexity through improved tenure arrangements;
  - improve development assessment; and
  - improve landscape scale planning.<sup>173</sup>
- 4.157 The complexity of the issue is highlighted by the various responses to the problem identified in the evidence. In its submission, the AACo stated that the ‘current, inconsistent system of land tenure laws across Northern Australia remains a major impediment to capital investment in the agricultural sector’. The submission noted that:
- Crown tenure across Western Australia, the Northern Territory and Queensland is a mix of pastoral leases in perpetuity, multiple levels of leases or leases for a defined period. Substantial investment on leased crown land requires the confidence that the investment can produce a commercial return over the period of the lease. Truly substantial investment is only possible with freehold land, where the return can also come in the form of capital gain.<sup>174</sup>
- 4.158 The AACo stated that ‘the company can make an investment in irrigation on one property in the Northern Territory, but a similar investment in a similar property in Queensland would not make commercial sense’. Similarly, pastoral leases denied the landholder the ability to invest in broadacre farming:
- While there may, in some regions of Northern Australia, be environmental reasons for not allowing broadacre farming on pastoral leases, this was not the original intention of the laws. The situation is that the owner of freehold land neighbouring a pastoral lease could engage in broadacre farming while his neighbour is barred from doing so under archaic regulation.<sup>175</sup>
- 4.159 The AACo argued that:

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172 CSIRO, *Land Tenure in Northern Australia: Opportunities and Challenges for Investment*, June 2013, p. 10.

173 CSIRO, *Land Tenure in Northern Australia: Opportunities and Challenges for Investment*, June 2013, pp. 1–2.

174 AACo, *Submission 264*, p. 9.

175 AACo, *Submission 264*, p. 9.

In its current form the pastoral lease system across Northern Australia has ceased to make commercial sense. The levels of capital investment needed to double production and meet forecast global demand are so high that commercial certainty is a necessity.<sup>176</sup>

4.160 In its submission, Cape York Sustainable Futures also called for substantial reform of land tenure arrangements to promote economic development, with greater security of tenure being the key reform. It noted the complexity of the existing tenure system, the 'onerous constraints and complex processes to achieve the requirements for longer terms and renewals', and recommended 99 year leases or freehold.<sup>177</sup>

4.161 The difficulty surrounding land tenure and Aboriginal economic development was highlighted in several submissions. The Cape York Institute noted that there 'has not been a single home ownership outcome within any Cape York Indigenous town', and that this had not been 'for a lack of local aspiration':

The core problem that always was, and remains, is the lack of enabling tenure and local land administration systems. A functional land administration and tenure system is essential infrastructure that is missing from these towns.<sup>178</sup>

4.162 The Cape York Institute argued for increased investment in resolving land tenure issues and Native Title claims:

The pace of progress in these areas is unacceptable and will continue to stunt local aspirations for land and enterprise for decades to come if the current approach is maintained. Government must understand the central importance of accelerating and completing these processes.<sup>179</sup>

4.163 The Northern Territory Government was concerned that, 'despite having security of tenure and receiving royalty income', people living on land covered by the *Aboriginal Land Rights Act 1976 (Commonwealth)* 'are among Australia's most disadvantaged', and economic development on those lands was minimal. The Northern Territory Government urged a review of the *Aboriginal Land Rights Act*, 'to ensure that, in addition to the

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176 AACo, *Submission 264*, p. 10.

177 Cape York Sustainable Futures, *Submission 212*, p. 4.

178 Cape York Institute, *Submission 87*, p. 3.

179 Cape York Institute, *Submission 87*, p. 4.

continuation of the legacy of the Traditional Owners, it is also a vehicle for socioeconomic advancement – as it was always intended to be'.<sup>180</sup>

4.164 Aboriginal land tenure was also identified as a brake on development, with the protracted process of obtaining title under the Aboriginal Land Rights Act or the Native Title Act frustrating prospective businesses.<sup>181</sup> For example, the Coomalie Council voiced its frustrations around a proposal for the development of a historic tourism precinct and the process for getting Aboriginal engagement.<sup>182</sup> The Northern Land Council acknowledged that there had been some issues around the processing of lease applications for developments on Aboriginal Land in the Northern Land Council Region, but that they were working to address these issues.<sup>183</sup>

4.165 Native title, which the Committee regards as an important protection for Aboriginal Australians, was also perceived as having an impact on the development of towns such as Katherine, where native title was seen as an impediment to the release of land for residential and commercial development. Mrs Neroli Dickens, representing Katherine Town Council explained that:

There is no available land within the Katherine area; it is all subject to native title. At the start of this year, there were 98 individual parcels of land within the immediate Katherine township that we passed back through to the department to try to move that process along, identifying future infrastructure needs and existing infrastructure. The majority of them were actually residential parcels of land. The land availability for development is not there at this point in time – not without that process being worked through.<sup>184</sup>

4.166 On the other hand, the Central Land Council believed that there was no evidence that the Aboriginal Land Rights Act and communal land ownership were impediments to economic growth, and stated that 'Aboriginal land is the private property of Aboriginal peoples held in common. This form of tenure reflects Aboriginal custom and law.' The

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180 Northern Territory Government, Submission 92, p. 14.

181 Ms Teresa Cummings, Chair, Katherine Centre of Excellence in Health Knowledge, *Committee Hansard*, Katherine, 22 May 2014, p. 15; Mr Stuart MacLean, Yolgnu, Gove Community Advisory Committee, *Committee Hansard*, Nhulunbuy, 21 May 2014, p. 13.

182 Councillor Ewan Crook, Coomalie Community Government Council, *Committee Hansard*, Darwin, 18 August 2014, p. 73.

183 Mr Joe Morrison, Chief Executive, *Committee Hansard*, Darwin, 18 August 2014, p. 10.

184 Mrs Neroli Dickens, Director, Works and Services; Deputy Chief Executive Office, *Committee Hansard*, Katherine, 22 May 2014, p. 9.

Central Land Council urged that communal title not be seen as an impediment to economic development and that the Aboriginal Land Rights Act not be amended without the consent of traditional owners.<sup>185</sup> A similar stance was adopted by the Northern Land Council.<sup>186</sup>

4.167 In its submission, the Winum Ngari Aboriginal Corporation, urged that the Federal and State Governments ‘undertake a detailed review of land tenure systems in Australia to provide recommendations on legislative change that’:

- Ensures aboriginal people have a lasting cultural and customary interest in their lands despite development;
- Grants Traditional Owners the right to facilitate economic improvements to their lands through commercial arrangement that are not bound by a defined government approvals process and the autonomy to make the ultimate determination on the improvements and development of their lands; and
- Establishes an appropriate mechanism to fund Traditional Owners and Aboriginal Communities to have sufficient resources in the medium term to plan for the economic development of their lands and undertake such development with or without private sector involvement.<sup>187</sup>

4.168 The Australian Government’s Green Paper acknowledged the problems surrounding land tenure arrangements. It noted that ‘restrictive land tenure arrangements can drive up business costs and increase project risks, stifle innovation and deter potential investment’,<sup>188</sup> and the challenges for businesses operating across jurisdictions with different tenure arrangements. The Green Paper also highlighted problems with pastoral leases, with leaseholders ‘generally unable to use their land for alternative activities, such as horticulture or tourism – and only with approval from various government bodies’.<sup>189</sup>

4.169 The Green Paper also acknowledged concerns surrounding Aboriginal land tenure arrangements, stating that:

Indigenous land arrangements in Western Australia and the Northern Territory do not usually allow for land to be converted to unrestricted freehold. This inhibits Indigenous communities seeking to use their land for social and economic activities.

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185 Central Land Council, *Submission 213*, p. 4.

186 Northern Land Council, *Submission 165*, p. 7.

187 Winum Ngari Aboriginal Corporation, *Submission 201*, pp. 14–15.

188 Australian Government, *Green Paper on Developing Northern Australia*, Canberra, 2014, p. 35.

189 Australian Government, *Green Paper on Developing Northern Australia*, Canberra, 2014, p. 35.

Mainstream lending institutions generally do not lend against land holdings that cannot be sold.<sup>190</sup>

- 4.170 While emphasising the Government's commitment to Native Title, the Green Paper noted the impact of Native Title upon land access and use in Northern Australia – 'the complexity and uncertainty that native title processes can create and the time they can take to conclude'.<sup>191</sup>
- 4.171 The Green Paper also observed the 'lack of accessible information on land tenure, such as planning and development requirements, and the processes for leasing and purchasing land in the north'.<sup>192</sup>
- 4.172 The State Governments have indicated that they are undertaking reform of land tenure in their own jurisdictions. The Western Australian Government:
- ... is currently preparing amendments to Part 7 of the *Land Administration Act 1997* to include greater security and flexibility through the inclusion of a new form of tenure, the rangelands (broad-scale) lease, which will allow lessees to conduct a diverse range of broad-acre permitted uses without the requirement of diversification permits.
- In addition the reform will propose amendments to allow for a perpetual pastoral lease and an increase in the length of leases up to 50 years. These changes constitute a future act under the *Native Title Act 1993 (Commonwealth)* (NTA) and therefore those wishing to convert, or apply for, these leases will be required to undertake the appropriate native title process.<sup>193</sup>
- 4.173 The Queensland Government is also undertaking a process to improve security and certainty of tenure to promote business investment and diversification, including reducing red tape on the renewal of rural leases and providing pathways for converting leasehold to freehold.<sup>194</sup>

## Air Services

- 4.174 The pressure to meet the costs associated with running small regional airports was highlighted as an impediment to development outside major centres. The Shire of Ashburton cited the upgrade of the airport at

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190 Australian Government, *Green Paper on Developing Northern Australia*, Canberra, 2014, p. 35.

191 Australian Government, *Green Paper on Developing Northern Australia*, Canberra, 2014, p. 36.

192 Australian Government, *Green Paper on Developing Northern Australia*, Canberra, 2014, p. 36.

193 Hon. Terry Redman MLA, Minister for Regional Development; Lands, Western Australia, *Submission 161*, p. 6.

194 Premier of Queensland, *Submission 219*, pp. 46–7.

Onslow, largely through money from a mining company and a State Government grant. The upgrade would allow mining companies to conduct charter services, but regular passenger transport (RPT) services – the ultimate goal of the Shire – would require compliance with ‘a whole range of other regulations around scanning and security’ and Federal and State licencing.<sup>195</sup>

- 4.175 In Katherine, the difficulties in meeting the costs associated with RPT services had led the Katherine Town Council to hand back the civil airport to the Commonwealth. Mr Steven Rose explained:

The Katherine Town Council has a problem that to get RPT services to Katherine we have to upgrade the airport security and also the tarmac. The cost of upgrading just the tarmac apron area is about \$1.4 million and the cost to upgrade security and put staff in there in order to have a passenger service would cost much more than what we could raise in rates.<sup>196</sup>

- 4.176 The CME also recognised the difficulties facing regional airports run by local governments, ‘including their limited ability to invest in the required level of infrastructure investment to support increasing air traffic and aircraft size using these destinations’. CME also recognised that ‘some regional airports may lack the skill and resourcing to appropriately manage airports and airport growth’. It supported ‘action to encourage private sector investment in, and management of, regional airports’.<sup>197</sup>

- 4.177 International airports also had problems with costs and regulation. In evidence before the Committee, Mr Jim Parashos of Northern Territory Airports outlined the impact of government charges on ticket prices for people travelling to Darwin from overseas:

... if I am sitting in Jakarta, to come to Darwin it is going to cost me \$200 in taxes before I even purchase my airfare – the \$55 passenger movement charge, \$140 for my visa and about \$15 in federal government mandated airport charges for liquids, aerosols and gels. So it costs \$200 for the privilege of coming to Australia before you have purchased the airfare, whereas you can fly from Jakarta to Bangkok or Hong Kong – similar sector lengths – without those taxes and charges.<sup>198</sup>

195 Mr Neil Hartley, Chief Executive Officer, *Committee Hansard*, Tom Price, 8 April 2014, p. 3.

196 Mr Steven Rose, Member, Katherine Region, Chamber of Commerce Northern Territory, *Committee Hansard*, Katherine, 22 May 2014, p. 36.

197 CME of Western Australia, *Submission 93*, p. 23.

198 Mr Jim Parashos, Director Commercial and Aviation Development, *Committee Hansard*, Darwin, 20 May 2014, p. 81.

- 4.178 The Tourism and Transport Forum (TTF) regarded the passenger movement charge as ‘a tax on tourism’, one which was having a significant impact on travel to Northern Australia from overseas.<sup>199</sup>
- 4.179 The provision of customs, quarantine and immigration was particularly difficult at regional and remote airfields. Though several regional airports could sustain some international traffic, the lack of international airport status meant that ‘the cost of customs, quarantine and immigration has to be paid for on top of the passenger movement charge. So even though you are paying this \$55, there is this impost on top.’<sup>200</sup> The TTF recommended a more flexible approach to the provision of these services, stating:

One recommendation that we have had for a while is creating small, rapidly deployable teams that do all the passenger processing. When the Sunshine Coast Airport did a trial of flights, in the first year they had 20 government agents meeting flights with 135 passengers in one instance. You had Australian Customs and Border Protection staff, Department of Immigration and Citizenship staff and Australian Quarantine Inspection Service staff. So you had a team of 20 people from all three agencies. We have seen that number reduce to about 12 this year. We are hoping that the merger between the Department of Immigration and Border Protection and the Australian Customs Service will lead to a further reduction. We think that evidence from other countries has shown that if you can delegate the quarantine checking responsibility to Customs and do it on a risk based approach then you can certainly have these teams of four or five people meeting a flight, which would then open up some of these regional airports.<sup>201</sup>

## **Standardisation of Processes Across Northern Jurisdictions**

- 4.180 The lack of consistency in regulations across jurisdictions is seen as a significant impediment to development in Northern Australia. Residents and companies have to deal with three layers of government across four jurisdictions, each with their own priorities.

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199 Mr Justin Wastnage, Director, Aviation Policy, *Committee Hansard*, Darwin, 20 May 2014, p. 75.

200 Mr Justin Wastnage, *Committee Hansard*, Darwin, 20 May 2014, pp. 82–3.

201 Mr Justin Wastnage, *Committee Hansard*, Darwin, 20 May 2014, p. 83.

- 4.181 In *Governance Challenges for Northern Australia*, Associate Professor Alan Dale highlighted the fragmented governance arrangements across Northern Australia and the lack of connectivity between the various jurisdictions responsible for the government and administration of the North. Professor Dale noted that ‘by and large’, Queensland, Western Australia and the Northern Territory ‘tend to manage common issues in isolation’. The Commonwealth’s relationships with the States and Territory were also ‘compartmentalised, with high levels of communication fragmentation in and across major Commonwealth ministries and programs’.<sup>202</sup>
- 4.182 The problems caused by this fragmentation were highlighted in the evidence presented to the Committee. The APPEA noted problems with environmental management of offshore gas pipelines in Western Australia, which required approvals from four different government agencies, two State and two Federal. Oil spill contingency plans required approval from five agencies, all with their own requirements.<sup>203</sup> The Western Australian Government cited the Kimberley Science and Conservation Strategy (KSCS) as an example of duplication of services, where the State and Commonwealth governments were pursuing similar objectives in the same location through different strategies:
- The objectives of the KSCS and Commonwealth programs are largely consistent, however, much of the Commonwealth funding is directed to programs that create parallel administrative structures in the Kimberley. This results in significant overlap and inefficiency.<sup>204</sup>
- 4.183 The Western Australian Government urged the Commonwealth to ‘invest in and act consistently with existing State planning and development frameworks’. It believed that ‘it is important that any new initiatives to encourage investment in northern Western Australia are aligned with these current arrangements’.<sup>205</sup>
- 4.184 The Western Australian Government also urged that ‘the Commonwealth and Northern jurisdictions should work to establish a cross jurisdictional mechanism to address key Northern Australian health service and

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202 Alan Dale, *Governance Challenges for Northern Australia*, James Cook University, Cairns, 2013, p. 10.

203 Mr Adam Welch, Senior Policy Advisor, Western Region, *Committee Hansard*, Darwin, 18 August 2014, p. 41.

204 Hon. Terry Redman MLA, Minister for Regional Development; Lands, Western Australia, *Submission 161*, p. 8.

205 Hon. Terry Redman MLA, Minister for Regional Development; Lands, Western Australia, *Submission 161*, pp. 16–17.

workforce issues'. The Western Australian Government noted, for example, that 'cancer patients based in Kununurra must currently travel to Perth to receive fortnightly treatment. This treatment could just as well be provided from Darwin, reducing patient stress and travel time.'<sup>206</sup>

4.185 In a similar example of the failure of cross-border coordination, the Shire of Wyndham, East Kimberley, told the Committee that 'our infrastructure guys here cannot get gravel across the border from NT into WA for any roadworks ... because of environmental reasons'. The Shire noted that 'there are a lot of constraints in having normalisation of access across the top end'.<sup>207</sup>

4.186 The Western Australian Government urged the reform of biosecurity regulations to achieve greater co-ordination between jurisdictions:

Biosecurity regulations and protocols between State/Territory and Commonwealth Governments need to be coordinated to support development, as well as mitigate risks to Northern Australia's reputation for being relatively free from serious pests and diseases.<sup>208</sup>

4.187 In its submission, Suncorp identified the need for consistent building codes, stating that 'a broadly implemented resilient building code would help to improve risk management nationally and may also improve insurability due to increased comparability of building data'.<sup>209</sup>

4.188 CRANApplus identified the need for standardisation in the health sector across Northern Australia, noting that:

It is well acknowledged that the workforce who have chosen this sector to work in, tend to be very mobile across the various jurisdictional areas of Northern Australia and there are many barriers put in place by jurisdictions that impacts on the efficiency and practicalities of providing standards of professional care and thus a barrier to retention.<sup>210</sup>

4.189 Mr Christopher Cliffe, Chief Executive Officer of CRANApplus, highlighted the problems this caused:

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206 Hon. Terry Redman MLA, Minister for Regional Development; Lands, Western Australia, *Submission 161*, p. 14.

207 Ms Janet Takarangi, Economic Development and Remote Service Delivery, *Committee Hansard*, Kununurra, 7 May 2014, p. 4.

208 Hon. Terry Redman MLA, Minister for Regional Development; Lands, Western Australia, *Submission 161*, p. 8.

209 Suncorp, *Submission 151*, p. 4.

210 CRANApplus, *Submission 156*, p. 5.

We waste a huge amount of money on trying to educate and prepare a work force, and we are often trying to prepare them for a specific system of care as opposed to the entire system of care across remote Australia ... I think we can have a set system of care with regard to clinical governance and the protocols that drive them, like the drugs and poisons act they need to refer to, that will allow that transferability so that organisations like CRANaplus can create education, preparation and orientation programs for that part of the health work force so that they can work anywhere across remote Australia. We know there is transferability and a high level of mobility among health professionals. That way we can invest in the entire remote health work force rather than keep losing them back to metro. If something happens in the NT they go back to Adelaide as opposed to moving across to Cape York to work.<sup>211</sup>

- 4.190 In its submission, the Indigenous Land Corporation identified the problem of different funding structures and systems of governance in the delivery of services in remote Aboriginal communities across Northern Australia:

The absence of cohesive arrangements and adequate effective investment in infrastructure presents numerous challenges for community-based service providers and local Indigenous council governance and authority, and limits the end effect of broader efforts to improve infrastructure provision. The need to establish infrastructure bases in remote northern Australia, which are conducive to the effective economic participation of Indigenous people, must be considered in any broader blueprint for development of the north.<sup>212</sup>

- 4.191 A further source of frustration for the beef industry was the lack of standardisation in road transport rules across jurisdictions, particularly with regard to weight and driver fatigue. Mr Troy Setter, of the CPC, told the Committee:

Heavy vehicles are a challenge for us. We load cattle in the Northern Territory on a weight basis. When we get into Queensland we can add more cattle to the truck because of volumetric load. Then when that truck gets into New South Wales we would need to take cattle off that truck, or in our Queensland operations we need to reduce cattle, to take them off the truck. I

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211 Mr Christopher Cliffe, *Committee Hansard*, Alice Springs, 19 May 2014, p. 52.

212 Indigenous Land Corporation, *Submission 157*, p. 8.

am not just talking about truck size; it is the actual weight per deck on the truck which is a logistics challenge and an inefficiency. There is also the lack of harmonisation around road driver fatigue, with some states signing on and others not, which does make it quite challenging for the heavy vehicle transport of livestock through Australia. Different weight rules and different fatigue rules were not solved by the national harmonisation.<sup>213</sup>

- 4.192 The CPC identified ‘the effective co-ordination of effort and common priorities by governments’ as ‘the key to the economic and social development of Northern Australia.’<sup>214</sup> In particular, CPC urged a co-ordinated approach to trade, noting that ‘some countries have to deal with a series of separate delegations from a number of state governments as well as the Federal Government’, and that ‘this disjointed approach has the potential to send confusing and sometimes conflicting messages’ to trade partners.<sup>215</sup>

## Conclusion

- 4.193 This chapter has addressed the impediments to the development of Northern Australia. Many of the proposals discussed in previous chapters will help to overcome these impediments. The next chapter lists the recommendations made by the Committee to promote the development of Northern Australia.

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213 Mr Troy Setter, Chief Executive Officer, *Committee Hansard*, Darwin, 19 August 2014, p. 14.

214 CPC, *Submission 312*, p. 3.

215 CPC, *Submission 312*, p. 11.



## Recommendations

- 5.1 This chapter sets out the recommendations the Committee has made to assist with the development of Northern Australia. The recommendations are drawn from the material discussed in preceding chapters. Each recommendation is followed by a brief comment from the Committee.
- 5.2 The first section consists of priority recommendations for Government intervention in the economy, and through support of various projects.
- 5.3 Other recommendations are listed according to the chapters in which the topic is discussed, being opportunities, development proposals or remediating impediments.

### Priority Recommendations 1 to 7

- 5.4 The Committee considers that the following seven recommendations are essential to assist with the development of Northern Australia.

#### Recommendation 1

- 5.5 **The Committee recommends that the Australian Government create a Department of Northern Australian Development, and that it be based in Northern Australia.**
- 5.6 The Committee has welcomed the decision to form the Northern Australia Strategic Partnership, which gives the development of Northern Australia its due status as an issue of the first order – under the direct oversight of the Prime Minister, Premiers of Queensland and Western Australia, and Chief Minister of the Northern Territory. The Committee believes that the development of Northern Australia should remain the responsibility of the first ministers of the respective jurisdictions. Within this context, the Committee is of the view that the complex and demanding task of

promoting the development of Northern Australia requires the dedicated attention of a Minister with their own department to co-ordinate and control government programs relating to northern development across a range of portfolios – in effect a ‘one-stop-shop’.

## **Recommendation 2**

- 5.7 **The Committee recommends that the Australian Government identify key roads and commit to funding their upgrade as a matter of priority, subject to relative benefit assessment by Infrastructure Australia. Projects to consider would include:**
- **Continued upgrade of National Highways, including the Bruce and Stuart Highways**
  - **Hann Highway**
  - **Peninsula Development Road (to the tip of Cape York)**
  - **Tanami Road**
  - **Outback Way**
  - **Beef development roads such as the Barkly Stock Route.**
- 5.8 The Committee regards the development of road infrastructure as critical to the economic and social development of Northern Australia, and has identified these roads as particularly important to the development of the region. Sealing and flood-proofing these roads along their entire length would allow year round access for industry, tourists and residents, significantly reduce travel times and facilitate economic opportunities.
- 5.9 The national highway system is the vital network of roads connecting the main urban centres with each other and the regions. The maintenance and ongoing upgrade of these roads is essential to the development of Northern Australia. The Bruce Highway is the most important road connecting North and South Queensland. The Committee acknowledges the ongoing commitment of the Australian Government to the upgrade of the Bruce Highway. The current pace of the highway’s upgrading should be maintained into the future because it is essential to the development of Northern Australia. The Stuart Highway is the main link between Darwin and the rest of Australia and is vital to the movement of people and goods throughout the Northern Territory.
- 5.10 The completion of the Hann Highway provides a shorter route between North Queensland and Sydney and Melbourne, taking at least 15 hours off current travel time between Cairns and Melbourne. It will divert heavy traffic from the Bruce Highway and will be less prone to weather events, improving safety, reliability, productivity and enhancing investment. It

will allow road trains to travel from the north all the way through to New South Wales. It will also promote the development of the Atherton Tablelands.

- 5.11 The upgrade of the Peninsula Development Road to Seisia would significantly improve access to and from Cape York Peninsula with benefits to primary producers and Aboriginal and Torres Strait Islander communities. Currently, the road is regularly cut during the wet season, with significant funds being spent on repair work. The current condition of sections of the road is also a disincentive to tourism. The upgrade of the road along its full length would also improve access to the Torres Strait Islands, reducing freight costs and decreasing isolation. All goods could be transported by road. It would provide opportunities to increase fuel and cold storage at Seisia wharf, reducing the costs of fuel and goods into the Torres Strait Islands and other islands. Barge costs are about three times greater than road costs. Reduced freight costs would see a reduction in the price of food and fuel.
- 5.12 The upgrade of the Tanami Road would significantly improve access to the Kimberley, reducing costs to primary producers and the resources sector, create better access to southern markets, and open a new avenue for tourism. It would create a direct freight corridor between the Kimberley and South Australia, shorten the journey by some 1100 kilometres and 17 hours between the south-east and the north-west, give greater access to the national rail network through Alice Springs, and enable more rapid resupply or reinforcement of the north-west for defence purposes, along a secure inland route.
- 5.13 The Outback Way will improve east-west connectivity across the centre of Australia. It will enhance regional productivity, improve market access in remote communities, and establish a route for adventure tourism.
- 5.14 Beef development roads, such as the Buntine Road, Barkly Stock Route, Duncan Highway and Buchanan Highway are the core arterial routes for Northern Australian beef producers. These roads were built fifty years ago to accommodate smaller vehicles than are used today. The seal needs to be strengthened and the roads widened to take account of the new types of transport available today and into the future. This will allow year-round transport of cattle and reduce travel times with benefits for animal welfare and driver well-being. They are also critically important to local communities.
- 5.15 While recognising that the completion of these roads will take some years, the Committee believes that the early commitment of funding for the work will of itself provide a significant incentive for private sector investment in these regions.

### **Recommendation 3**

- 5.16 **The Committee recommends that the Australian Government, in conjunction with the Queensland and Northern Territory Governments, should fund a cost-benefit analysis of the following projects :**
- **a rail line linking Mount Isa and Tennant Creek; and**
  - **passing lanes on the Darwin to Alice Springs railway.**
- 5.17 The Committee believes that the construction of a rail line between Mount Isa and Tennant Creek, effectively making a direct rail link between Darwin and the east coast may be of enormous benefit to the immediate region and the nation as a whole. It would facilitate the export of commodities through Darwin, promote the development of Mount Isa and Tennant Creek and the country in between, and allow for increased container trade through the Port of Darwin bound for the east coast. The initial phase of construction could allow for the building of a standard gauge line between Mount Isa and Tennant Creek, with transfer facilities in Mount Isa, with the construction of a dual gauge or standard gauge track through to Townsville to be completed at a later date.
- 5.18 The construction of passing lanes on the Darwin to Alice Springs railway would improve the speed and efficiency of freight movement on the line and allow for a greater number of trains to travel in both directions.

### **Recommendation 4**

- 5.19 **The Committee recommends that the Australian Government give priority to the development and funding of water resource proposals that have been scientifically identified as being sustainable and with the strongest cost-benefit case, and consistent with National Water Policy. Projects to be considered could include:**
- **Use of groundwater for expanding horticulture;**
  - **Flinders River Weir/O'Connell Creek Water Storage Project;**
  - **Urannah Dam;**
  - **Elliot Main Channel;**
  - **Nullinga Dam;**
  - **Eden Bann and Rookwood Weirs on the Fitzroy River; and**
  - **Cloncurry Dam, Cave Hill.**

**The Committee further recommends that the government proceed with its election proposal to set up the Water Project Development Fund which could be used to assess and plan – and possibly provide seed**

**funding for water management proposals for Northern Australia.**

- 5.20 The Committee believes that the development of water resources in Northern Australia is essential to the growth of industries and communities. These proposals have enormous potential to create urban and industrial growth in a relatively short period of time. For example, the sustainable use of groundwater has great potential for the expansion of horticulture in Northern Australia using mosaic irrigation.
- 5.21 The Flinders River Weir/O’Connell Creek Water Storage Project would allow for the expansion of agriculture on the black soil plains at Richmond with the potential for the growth of a variety of high value crops and associated processing industries. Up to 20 000 hectares of irrigated land could be brought into production, substantially increasing the amount of land under irrigation in the region. Irrigation can also facilitate dry-land cropping in adjacent areas, allowing dry-land farmers to take advantage of infrastructure such as improved transport and processing facilities. It also provides economies of scale for farming equipment contractors.
- 5.22 The Urannah Dam proposal has the capacity to provide water for the expansion of mining in the Bowen and Galilee Basins as well as for further irrigation in the Bowen region – a rich horticultural area. Around 20 000 hectares of land could be opened for irrigation, substantially increasing the agricultural productivity of the region. The dam could also provide water to the Collinsville power station site.
- 5.23 The Elliot Main Channel is linked to the Burdekin system and could also potentially be supplied by the Urannah Dam. The Channel would provide water for the Abbot Point industrial area and potentially 30 000 hectares of irrigated land south of Bowen region. In conjunction with Urannah Dam, it represents an opportunity to substantially increase agricultural and industrial production in Northern Australia.
- 5.24 The Nullinga Dam proposal has the capacity to supply water for the Cairns urban water supply, provide water for agriculture and provide hydro-electric power. This would allow for the expansion of the city of Cairns and the Mareeba-Dimbulah Irrigation Area.
- 5.25 The proposal to raise the dam wall at Eden Bann Weir and build a new weir at Rookwood, near Rockhampton, has the potential to allow large scale development of horticultural crops for export to Asia.
- 5.26 The Cloncurry Dam at Cave Hill would provide an increased supply of town water, potential development for a feed lot and abattoir, and expansion of the mining industry.

**Recommendation 5**

- 5.27 **The Committee recommends that the Australian Government conducts a full investigation of the potential and practicality of special economic zones in Northern Australia.**
- 5.28 The Committee acknowledges the constitutional issues surrounding the creation of special economic zones, and the possible distortions in investment decisions caused by creating different legal regimes within the same polity. Nonetheless the Committee considers that limited use of special economic zones will provide a mechanism for promoting growth and development across Northern Australia.

**Recommendation 6**

- 5.29 **The Committee recommends that the Australian Government take measures to reduce insurance premiums back to an affordable level, which could include increasing competition in the insurance market in Northern Australia. The Australian Government has particular responsibility for the Indian Ocean Territories, but should also conduct negotiations with the governments of the Northern Territory, Western Australia and Queensland, with a view to allowing the Territory Insurance Office to extend its coverage across Northern Australia including the Torres Strait Islands.**
- 5.30 The cost and availability of insurance is a significant impediment to development in Northern Australia. The Committee notes the extraordinary disparity in insurance costs between the north and south of Australia, and between the Northern Territory and the northern portions of Queensland and Western Australia, and the parlous state of insurance on Christmas Island, the Cocos (Keeling) Islands and the Torres Strait Islands. The risk factors applying in the north – chiefly cyclones – do not fully explain this disparity. The Committee welcomes the initiatives by the Australian Government to encourage competition in the provision of insurance in North Queensland, and the current initiatives by some insurers to ease the burden on strata title holders. The Committee believes that more needs to be done. The Territory Insurance Office (TIO) in the Northern Territory is a government owned statutory insurance provider that has provided affordable insurance to citizens of the Territory since 1979. It provides a potential model for the creation of an insurance office covering Northern Australia.

## Recommendation 7

- 5.31 **The Committee recommends that the Australian Government, in conjunction with State and Territory Governments, continue to fund the Great Artesian Basin Sustainability Initiative with a view to completing the capping and piping of all uncapped bores identified under the Great Artesian Basin Coordinating Committee Strategic Management Plan.**
- 5.32 The Committee is of the view that the success so far achieved in conserving water and restoring pressure in the Great Artesian Basin under the Great Artesian Basin Sustainability Initiative (GABSI) needs to be sustained by continuing the program through to completion. Given the importance of the resource, it is vital that every effort be made to ensure its long-term viability and limit the loss of water wherever possible. Access to aquifers will be absolutely critical for the development of future agricultural projects in Northern Australia. Moreover, unrestricted water flows can create a focus for feral animals, such as camels, with consequent environmental damage.
- 5.33 The Committee notes the decision of the Minister for the Environment to approve the Carmichael Mine, in the Galilee Basin, on the basis that the proponent returns a minimum of 730 megalitres of water to the Great Artesian Basin each year for five years, effectively extending the GABSI program.<sup>1</sup> Nonetheless, the Committee feels that more needs to be done to effect the completion of the capping program.

## Recommendations Addressing Opportunities

- 5.34 The following recommendations pertain to the issues set out in Chapter 2 of the report dealing with economic and social opportunities for the development of Northern Australia.

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1 Hon. Greg Hunt MP < Minister for the Environment, Media Release 28 July 2014, 'Strictest Conditions on Carmichael Coal Mine Project', <[www.environment.gov.au/minister/hunt/2014/pubs/mr20140728.pdf](http://www.environment.gov.au/minister/hunt/2014/pubs/mr20140728.pdf)> July 2014.

## Climate Change

### Recommendation 8

- 5.35 **That the impacts of the ongoing change in climate are included in all planning processes, and that the planning process includes the development of adaptation and mitigation policies and strategies for northern Australia.**
- 5.36 The impacts of the changing climate will pose challenges for northern Australia. These impacts include changing rainfall patterns, increasing temperatures and extreme climatic events such as cyclones and higher intensity wildfires. Salt water intrusion into wetlands from sea level rise, changing fire and burning patterns, and increased spread of pests and weeds are likely to have adverse impacts. The impacts will effect infrastructure development, water resources, establishment of horticulture and agriculture, and liveability.
- 5.37 Any long term planning for Northern Australia must take into account the impact of the changing climate. Mitigation and adaption policies and strategies are crucial to ensure sustainable economic and community growth in Northern Australia.

## Resources Sector

### Recommendation 9

- 5.38 **The Committee recommends to the Australian Government that it is necessary that where socially significant community centres are placed at risk due to the finite nature of mining activities, consideration be given to appropriate actions to extend mine or like operations and opportunities consistent with best environmental practices and the interests of the region.**
- 5.39 The Committee considers that, in light of the curtailment of the bauxite refinery at Gove, the Australian Government, Northern Territory Government, Aboriginal people, local community and Rio Tinto must work collaboratively with Aboriginal people and other residents of the region to formulate, fund and implement strategies in North East Arnhem Land, including at Nhulunbuy, for the development of alternative sustainable business and employment opportunities. This is fundamental to ensuring the continuation of opportunity and amenity in the region including in the areas of health, housing, education and other services. These actions are necessary to mitigate the distress, social dislocation, and

- the loss of business and employment opportunities that have been the direct consequence of the curtailment of the refinery and related activities.
- 5.40 With the current copper mining operations at Mount Isa approaching their end of life, avenues are being explored to find ways to extend the life of the mine by extending open cut operations into sections of the lease currently holding mine and infrastructure and smelters. This would ensure that the mine – and the town – remain viable for another half-century. There are cost barriers and regulatory hurdles to be overcome, but these are not insurmountable. There is also the possibility that sections of the town itself may have to be moved. The Committee believes that all reasonable measures should be considered to extend the life of the mine and maintain the existence of the town.
- 5.41 The development of the Bertiehaugh Road at Weipa is critical to the future diversification of the town. It would significantly improve access to and from the town to northern Cape York. For relatively little cost – the road would be graded not sealed – it would provide important economic stimulus to the local tourism industry and promote the economic diversification of Weipa, thereby improving viability post-mining. It is important that the Queensland Government and Rio Tinto support this development for the benefit of the local community.

## Industry

### Recommendation 10

- 5.42 **The Committee recommends that the Australian Government, in conjunction with the Queensland Government, investigate the construction of an abattoir in North Queensland with a view to facilitating private sector investment at the earliest possible date.**
- 5.43 The Committee is aware that the lack of meat processing facilities in North Queensland has limited the opportunities for the development of the beef industry in the north, restricting graziers to the export of cattle from the region either for processing further south or for live export. The presence of an abattoir would significantly reduce transport costs and stress on animals, allow year round production, the culling of older animals, herd improvements and improvements to the land with the removal of excess animals. Poorer seasons have produced overstocking and there is a need to reduce the number of animals. This will reduce pressure on the land, improve the herd and allow pastoralists to receive more value for their animals. The development of the Hann Highway will increase the viability of a possible abattoir by giving year round access to markets.

- 5.44 The construction of abattoirs in the Kimberley and Darwin demonstrate the advantages of having access to local meat processing facilities to provide a market for animals not suitable for live export and opens up alternatives to live export.

## Tourism

### **Recommendation 11**

- 5.45 **The Committee recommends that the Australian Government, in conjunction with the Northern Australia Strategic Partnership, develop a tourism strategy for promoting Northern Australia domestically and internationally, highlighting natural assets and Aboriginal and Torres Strait Islander culture.**

### **Recommendation 12**

- 5.46 **The Committee recommends that the Australian Government seek to build upon significant cultural and artistic events, and programs including the promotion of Aboriginal and Torres Strait Islander arts, to increase participation in, and the public profile of, artistic and cultural activities in Northern Australia.**
- 5.47 The Committee considers the arts and culture scene in Northern Australia to be a significant, if somewhat underrated, asset. With world-class events, such as the Festival of Chamber Music in Townsville and the Cairns Indigenous Arts festival, as well as local and Aboriginal and Torres Strait Islander performers and artists, there is considerable capacity to grow the arts and culture in Northern Australia for the benefit of local communities and as a drawcard for tourism.

### **Recommendation 13**

- 5.48 **The Committee recommends that the Australian Government commit to facilitating the approval process to enable the reopening of the Christmas Island casino.**
- 5.49 The Committee believes that the reopening of the Christmas Island Casino is vital to the economic future of the Island. Neither mining nor immigration related activities will sustain the Island's economy indefinitely, and the casino has the potential to play a major role in transitioning the Christmas Island economy away from its traditional

mainstays towards a future centred on tourism. In addition, it has the potential to be a major source of employment for the local community. The Committee notes that a similar recommendation was made by the Joint Standing Committee on the National Capital and External Territories in its report on the Indian Ocean Territories in June 2013.<sup>2</sup>

## Research and Education

### Recommendation 14

5.50 **The Committee recommends that the Australian Government support the creation of a Co-operative Research Centre for Northern Agriculture. All three universities substantially based in Northern Australia should be involved in the CRC.**

5.51 The Committee is of the view that a CRC for Northern Agriculture would provide a focus point for the research necessary to exploit the enormous potential for agricultural development that exists in Australia's north, facilitating research on crops, soils, water, climate and potential innovation – whether in new industries or in promoting new varieties and practices in existing industries. The CRC would focus on products for export to the growing Asian market, promote coherent agricultural development across the North, and support the development of Aboriginal and Torres Strait Islander communities, allowing them to develop their land resources for economic gain. The Committee believes that all three universities substantially based in Northern Australia should be included in the CRC

### Recommendation 15

5.52 **The Committee recommends that the Australian Government support the development of a national institute for tropical sports and sports medicine in Northern Australia.**

5.53 With the growing affluence of countries in the tropical zone, the importance of organised and elite sports in countries in the region is being increasingly recognised. Tropical sport acclimatisation training centres have been developed in several cities in the Asian region. With the presence of world class health and sporting facilities and a strong tradition in sports medicine, Australia is well placed to take advantage of this trend.

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2 Joint Standing Committee on the National Capital and External Territories, *Report on the Visit to the Indian Ocean Territories 21–25 October 2012*, Parliament of Australia, June 2013, p. 34.

Cairns, Darwin or Townsville could conceivably host an institute for tropical sports and medicine, each having strengths in terms of their capacity to host the institute, either in terms of existing sporting and research facilities, and/or their capacity to meet the demands of the likely increase in sports tourism. The Committee strongly urges the Government to assess the prospects for such an institute in one of these locations and pursue its implementation at the earliest opportunity. It will create a new industry and position Australia as the fourth tropical sports conditioning centre in the world alongside Hong Kong, Kuala Lumpur and Singapore. The infrastructure would also be available in the off-season for use in sports tourism.

### **Recommendation 16**

- 5.54 **The Committee recommends that the Australian Government allow graduates to have some or all of their Higher Education Loan Program debt written-off in return for living and working in locations deemed remote for a significant period of time, such as five years.**
- 5.55 The Committee considers that a useful way to encourage graduates to live and work in remote areas is to provide financial incentives through the Higher Education Loan Program (HELP), which provides for the graduated repayment of loans to cover higher education fees. The Committee notes, for example that early childhood education teachers working regional and remote areas are eligible for assistance in reducing HELP debts and repayments. This support could be extended to other graduates living and working in remote locations.

## **Public Service**

### **Recommendation 17**

- 5.56 **The Committee recommends that the Australian Government give consideration to locating relevant departmental functions within the Australian Public Service to Northern Australia, particularly where new organisations or departments or positions are being created which have no historical connection to other parts of Australia.**
- 5.57 The Committee considers that the location of sections of the public service to Northern Australia would have benefits for the public service and regional economies. A number of government departments have responsibilities with a Northern Australia focus. Locating elements of those departments in Northern Australia would give them greater knowledge of the region, a better understanding of how their

responsibilities might be undertaken, and improve response times for the implementation of policy. The location of these elements in the North would also provide a boost for regional economies, providing a critical mass of employment around which other sectors can develop.

- 5.58 The evidence received by the Committee suggests that elements of the Departments of Immigration and Border Protection (including Customs), Defence, Agriculture, Environment, Industry, Indigenous Affairs, and Foreign Affairs and Trade could effectively be relocated to the North.

## Defence

### Recommendation 18

- 5.59 **The Committee recommends that the Department of Defence give preference to local firms in Northern Australia for the repair and maintenance of material and infrastructure, where it is financially sound.**
- 5.60 Supporting the capacity of local firms in Northern Australia to undertake repair and maintenance work for the Australian Defence Force (ADF) will boost the local economy, have a significant multiplier effect on local employment, and ensure that the capacity to undertake this work is available to the ADF and the armed forces of Australia's regional neighbours. This is not to say that local firms be engaged at any cost, but rather that they be preferred if they match or better tenders from southern-based suppliers.

### Recommendation 19

- 5.61 **The Committee recommends that the Australian Government consider relocating additional defence assets to Northern Australia in accordance with the recommendations of the Defence White Paper.**
- 5.62 The evidence received by the Committee indicates that there is considerable scope to significantly increase the Defence presence in Northern Australia. Naval assets in particular could be better located in Northern Australia closer to the locations where they might be required to promote national security or provide humanitarian aid. For example, the Committee notes the location of, and existing and potential capabilities of, Exmouth as a base for air and sea operations. The Committee believes that a long-term northern focus for the defence force is both appropriate to national defence and beneficial for northern development.

## Communications

### Recommendation 20

5.63 **The Committee recommends that the Australian Government improve access to, speed and reliability of high speed broadband in order to support the development of uses of digital communication technologies in Northern Australia, such as:**

- **tele-health;**
- **e-learning; and**
- **projects to improve social amenity.**

5.64 The Committee has discussed some uses of digital communication technologies in Chapter 2, and considers such innovations should be encouraged. In particular, the Committee was impressed by the proposals of Broadband for the Tropics, which would improve liveability in tropical communities and thereby contribute to population growth. The potential benefits of tele-health and e-learning to regional and remote communities in Northern Australia cannot be overstated – they are crucial to the future development of the North.

### Recommendation 21

5.65 **The Committee recommends that the Australian Government develop a telecommunications and digital technology strategy specifically for Northern Australia.**

5.66 In a global economy and digitally connected world, the development and provision of affordable, fast and reliable digital technologies is particularly important in regions where distance and access are real challenges. New digital technologies are vital for the growth of businesses and jobs, essential for the expansion of educational opportunities. They will enable research and development, and provide the capacity to improve health care in regional and remote communities. The digital revolution has the capacity to end the tyranny of distance, but only if effective investment in communications infrastructure and digital services is made by governments, industries and communities.

## Aboriginal and Torres Strait Islander Engagement

### Recommendation 22

- 5.67 **The Committee recommends that the Australian Government support the development of Aboriginal and Torres Strait Islander employment and businesses through the use of successful public and private sector models of employment and enterprise.**
- 5.68 The Committee is very much aware of the significant untapped latent potential in the Aboriginal and Torres Strait Islander population of Northern Australia. Aboriginal and Torres Strait Islander people make up thirty per cent of the Northern Territory's population; sixty per cent of the population of Cape York; and fifty per cent of the Kimberley's population. The Committee has received evidence that by 2050, at current rates of growth, there will be more Aboriginal and Torres Strait Islander people living in Northern Australia than non-Aboriginal and Torres Strait Islander people.
- 5.69 Employment rates are currently low amongst Aboriginal and Torres Strait Islander people, particularly in remote communities. This means there is a significant and growing section of the population in Northern Australia with potential for greater economic participation. The Committee believes that engaging, training, encouraging and connecting Aboriginal and Torres Strait Islander people to employment, and accessing this untapped labour resource, should be a priority for all governments and potential employers.
- 5.70 There are a number of successful models for developing Aboriginal and Torres Strait Islander employment and enterprise. Within the private sector, the success of Rusca Brothers in the Northern Territory and Northern Project Contracting in north-west Queensland demonstrate the achievements of Aboriginal and Torres Strait Islander business enterprises in promoting Aboriginal and Torres Strait Islander employment. Both are focussed not only on providing employment but on developing skills and experience that can be utilised by other communities. This will increase the labour pool and skills base for the resources and construction sectors, reducing demand for transient employees.
- 5.71 Equally the importance of Aboriginal and Torres Strait Islander organisations to providing employment and training options for Aboriginal and Torres Strait Islander people must not be overlooked or under estimated. The largest employers of Aboriginal and Torres Strait Islander people are these organisations. Aboriginal community controlled health services in particular employ significant numbers of Aboriginal people across northern Australia and

provide good career options and education and training pathways for Aboriginal and Torres Strait Islander people. Likewise land Councils and other community based and controlled organisations, including resource agencies set up solely for the provision of services for and to Aboriginal and Torres Strait Islander Communities, provide similar pathways and opportunities. All of these organisations should be recognised for the contributions they make in the provision of career opportunities and long term sustainable employment options for Aboriginal and Torres Strait Islander people.

- 5.72 There is also considerable scope for the further development of community based employment and enterprises, such as tourism, arts and crafts, land management initiatives such as carbon farming and the services sector. Western Arnhem Land carbon farming is an outstanding example in this regard.

## Environmental Sustainability

### Recommendation 23

- 5.73 **The Committee recommends that large scale extraction of water from river systems and aquifers in Northern Australia, which may impact on the environment and the fisheries industry and other activities, should be preceded by thorough scientific investigation.**
- 5.74 The use of water in large agricultural projects has the potential to significantly contribute to the regional economy of Northern Australia. In particular the Integrated Food and Energy Developments (IFED) proposal has the potential to revitalise Georgetown. However, concerns have been raised about potential adverse impacts on other potential irrigation projects in the Gilbert River catchment and on the ecology of the south-east Carpentaria Gulf and on the prawn industry.
- 5.75 There needs to be thorough scientific evaluation of the IFED proposal and other similar projects, before approval is granted.

### Recommendation 24

- 5.76 **The Committee recommends that the numbers of Australian Quarantine and Inspection Service officers be significantly increased in Northern Australia.**
- 5.77 As the agricultural and pastoral industries increase it is vital to ensure that they are not thwarted through biosecurity shortfalls.
- 5.78 North-west Australia is often the gateway for wind borne pathogens, and the Torres Strait Islands and Cape York Peninsula provide another avenue

for pest and disease introduction. Development of Northern Australia will increase movements of people and products into and across the region and will also increase biosecurity risks.

- 5.79 Increasing the numbers of Australian Quarantine and Inspection Service (AQIS) officers in Northern Australia will increase the chances of early detection of pest and disease incursions, and reduce the time taken to identify specific pests and diseases and put in place remedial action.

## Regional Affairs

### Recommendation 25

- 5.80 **The Committee recommends that the Australian Government encourage ongoing bilateral exchange between the northern regions of Australia and neighbouring countries and communities in the Asia-Pacific and Indian Ocean regions.**
- 5.81 The Committee considers it of great importance to promote relations between Northern Australia and the neighbouring countries in the region. By promoting regular talks at local, regional and national levels, the Government can maximise partnership opportunities and gain valuable insights from our regional neighbours.

## Recommendations Addressing Development Proposals

- 5.82 The following recommendations pertain to the issues set out in Chapter 3 of the report dealing with development proposals for Northern Australia. There is general recommendation covering the creation of a strategy for the development of capital infrastructure in Northern Australia, as well as several recommendations concerning specific projects related to roads, water and power. There is also a general recommendation covering the creation of a strategy for the potential development of a range of agricultural schemes. Separate recommendations covering priority roads, rail and water developments appear in the section dealing with priority recommendations.

## Capital Infrastructure

### Recommendation 26

- 5.83 **The Committee recommends that the Australia Government in conjunction with the Northern Australia Strategic Partnership, design and implement a 20 year strategy for the staged development of capital infrastructure in Northern Australia, including:**
- **the upgrade of major arterial roads with a view to provide year-round access to most areas in Australia’s North;**
  - **increasing the capacity of ports and airports to facilitate an increase in volumes of traffic and trade; and**
  - **the development of water infrastructure to cater for urban and industrial development, particularly in agriculture and the resources sector.**
- 5.84 The evidence presented to the Committee has identified a number of capital infrastructure proposals with the potential to enhance the development Northern Australia (see Chapter 3). The Committee acknowledges constraints on government funding, and that any development must necessarily proceed in stages according to available funding and resources. The Committee is of the view, however, that the planned development of a number of these projects would significantly increase the range of options available for the economic and social advancement of Northern Australia and the economic sustainability of regional and remote communities.
- 5.85 Chapter 3 highlights a number of secondary roads which if developed would complement the national highway in facilitating road transport for the development of trade and tourism, while improving communications and liveability in regional and remote communities. These roads also have the potential to facilitate east-west communications across Northern Australia, an essential component of its future development. The development of a network of all-weather roads will significantly improve the productivity and amenity of the North.
- 5.86 There are significant opportunities to upgrade existing port and airport facilities with a view to increasing access to international markets for Australian commodities and international tourism. The upgrade of regional airports to facilitate international links would allow increased export of horticultural and aquaculture products direct to Asia, while facilitating an increase in tourism from Asia. Port developments, with associated transport infrastructure, have the potential to increase the export of resources and agricultural commodities, while the development

of additional deep-water capacity at several ports will facilitate the entry of large cruise ships, providing a significant new avenue for international tourism.

- 5.87 The development of water infrastructure, particularly water storage, is critical to the development of Northern Australia. The expansion of cities and towns, increased agricultural production and the development of the resources sector all require water. The development of a number of the water infrastructure proposals identified in the evidence presented to the Committee would stimulate a major expansion in population and production across the North.
- 5.88 The Committee has also been interested in some of the more visionary proposals for the development of water infrastructure. Several have focussed in the transfer of water from the North to the Murray-Darling Basin or other parts of the inland. The Water Project has focussed on using water from the Ord for high value uses in the Pilbara resources sector based on a comprehensive system of water rights, making the project effectively self-funding.

## Ports

### Recommendation 27

- 5.89 **The Committee recommends that the Australian Government identify key ports and commit to funding their upgrade, subject to relative benefit assessment by Infrastructure Australia. Projects to consider may include:**
- Darwin;
  - Karumba; and
  - Wyndham.
- 5.90 There is scope and a need for the upgrade of Darwin Port including the expansion of facilities at East Arm Wharf, and new port facilities at Middle Arm and Glyde Point. These upgrades would support growth in the oil, gas and mining industries and facilitate freight movements to Asia.
- 5.91 The upgrade of facilities at Karumba Port would support high volume trade between Queensland's Gulf region and Asia. The upgrade of onshore refuelling, watering and loading facilities would also assist the development of the commercial fishing industry.
- 5.92 The Port of Wyndham is the principal port for the Ord and East Kimberley. The upgrade of the port would allow for the docking of larger

ships and bring immediate benefits to the community. It is a cost-effective alternative to establishing a deep-water port at a different location.

## Roads

### Recommendation 28

- 5.93 **The Committee recommends that the Australian Government, in consultation with the cattle industry, investigate standover/transfer facilities to accommodate the movement of cattle across Australia.**
- 5.94 Standovers and transfer facilities along major roads used to transport cattle over long distances allow for the rest and watering of cattle in transit, the safe transfer of cattle between vehicles, and rest stops for drivers to prevent fatigue. A regular network of standovers would be of great benefit in promoting animal welfare and preventing driver fatigue at little cost. Regarding driver safety issues, the Committee notes the recent death of a road train driver while cross-loading cattle at Gracemere near Rockhampton, Queensland.<sup>3</sup>

## Horticultural and Agricultural Development Schemes

### Recommendation 29

- 5.95 **The Committee recommends that the Australian Government in conjunction with the Northern Australia Strategic Partnership, design and implement a 20 year strategy for the staged development of horticulture and agriculture in Northern Australia, including:**
- **funding scientific studies on the available water and soil resources on a catchment scale, as well as the environmental implications of horticultural and agricultural developments in each catchment;**
  - **identifying infrastructure requirements for horticultural and agricultural development in each region; and**
  - **identifying regulatory impediments to horticultural and agricultural development and the best way to overcome these (e.g. land tenure issues and approvals processes).**

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3 *Queensland Country Life*, 27 August 2014, *Gracemere's cross loading tragedy*, <[www.queenslandcountrylife.com.au/news/agriculture/general/news/gracemeres-cross-loading-tragedy/2709862.aspx#](http://www.queenslandcountrylife.com.au/news/agriculture/general/news/gracemeres-cross-loading-tragedy/2709862.aspx#)> September 2014.

- 5.96 A number of significant proposals for the development of horticulture and agriculture in Northern Australia have been presented to the Committee (see Chapter 3). Some, such as Ord Stage 3, are expansions of existing schemes; others, such as the Etheridge Integrated Agricultural Project (EIAP), are greenfield projects designed to take advantage of the growing understanding of the possibilities inherent in the land and water resources of Northern Australia. All point to the enormous potential for horticultural and agricultural development in Australia's North. In this context the Committee recognises the need for market and economic driven cropping systems.
- 5.97 Projects such as these are facilitated by public investment in scientific research on water availability, soil types, and crop suitability and improvements. They benefit from a regulatory regime focussed on sustainable development and reducing red tape. They also benefit from investment in transport, power and water infrastructure. In turn, they provide income and opportunities for rural communities, generate potential for innovation and value-adding, and boost Australian exports.

### **Recommendation 30**

- 5.98 **The Committee recommends that the Australian Government facilitate the creation of a rural investment fund to provide opportunities for investors to participate in rural infrastructure development projects.**
- 5.99 The Committee is aware of the recent announcement of the Rural Infrastructure Opportunity Fund in the United States, which is designed to enhance access to capital for rural infrastructure projects and speed up the process of rural infrastructure improvements. The fund will allow a wide variety of investors to access markets to invest in rural development. The Committee believes that a similar funding arrangement would be of great benefit for rural industries in Northern Australia, connecting institutional funds with infrastructure needs.

## Power

### Recommendation 31

- 5.100 **The Committee recommends that the Australian Government, as a matter of urgency, engage the Queensland and Western Australian Governments to improve power grids in Northern Queensland and in the Pilbara respectively.**
- 5.101 Much of the electricity used in North Queensland is generated in Central Queensland. The long transmission distances mean a substantial loss of power in transit, at high cost to industry and the taxpayer (domestic supplies in North Queensland are subsidised). It is widely recognised that the only real solution to this situation is the development of a base load power generation capacity in North Queensland. This would reduce transmission losses and electricity prices and remove the need for subsidies. The Committee is of the view that construction of a base load power station in North Queensland should be a matter of high priority.
- 5.102 A host of studies show greater investment in energy infrastructure in the Pilbara is required to meet the significant domestic and small industry growth. This growth is necessary to allow the economy to diversify. The development of a fully interconnected grid in the Pilbara will unleash a significant amount of under-utilised and standby generation, would facilitate large scale renewables and would deliver much greater network resilience in the event of severe weather events.

### Recommendation 32

- 5.103 **The Committee recommends that the Australian Government promote the use of renewable energy sources as a solution to the remoteness and isolation from the grid of many homesteads and communities in Northern Australia.**
- 5.104 The Committee is conscious that one of the answers to the remoteness and distance from the power grid for isolated areas is the use of renewable energy sources. For example, the proposed wind farm in the Newcastle Range at Forsayth, the creation of a solar farm to feed into the power supply at Cooktown, and proposals for the development of renewable energy in the Torres Strait Islands, are just some examples of where renewable energy is providing sustainable solutions to energy problems in Northern Australia. The Committee is also of the view that solar power is an ideal energy sources for many remote communities. Solar power reduces reliance upon the use of diesel fuel. There is already extensive use

of solar power in Northern Australia, as evidenced by work in remote communities such as the Mackerel Islands off Western Australia and Hermannsburg in the Northern Territory.

## **Recommendations Addressing Impediments**

5.105 The following conclusions and recommendations pertain to the issues set out in Chapter 4 of the report dealing with impediments to the development of Northern Australia.

### **Population**

5.106 The importance of population growth to economic and social development cannot be overstated. Ways have to be found to significantly increase the population of Northern Australia so that the full range of opportunities for economic, social and cultural development can be fulfilled. In order to do that, we must encourage people to move north and then retain them. This will require investment in economic and social infrastructure, a focus on liveability and policies which make the North an attractive place to live and work. Most of the recommendations in this chapter are focussed on addressing these issues, thereby making Northern Australia a more prosperous and amenable place to live.

### **Absence of Capital Infrastructure**

5.107 The Committee believes that the development of physical infrastructure is critical to the overall development of Northern Australia. The absence of economic infrastructure, particularly water, power and transport, impedes opportunities for economic development and liveability, as does poor access to telecommunications and global digital technologies.

5.108 Realising these opportunities requires overcoming impediments to economic growth and social infrastructure. Transport infrastructure and access to water and power are critical to the future development of the resources and agriculture sectors. Increased road and rail access to expanded port facilities and air freight options are vital to the growth of the economy. Likewise, growth in tourism requires better transport access, particularly air and road access. Many of the earlier recommendations in this chapter have focussed on the development of capital infrastructure.

## Absence of social infrastructure

### Recommendation 33

- 5.109 **The Committee recommends that the Australian Government, in conjunction with the Northern Australia Strategic Partnership, develop a strategy to promote liveability in Northern Australia using the ‘hub-and-spoke’ model to deliver services and promote amenity in regional and remote communities, including in the areas of:**
- health;
  - education;
  - social/community services;
  - sports; and
  - arts/culture.
- 5.110 The failure of governments to effectively recognise and mitigate lack of access to services experienced by Australians who reside in Northern Australia is a significant constraint upon social and economic development. If people, especially families, are to live and work in the region, there is a reasonable expectation that they will have access to similar services to those enjoyed by other Australians living in the south. This does not mean that every small town will have a teaching hospital or a university campus, but rather that such services will be accessible within reasonable time frames and at a reasonable cost. That accessibility and affordability will largely be determined by transport and communications infrastructure.
- 5.111 Liveability – access to health services, social and community services, education, sports, culture and lifestyle – is not a luxury. It is a major determinant in where people choose to live and work and do business. It affects access to qualified staff in regional and remote communities. It also affects the ability of communities to retain the critical mass of population needed to sustain a range of services. Providing affordable and accessible social infrastructure is essential to the development of Northern Australia.
- 5.112 The Committee is of the view that the ‘hub-and-spoke’<sup>4</sup> model is the best means of delivering services and amenity to regional and remote communities. This model allows the concentration of services in existing

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4 The ‘hub-and-spoke’ model is a system for the distribution of goods and services which allows their concentration in regional centres with a critical mass of population (the hub), while allowing access to surrounding populations along transport or communication corridors (the spokes).

centres while ensuring a reasonable level of access to all residents. The Committee is also aware that access to telecommunications and global digital technologies will be critical to the delivery of services in remote communities.

### **Recommendation 34**

- 5.113 **The Committee recommends that the Australian Government, in conjunction with State and Territory Governments, work to normalise the local government arrangements in mining communities, such as Weipa and Nhulunbuy, to allow these communities to pursue development opportunities free from the control of mining companies. Strategies need to be developed to complete the normalisation process in a number of Pilbara towns where mining companies' retention of monopoly ownership of utilities and land is hampering growth and economic diversification.**
- 5.114 The Committee is of the view that local councils in mining centres need to be fully independent of big mining companies. There needs to be a full normalisation<sup>5</sup> of local government arrangements, with local councils having control over land, housing and utilities, free of corporate interference. In addition, mining companies need to work with governments to ensure the long-term viability of communities post-mining.

## Regulatory Environment

### Aquaculture

### **Recommendation 35**

- 5.115 **The Committee recommends that the Australian Government facilitate the development of the aquaculture industry in Northern Australia by improving the regulatory framework.**
- 5.116 In the evidence presented to the Committee, it was argued that there was a serious problem in the regulation of prawn aquaculture. Despite massive

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5 Normalisation is the process in which a community governed by a private entity is transformed into a publicly owned community entity, governed by a democratic structure consistent with local government structures elsewhere in Australia. Normalisation involves the transfer of publicly accessible services (land, housing, utilities, community assets and services) from private ownership (e.g. a mining company) to public ownership by State or local governments.

investment in science by governments to prove the economic viability and environmental sustainability of prawn aquaculture, and commensurate investment by the industry to comply with strict environmental guidelines, the industry is stalled in the approvals process on the cusp of a major expansion. The result is that it is easier to import prawns from overseas countries that have benefited from access to Australian research than it is to grow the prawns here.

- 5.117 The Committee notes that a lot of money has been spent on the science of farming prawns, especially regulating nutrient levels in the water, and that Australia has developed best practice for the management of farming tiger prawns. Australia's high level of expertise in this area, however, has largely been exploited for the benefit of foreign growers.

## Fisheries

### Recommendation 36

- 5.118 **The Committee recommends that the Australian Government review fisheries laws to harmonise regulations between jurisdictions, promote the sustainable development of existing commercial, recreational and sporting fisheries and the creation of new fisheries, and provide a secure long-term future for the fishing industry in Northern Australia.**
- 5.119 Governments in Australia need to recognise the value of commercial recreational and sporting fisheries in Australia. Regulation of the industry needs to be based on science and focussed on sustainability. There must be security of tenure for fishing licences and licences need to be based on the sustainability of wild fisheries. Security for the industry will enable access to funds to promote development and provide pathways for young people to enter the industry.
- 5.120 The CSIRO has noted that some fisheries are under threat, but this should not prevent the Government from investigating any future opportunities for expansion. For example, the Queensland tuna fishery sustained between eight and ten licences – that is now down to one licence and four boats.

## Taxation

### Recommendation 37

- 5.121 **The Committee recommends that the Australian Government explore reforms to the taxation system to better promote investment and development in Northern Australia.**
- 5.122 The evidence received by the Committee indicates that there are a range of potential taxation measures which could be used to promote investment and development in Northern Australia. Measures targeting the resources sector and agriculture have been highlighted. Such measures could be considered in conjunction with the establishment of special economic zones.

### Recommendation 38

- 5.123 **The Committee recommends that the Australian Government investigate the equity of the current application of the Zone Tax Offset arrangements so that:**
- **the Zones reflect the current distribution of population and rebates are increased to reflect the current cost of living in regional and remote areas; and**
  - **the Zone Tax Offset applies only to persons whose principle place of residence is within a zone.**
- 5.124 The cost of living and the cost of doing business is a serious impediment to economic development in Northern Australia. Development costs are high, largely as a result of remoteness and the need to import most inputs. The need to mitigate weather risks can add to the cost of development, particularly the cost of construction. There is also a high cost of service delivery to small and dispersed populations. Much of this is regrettably the inevitable cost of isolation. This can in part be addressed by better transport infrastructure, reducing transport costs, and more and better targeted investment in power generation. It could also be mitigated through the tax regime, with better recognition of the cost to individuals of living outside major centres.
- 5.125 The Committee considers that the Zone Tax Offset should be reviewed to make it more relevant to current circumstances. The Zones should reflect the current distribution of population and the rebates increased to reflect the current cost of living in regional and remote areas. The Committee believes that this should be done, not only out of fairness to the current residents of these communities, but in a deliberate attempt to provide

incentives for people to move to and establish themselves within regional and remote communities in Northern Australia. The purpose of the Offset should be to promote development.

- 5.126 The Committee further observes that a number of centres where the Zone Tax Offset apply are now major urban centres whose economic development will be largely self-sustaining, and whose residents have a high degree of access to services and amenities.
- 5.127 The Committee supports the recommendation of the report of the House of Representatives Standing Committee on Regional Australia, *Cancer of the Bush or Salvation for Our Cities?*, that the Government review the Zone Tax Offset to ensure:
- that it provides reasonable acknowledgement of the cost of living in remote Australia;
  - that the zones are based on a contemporary measure of remoteness;
  - that the zones are based on up-to-date census figures;
  - that it includes a mechanism for regular review to ensure that the offset reflects accurate population figures; and
  - that the Zone Tax Offset is claimable only by permanent residents of a zone or special area.

### **Recommendation 39**

- 5.128 **The Committee recommends that the Australian Government review the taxation treatment of FIFO work arrangements to ensure that they are consistent with the goal of promoting the development of regional and remote communities in Northern Australia, including:**
- **implementing Recommendations 12 and 13 of the House of Representatives Standing Committee on Regional Australia report *Cancer of the Bush or Salvation for Our Cities?* relating to changes to the *Fringe Benefits Tax Assessment Act 1986*; and**
  - **reviewing the taxation laws to encourage the construction of permanent dwellings rather than temporary work camps by:**
    - ⇒ **capital depreciation for residential housing developed by mining companies on the same basis as transient worker accommodation; and**
    - ⇒ **the exclusion of transient worker accommodation from within a sixty kilometre radius of existing settlements.**
- 5.129 FIFO is perhaps the most controversial aspect of the development of Northern Australia. On the one hand, it allows the rapid development of

major resources projects in remote locations without committing government or industry to the development of infrastructure or communities that do not have a viable long-term future. FIFO is both flexible and efficient.

- 5.130 On the other hand, the use of FIFO workers undermines the growth and development of existing regional communities and places a drain on resources such as airports, roads and utilities without adequate return.
- 5.131 To the extent that FIFO is the product of a taxation regime which seems to privilege a transient workforce over more permanent forms of settlement, the Committee believes that the taxation regime needs to be adjusted. There are three elements to the taxation treatment of FIFO which give it an advantage over the employment of resident workers:
- the up-front deductibility of expenses, including travel and accommodation, related to employment;
  - the faster rate of depreciation of temporary accommodation structures compared with houses; and
  - the access to Fringe Benefits Tax exemptions for FIFO work arrangements.
- 5.132 The Committee endorses Recommendations 12 and 13 of the House of Representatives House Standing Committee on Regional Australia report into the use of FIFO workforce practices in regional Australia. These requested that:
- The Government review the *Fringe Benefits Tax Assessment Act 1986* to examine the:
    - ⇒ removal of impediments to the provision of residential housing in regional communities;
    - ⇒ removal of the exempt status of fly-in, fly out/ drive-in, drive-out work camps that are co-located with regional towns; and
    - ⇒ removal of the exempt status of travel to and from the workplace for operational phases of regional mining projects.
  - The Government review the *Fringe Benefits Tax Assessment Act 1986* to:
    - ⇒ remove the general exemption for fly-in, fly-out/ drive-in, drive out workers from the 12-month limit of payment of the living away from home allowance;
    - ⇒ enable specific exemptions for construction projects that have a demonstrated limited lifespan; and
    - ⇒ enable specific exemptions for projects in remote areas where the fly-in, fly-out/ drive-in, drive out work practice is unavoidable.

- 5.133 The Committee also believes that putting residential housing on a level playing field with transient worker accommodation in terms of depreciation will allow the choice between the two to be less one-sided. The Committee believes that the construction of permanent dwellings should be as financially attractive as the construction of work camps in the vicinity of existing settlements. Work camps should only be regarded as preferable to more permanent accommodation when they are genuinely remote from existing townships. Discouraging transient worker accommodation within a 60 km radius of existing settlements seems a reasonable measure to the Committee.

## Land Tenure

### Recommendation 40

- 5.134 **The Committee recommends that the Australian Government pursue, through the Northern Australia Strategic Partnership, the harmonisation and simplification of land tenure arrangements in the jurisdictions across Northern Australia. The Committee acknowledges the unique nature of the statutory inalienable freehold title under the *Aboriginal Land Rights (Northern Territory) Act 1976* and that it is particular to the Northern Territory. The Committee also acknowledges the limited range of rights in land that are derived from the *Native Title Act 1993*. The Committee recommends that Governments and business work constructively with Aboriginal and Torres Strait Islander people and organisations such as land councils and native title representative bodies or prescribed bodies corporate to maximise the economic development and employment opportunities on Aboriginal land and/or land over which there is native title.**
- 5.135 The Committee believes that simplifying and harmonising land tenure arrangements across jurisdictions is critical to the development of Northern Australia and to promoting economic opportunities for Aboriginal and Torres Strait Islander communities. The current arrangements are the accretions of history and require a systematic overhaul to allow individuals and enterprises to make more productive and innovative use of land. In particular, the various systems of pastoral leasehold need to be reviewed and harmonised to allow greater security of investment. The Committee welcomes the commitment of the State and Territory Governments to review the current land tenure arrangements and encourages the various jurisdictions to work in concert with each other.

- 5.136 The Committee is also aware of the difficulties of obtaining land tenure for residential or commercial purposes under the Aboriginal Land Rights Act and the Native Title Act. This is having a significant impact on the ability of Aboriginal and Torres Strait Islander communities to pursue economic development.

## Air Services

### Recommendation 41

- 5.137 **The Committee recommends that the Australian Government review the cost and administration of customs, quarantine and immigration services to provide the most cost-effective way of delivering those services, including:**
- **providing customs, quarantine and immigration services at selected regional airports;**
  - **reducing visa charges for overseas visitors to encourage inbound tourism; and**
  - **reducing the passenger movement charge to reflect the actual cost of providing customs, quarantine and immigration services.**
- 5.138 The importance of air services to regional and remote communities cannot be overstated. They are often the principal means of travel for residents, transient workers and service providers alike. Moreover, an effective and affordable network of air services across Northern Australia would increase access for tourism and improve liveability for residents. The Australian Government should look at ways to improve the accessibility and affordability of air services to and within Northern Australia.
- 5.139 In particular, the Australian Government should consider measures to improve international access to the North by examining overheads on travel costs such as the passenger movement charge and visa costs. These may significantly increase travel costs for potential visitors and discourage tourism from our nearest neighbours.
- 5.140 The Government should also consider more cost effective ways of providing immigration, customs and quarantine services to allow more regional airports to upgrade to international status, with increased access to tourism and trade.

## Standardisation

### Recommendation 42

5.141 **The Committee recommends that the Australian Government pursue, through the Northern Australia Strategic Partnership, the harmonisation of governance and regulation in the jurisdictions across Northern Australia, including in the areas of, but not exclusive to:**

- **environmental management;**
- **provision of health services and health industry qualifications;**
- **transport regulations, especially those dealing with heavy vehicle capacity and driver fatigue;**
- **water management; and**
- **Aboriginal and Torres Strait Islander affairs.**

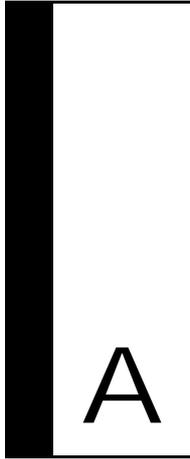
5.142 Harmonising governance and regulation across Northern Australia is essential to its future development. The Committee recommends that one of the principal objectives of the Partnership should be the harmonisation of laws and governance arrangements across Northern Australia.

5.143 The Committee notes in particular the problems associated with loading requirements and driver fatigue in the heavy transport industry. Different jurisdictions have different regulations governing the carrying capacity of trucks and driver fatigue.

This leads to livestock often having to be offloaded to meet the different loading rules in the different jurisdictions across Northern Australia. There is also the issue of different driver fatigue regulations as well as drivers suffering greater fatigue from travelling long distances at lower speeds on dirt roads than on sealed roads.

Hon Warren Entsch MP  
Chair

1 September 2014



## Appendix A – Submissions

- 1 Mr Trevor Crawford
- 2 SGS Economics and Planning
- 3 North Queensland Conservation Council
- 4 Mr Alistair Watson
- 5 Mr Keith Noble
- 6 East West Line Parks Ltd
  - 6.1 East West Line Parks Ltd
- 7 Carpentaria Shire Council
- 8 Innisfail District Chamber of Commerce Industry & Tourism
- 9 Anindilyakwa Land Council
- 10 Rockhampton Regional Council
  - 10.1 Rockhampton Regional Council
- 11 Mr Ian Marshall
- 12 Flinders Shire Council
- 13 Australian Institute of Health and Welfare
- 14 Dr Anna O. Soter (Ph.D).
- 15 Burdekin Shire Council
- 16 Burke Shire Council
- 17 Capricorn Enterprise
  - 17.1 Capricorn Enterprise
- 18 Broadband for the Tropics Committee
- 19 T Bowring and Associates Pty Ltd
- 20 Cairns Alliance of Social Services
- 21 Pioneer Corporation Pty Ltd
- 22 MMG Limited

- 23 Great Southern Cross
- 24 The Shire of Ashburton
- 25 Pilbara Regional Council
- 26 World Society for the Protection of Animals
- 27 Longreach Regional Council
- 28 Mr Kendall Trudgen
- 29 Federation of Ethnic Communities' Councils of Australia
- 30 James Cook University Faculty of Medicine, Health and Molecular Sciences
- 31 The University of Notre Dame Australia
- 32 Mount Isa to Townsville Economic Development Zone
- 33 Gulf Savannah Development Inc
- 34 Mr Maurice Johnson
- 35 Darwin Centre for Bushfire Research
- 36 Australian Guar Company
- 37 The Australian Forest Products Association
- 38 Queensland Tourism Industry Council
- 39 Research Australasia
- 40 Cairns Regional Council
- 41 Flinders University
- 42 City of Darwin
  - 42.1 City of Darwin
- 43 Association of Northern Kimberley and Arnhem Aboriginal Artists
- 44 Australian Bureau of Statistics
- 45 Cotton Australia
- 46 Regional Development Australia Fitzroy and Central West Inc.
- 47 Ngaanyatjarra Council
- 48 Wet Tropics Management Authority
- 49 Infigen Energy
- 50 Catholic Social Services Australia
- 51 Australian Honey Bee Industry Council Inc.
- 52 Harvesting Sunshine
- 53 Far North Queensland Regional Organisation of Councils
- 54 Regional Development Australia Townsville and North West Queensland Committee
- 55 Menzies School of Health Research
- 56 Regional Development Australia Far North Queensland & Torres Strait

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- 57 North Queensland Bulk Ports Corporation
  - 58 Northern Territory Planning Commission
  - 59 Outback Highway Development Council Inc.
  - 60 Australia's Mineral & Mining Group Ltd
  - 61 Chuulangun Aboriginal Corporation
  - 62 JUTE Theatre Company
  - 63 Darwin Port Corporation
  - 64 The Whitsunday Regional Organisation of Councils
    - 64.1 The Whitsunday Regional Organisation of Councils
  - 65 Carpentaria Rail
  - 66 Ports North
  - 67 The Tom Price and Paraburdoo Business Association
  - 68 North West Queensland Regional Organisation of Councils
  - 69 Advance Cairns
  - 70 Liberal National Party Northern Development Policy Committee
    - 70.1 Liberal National Party Northern Development Policy Committee
  - 71 Aboriginal Areas Protection Authority
  - 72 The Shire of Roebourne
  - 73 Central and North West Queensland Medicare Local
  - 74 Queensland Farmers' Federation
  - 75 Queensland Western Roads Interim Working Group
  - 76 The Roper Gulf Regional Council
  - 77 Ms Jan Ford
  - 78 Coomalie Community Government Council
  - 79 Sunfish Queensland Inc.
  - 80 Great Green Way Tourism Inc.
  - 81 Integrated Food & Energy Developments Pty Ltd
    - 81.1 Integrated Food & Energy Developments Pty Ltd
    - 81.2 Integrated Food & Energy Developments Pty Ltd
    - 81.3 Integrated Food & Energy Developments Pty Ltd
  - 82 Broome CIRCLE Inc.
    - 82.1 Broome CIRCLE Inc
  - 83 Tablelands Wind Turbine Action
  - 84 Austral Fisheries Pty Ltd
  - 85 Northern Prawn Fishery Industry Pty Ltd
  - 86 Cook Shire Council

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- 87 Cape York Institute For Policy & Leadership
    - 87.1 Cape York Institute For Policy & Leadership
  - 88 Ninti One Limited
    - 88.1 Ninti One Limited
  - 89 Baucau Beaches Development Group, Democratic Republic of Timor- Leste
  - 90 Ergon Energy Corporation Limited
  - 91 Mr Trevor Maltby
  - 92 Northern Territory Government
    - 92.1 Northern Territory Government
  - 93 The Chamber of Minerals and Energy of Western Australia
    - 93.1 The Chamber of Minerals and Energy of Western Australia
  - 94 Queensland Resources Council
    - 94.1 Queensland Resources Council
  - 95 Australasian Centre for Rural and Remote Mental Health
  - 96 Kimberley Land Council
  - 97 CONFIDENTIAL
  - 98 Northern Minerals
  - 99 Growcom
  - 100 Tennant Creek Regional Economic Development Committee
  - 101 Mount Isa City Council
  - 102 Australasian Railway Association
  - 103 Shire of Halls Creek, Central Kimberley Chamber of Commerce, Kimberley Cattlemen's Association and Tanami Action Group.
  - 104 Mr Garth Harrigan
  - 105 EcoEnergy Ventures
  - 106 Australian Institute of Marine Science
  - 107 Chamber of Commerce & Industry Queensland
  - 108 Commonwealth Scientific and Industrial Research Organisation
    - 108.1 Commonwealth Scientific and Industrial Research Organisation
  - 109 Shire of Exmouth
  - 110 Larrakia Nation Aboriginal Corporation
  - 111 Mareeba Chamber of Commerce
  - 112 Parks and Wildlife Commission of the Northern Territory
  - 113 Australian Academy of Science
  - 114 Australian Workforce and Productivity Agency
  - 115 Australia Japan Business Co-operation Committee

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- 116 City of Palmerston
  - 117 Australian Industry and Defence Network – Northern Territory
    - 117.1 Australian Industry and Defence Network – Northern Territory
  - 118 Bupa
  - 119 Department of Immigration and Border Protection
    - 119.1 Department of Immigration and Border Protection
  - 120 Minister for the Environment
  - 121 The Ord-East Kimberley Expansion Project
  - 122 Minerals Council of Australia
  - 123 National Water Commission
  - 124 Shire of Wyndham - East Kimberley
  - 125 Broome Chamber of Commerce & Industry
  - 126 Institute of Chartered Accountants Australia
  - 127 Kaurareg Aboriginal Land Trust
  - 128 Regional Social Development Centre
  - 129 Australian Charities and Not-for-profits Commission
  - 130 Global Innovation Centre
  - 131 The Wilderness Society Inc.
  - 132 Weipa Town Authority
  - 133 Centre for Appropriate Technology
  - 134 DS Enterprises Consultants
  - 135 Hedland First National Real Estate
  - 136 Professor Jon Altman and Francis Markham
  - 137 ConocoPhillips Australia Pty Ltd
    - 137.1 ConocoPhillips Australia Pty Ltd
  - 138 Dr Seán Kerins
  - 139 Broadband for the Bush Alliance
  - 140 Whitsunday Regional Council
  - 141 Queensland Teachers' Union
  - 142 Australia Taiwan Business Council
  - 143 TROPLINKS Inc
  - 144 Greater Northern Australia Regional Training Network and The Remote Health Project
  - 145 Regional Development Australia Mackay-Isaac-Whitsunday Inc.
  - 146 Services for Australian Rural and Remote Allied Health
  - 147 Australians for Northern Development & Economic Vision

- 147.1 Australians for Northern Development & Economic Vision
- 147.2 Australians for Northern Development & Economic Vision
- 147.3 Australians for Northern Development & Economic Vision
- 147.4 Australians for Northern Development & Economic Vision
- 147.5 Australians for Northern Development & Economic Vision
- 148 Unc Turner
- 149 Australian Federation of Disability Organisations
- 150 Business Council of Australia
- 151 Suncorp Group
- 152 Kimberley to Cape
  - 152.1 Kimberley to Cape
- 153 Territory Natural Resource Management
- 154 Regional Australia Institute
  - 154.1 Regional Australia Institute
- 155 National Seafood Industry Alliance
- 156 CRANApplus
- 157 Indigenous Land Corporation
- 158 African Mahogany (Australia) Pty Limited
- 159 Mackay Canegrowers Limited
- 160 Chamber of Commerce and Industry Western Australia
- 161 Hon Terry Redman MLA, Minister for Regional Development; Lands; Minister Assisting the Minister for State Development
- 162 Tablelands Futures Corporation
- 163 Department of Foreign Affairs and Trade
- 164 Office of Major General the Hon Michael Jeffery
- 165 Northern Land Council
- 166 Northern Territory Farmers Association
- 167 North Queensland Bio-Energy Corporation Limited
- 168 Forum 4 Business Growth
- 169 Tourism Tropical North Queensland
- 170 City of Townsville
- 171 Northern Territory Airports Pty Ltd
- 172 Mackay Conservation Group
- 173 Northern Territory Shelter Inc.
- 174 Kormilda College
- 175 Australian Institute of Aboriginal and Torres Strait Islanders Studies

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- 176 Australia Council
  - 177 North Australia Indigenous Land and Sea Management Alliance
  - 178 Terrestrial Ecosystems Research Network
  - 179 Rural Industries Research & Development Corporation
  - 180 Australian Conservation Foundation
  - 181 Regional Development Australia Northern Territory
  - 182 Association of Mining and Exploration Companies Inc.
  - 183 East Arnhem Regional Council
  - 184 Meridian Energy Australia and Powershop Australia
  - 185 North Queensland Airports
  - 186 Northern Gulf Resource Management Group
  - 187 Chamber of Commerce Northern Territory
    - 187.1 Chamber of Commerce Northern Territory
  - 188 Kimberley Zone of Western Australia Local Government Association
  - 189 Cape York Natural Resource Management and Terrain Natural Resource Management
  - 190 Northern Regional Development Australia Alliance
  - 191 Brendan Doran
  - 192 Queensland Nurses' Union
  - 193 Dr Nicholas Paul and Professor Rocky de Nys
  - 194 The Pew Charitable Trusts
  - 195 The Australian Sugar Milling Council
  - 196 Shire of Derby West Kimberley
  - 197 Fred Hollows Foundation
  - 198 Cape York Natural Resource Management Ltd
  - 199 Charles Darwin University
  - 200 Port Hedland Chamber of Commerce
  - 201 Winun Ngari Aboriginal Corporation
  - 202 Environment Centre Northern Territory
  - 203 Hedland Dental Care
  - 204 Clean Energy Finance Corporation
    - 204.1 Clean Energy Finance Corporation
  - 205 Australian Network of Environmental Defenders' Offices Inc
  - 206 Ms Kelly Howlett
  - 207 Mr Julian Malnic

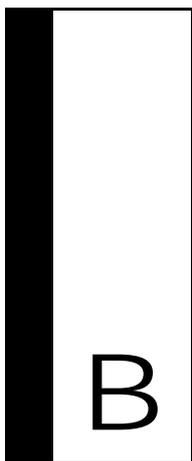
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- 208 Patrick F. J. Needham
  - 209 CANEGROWERS
  - 210 Mr Richard Thorp
  - 211 Beagle Bay Marine
  - 212 Cape York Sustainable Futures
  - 213 Central Land Council
  - 214 Yawuru Native Title Holders
  - 215 Mr Adam Joseph
  - 216 Tracey Lines Consulting
  - 217 Town of Port Hedland
  - 218 Rio Tinto Alcan
  - 219 Premier of Queensland
  - 220 Might and Power Australia
    - 220.1 Might and Power Australia
  - 221 Department of Defence
    - 221.1 Department of Defence
  - 222 Australian Livestock Exporters' Council
  - 223 National Rural Health Alliance
  - 224 Australia Papua New Guinea Business Council
  - 225 Cattle Council of Australia
  - 226 Mr Ewen Jones MP
  - 227 CONFIDENTIAL
  - 228 Visit Queensland Pty Ltd
  - 229 RL Agacy
  - 230 CONFIDENTIAL
  - 231 Pinnacle Pocket Consulting
    - 231.1 Pinnacle Pocket Consulting
  - 232 Etheridge Shire Council
    - 232.1 Etheridge Shire Council
  - 233 Australian Marine Complex Connect
  - 234 Planning Institute of Australia
  - 235 Insurance Australia Group
  - 236 Construction Technology Consulting Group
  - 237 Tourism and Transport Forum
  - 238 Department of Agriculture
    - 238.1 Department of Agriculture

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- 239 The Hon Warren Truss MP, Deputy Prime Minister, Minister for  
Infrastructure and Regional Development
- 240 Shire of Broome
- 241 Mr Bill Sperring
- 242 Australian Petroleum Production and Exploration Association Limited
- 243 NANA Australia and the Karlka Nyiyaparli Aboriginal Corporation
- 244 G. R. and M. E. Cramer
- 245 Mr Daron Keogh
- 246 bioCSL
- 247 remoteFOCUS and Desert Knowledge Australia
- 248 Pilbara Inland Chamber of Commerce & Industry
- 249 James Cook University, Charles Darwin University, Commonwealth  
Scientific and Industrial Research Organisation and University of Western  
Australia
- 250 TFS Corporation Ltd  
250.1 TFS Corporation Ltd
- 251 James Cook University
- 252 Mr Harold Krause
- 253 Curtin University Sustainability Policy Institute
- 254 Bush Heritage Australia
- 255 Urban Development Institute of Australia (Northern Territory)
- 256 Broome Port Authority
- 257 Torres Shire Council
- 258 Torres Strait Regional Authority
- 259 Centre for Biosecurity and Food Security, Murdoch University
- 260 Ms Kath O'Brien
- 261 Espressoholics
- 262 Australia's North West Tourism
- 263 North Queensland / Territory X-ray Services
- 264 Australian Agricultural Company Limited
- 265 Mr Bob and Mrs Ute Elliot
- 266 Amateur Fishermen's Association Northern Territory
- 267 Eni Australia Limited
- 268 AgForce Queensland
- 269 Godinymayin Yijard Rivers Arts and Culture Centre
- 270 Northern Territory Cattlemen's Association

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- 271 Australian Prawn Farmers Association
  - 272 Sea Swift Pty Ltd
    - 272.1 Sea Swift Pty Ltd
  - 273 Islanders Board of Industry and Service
  - 274 Mr Martin Glass
  - 275 Mr Jim Sullivan
  - 276 Why Warriors Pty Ltd
  - 277 Tourism Top End
  - 278 Kimberley Agricultural Investment Pty Ltd
  - 279 Mossman Botanic Garden
  - 280 Muzzys Home Hardware
  - 281 Great Barrier Reef Legacy Inc.
  - 282 Ms Margaret Gaff
  - 283 East Arnhem Regional Economic Development Committee
  - 284 Mr Tony Hooper
  - 285 Mr Lou Madjeric
  - 286 Lirrwi Tourism
  - 287 Seafarms Group
  - 288 Mimi Ngurrdalingi Aboriginal Corporation
  - 289 Mr James S. Adlington
  - 290 Northern Project Contracting
    - 290.1 Northern Project Contracting
  - 291 Tourism Western Australia
  - 292 Katherine Town Council
  - 293 Allianz Australia Insurance Ltd
  - 294 Mr Graham Dunton
  - 295 Ashburton Aboriginal Corporation
  - 296 Shire of Cocos (Keeling) Islands
  - 297 Nhulunbuy Corporation Limited
  - 298 Austcane Energy Pty Ltd
  - 299 Mr Jack Wilkie-Jans
  - 300 Napranum Aboriginal Shire Council
  - 301 Ken and Brendan Fry, Forrest Home Station
  - 302 Small Business Centre West Pilbara
  - 303 Department of Health
  - 304 Bamanga Bubu Ngadimunku Inc

- 305 CONFIDENTIAL
- 306 The Treasury
- 307 Professor Michele Burford, Griffith University
- 308 Mr Bob Smith
- 309 CONFIDENTIAL
- 310 Soft Star Pty Ltd
- 311 Engineers Australia
- 312 Consolidated Pastoral Company Pty Ltd
  - 312.1 Consolidated Pastoral Company Pty Ltd
- 313 Cotton Research and Development Corporation
- 314 Northern Clinical Training Network
- 315 Northern Territory Indigenous Tours





## Appendix B – Exhibits

1. Department of Primary Industries and Fisheries & Department of Infrastructure  
*Fitzroy Industry & Infrastructure Study* – various documents
2. Department of Defence  
*Significant ADF Facilities, ADF Training Areas, Selected Civil Ports and Offshore Resources and Northern Australia Significant ADF Bases and Training Areas* – maps
3. Integrated Food & Energy Developments Pty Ltd  
*Etheridge Integrated Agriculture Project: Vision, Overview and Analysis* – various documents
4. Department of Foreign Affairs and Trade  
*The Tourism 2020 Strategy; The 2013 Progress Report on the Implementation of Tourism 2020; The Tourism 2020 Work Plan for 2014* – document
5. Rural Industries Research and Development Corporation (RIRDC)  
*RIRDC, 'Future Directions for Forestry and a Forest Products Industry in Northern Australia', October 2012, RIRDC Publication No. 12/081* – document
6. Integrated Food & Energy Developments Pty Ltd  
*Integrated food and Energy Developments: Analysis of the CSIRO Report into the potential for Agricultural Development in North Queensland* – documents
7. Integrated Food & Energy Developments Pty Ltd  
*Project Co-ordinates* – map
8. Richmond Shire  
*Flinders River / O'Connell Creek Cropping Proposal* – document
9. Western Cape Regional Partnership  
*WCRPA Heads of Agreement* – document

10. Regional Development Australia (RDA) Mackay  
*RDA introductory statement* – document
11. Mackay, Isaac, Whitsunday Regional Council  
*Whitsunday ROC Powering Australia* – pamphlet
12. Mackay Fish Market and Debbie’s Seafoods  
*Department of Infrastructure and Regional Development, Draft Air Cargo Supply Chain Security Training Syllabus, Version 2, February 2014* – document  
*Drawing the Line: What if You Lost Everything You Loved Because Someone Else Wanted to Protect It?*, 82 mins, 2013 – DVD
13. Mr Jason Costigan MP, Member for Whitsunday  
*Smart Water for the Smart State: Urannah Dam, Water for the New Millennium Bowen Collinsville Enterprise Group Inc. April 2002* – document
14. Mackay Conservation Group  
*Railroad: Carving Up Food Lands for Coal Transport in Central Queensland, Hydrology Environmental Consulting, March 2014* – report; Mackay region – maps
15. Mackay Sugar  
*Mackay Sugar: Growing the Future: 20 Year Diversification Plan* – speaking notes – document
16. Whitsunday Marketing and Development  
*Perfectly Placed: the Whitsundays...the Place to Live* – document
17. Bowen Gumlu Growers Association  
*Information package* – documents
18. Canegrowers Burdekin  
*Information package* – documents
19. Flinders Shire Council  
*Etheridge Shire Council and Flinders Shire Council, Hann Highway Development Report: Economic Impact Benefit Cost Analysis, August 2005* – document
20. Broadband for the Tropics  
*Broadband for the Tropics: Tropical Innovation Projects, 26 March 2013;*  
*Information about Broadband for the Tropics* – documents
21. Mt Isa Centre for Rural and Regional Health  
*Australian Rural Health Education Network (ARHEN)* – document
22. TFS Corporation  
*Information on TFS Corporation Ltd* – document

23. Mobile LNG  
*Mobile LNG Australia's Energy Future! – Development of Northern Australia; Mobile LNG Australia's Energy Future! – The Outlook for Domestic LNG in Australia; LNG versus Diesel Mobile LNG Australia's Energy Future! – documents*
24. Chamber of Minerals and Energy  
*Map of Mining Infrastructure in WA – document*
25. Ashburton Shire Council  
*PowerPoint presentation – electronic document*
26. Pilbara Inland Chamber of Commerce and Industry  
*Transient Worker Accommodation in the Pilbara – Final Draft – document*
27. Small Business Centre West Pilbara  
*Karratha Business Park – Keep Business Pumping – document*
28. Exmouth Shire Council  
*PowerPoint presentation, Shire of Exmouth – hard copy document; Creating a World-Class Aquaculture Production System in Australia Project Sea Dragon–Big Picture Themes – document*
29. Pilbara Regional Council  
*The Cost of Doing Business in the Pilbara – document*
30. Broome Chamber of Commerce and Industry  
*A Kimberley Economic Zone for Sustained Liveability and Growth – electronic document*
31. Town of Port Hedland  
*Port Hedland, A Nationally Significant, Friendly City, Where People Want to Live and Are Proud to Call Home – document*
32. Port Hedland Chamber of Commerce  
*Pilbara Report 2012 – Exploring Opportunities in the Nation's Powerhouse; Pilbara Report – Investment Prospectus Summary 2012 Exploring Opportunities in the Nation's Powerhouse; Pilbara Report – Investment Prospectus 2012, Exploring Opportunities in the Nation's Powerhouse – documents*  
*Map & Gap Analysis – Pilbara non-government organisations – documents*
33. Dr Roger Higgins  
*Maps of WA showing (a) Road Network; (b) Resource projects; and (c) Unconventional Gas Exploration – document*

34. Port Hedland Authority  
*Media pack of documents promoting the town of Port Hedland – documents*
35. Regional Development Australia (RDA) Far North Queensland and Torres Strait  
*Regional Development Australia: Joint Select Committee Northern Australia Inquiry – document; CSIRO, Land Tenure in Northern Australia – Opportunities and Challenges for Investment, June 2013; The Cairns Institute, James Cook University et al, Governance Challenges for Northern Australia, 2013 – documents*
36. Gulf Savannah Development  
*Cornerstones for Development and Growth on the Gulf Savannah – document*  
*Gulf Savannah Northern Australia: Information Document, Third Edition, October 2013 – document*
37. Mareeba Chamber of Commerce  
*The Very Best Australian Fruits and Vegetables – document*
38. Mosquito Research Facility, James Cook University, Cairns Campus  
*Cairns Field Trail Update March 2014: Eliminate Dengue Our Challenge – document*
39. Kaurareg Native Title Aboriginal Corporation RNTBC (Registered Native Title Body Corporate)  
*Kaurareg People's Strategic Plan 2012-2029 – document*
40. Mr Owen Droop, Director/Principal Water Resources Engineer, OD Hydrology Pty Ltd  
*Plan area and topographical map – document*
41. Shire of Wyndham – East Kimberley  
*Strategic Community Plan 2012–2022; East Kimberley@25K, November 2013; CTCG Construction Technology Consulting Group, Darwin International Airport Global Export Centre and East Kimberley Regional Airport Hub, Kununurra, Western Australia – documents*
42. Shire of Halls Creek, Central Kimberley Chamber of Commerce and Tanami Action Group  
*Shire of Halls Creek, Development of North Western Australia – maps; Shire of Halls Creek, Upgrading the Tanami Road, Economic Impact Study, December 2009, final – document*

43. Ninti One Ltd  
*Ninti One Annual Report 2012-2013 – document*  
*Co-operative Research Centre for Remote Economic Participation, Project Information Brochures (11) – documents; The Key to the Community Intelligence of Remote Australia; The Experience for Innovating in Remote Australia; Ninti One Working In and With Remote Aboriginal and Torres Strait Islander Communities; Remote Education systems, background information*
44. Northern Territory Government  
*Northern Territory Government, Developing the North (White paper) – document*
45. Northern Territory Planning Commission  
*Northern Territory Planning Commission, Towards a Darwin Regional Land Use Plan 2014 – document*
46. Rusca Bros Services Ltd  
*Rusca Brothers services overview and HR links brochure – information package*
47. Kalano Community Association  
*Northern Territory Government, Katherine and Big Rivers Region – Regional Economic Development Committee Strategic Plan 2014-2015 – document*
48. Katherine Chamber of Commerce and Industry  
*Katherine Economic Development Committee: List of Key Development Opportunities, Evaluation; Katherine Regional Economic Development Committee, Revised Terms of Reference, April 2014-2015; Big Rivers Economic Dashboard Committee: Economic Enablers Snapshot; Top Saddlery Business Card, Strategic Plan 2014-2015 – documents*
49. Katherine Chamber of Commerce and Industry  
*Submission to the Federal Government 2011, Benefits of the Road to the Daly including the Mount Todd Environmental Impact Statement (2011) – document*  
*Proposed road and major highways in the Northern Territory – maps*
50. Greater Northern Australia Regional Training Network (GNARTN)  
*Safe Guarding the Future with Healthy and Thriving Northern Communities – document*
51. Islander Board of Industry and Service (IBIS)  
*Freight Consideration Submission; and Estimated Cost of Proposed Maritime Charges to Outer Torres Strait Islands – document*
52. Remote Focus and Desert Knowledge  
*Fixing the hole in Australia's Heartland: How Government needs to work in remote Australia – Booklet (19 May 2014)<sup>49</sup> – document*

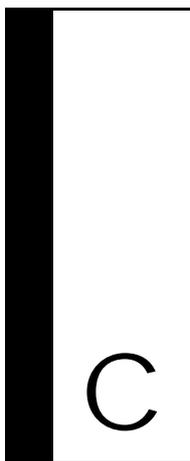
53. Government of Western Australia  
*The Ord-East Kimberley Expansion Project – document*
54. Townsville Port Authority  
*Map of Port – document*
55. Port of Wyndham, WA Authority  
*Cambridge Gulf Limited, Copy of presentation – document*
56. Pacific Reef Fisheries  
*Current Australian prawn farming industry – document*
57. Mount Isa to Townsville Economic Development Zone (MITEZ)  
*Mount Isa to Townsville Economic Development Zone Regional Snapshot; Investment Opportunity, northern outback Queensland abattoir, The Flinders and Gilbert Agricultural Assessment, Part of the Northern Queensland Irrigated Agriculture Strategy, CSIRO; Queensland's significant mineral mines, advanced mineral projects and new intersections, North West Queensland Mineral Province map, Queensland's mineral, petroleum and energy operations and resources map and information 2012 – documents*
58. Flinders River Ag Precinct  
*Agricultural resource assessment for the Flinders catchment, CSIRO, December 2013 – document*
59. Broome Port  
*Port Development Plan, November 2013 – document*
60. Kimberley Training Institute  
*Kimberley Training Institute Annual Report 2013 – document*
61. James Cook University, School of Marine & Tropical Biology  
*Briefing note on Centre for Macroalgal Resources & Biotechnology – document*
62. Greater Northern Australia Regional Training Network (GNARTN)  
*Health Workforce Australia, Addressing barriers and enablers to reform (Aber) project – document*
63. North Queensland Airports  
*Asian Open skies: Relevance to Northern Australia's Economic Development – document*
64. Bunuwal Group  
*Letter from Rirratjingu Aboriginal Corporation to Senator Nigel Scullion, Minister for Indigenous Affairs, 18 March 2014; Letter from Rirratjingu Aboriginal Corporation to Senator Nigel Scullion, Minister for Indigenous Affairs,*

- 9 April 2014; Letter from Rirratjingu Aboriginal Corporation to Senator Nigel Scullion, Minister for Indigenous Affairs, 10 April 2014 – documents*
65. Medicare Local Far North Queensland  
*Submission to Inquiry into Telehealth Services in Queensland – document*
66. Medicare Local Kimberley-Pilbara  
*Population Health Commission Atlas: population health profiling; Medicare Locals Needs Assessment Report Template 2013 – documents*
67. Mr Richard Thorp  
*The R-G WAREA Project for Australia, Issue Paper No. 2; Material relating to Cubbie Station – documents*
68. Small Business Centre West Pilbara  
*Pilbara Regional Council submission to the Inquiry into the use 'Fly-in, Fly-out' (FIFO) workforce practices in regional Australia – document*
69. Shire of Ashburton  
*Shire of Ashburton presentation to committee by Neil Hartley – documents*
70. Mackay Reef Fish  
*Department of Infrastructure and Regional Development, Proposed regulatory amendments to the Aviation Security Regulations 2005; Department of Infrastructure and Regional Development, Changes to accredited air cargo agent and regulated air cargo agent training arrangements: Air cargo supply chain security training syllabus for review – documents*
71. Curtin University  
*Pilbara 2050 report – document*
72. Queensland Government  
*Department of State Development, Infrastructure and Planning; Royalties for the Regions, Governing for Growth: Economic Strategy and Action Plan – February 2014, Economic Strategy and Action Plan Highlights – documents*
73. Rockhampton Regional Council  
*Package of Information: Rockhampton Region: Transforming into a Major Economic and Lifestyle Hub for the Broader Central Queensland Region (Regional Overview, Investment, Liveability – documents*
74. Regional Development Australia – Fitzroy and Central West  
*An Overview of Food and Fibre Industries in Central Queensland, Fitzroy and Central West Regional Roadmap 2013-2016 – documents*
75. Integrated Food & Energy Developments Pty Ltd (IFED)  
*Guar Gum briefing, Redclaw briefing, Business model Block Diagram – documents*

76. Cummins Economics  
*Australia's Tropical North Initial Challenges, Historical Development, Current Progress and Future Prospects – document*
77. The Hon. Tony McGrady, Mayor of Mt Isa  
*North Queensland Strategic Development Study, Final, May 2014 – document*
78. Alexander Robert Fullarton  
*Are you still here, Mr Haase? A study of Australia's tax rebates for residents in isolated areas – February 2014 77 – document*
79. Tourism and Transport Forum  
Package of documents;  
*Cruising to Prosperity – TTF's submission to the review of the Coastal Trading Act, Driving Change in the Rental Vehicle Industry, Further details on the economic impact of the passenger movement charge. TTF's backgrounder on the tax, Australia's Passenger Movement Charge explained. A look at the PMC as a percentage of fares from Darwin, provided by NT Airports. An economic impact study by the International Air Transport Association, Details on aviation security charges at DRW and ASP, factsheet on the issue from NT Airports*  
*A view on Cairns cruise ship terminal expansion. Attached is our analysis of the federal budget. A report from Access Economics from 2008 on Aviation policy options to support regional development in the NT. Further details on CASA regs prohibiting charter scenic flights that operate as RPT.*  
1) A recommendation from the Regional Aviation Association of Australia for changes to the charter regulations.  
2) the original ruling from CASA
80. Shire of Broome  
*Shire of Broome PowerPoint Presentation – document*
81. Canegrowers  
*Canegrowers submission to AER Framework and Approach for Energex and Ergon Energy. A summary of the impact of the 20% RET on typical Ergon electricity tariffs 77 – document*
82. Aboriginal Carbon Fund  
*Submission made on the Emissions Reduction Fund – document*
83. Cattle Council of Australia  
*Outcomes of a study on the top 10 transport infrastructure improvements needed for broadacre industries in Queensland. The other document outlines current heavy vehicle access for beef supply chains in Queensland – document*
84. Greater Northern Australia Regional Training Network (GNARTN)  
*Northern Australia Health Roundtable May 2014 – document*

- Northern Australia Health Roundtable meeting summary* – document
85. Confidential
86. Etheridge Shire Council  
*Etheridge Shire Council, Charleston Dam Presentation* – document  
*Shire of Flinders, Etheridge Shire Council and Flinders Shire Council Project Upgrade of Hann Highway (Pave and Seal)* – document  
*Etheridge Shire Council, Communications within the Etheridge Shire* – document  
*Northern Australia: The New Food Bowl* – electronic document  
*Galilee and Bowen Basin Water Supply Storage* – electronic document
87. Infigen  
*Presentation, Renewable Energy in Northern Australia* – document
88. Burke Shire Council  
*North West Queensland Development Study- Summary* – document  
*Gulf Savannah Renewable Energy Investment Profile* – document  
*Maps – Shale Gas, Savannah Way and North West Queensland Road Network* – document
89. Weipa Town Authority  
*Map, proposed Weipa-Bertiehaugh Road Burke Shire Council* – document
90. Western Cape Chamber of Commerce  
*Western Cape Chamber of Commerce Strategic Plan 2010-2012, Strategic Plan for recreational Sport fishing, Western Cape Chamber of Commerce Submission- Port of Weipa Land Use Plan 2012, North Queensland Bulk Ports Corporation, Weipa Boat Ramp- Request for support of new location* – documents
91. Pioneer Corporation Pty Ltd  
*Report, Converting Prickly Acacia from Weed of National Significance to Sustainable Fuel and Energy. Richmond McKinlay Paddock Percentages effected by Acacia nilotica* – documents
92. Canegrowers Mackay  
*Submission to Queensland Competition Authority. Queensland Completion Authority Issues Paper: Retail Electricity Price Regulation in Regional Queensland* – documents
93. Minerals Council of Australia  
*Covering letter to Northern Australia Committee. Report on Long Distance Commuter Workforce. Map: Committed projects above Tropic of Capricorn* – documents

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94. Cairns Business and Sporting Group  
*Sports Tourism and Sports Medicine Infrastructure Plan October 2011*  
*Sports Tourism and Sports Medicine Infrastructure Plan October 2011*  
*Appendices – documents*
  95. Australian Petroleum Production and Exploration Association  
*Discussion Paper: 'Heading North: The Importance of Labour Mobility in Developing Northern Australia', Creating Communities – documents*
  96. Northern Territory Indigenous Tours  
*Brochure – Learn the real story – document*
  97. Northern Territory Cattlemen's Association  
*Background information: Rural Infrastructure Opportunity Fund*  
*Media Release- Increasing the Investment in Rural America – White House Rural Council – documents*
  98. National Critical Care and Trauma Response Centre  
*Australian Medical Assistance: Surgical Anaesthetic Course, booklet, August 2014*  
*Australia's National Critical Care and Trauma Response Centre: Response Capabilities*  
*Operation Philippines Assist 2013: Team Alpha and Bravo AUSMAT Deployments Report to the AHPPC (Australian Health Protection Principal Committee – documents*
  99. Northern Territory Cattlemen's Association  
*Letter - Remote Australia Livestock Transport Scheme (RALTS) – Operational Trial 2010.*  
*Securing the Export and Domestic Cattle Trade, Submission to Government*  
*Northern Territory Road Network Brief, 2005 – documents*



## Appendix C – Witnesses

### **Friday, 21 March 2014 – Canberra, ACT**

#### **Department of Infrastructure and Regional Development**

Mr James Collett, General Manager, Office of Northern Australia, Policy and Research Division

Ms Philippa Power, Acting Executive Director, Policy and Research Division

#### **National Water Commission**

Ms Kerry Olsson, Acting Chief Executive Officer

Mr Matt Kendall, General Manager, Planning and Evaluation

#### **Regional Australia Institute**

Ms Su McCluskey, Chief Executive Officer

Ms Vanessa Barnett, Manager, Policy

#### **Department of Defence**

Air Marshal Mark Binskin AC, Vice Chief of the Defence Force

Mr Steve Grzeskowiak, Deputy Secretary, Defence Support and Reform

Ms Rebecca Skinner, Acting Deputy Secretary, Strategy

#### **Department of Agriculture**

Dr David Cunningham, Assistant Secretary, Natural Resources, Australian Bureau of Agricultural and Resource Economics and Sciences

Ms Sally Standen, Assistant Secretary, Governance Division

Ms Patricia Gleeson, Senior Economist, Australian Bureau of Agricultural and Resource Economics and Sciences

**Rural Industries Research and Development Corporation**

Ms Anwyn Lovett, Acting Managing Director

**Department of Health**

Ms Kerry Flanagan, Deputy Secretary

**Treasury**

Mr Jason Allford, General Manager, Domestic Economy Division

Mr Gerry Antioch, General Manager, Tax System Division

Mr Andrew Deitz, Manager, Foreign Investment and Trade Policy Division

Mr Robert Donnelly, Chief Adviser, Personal and Retirement Income Division

**Minerals Council of Australia**

Mr John Kunkel, Deputy Chief Executive Officer

Mr James Sorahan, Director, Taxation

Ms Melanie Stutsel, Director, Health, Safety, Environment and Community Policy

**Department of Foreign Affairs and Trade & Australian Trade Commission (Austrade)**

Mr Graham Fletcher, First Assistant Secretary, Free Trade Agreement Division, Department of Foreign Affairs and Trade

Mr Sam Gerovich, First Assistant Secretary, Trade and Economic Diplomacy Division, Department of Foreign Affairs and Trade

Ms Jenny Da Rin, Assistant Secretary, Health and Environmental Safeguards Branch, Department of Foreign Affairs and Trade

Mr Mat Kimberley, Assistant Secretary, Papua New Guinea and Solomon Islands Branch, Department of Foreign Affairs and Trade

Mr Nicholas Dowie, Assistant General Manager, Tourism Policy Branch, Australian Trade Commission

Mr Tim Beresford, Executive Director, Australian Operations, Australian Trade Commission

**Australian Federal Police**

Mr Neil Gaughan, Assistant Commissioner, National Manager, Counter Terrorism

Mr Ramzi Jabbour, Assistant Commissioner, National Manager, Serious and Organised Crime

Mr Peter Whowell, Manager Government Relations

**Department of Immigration and Border Protection & Australian Customs and Border Protection Service**

Mr Garry Fleming, First Assistant Secretary, Migration and Citizenship Policy Division, Department of Immigration and Border Protection

Mr Roman Quaedvlieg, Deputy Chief Executive Officer, Border Enforcement, Australian Customs and Border Protection Service

**Monday 31 March 2014 – Mackay, Qld****Regional Development Australia, Mackay-Isaac-Whitsunday**

Mr Graham Smith, Chairman

Mr Andre Wessels, Interim Chief Executive Officer

**Mackay, Isaac & Whitsunday Regional Councils**

Councillor Deidre Comerford, Mayor, Mackay Regional Council

Councillor Anne Baker, Mayor, Isaac Regional Council

Mr Scott Waters, Chief Executive Officer, Whitsunday Regional Council

Ms Nicole Duguid, Chief Operating Officer, Whitsunday Regional Council

Mr David McKendry, Executive Officer, Sustainability and Collaboration, Mackay Regional Council

**Fishing Industry Representatives**

Mr Mark Ahern, Manager, Debbie's Seafood Pty Ltd

Mr David Caracciolo, Director, Mackay Reef Fish Supplies Pty Ltd

**Queensland Parliament**

Mr Jason Costigan, Member for Whitsunday

**Central Queensland University**

Professor Jozua Viljoen, Pro Vice Chancellor

Professor William Dawson, Director, Appleton Institute

Mr Martin Elms, Principal Adviser to the Vice-Chancellor and President

**Mackay Tourism**

Mr Stephen Schwer, General Manager

**Mackay Conservation Group**

Mrs Patricia Julien, Research Analyst

**North Queensland Bulk Ports Corporation**

Mr Bradley Fish, Chief Executive Officer

**Mackay Area Industry Network**

Mr Peter Van Iersel, Chair

Ms Julie Boyd, General Manager

**Mackay Region Chamber of Commerce & Charles Porter and Sons Proprietary**

Mr Tim Miles, Chair, Mackay Region Chamber of Commerce

Mr Peter Jones-Trifelly, Treasurer, Mackay Region Chamber of Commerce

Mrs Karen May, Committee Member, Mackay Region Chamber of Commerce

Mr Gavan Porter, Chief Finance Officer/General Manager Corporate Service, Charles Porter and Sons Pty

**Mackay Sugar Limited & Mackay Canegrowers Limited**

Mr Andrew Cappello, Chairman, Mackay Sugar Ltd

Mr John Hodgson, Business Development Manager, Mackay Sugar Ltd

Mr Kevin Borg, Chairman, Mackay Canegrowers Ltd

Mr Kerry Latter, Chief Executive Officer, Mackay Canegrowers Ltd

**Reef Catchments (Mackay, Whitsundays, Isaac) Limited**

Mr Royce Bishop, Chair

Mr Robert Cocco, Chief Executive Officer, Chairman

**Private Capacity**

Mr Clinton Lowe

Mr Les Durnsford

Mr Jack Long

**Tuesday 1 April 2014 – Bowen, Qld**

**Bowen Collinsville Enterprise & Whitsundays Marketing and Development Limited**

Mr Stephen Darwen, Chairman, Bowen Collinsville Enterprise

Mr David Nebauer, Chairman, Economic Development Strategic Advisory Group, Whitsundays Marketing and Development Ltd

Mr Danial Rochford, Chief Executive Officer, Whitsundays Marketing and Development Ltd

**Bowen Gumlu Growers Association**

Mr Carl Walker, Chairman and President

Miss Sarah Simpson, Industry Development Manager

**Whitsunday Charter Boat Industry Association**

Mr Tony Brown, President

Mr Alan Grundy, Member

**Private Capacity**

Mr Bob Harris

Sergeant Michelle O'Regan, Queensland Police Service

**Tuesday 1 April 2014 – Ayr, Qld****Burdekin Shire Council**

Councillor Bill Lewis, Mayor

Councillor Ross Lewis, Deputy Mayor

Mr Tony Vaccaro, Manager, Economic and Community Development

Mr Trevor Williams, Director, Environment and Operations

**Canegrowers Burdekin & Austcane Energy Limited**

Ms Debra Burden, Regional Manager, Canegrowers Burdekin

Mr Wayne Smith, Manager, Member Services, Canegrowers Burdekin

Mr Dan Duffy, General Manager, Austcane Energy Ltd

Mr Talbot (Geoff) Cox, Managing Director, Austcane Energy Ltd

**Private Capacity**

Mr Ray Menkens

Mrs Margaret Menzel, Burdekin Director, Australian Cane Farmers

Mr Max Richard Menzel

Mr Francis Scarabel

**Wednesday 2 April 2014 – Townsville, Qld****Regional Development Australia Townsville & North West Queensland Inc.**

Mr Paul Woodhouse, Chairman

Ms Glenys Schuntner, Chief Executive Officer

**Townsville City and Townsville Enterprise Limited**

Councillor Jennifer Hill, Mayor, Townsville City

Mr David Eric Kippin, Chief Executive Officer, Townsville Enterprise Ltd

**James Cook University**

Professor Robyn McGuiggan, Pro-Vice-Chancellor, Faculty of Law,  
Business and the Creative Arts

**Flinders Shire Council**

Councillor Greg Jones, Mayor

Mr Graham King, Acting Chief Executive Officer

Councillor Bill Bode

Councillor David (Ninian) Stewart-Moore, Deputy Mayor

**Australian Institute of Marine Science**

Dr Jamie Oliver, Research Director

Ms Sue English, Representative

**Townsville Airport**

Mr Kevin Gill, Chief Operating Officer

Ms Isabelle Yates, General Manager Commercial

**Broadband for the Tropics**

Mr Geoffrey Plante, Chairman

Professor Ian Atkinson, Committee Member

Mr Colin Harkness, Committee Member

**Thursday 3 April 2014 – Mt Isa, Qld****Mount Isa and Townsville Economic Zone Inc. (MITEZ)**

Mr Glendon Graham, Chief Executive Officer

**Flinders River Agricultural Precinct**

Mr Brendan McNamara, Chairman

**Mt Isa City Council**

The Hon. Councillor Tony McGrady, Mayor

Mr Emelio Cianetti, Chief Executive Officer

**Boulia Shire Council & Cloncurry Shire Council**

Councillor Rick Britton, Mayor, Boulia Shire Council

Councillor Andrew Daniels, Mayor, Cloncurry Shire Council

Mr David Neeves, Chief Executive Officer, Cloncurry Shire Council

Mrs Kelsey Neilson, Councillor, Boulia Shire Council

Mr Geoff Norton, Councillor, Boulia Shire Council

**Mt Isa Chamber of Commerce**

Mr Travis Crowther, President

**Mount Isa Centre for Rural and Remote Health, James Cook University**

Professor Sabina Knight, Director

**Carpentaria Rail**

Mr David Fletcher, Chief Executive Officer

**Monday 7 April 2014 – Perth, WA****University of Notre Dame Australia**

Professor Celia Hammond, Vice Chancellor

Mr Julian Smith, Pro Vice Chancellor, Strategy and Planning

**Sustainability Policy Institute, Curtin University**

Mr Boyd Milligan, Adjunct Senior Research Fellow

Ms Jemma Green, Research Fellow

**Mobile LNG**

Mr Andrew White, Managing Director

Mr Rodney Carter, Director

Mr Paul Henderson, Partner, Bespoke Territory

**Newman Chamber of Commerce and Industry**

Mrs Barbara O'Driscoll, Chairperson

**Shire of East Pilbara**

Ms Lynette Craigie, President

Mr Allen Cooper, Chief Executive Officer

**The Water Project & the Global Innovation Centre**

Mr Ian Marshall, Private capacity

Professor Adam Osseiran, Global Innovation Centre

**TFS Corporation**

The Hon. Christopher Ellison, Advisory Director

Mr Quentin Megson, General Manager, Human Resources and Communications

**Outcomes Australia – Soils for Life & Future Directions International**

Major General the Hon. Michael Jeffery, Chairman, Outcomes Australia – Soils for Life, and Chairman, Future Directions International

Major General John Hartley, Chief Executive Officer and Institute Director,  
Future Directions International

**Western Australian Pastoralists and Graziers Association**

Mr Robert Gillam, Acting Chairman

Mr Sheldon Mumby, Director, Media and Communications

**Resources Industry Roundtable:**

**Association of Mining and Exploration Companies**

Mr Graham Short, National Policy Officer

**Chamber of Minerals and Energy of Western Australia**

Mr William Witham, Manager North West

Mr Ethan James, Policy Adviser, Land Access and Kimberley

**ConocoPhillips Australia**

Mr Robin Antrobus, General Manager, Government and Public Affairs

**Northern Minerals**

Mr George Bauk, Managing Director and Chief Executive Officer

**Australians for Northern Development and Economic Vision (ANDEV)**

Mr Imants Kins, Co-chair

**Monday 8 April 2014 – Tom Price, WA**

**Shire of Ashburton**

Councillor Kerry White, Shire President

Mr Neil Hartley, Chief Executive Officer

**Tom Price and Paraburdoo Business Association**

Mr Rhys Edwards, Vice Chairman

**Ashburton Aboriginal Corporation**

Ms Janet Brown, Chief Executive Officer

Dr Stuart Gunzburg, Enterprise and Research, Development Manager

**Tuesday 9 April 2014 – Karratha, WA**

**Shire of Roebourne**

Mr Peter Long, President

Mr Andrew Ward, Acting Chief Executive Officer, and Director,  
Community Services

**Regional Development Australia Pilbara**

Ms Fiona White-Hartig, Chair

Mrs Diane Pentz, Chief Executive Officer

**Dampier Port Authority**

Mr Steve Lewis, Chief Executive Officer

**Karratha and Districts Chamber of Commerce and Industry**

Mr John Lally, Chief Executive Officer

**Shire of Exmouth**

Mr Turk Shales, President

Mr Michael Hood, Deputy President

Mr Bill Price, Chief Executive Officer

**Small Business Centre West Pilbara**

Mr Grant Cucel, Chairman

Mrs Rachel Whiting, Chief Executive Officer

**Thursday 10 April 2014 – Port Hedland, WA**

**Port Hedland Port Authority**

Mr John Finch, General Manager, Operations; and Harbour Master

**Town of Port Hedland**

Councillor Kelly Howlett, Mayor

Councillor Gloria Jacob, Deputy Mayor

Mr Mal Osborne, Chief Executive Officer

Mr Eber Burton, Director, Planning and Development Services

**Port Hedland Chamber of Commerce and Industry**

Mr Owen Hightower, Vice-President

**Private capacity**

Dr Roger Higgins

**Port Hedland Community Progress Association**

Ms Jan Ford, Spokesperson

Mr Vance Petkovski, Private capacity

**South Hedland Business Association**

Ms Gloria Jacob, President

**Pilbara Regional Council**

Mr Tony Friday, Chief Executive Officer

Mr Alexis Guillot, Deputy Chief Executive Officer

**Monday 28 April 2014 – Cairns, Qld****Cairns Regional Development Roundtable:****Advance Cairns**

Mr Trent Twomey, Chairman

Mr Mark Matthews, Chief Executive

**Cairns Regional Council**

Councillor Bob Manning, Mayor

Mr Neil Quinn, Executive Manager

**North Queensland Airports**

Mr Kevin Brown, Chief Executive Officer

**Tourism Tropical North Queensland**

Mr Alex de Waal, Chief Executive Officer

**Far North Queensland Development Roundtable:****Advance Cairns**

Mr Mark Matthews, Chief Executive

**Ports North**

Mr Brett Moller, Chairman

Mr Chris Boland, Chief Executive Officer

**Regional Development Australia, Far North Queensland and Torres Strait**

Dr Allan Dale, Chairman

Ms Sonja Johnson, Chief Executive Officer

**Gulf Savannah Development**

Ms Lara Wilde, Chief Executive Officer

**Mareeba Chamber of Commerce**

Mr Joe Moro, President

**James Cook University**

Professor Chris Cocklin, Senior Deputy Vice-Chancellor

**Northern Gulf Resource Management Group**

Mr Neill Newton, Chief Executive Officer

**Wet Tropics Management Authority**

Mr Andrew Maclean, Executive Director

**North Queensland Bio-Energy Corporation Limited**

Mr Anthony Castorina, Director

Mr David Celotto, Director

**Might and Power Australia**

Mr Fred Ariel, Chairman, Might and Power Australia

Mr Philip Moya, First Secretary to the Hon. Francis Awesa, Minister for Works and Implementation, Papua New Guinea

Mr Tony Siab, Policy Advisor

**Cape York Natural Resource Management Limited**

Mr Robert (Bob) Fraser, Chief Executive Officer

**Troplinks**

Mr Les Searle, Secretary

Mr Frank Collins, Committee member

Mr Anthony Neil, Committee member

Mr Graham Poon, Committee member

**Tuesday 29 April 2014 – Cairns, Qld****Ewamian Aboriginal Corporation**

Mr Jimmy Richards, Spokesperson

**Chuulangun Aboriginal Corporation**

Mr David Claudie, Chief Executive Officer and Chairman

Mr Allan (John) Locke, Biocultural Strategist

**Cape York Institute for Policy and Leadership**

Mr Michael Schuele, Senior Project Officer

**Pinnacle Consulting**

Mr Peter Spies, Consultant

**Cairns Alliance of Social Services**

Ms Helga Biro, Chair

Ms Tamilyn Brennan, Member

**Cape York Sustainable Futures**

Mr Peter McCulkin, Chairman

**Mareeba Shire Council**

Councillor Tom Gilmore, Mayor

Mr Peter Franks, Chief Executive Officer

**Wednesday 30 April 2014 – Thursday Island, Torres Strait Islands****Opening Prayer**

Councillor Napau Pedro, Mayor, Torres Shire Council

**Official Welcome**

Mr Milton Seeka Savage, Chairman, Kaurareg Native Title Aboriginal Corporation Registered Native Title Body Corporate

**Torres Shire Council**

Councillor Napau Pedro Stephen, Mayor

Mrs Dalassa Yorkston, Chief Executive Officer

Mr David McNicoll, Director, Corporate and Community Services

**Kaurareg Native Title Aboriginal Corporation**

Mr Milton Seeka Savage, Chairman

**Torres Strait Regional Authority**

Mr Joseph Elu, Chairperson

Mr Wayne Seekee, Chief Executive Officer

**Far North Queensland Medicare Local**

Ms Vonda Moar-Malone, Senior Manager, Health Collaboration

**Rotary Club of Thursday Island**

Mr Ronald Humphreys, Vice-President

## **Monday 5 May 2014 – Broome, WA**

### **Yawuru Native Title Holders**

Professor Patrick Dodson, Chairman  
Mr Neil McKenzie, Chairman  
Mr Dean Mathews, Senior Project Officer

### **Environs Kimberley**

Mr Martin Pritchard, Executive Director  
Ms Pat Lowe, Member

### **Shire of Broome**

Councillor Jenny Bloom, Deputy Shire President  
Mr Paul Martin, Deputy Chief Executive Officer

### **Kimberley Land Council**

Mr Anthony Watson, Director  
Ms Ariadne (Ari) Gorring, Land and Sea Unit Manager

### **Shire of Derby/West Kimberley**

Mr Stephen Gash, Chief Executive Officer  
Councillor June Oscar  
Mr Andre Veder, Consultant to the Shire

### **Greater Northern Australia Regional Training Network**

Ms Melissa Vernon, Chair  
Dr Scott Davis, Senior Director

### **University of Notre Dame, Broome**

Ms Sally Clark, Deputy Head of Campus

### **Broome Chamber of Commerce and Industry**

Mr Anthony (Tony) Proctor, President

### **Australia's North West Tourism**

The Hon. Chris Ellison, Chairman  
Mr Mike Dunnett, Deputy Chairman  
Mr Glen Chidlow, Chief Executive Officer

### **Not-for-Profit Managers Group, Broome**

Mr Michael King, Member

### **Broome International Airport**

Mr Nick Belyea, Chief Executive Officer

Mr Robert Menzies, Executive Director, Projects

**Broome Port Authority**

Mr Charles Kleiman, Acting Chief Executive Officer

**Yeeda Station**

Mr Jamie Peter (Jack) Burton, Chief Executive Officer and Director  
Kimberley Meat Company

**Private capacity**

Mr David Dureau

**Wednesday 7 May 2014 – Kununurra, WA**

**Shire of Wyndham, East Kimberley**

Councillor Beau Robinson, Councillor

Ms Janet Takarangi, Economic Development and Remote Service Delivery

**Cambridge Gulf Limited**

Mr Anthony Chafer, Chief Executive Officer

**Private capacity**

Ms Alma Petherick, Managing Director, Petherick Enterprises, Kununurra

**Wunan Foundation**

Mr Ian Trust, Executive Director

**Shire of Halls Creek, Central Kimberley Chamber of Commerce & Tanami  
Action Group**

Mr John Fitzgerald, President, Central Kimberley Chamber of Commerce

Mr Phillip Hams, Chairman, Tanami Action Group

Miss Bronwyn Little, Strategic Planning Manager, Shire of Halls Creek

**Kimberley Cattlemen's Association**

Mr Peter Camp, Chairman, Pastoralist, Kalyeeda Station, Derby

Ms Kirsty Forshaw, Pastoralist, Nita Downs Station, Broome

**Monday 19 May 2014 – Alice Springs, NT**

**Lhere Artepe Aboriginal Corporation**

Mr Harold Furber, Advisory Group/ Board member

**Chamber of Commerce NT - Central Australia**

Mrs Kay Eade, Executive Officer

**Outback Way Panel****Alice Springs Town Council**

Councillor Damien Ryan, Mayor and Deputy Chair, Outback Highway Development Council

**MetalsX Limited**

Mr Alan Ferris, Project Manager, Central Musgrave Project

Mr Anthony (Tony) Crook, Consultant

**Outback Highway**

Mrs Helen Lewis, General Manager

**Private Capacity**

Mr Alan Keeling

**Ngaanyatjarra Council**

Mr Alexander Knight, Manager, Land and Culture

**RemoteFOCUS and Desert Knowledge Australia**

The Hon. Fred Chaney AO, Convenor, RemoteFOCUS; Chairman, Desert Knowledge Australia

Dr Michelle Lucas, Director

Professor Ian Marsh, Visiting Professor Australian National University

Mr John Huigen,

**Centre for Appropriate Technology**

Dr Bruce Walker, Chief Executive

**Ninti One Limited**

Ms Jan Ferguson, Managing Director

Ms Apolline Kohen, Senior Policy Advisor

**CRANaplus**

Mr Christopher Cliffe, Chief Executive Officer

Ms Geri Malone, Professional Development Manager

**Broadband for the Bush Alliance**

Mr John Huigen, Chairman

Mr Andrew Crouch, Member

Mr Ray Heffernan, Member

## **Tuesday 20 May 2014 – Darwin, NT**

### **Official Welcome**

Mr John Rawnsley, Director, Larrakia Development Corporation

### **City of Darwin**

Councillor Katrina Fong Lim, Lord Mayor of Darwin

Mr Brendan Dowd, Chief Executive Officer

### **Northern Territory Government**

The Hon. Adam Giles, Chief Minister, Northern Territory Government

Mr Gary Higgins, Deputy Speaker and Chairman of Committees, Northern Territory Legislative Assembly

Mr Gary Barnes, Chief Executive Officer, Department of the Chief Minister

Mr Peter Carew, General Manager, Northern Australia Development Office

### **Northern Territory Planning Commission**

The Hon. Gary Nairn, Chairman

Mr James Teh, Manager, NT Planning Commission Secretariat

### **Northern Territory Livestock Exporters Association**

Mr Benjamin Hindle, Chief Executive Officer

### **Baucau Beaches Development Group, Democratic Republic of Timor-Leste**

Mr Kevin Austin, Chief Executive Officer

### **Darwin Port Corporation**

Mr Terrence (Terry) O'Conner, Chief Executive Officer

### **Menzies School of Health**

Professor Alan Cass, Director

### **Charles Darwin University**

Professor Simon Maddocks, Vice-Chancellor

### **Rusca Brothers Group**

Mr Robert Rusca, Managing Director

Mr Derek Yates, Operations Manager

### **Kimberley to Cape Network Panel**

#### **Anindilyakwa Land Council Land and Sea Management**

Mr Ian Kerr, Manager

**Australian Conservation Foundation**

Mr Graham Tupper, Manager, Northern Australia Program

**Charles Darwin University**

Professor John Woinarski, National Environment Research Program

**Environment Centre NT**

Dr Stuart Blanch, Director

**Kimberley to Cape Initiative**

Dr Clare Taylor, Co-ordinator

**Regional Development Australia NT**

Ms Kate Peake

**INPEX**

Mr Sean Kildare, General Manager Darwin

Ms Rebecca Cass, Senior Stakeholder Management Advisor, External Affairs

Ms Mary Durack, Community Relations Co-ordinator

**Tourism and Transport Forum Panel****AAT Kings**

Mr Anthony Hayes, Global Managing Director

**Air North**

Mr Michael Bridge, Chief Executive Officer

**Indigenous Business Australia**

Mr Leo Bator, Chief Operating Officer

**Northern Territory Airports**

Mr Jim Parashos, Director, Commercial and Aviation Development

**Tourism Northern Territory**

Mr Tony Mayell, Chief Executive Officer

**Tourism and Transport Forum**

Mr Justin Wastnage, Director, Aviation Policy

**Wednesday 21 May 2014 – Nhulunbuy, NT****Gumatj Aboriginal Corporation and Mitwatj Employment and Participation Limited**

Mr Djawa Yunupingu, Traditional owner

**Nhulunbuy Corporation Limited**

Mr Shawn Kidner, Chief Executive Officer

**Gove Community Advisory Committee Panel**

Mr Glenn Aitchison, Chairman, Regional Development

Mr Timothy Bunton, Business

Mr Stuart Maclean, Yolgnu

Mr Wanyubi Marika, Yognu

Ms Sarah Munnings, Allied Health

Ms Lynn Walker, Town Services

**East Arnhem Regional Council**

Ms Jessica Greenaway, Grants Officer

**Rio Tinto**

Mrs Jo-Anne Scarini, Director, Gove Transition

**Thursday 22 May 2014 – Katherine, NT****Kalano Community Association & Jawoyn Association Aboriginal Corporation****Kalano Community Association Inc.**

Mr Ian Woods, President

Mr Rick Fletcher, Chief Executive Officer

**Jawoyn Association Aboriginal Corporation**

Ms Lisa Mumbin, Chair

**Katherine Town Council**

Ms Neroli Dickens, Deputy Chief Executive Officer; Director, Works and Services

**Katherine Centre of Excellence in Health Knowledge**

Ms Teresa Cummings, Chair

**Roper Gulf Regional Council & Victoria Daly Regional Council**

Mr Stuart Duncan, Chief Executive Officer, Victoria Daly Regional Council

Mr Greg Arnott, Director, Corporate Governance, Roper Gulf Regional Council

**Godinymayin Yijard Rivers Arts and Cultural Centre**

Mr Craig Lambert, Chairman

Ms Catherine Bowdler, Director

**Chamber of Commerce Northern Territory – Katherine Region Panel**

Ms Susan Jones, Executive Officer

Ms Petrena Ariston, Member

Mr Ewan Crook, Member

Mrs Morag Dwyer, Member

Mrs Julie Newton, Member; Council Member, Katherine Regional Economic Development Committee

Mr Steven Rose, Member

**Friday 30 May 2014 – Brisbane, Qld****Queensland Resources Council**

Mr Michael Roche, Chief Executive

Mr David Rynne, Director Economic & Infrastructure Policy

**Chamber of Commerce and Industry Queensland**

Mr Nick Behrens, General Manager

Ms Suzanne Lawless, Senior Policy Advisor

**CSIRO**

Dr Peter Stone, Deputy Director Sustainable Agriculture

**Canegrowers**

Mr Burnett Ashburner, Senior Manager Industry

Mr Jonathan Pavetto, Policy Officer

**Liberal National Party**

Mrs Robyn Quick, Northern Development Policy Chair

Mr David Farley, Member

**East West Line Parks**

Mr Shane Condon, Managing Director/Founder

Mr Phil Shapiro, Project Director

**Wilderness Society**

Mr Gavan McFadzean, Northern Australia Program Manager

**Growcom**

Ms Rachel Mackenzie, Chief Advocate

**Queensland Tourism Industry Council**

Mr Daniel Gschwind, Chief Executive

**Insurance Round Table****Suncorp**

Mr Stephen Jeffery, Exec Manager Home Portfolio Personal Insurance

Mr Marcus Taylor, Corporate Affairs Manager

**Insurance Group Australia**

Mr Brad Robson, National Manager

Mr Mark Leplastrier, Senior Manager

Ms Tracy Green, Head of Commercial Pricing

**Islander Board of Industry and Service**

Mr Ian Copeland, Chief Executive Officer

Mr Colin Kane, Director

Mr David Stout, Director

Mr Thomas Hannaford, Director

**Australian Agricultural Company**

Mr Jason Strong, Managing Director and Chief Executive Officer

**Cattle Council of Australia**

Mr Mark Harvey- Sutton, Policy Director

**Friday 20 June 2014 – Brisbane, Qld****Queensland Government**

Mr Craig Wilson, Senior Executive Director

Ms Maree Parker, Executive Director

Ms Lynne MacKenzie, Senior Project Officer

**Integrated Food and Energy Developments Proprietary Limited**

Mr David Hassum, Director

**Queensland Resources Council**

Mr Michael Roche, Chief Executive

Mr David Rynne, Director

**Rockhampton Regional Council**

Mr Tony Williams, Deputy Mayor

Mr Rick Palmer, Manager Economic Development

**Agforce**

Mr Alex Stubbs, Board Member

Ms Lauren Hewitt, General Manager Policy

**Capricorn Enterprise**

Mr Neil Lethlean, Economic Development Manager

**Regional Development Australia - Fitzroy and Central West**

Cr Paul Bell, Chair

Mr Rees Banks, Chief Executive Officer

**Commonwealth Scientific and Industrial Research Organisation**

Dr Mathew Cook, Stream Leader

Dr Peter Stone, Deputy Director, Sustainable Agriculture

Dr Andrew Ash, Research Scientist

**Queensland Farmers' Federation**

Mr Daniel Galligan, Chief Executive Officer

**Wednesday 2 July 2014 – Georgetown, Qld****Etheridge Shire Council**

Mr Will Attwood, Mayor

Mr David Munro, Acting Chief Executive Officer

Cr Ian Tinckwell

Mr Michael Kitzelmann

**Richmond Shire Council**

Cr John Wharton AM, Mayor

**Infigen Energy Development Ltd.**

Mr Frank Boland, Senior Development Manager

**Pastoral Panel**

Mr Barry Hughes, Chairman, Gulf Cattleman's Association

Mr Gregory Ryan, Chairman, Gilbert River Working Group Committee

Mr Warren Devlin, Gilbert River Working Group Committee

Mr Peter Anderson, Business and Finance Manager, Strathmore Cattle Station

Mr Ken Fry, Owner, Forest Home Station

#### **Fisheries Panel**

Mr Gary Ward, Chairman, Gulf of Carpentaria Commercial Fisherman's Association

Ms Judy Lynne, Executive Officer, Sunfish Queensland

Mr Michael O'Brien, Member, NFP Industry Pty Ltd

Mr Andrew Prendergast, Member, NFP Industry Pty Ltd

### **Wednesday 2 July 2014 – Normanton, Qld**

#### **Carpentaria Shire Council and North West Queensland Regional Organisation of Councils**

Cr Ernie Camp, Mayor, Burke Shire Council & Member of the West Queensland Regional Organisation of Councils

Cr Alan Gurney, Deputy Mayor, Carpentaria Shire Council

Cr Ashley Gallaher, Councillor, Carpentaria shire Council

Mr Oliver Pring, Deputy Chief Executive Officer, West Queensland Regional Organisation of Councils

#### **Bynoe Community Advancement Co-operative Society**

Ms Cherie Sivyler, Director

Ms Letitia Rainbow, Director

Ms Sharon Robinson, RJCP Manager

#### **Burke Shire Council**

Mr Ernie Camp, Mayor

Mr Philip Keirle, Chief Executive Officer

#### **Northern Project Contracting**

Mr Bradley Jackson, Managing Director

### **Thursday 3 July 2014 – Weipa, Qld**

#### **Napranum Aboriginal Shire Council**

Cr Philemon Mene, Mayor

Mr Amos Njaramba, Chief Executive Officer

**Weipa Town Authority**

Mr Ian McNamara, Chairman

Mr Richard Noonan, Deputy Chair

Mr John Gleeson, Town Superintendent

Mr Troy McNamara, Member

**Western Cape Chamber of Commerce**

Mr Vance Wallin, President

**Western Cape Regional Partnership Agreement**

Ms Liz Logan, Co-ordinator

**Rio-Tinto Alcan**

Mr Jim Singer, General Manager, Communication and External Relations

Mr Brad Welsh, Manager Community Relations

**Tuesday 15 July 2014 – Canberra, ACT**

**Australia Taxation Office**

Mr Mike Ingersoll, Assistant Commissioner, Small Business Individual Taxpayers

Mr Tony Poulakis, Assistant Commissioner, Private Groups and High Wealth Individuals

Mr Glenn Smith, Director, Private Groups and High Wealth Individuals

Mr Craig Dunn, Director, Small Business Individual Taxpayers

**The Treasury**

Ms Tania Constable, Chief Adviser, Personal and Retirement Income Division

Mr Chris Leggett, Manager, Law Design Practice

Mr Jerome Davidson, Manager, Insurance and Superannuation Unit

## **Monday 18 August 2014 – Darwin, NT**

### **Larrakia Nation Aboriginal Corporation**

Ms Ilana Eldridge, Chief Executive Officer

Mr James Pilkington, General Manager

### **Northern Land Council**

Mr Joe Morrison, Chief Executive Officer

Mr Robert Dalton, Policy Adviser

### **City of Palmerston**

Mr Ricky Bruhn, Chief Executive Officer

### **Urban Development Institute of Australia**

Mr Graeme Suckling, Chief Executive Officer

Mr Justin Gill, Member

### **Northern Territory Chamber of Commerce and Industry**

Mr Greg Ireland, Vice President

Mr Greg Bicknell, Chief Executive Officer

### **Australian Petroleum Production and Exploration Association**

Mr Stephen Gerhardy, Director, Northern Territory

Mr Adam Welch, Senior Policy Adviser, Western Region

### **Engineers Australia**

Ms Nerida Beard, Deputy President, Northern Division

Mr Greg Ewing, General Manager, Northern Division

### **Australian Industry and Defence Network (Northern Territory)**

Mr Arthur Boyd, President

Ms Jodie Cassidy, Executive Officer

### **Kormilda College**

Mr Peter Jones, Chairperson of Board

Dr Helen Spiers, Principal

### **Coomalie Community Government Council**

Mr Leigh Ashford, Chief Executive Officer

Cr Ewan Crook, Councillor

**Tuesday 19 August 2014 – Darwin, NT****Northern Territory Indigenous Tours**

Ms Teresa Atie, Managing Director

**Consolidated Pastoral Company**

Mr Troy Setter, Chief Executive Officer

**ENI Australia Limited**

Mr Simone Rizzi, New Project Commercial Manager

Mr John Williams, External Relations & Communications Manager

**Northern Territory Cattlemen's Association**

Mr David Warriner, President

Ms Tracy Hayes, Chief Executive Officer

Mr Tom Ryan, Executive Officer

**National Critical Care and Trauma Response Centre**

Dr Leonard Notaras, Chief Executive

Dr Nicholas Coatsworth, Acting Executive Director

**Northern Australia Indigenous Land and Sea Management Alliance Limited**

Mr Bo Carne, Chief Executive Officer

Dr Guy Fitzhardinge, Director

Dr Peter Whitehead, Contractor/Consultant

Professor Jeremy Smith-Russell, Consultant Researcher

**Northern Territory Farmers' Association**

Mr Grant Fenton, Chief Executive Officer

**Amateur Fisherman's Association Northern Territory**

Mr Warren de With, President

Mr Craig Ingram, Executive Officer

**National Seafood Industry Alliance**

Mrs Katherine Winchester, Treasurer