Disclaimer

Inherent Limitations

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No warranty of completeness, accuracy or reliability is given in relation to the statements and representations made by, and the information and documentation provided by the Department of Defence and other stakeholders consulted as part of the process.

KPMG has indicated within this report the sources of the information provided. We have not sought to independently verify those sources unless otherwise noted within this report.

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The findings in this report have been formed on the above basis.

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This report has been prepared at the request of the Department of Defence in accordance with the Official Order dated 3 May 2018. Other than our responsibility to the Department of Defence, neither KPMG nor any member or employee of KPMG undertakes responsibility arising in any way from reliance placed by a third party on this report. Any reliance placed is that party’s sole responsibility.
## Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Executive summary</td>
<td>1</td>
</tr>
<tr>
<td>1. Introduction</td>
<td>7</td>
</tr>
<tr>
<td>1.1 Scope</td>
<td>8</td>
</tr>
<tr>
<td>1.2 Economic Measures</td>
<td>8</td>
</tr>
<tr>
<td>1.3 Report Structure</td>
<td>9</td>
</tr>
<tr>
<td>2. Northern Territory – Social and Economic Backdrop</td>
<td>10</td>
</tr>
<tr>
<td>3. USFPI Overview</td>
<td>13</td>
</tr>
<tr>
<td>3.2. Strategic Backdrop</td>
<td>14</td>
</tr>
<tr>
<td>3.3. Social and Economic Benefits to the Northern Territory</td>
<td>16</td>
</tr>
<tr>
<td>4. Economic Impact Assessment</td>
<td>18</td>
</tr>
<tr>
<td>4.1. Current Contribution of Defence and USFPI activity</td>
<td>19</td>
</tr>
<tr>
<td>4.2. Current contribution of the USFPI</td>
<td>27</td>
</tr>
<tr>
<td>4.3. Potential Future Contribution of USFPI and related activity</td>
<td>30</td>
</tr>
<tr>
<td>4.4. Key Messages – Economic Impacts</td>
<td>35</td>
</tr>
<tr>
<td>5. Social Impact Assessment</td>
<td>37</td>
</tr>
<tr>
<td>5.1. Approach and Methodology</td>
<td>38</td>
</tr>
<tr>
<td>5.2. Key Messages – Social Impacts</td>
<td>41</td>
</tr>
<tr>
<td>5.3. Social Impact Assessment</td>
<td>42</td>
</tr>
<tr>
<td>Appendix A : Modelling Framework</td>
<td>66</td>
</tr>
</tbody>
</table>
USFPI and ADF Impact Factsheet
Northern Territory

Factsheet on the territory-wide impacts of the Australian Defence Force and United States Force Posture Initiatives (USFPI) activity in the Northern Territory, drawn from KPMG’s Socio Economic Impact Assessment.

**ECONOMIC**

- **$704 million** towards Gross State Product (GSP) in 2016
- **5,965 personnel** employed directly and indirectly in the Northern Territory, and contributed up to $7.5 million

**SOCIAL**

- **408 residents** of Greater Darwin were randomly selected for consultations to inform the social impact assessment
- **27** in-depth meetings with key stakeholder representatives from business, government, and the community were conducted plus 2 public consultation sessions

**FUTURE CONTRIBUTION**

- **80 personnel** employed directly and indirectly and contribute up to $14.1 million towards Northern Territory’s GSP
- **1,062 personnel** employed directly and indirectly and contribute up to $250 million towards Northern Territory’s GSP

86% of phone survey respondents reporting awareness of the USFPI

- 51% positive sentiment
- 43% neutral (neutral and slightly positive)
- 6% negative sentiment
Major findings

Economic

A KPMG study has found that Defence activity, including USFPI (1,250 Marines in 2016), supported around 5,965 personnel employed directly and indirectly in the Northern Territory, and contributed up to $704m towards Gross State Product (GSP).

Of the total combined contribution, USFPI-related activity (1,250 Marines in 2016) supported 45 personnel (employed directly and indirectly) and contributed $7.5m towards Northern Territory’s GSP.

As the number of Marines on rotation increases from 1,250 to between 1,600 and 2,500 Marines, the economic contribution of the USFPI is expected to increase to around 80 personnel (employed directly and indirectly) and $14.1m* in additional annual GSP for the Northern Territory.

Significant USFPI-related capital works are anticipated to be delivered over the coming years, delivering economic growth to the Territory. KPMG estimates that USFPI-related activity during 2020/21, including delivered capital works and between 1,600 and 2,500 Marines on rotation, could provide up to $250m* in additional annual GSP for the Northern Territory economy and support up to 1,062 personnel (employed directly and indirectly). This significant contribution is largely driven by ADF and US Forces investment in the Territory.

*In today’s economy (based on 2016/17, as this was the latest full set of data available at the time of analysis).

Social

The study also included a social impact assessment, which involved public consultations, a randomly selected phone survey of 408 Greater Darwin residents, and in-depth meetings with 27 key stakeholder representatives from business, government, and the community.

After seven years in operation, awareness of the USFPI is high, with 86% of phone survey respondents reporting awareness. Support for the initiatives is also strong. 51% of respondents expressed positive sentiment towards the initiatives, while 6% expressed negative sentiment, 43% were neutral (including 3% that “did not know”).

Both Defence and the visiting US Forces have built relationships with Territory Government agencies and community groups, and conduct popular and well-known engagement activities. In particular, 71% of phone survey respondents believe that the ADF’s presence improved the sense of community in their local area. While 47% of respondents feel safer as a result of the US military presence, 6% feel less safe.

The majority of phone survey respondents believe that the presence of the USFPI and ADF (77% and 82% respectively) had brought benefits to the local economy.

What is the USFPI?

The US Force Posture Initiative (USFPI) is an extension of Australia’s existing alliance with the United States and supports a common interest in promoting regional security and stability. The USFPI comprises two initiatives, being:

• Annual dry-season rotation of United States Marine Corps personnel and equipment
• Enhanced air cooperation

What is the Socio-Economic Impact Assessment?

The Socio-Economic Impact Assessment is a study conducted by KPMG to understand the social and economic impact of the presence of ADF and visiting USFPI Forces in the Northern Territory.

Why was it conducted?

The Socio-Economic Impact Assessment was undertaken to provide Defence with a better understanding of the impacts of the USFPI and ADF in the Northern Territory. Outcomes from the study will inform and support Defence’s decision making regarding the long term development of the USFPI.
Executive summary

The United States Force Posture Initiatives (USFPI) – first announced in 2011 – are an extension of Australia’s existing alliance with the US in support of “our common interest in promoting regional security and stability.” Through combined training and improved interoperability, the Initiatives enhance the capabilities of both forces, and position both nations to better respond to crises going forward.

KPMG was engaged by the Department of Defence (Defence) to undertake a socio-economic impact assessment of the United States Force Posture Initiatives (the “USFPI”) in the Northern Territory.
Methodology

The socio-economic impact assessment has been presented in two distinct parts.

1. Economic Impact Assessment

A quantitative (measured) assessment of the current contribution of Defence and the USFPI (as per the 2016 rotation, as this is the most recent full set of data), and the potential future contribution of the USFPI to the Northern Territory economy – including (but not limited to): total gross state product (GSP) and employment in the State; and industry-specific activity.

2. Social Impact Assessment

The approach employed for the social impact assessment is an adaptation of the standard model presented by the Queensland Government.\(^1\) The assessment is structured around six key themes - community engagement; indigenous culture; business and the economy; community safety; environmental impacts; and national security. Across each of these themes, our research explored the social impact of the USFPI, along with the broader ADF presence in the NT.

The approach taken for this report included both qualitative and quantitative research elements, including:

- a telephone survey;
- public submissions;
- public consultation sessions; and
- face-to-face interviews with key stakeholder representatives from business, government, and the community.

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\(^1\) The NT Government is in the process of developing its own standard assessment model. The QLD guide can be found at: https://www.statedevelopment.qld.gov.au/resources/cg/social-impact-assessment-guideline.pdf
Economic Impact

To provide additional insight into the economic contribution of the USFPI to the Northern Territory, both today and into the future, KPMG has looked at three different measures with the following objectives in mind:

- Provide a sense of relativity between the aggregate economic contribution of both Defence and USFPI to the Northern Territory (scenario 1) and the standalone contribution made by the USFPI (scenario 2).
- Demonstrate how USFPI activity is expected to provide a significantly greater contribution to Northern Territory in future rotations (scenario 3), through:
  - An increase in the expected number of Marines on rotation from 1,250 to between 1,600 (similar to the 2018 rotation) and 2,500 (the expected full complement).
  - Significant investment in capital works that are expected to be carried out on Defence assets in the Northern Territory in 2020.

Direct and indirect impacts relating to Enhanced Air Cooperation (EAC) annual activities have not been considered in this economic impact assessment. The EAC is expected to make a small positive contribution to the Northern Territory economy. However, the initiative is relatively new and relevant data, suitable for a robust economic impact assessment, is not available.

Using KPMGs in-house computable general equilibrium model, the economy wide impacts (direct and flow-on impacts) were calculated for each scenario. Table 1 provides an overview of the key economy wide results for each scenario.

Table 1: Overview of economy-wide results by scenario

<table>
<thead>
<tr>
<th>Scenario</th>
<th>Rotation</th>
<th>Year</th>
<th>No. Marines</th>
<th>ADF personnel</th>
<th>GSP(1)</th>
<th>Personnel employed (directly and indirectly)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current Contribution: Defence and USFPI (Scenario 1)</td>
<td>5</td>
<td>2016</td>
<td>1,250</td>
<td>5,321</td>
<td>$704 million</td>
<td>5,965</td>
</tr>
<tr>
<td>Current Contribution: USFPI only (Scenario 2)</td>
<td>5</td>
<td>2016</td>
<td>1,250</td>
<td></td>
<td>$7.5 million</td>
<td>45</td>
</tr>
<tr>
<td>Potential Future Contribution: USFPI (Scenario 3), excluding capital works</td>
<td>9</td>
<td>2020</td>
<td>1,600 - 2,500</td>
<td></td>
<td>$12.3 million - $14.1 million</td>
<td>64 – 80</td>
</tr>
<tr>
<td>Potential Future Contribution: USFPI (Scenario 3), including capital works</td>
<td>9</td>
<td>2020</td>
<td>1,600 - 2,500</td>
<td></td>
<td>up to $250 million</td>
<td>up to 1,062</td>
</tr>
</tbody>
</table>

Source: KPMG estimates based on Defence data and assumptions

Note (1): the GSP column shows the contribution to total industry value-added and indirect tax income in the territory. Value-added is output less the goods and services inputs from other states and imports from overseas. Thus GSP is a measure of production in the territory, but does not account for the destination or nationality of those accruing income.

2 CGE models are necessary to quantify impacts across the entire economy. Models without general equilibrium linkages can miss feedback effects that occur from economic agents such as businesses, households and government. Moreover, input-output multipliers over-estimate impacts by ignoring relevant economic constraints such as prices and limited quantities of inputs.
Defence and USFPI activity generates a significant contribution to the Northern Territory economy. Northern Territory’s Gross State Product was around $25.2 billion in 2016, of which Defence and USFPI activity is estimated to have contributed $704m (around 2.8 per cent).

When isolating the economic contribution of the USFPI the overall economic impact is smaller. Direct impacts relating to the USFPI include US Forces spending on service contracts (i.e., accommodation, meals and training support) and US Marines personal consumption in the local economy (i.e., spending on food and drink during liberty leave). At $7.5m, the contribution made to the local economy by the USFPI in 2016 was relatively small, yet, positive. This contribution is expected to grow larger as the number of Marines on rotation increases.

Under the potential future impact scenario, the contribution of the USFPI to the Northern Territory ramps up significantly when future capital works (capital investment) are considered. Capital works, which include upgrades to existing Defence bases and training areas, provide a solid boost to the local economy, particularly the construction and professional services sectors. The additional economic activity generated by the capital works stimulates demand for intermediate inputs (i.e., materials), labour and capital. As a result, nearly all sectors in the Northern Territory enjoy a boost in economic output, additional employment opportunities are created and households enjoy higher consumption. It is important to note that these impacts are during the construction of the USFPI related capital works in the Northern Territory, and as such will not continue indefinitely.

The potential contribution of the USFPI activity in the future also includes the additional economic impact generated by a larger rotation force. An increase in Marine numbers requires additional spending by US Forces on service contracts, and naturally increases aggregate consumption spend by Marines in the local economy. This analysis considers a rotation size of between 1,600 (similar to the size of the 2018 rotation) and 2,500 Marines (the anticipated full complement). Variations in the number of Marines has only a modest impact on the overall estimated contribution of the USFPI and associated activity in 2020.

Thus, the overwhelming majority of the economic impact arising from the USFPI during the 2020 rotation will be derived from the capital works expected to be delivered during 2020/21; with the size of the rotation force having relatively little impact on the Northern Territory economy.

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3 GSP is a measure of total industry value-added and indirect tax income in the territory. Value-added is output less the goods and services inputs from other states and imports from overseas. Thus GSP is a measure of production in the territory, but does not account for the destination or nationality of those accruing income.

4 Note that, in both instances, the size of the rotation force is larger than the 1,250 Marines considered in Scenario 1 and Scenario 2 (which are based on the 5th rotation).
Social Impact Assessment

The social impact assessment found that the Greater Darwin community is positively disposed towards the USFPI, with the vast majority of key stakeholders across sectors expressing strong support for the Initiatives. A small majority (51%) of phone survey respondents feel positively towards the Initiatives, with only 6% expressing a negative sentiment. Government and business representatives in particular were very strong in their support, but many key stakeholders expressed a desire for increased communication and outreach from both the USFPI and the ADF. Significantly, 43% of those surveyed expressed a “neutral” sentiment towards the USFPI.

The social impact assessment focused on the following themes and impact areas, with key findings summarised below:

Community engagement

The community engagement activities of both the USFPI and the ADF have been effective, and the USFPI has achieved broad acceptance in the community. Both the public and key stakeholders displayed a strong awareness and support for the role played by the ADF in particular, with 71% of phone survey respondents reporting that the ADF presence improved the sense of community in their area.

Indigenous culture

The ADF is perceived to have respectful and understanding relationships with indigenous communities in the Northern Territory. While the USFPI is also perceived to have positive relationships, there was suggestion from stakeholders that these relationships could be used to strengthen the USFPI’s engagement and communication with indigenous communities.

Business and the economy

Both key stakeholders and the public are positive regarding the economic benefits of the USFPI, with 77% of phone survey respondents stating that the presence of the USFPI has benefited the local economy. However, key stakeholders believe that deeper engagement with local business and industry on the part of the ADF and the US would increase the economic benefits gained by the community.

Community safety

A majority of the public and key stakeholders believe that concerns that may have existed following the original announcement of the commencement of USFPI activities in Australia have not been borne out, and many believe that it has in fact improved community safety (47% of phone survey respondents felt safer as a result of the US military presence, and 6% felt less safe).

5 Including 3% who “don’t know”.

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Environmental impacts

While close to a third (32%) of phone survey respondents believe that noise levels have increased as a result of the US military presence, 64% disagree, suggesting that noise issues are localised. Neither key stakeholders nor the public expressed particular concern regarding impacts on the natural environment.

National security

Most key stakeholders and a majority of the public believe that Australia’s alliance with the United States is important, and regard the impact of the USFPI on Australia’s national defences, on our relationship with neighbouring countries as positive.

The assessment also worked across these six themes to place the social impact of the USFPI in the context of the broader ADF presence in the Northern Territory, finding strong support from key stakeholders and the public for the ADF’s presence and positive sentiment regarding the ADF’s impact in all areas. Many stakeholders, and 64% of phone survey respondents expressed a desire for the ADF to play a greater role in the community.
Introduction

The United States Force Posture Initiatives (USFPI) – first announced in 2011 – are an extension of Australia’s existing alliance with the US in support of “our common interest in promoting regional security and stability.”

Through combined training and improved interoperability, the Initiatives enhance the capabilities of both forces, and position both nations to better respond to crises going forward.

Through the USFPI, the Governments of Australia and the United States are implementing the 25-year Force Posture Agreement (FPA). The Agreement currently covers two initiatives:

a) United States Marine Corps (USMC) initiative that allows for annual rotations of the US Marine Rotational Force – Darwin (MRF-D) and accompanying equipment and vehicles through Northern Australia; and

b) Enhanced Air Cooperation (EAC) to strengthen bilateral collaboration and interoperability through increased combined training and exercise.

The USMC rotations occur during April to September/October. In 2017, the rotation involved approximately 1,250 personnel and an Aviation Combat Element (ACE) consisting of 13 aircraft.

The latest rotation (2018) is the largest and most sophisticated contingent, comprising 1,587 personnel.

The EAC initiatives, which commenced in 2017, enhances cooperation between the US Air Elements and the Royal Australian Air Force (RAAF) through increased rotations of US aircraft through Northern Australia. The first EAC activity in February 2017, comprised a squadron of 12 USAF F-22 Raptors at RAAF Base Tindal, conducting combined training with the RAAF’s 75 Squadron F/A-18A/B Hornets.

The most recent phase focused on C-17A aircraft maintenance interoperability. Future EAC activities may involve aviation assets from other US Forces and interactions with Australian Army and Navy elements.

To support the USFPI, Australia and the United States are investing around $2 billion into Defence facilities and infrastructure in the Northern Territory (NT) which is part of the NT investment package committed in the 2016 Defence White Paper. Under the FPA, Australia and the United States have agreed to fund and deliver distinct infrastructure and facilities-related projects, which will occur at: RAAF Base Darwin, Robertson Barracks and RAAF Base Tindal, and investment in the training facilities at Kangaroo Flats, Bradshaw Field and Mt. Bundey. Projects will include upgrades to; airfields, accommodation (including gyms; messes), and training areas and ranges.

The combination of capital/infrastructure investment, along with operational expenditure associated with the Initiatives will likely have net positive impacts on local businesses and the wider community in the NT. This review provides a timely opportunity to reconsider the impacts (social and economic) of the USFPI in the Northern Territory, five years after the initial reports in 2013. It is envisaged that this report will provide an important basis for future decision making regarding the USFPI.

Department of Defence information.
Deloitte, Economic impact of the rotation of 1,100 US Marines and associated equipment in northern Australia, April 2013 and Deloitte, Social Impact of rotations of up to 1,100 US Marines and associated equipment in Northern Australia, April 2013
1.1 Scope

The Department of Defence has commissioned KPMG to assist with the development of a Socio-Economic Impact assessment of the approved USFPI activities in the Northern Territory on the Darwin and Northern Territory economies and communities. The scope of the engagement is to assess the:

- Economic impact of the presence of ADF and USFPI Forces in the Northern Territory.
- Economic impact of construction associated with USFPI in the Northern Territory.
- Social impacts of the USFPI, in the context of the broader ADF presence in the Northern Territory.\(^{11}\)

1.2 Economic Measures

Key terms which are used throughout this report include:

- **Sales / Output** is total production/sales by a sector.
- **Value-added (factor income)** by sector captures the return to a sector’s labour and capital and other fixed factors and is therefore the sector contribution to GRP/GSP (except for indirect tax payments). Value-added is output less goods and services inputs from other sectors and imports. Thus, value-added avoids double counting as it does not include the value-added from other sectors.
- **Gross Domestic/State Product (GDP/GSP)** is a measure of the total value-added of all sectors in the national (GDP) or state/territory (GSP) economy plus indirect tax income to government. GSP is a measure of production in the economy, but does not account for the destination or nationality of those accruing income.
- **Employment** refers to the total number of personnel employed (full time and part time). The estimated figures capture the amount of direct and indirect employment, on average in each year, that is supported by Defence and or USFPI related activity compared to the level of employment that would be in the Northern Territory without Defence and or the USFPI. These employment estimates are not cumulative across years.

\(^{11}\) Note that the analysis excludes any bilateral activities that the USFPI participate in.
1.3 Report Structure

The remainder of this report is structured as follows:

- Section 2 begins by providing the economic backdrop in the Northern Territory and establishing the economic foundations on which further analyses can be based.
- Section 3 provides an overview of the USFPI and summarises the training activity profile of current and expected military involvement in the Northern Territory.
- Section 4 presents the results from the economic analysis including the direct economic effects and the modelled flow-on impacts.
- Section 5 presents an assessment of the potential social impacts of the USFPI on the community, in the context of the broader ADF presence.
The Northern Territory (NT) economy is a relatively small open economy driven largely by natural resources, and the defence and public sector. In 2016-17, Gross State Product (GSP) was $25.2 billion – 3 per cent growth rate over the previous calendar year.

GSP in the territory was driven largely by growth in private and public investment, as well as domestic consumption. This strong rate of growth was almost double that of the national economic growth rate over the same period. As a share of national economic output, NT GSP accounts for only approximately 1.5 per cent of Australian Gross Domestic Product (GDP). Growth for 2017-18 is expected to remain relatively strong but decline to around 2.6 per cent following a drop-off from significant investment spending the year prior.

The NT’s estimated resident population grew modestly in 2017 and currently stands at approximately 246,000. Population growth is expected to remain flat over the coming years following healthy increases in 2012-13 and 2013-14. This moderation is largely a reflection of net outflows in interstate migrants and lower levels of overseas migrant inflows due to a slowing in economic activity. The NT population is relatively young with a median age of 32 years compared with the national median of 37.2 years. The majority (around 60 per cent) of the population is located in the Greater Darwin area with the rest residing in the Northern Territory – Outback region. The Indigenous proportion of the NT population is 27%, which is considerably higher than that of Australia as a whole (3%).

The demography of Darwin itself remains distinct from that of the rest of Australia. Greater Darwin has an estimated population of approximately 146,000, an overrepresentation of young men and the youngest median age for a capital city. In 2016, the median age of Darwin remained at 33 years, the same number reported in 2013. The 2011 census recorded that 45% of the population of Greater Darwin had changed over in the five years since the previous census. The 2016 census recorded this rate of change continued with 46% per cent of the population of Greater Darwin changing in the five years previously, compared with 38% of Australia overall. This reflects Darwin’s status as a relatively transient city, subject to large influxes of tourists and seasonal workers, especially during the dry season (which coincides with the US Marine rotations).

These demographic characteristics, highlighted in the 2013 social impact assessment, have remained consistent despite the growth in Darwin’s population (from approximately 129,000 in 2012 to 146,000 in December 2017). Given this, it is reasonable to echo the sentiment expressed in the 2013 social impact assessment, which referred to “the way Darwin is able to cope well with high population turnover and many diverse people groups,” and concluded that rotations of US military personnel would not have significant or even noticeable impacts on Darwin’s demography.

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12 ABS Cat. No. 3101.0 – Australian Demographic Statistics, September 2017.
14 2016 Census - Counting Persons, Place of Usual Residence (MB) – includes elsewhere in Aust in 2011 and Overseas in 2011
15 Deloitte, Social Impact of rotations of up to 1,100 US Marines and associated equipment in Northern Australia, April 2013
The NT labour force comprises around 187,500 persons, which is relatively small in relation to the other States and Territories. The NT, however, has traditionally had relatively high labour force participation rates along with relatively low unemployment rates. The labour force participation rate as at March 2018 was 76.4 per cent.16 This also implies lower capacity in the labour market to support new major projects and a dependency on migrant and temporary (fly-in-fly-out) workers. The unemployment rate in 2016-17 stood at 3.4 per cent, significantly lower than the national unemployment rate of 5.6 per cent.

The economic base in the NT is relatively concentrated and not as diversified as the other States and Territories. Public administration and defence, along with social and health services are significant contributors to the Territory’s economic activity. Construction and development of major projects also plays a key role in driving economic activity in the region. As at June 2017, the main industries by economic activity (value-added contribution) were Public Administration and Safety (13.9%), Mining (13.5%), Construction (12.5%), Ownership of Dwellings (10.7%), and Health Care and Social Assistance (7.3%).17 In total, these industries account for almost 60 per cent of NT GSP. In contrast, the top five industries by share of employment in the NT were Public Administration and Safety (18.1%), Health Care and Social Assistance (11.1%), Construction (10.1%), Education and Training (9.3%), and Retail Trade (7.3%).18

The NT is a key hub for defence and national security, and Defence makes a significant contribution to the NT both from an economic and security perspective.19 Defence expenditure in the NT has grown steadily over the last decade - particularly with increased Defence infrastructure spending.20 Going forward, Defence’s economic contribution to the NT is expected to grow, with a significant increase in defence infrastructure investment planned over the next 20 years.21 Around $2 billion of this investment, which will be cost-shared by Australia

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17 ABS Cat. No. 5220.0 Australian National Accounts – Northern Territory.
18 Northern Territory 2017-18 Budget.
19 The 2016 Defence White Paper highlights the importance of the Northern Territory to Australia’s defence and security.
20 See 2016 Defence White Paper and 2016 Integrated Investment Program which highlight infrastructure investment, particularly in Darwin and RAAF Base Tindal in Katherine, as a high priority.
21 Ibid.
and the United States, can be directly attributed to the USFPI. The NT is also home to around 12,000 Defence personnel and their families who contribute to business and consumer activity as well as other sectors of the local economy.

Following a period of strong growth, economic activity in the NT is expected to return to more moderate levels over the next couple of years. Strong growth in 2016-17 was a reflection of an increase in investment associated with the construction of the Ichthys Liquefied Natural Gas (LNG) project. This is the Territory’s largest ever project and was valued at USD$34 billion in total. It is estimated that over the period 2012-13 to 2017-18, there was an additional $4 billion per annum in private investment associated with the Ichthys LNG project – equivalent to just under 20 per cent of GSP. As the project transitions from the construction to production phase, a decline in private business investment can be expected over the next couple of years. Public sector investment from Defence capital projects and the NT Government’s $1.45 billion Infrastructure Program, however, are expected to partially offset some of the declines in private sector spending.

The NT’s proximity to Asian economies remains a positive attribute. The NT’s main international markets for exports are Japan, China, Indonesia, South Korea, and the US, and economic conditions in these countries are expected to remain favourable over the short-to-medium term. Global growth and demand for NT exports are expected to remain healthy in the coming years mitigating the relatively weak contribution from domestic demand (as measured by State Final Demand). Net exports are expected to be the main driver of economic growth over the next couple of years whilst domestic consumption is expected to be a drag on GSP.

Forecasts from the NT Department of Treasury and Finance suggests economic growth is likely to slow in 2018-19 (2.1 per cent) before dipping into negative territory in 2019-20 (-0.4 per cent). In the outer years, growth is expected to pick-up and lie within a range of 2.6 per cent – 2.8 per cent.

### Figure 2-2 Key Economic Indicators

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<th></th>
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<tr>
<td>Gross State Product</td>
<td>6.5</td>
<td>10.5</td>
<td>2.7</td>
<td>4.0</td>
<td>2.6</td>
<td>2.1</td>
<td>-0.4</td>
<td>2.6</td>
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<td>State Final Demand</td>
<td>4.5</td>
<td>8.3</td>
<td>-12.5</td>
<td>8.2</td>
<td>0.1</td>
<td>-0.8</td>
<td>-4.4</td>
<td>2.0</td>
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<tr>
<td>Population Growth</td>
<td>1.9</td>
<td>0.1</td>
<td>0.3</td>
<td>0.3</td>
<td>0.0</td>
<td>-0.7</td>
<td>0.6</td>
<td>1.0</td>
</tr>
<tr>
<td>Employment Growth</td>
<td>4.6</td>
<td>-0.6</td>
<td>2.9</td>
<td>2.5</td>
<td>-2.0</td>
<td>-0.5</td>
<td>0.3</td>
<td>0.9</td>
</tr>
<tr>
<td>Unemployment Rate</td>
<td>4.4</td>
<td>4.2</td>
<td>3.6</td>
<td>3.4</td>
<td>4.3</td>
<td>4.9</td>
<td>4.5</td>
<td>4.3</td>
</tr>
<tr>
<td>Consumer Price Index</td>
<td>3.9</td>
<td>1.4</td>
<td>0.1</td>
<td>0.1</td>
<td>0.5</td>
<td>1.0</td>
<td>1.7</td>
<td>1.9</td>
</tr>
<tr>
<td>Wage Price Index</td>
<td>2.9</td>
<td>2.6</td>
<td>2.1</td>
<td>2.1</td>
<td>1.8</td>
<td>1.7</td>
<td>1.8</td>
<td>2.0</td>
</tr>
</tbody>
</table>

Note: e = estimate and f = forecast

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22 The Cost Sharing Implementing Arrangement is confidential.
24 Northern Territory 2017-18 Budget.
25 Northern Territory Budget Strategy and Outlook 2018-19 (Budget Paper 2).
27 State Final Demand is the sum of government final consumption expenditure, household final consumption expenditure, and gross fixed capital formation. It is conceptually equivalent to the Australia level aggregate domestic final demand.
The US Force Posture Initiatives (USFPI) is an extension of Australia’s existing alliance with the United States and supports a common interest in promoting regional security and stability. The USFPI comprises two major initiatives: the annual rotation of United States Marine Corps (USMC) personnel and equipment; and the enhanced air cooperation.

3.1. Marine Rotation Force – Darwin

The Marine Rotation Force – Darwin (MRF-D) has grown substantially since the first rotation of 200 Marines in 2012. Table 2 provides a summary of USFPI activities conducted since 2012.

Table 2: Marine Rotation Force in the Northern Territory

<table>
<thead>
<tr>
<th>Year</th>
<th>Rotation</th>
<th>US Personnel (approx.)</th>
<th>US Marines - Equipment</th>
<th>EAC</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>1</td>
<td>200</td>
<td>No heavy equipment.</td>
<td>-</td>
</tr>
<tr>
<td>2013</td>
<td>2</td>
<td>250</td>
<td>No heavy equipment.</td>
<td>-</td>
</tr>
<tr>
<td>2014</td>
<td>3</td>
<td>1,150</td>
<td>Four CH-53E Super Stallion helicopters, 150 vehicles and a range of equipment.</td>
<td>-</td>
</tr>
<tr>
<td>2015</td>
<td>4</td>
<td>1,150</td>
<td>Four CH-53E Super Stallion helicopters, 150 vehicles and a range of equipment.</td>
<td>-</td>
</tr>
<tr>
<td>2016</td>
<td>5</td>
<td>1,250</td>
<td>Four Bell UH-1Y Venom helicopters, 100 vehicles and a range of equipment.</td>
<td>-</td>
</tr>
<tr>
<td>2017</td>
<td>6</td>
<td>1,250</td>
<td>Up to 13 aircraft including four MV-22 Osprey aircraft, five AH-1W Super Cobra helicopters, four UH-1Y Venom helicopters, and a range of equipment.</td>
<td>Commencement of first EAC. Five joint RAAF and USAF activities were conducted, including a squadron of F-22 Raptors visiting RAAF Base Tindal.</td>
</tr>
<tr>
<td>2018</td>
<td>7</td>
<td>1,587</td>
<td>Eight MV-22 Osprey aircraft and six M777 Howitzers.</td>
<td>EAC 18 is comprised of eight activities. In many instances, EAC 18 activities are a continuation of RAAF – USAF force integration initiatives commenced during EAC 17, and provide the vehicle for operationalising existing lines of engagement between the two services.</td>
</tr>
</tbody>
</table>

Source: Department of Defence.
Training Activity

The Marine Rotational Force – Darwin (MRF-D) initiative involves the rotation of US Marines through the Northern Territory during the annual six month rotation. The 2018 rotation involved 1,587 US Marines, eight MV-22 Osprey aircraft and six M777 Howitzers deployed from April to October. The Marines were accommodated within existing Defence facilities such as Robertson Barracks, RAAF Base Darwin and Defence Establishment Berrimah. Since 2012, MRF-D has been increasing in size and complexity with a view to further enhancing interoperability and building stronger regional engagement. The Australian and US governments are committed to the ongoing development of MRF-D and its integration with ADF activities.

EAC commenced in early 2017 with USAF F-22 Raptors visiting RAAF Base Tindal for three weeks training, followed by a further four joint RAAF and USAF training activities. This year’s EAC activities included an aero medical evacuation training mission; 5th generation fighter integration; combat mobility activities with the US Marine Corps; integrated aircraft maintenance; and expanding air-to-air refueling capabilities. This initiative will develop over a number of years and result in increased rotations of USAF elements.

Training exercises vary from year to year and are conducted at various locations in the Northern Territory, northern Australia and South Australia. The USFPI training program encompasses a range of unilateral, bilateral and multilateral training and exercise opportunities for ADF, US Marines, and regional partners such as Indonesia, Malaysia, Singapore and the Philippines.

3.2. Strategic Backdrop

The 2016 Defence White Paper identified a number of relevant strategic themes, including “six key drivers that will shape the development of Australia’s security environment to 2035.” These included:

- The relationship between the United States and China, which is likely to be characterised by a mixture of cooperation and competition
- Challenges to the stability of the rules-based global order
- The growing threat from terrorism and foreign terrorist fighters to Australia’s security
- The increasing pace of military modernisation in our region
- State fragility including within immediate neighbourhood
- Increasing security threats in cyberspace and space

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Strategically, the US presence in the Indo-Pacific region, strongly supported by Australia through USFPI, is seen as an essential ingredient in preserving stability and security over the coming decades.

- The Initiatives enhance the capabilities of Australia and US forces through increased combined training and exercise activities and improved interoperability, which enhance ADF warfighting capabilities.
- The Initiatives also provide new opportunities for engagement with regional partners, and better position both nations to respond to crises in the region.
- The strategic objectives of the USFPI are
  - Posture: Posture Forces for crisis and contingency response and demonstrate the strength of the alliance
  - Interoperability: Modernise and strengthen military-to-military cooperation between US and Australian forces and facilitate interoperability to increase capability and achieve ready combined forces for crisis and contingency response
  - Regional Engagement: Enable engagement with other allies and partners in the Indo-Pacific region to promote security cooperation, capacity building and regional interoperability.
- The annual MRF-D rotation is focused on furthering the Australian-US alliance, interoperability and developing regional engagement. In particular, the rotation provides significant opportunities for intensive, practical and comprehensive training and exercises to enhance interoperability, including our ability to rapidly respond to crisis in the region, such as humanitarian assistance and disaster relief.
- The purpose of EAC is to strengthen bilateral collaboration and interoperability through increased combined training and exercises. EAC builds on the broad range of combined air exercises and training activities already undertaken between Australia and the US, which have involved the temporary deployment of USAF asset, including fifth generation fighter aircraft.
- Both governments have agreed to invest in a range of infrastructure and supporting arrangements to support implementation of USFPI. Infrastructure and facilities work will be concentrated at Robertson Barracks, RAAF Base Darwin, and RAAF Base Tindal, and will include airfield upgrades, accommodation upgrades and training range upgrades.
- The Australian government has committed to continue to invest unilaterally in defence facilities in northern Australia to ensure its ongoing operational readiness. Investment under USFPI represents only a small percentage of the overall investment.
- The design and construction projects associated with USFPI will contribute to employment and growth in northern Australia over the next 10 years. The maintenance of facilities and equipment will also increase demand for local suppliers. In supporting local industry, all Australian Defence led projects will include Local Capability Plans.
3.3. Social and Economic Benefits to the Northern Territory

While the USFPI has strategic benefits for the Australia–US Alliance, the Initiatives also bring social and economic benefits to the Northern Territory.

US Marines engagement with the local community in Northern Australia

- While in Australia, the US Marines dedicate many personal hours volunteering in local communities.
- The MRF-D have a heavy training and exercise schedule while in Australia; however, they find time to engage with the local community through their ‘Hearts and Minds’ program. In Australia, these activities include volunteering at schools and in indigenous communities, and participating with Defence in local activities.
- During 2017, the US Marines made 69 visits to 17 local schools; participated in 88 community events; dedicated 3,300 hours for command sponsored events; and invested over 1,500 individual volunteer hours.
- The MRF-D 18 assisted the ADF with clean-up activities in Darwin, post Cyclone Marcus in March 2018. More than 400 ADF personnel and approximately 50 Marines from MRF-D joined civilian efforts to clean up Darwin. The ADF and MRF-D’s support was coordinated by two task groups, led by 1st Combat Engineer Regiment and 5th Battalion, Royal Australian Regiment.

Local Industry engagement

- On 21 June 2017 the US and Defence held an industry day to build understanding of the US procurement process amongst interested local contractors and suppliers ahead of the first US-led procurement activity.
- In June 2017, the Northern Territory Government also ran a training program for local contractors on US procurement requirements.
- At the end of June 2018, the USFPI Team (from the Department of Defence) held a series of ‘USFPI Individual Feedback Sessions’ and an industry briefing session in Darwin. The sessions were conducted on an individual basis to let industry raise any observations on the US tender process and engagement, suggest any improvements or raise issues of concern in connection with business opportunities and industry engagement related to USFPI. Approximately 80 representatives from small to medium businesses attended.
- One-on-one feedback sessions were held on 28 June 2018 in Darwin, with five companies in attendance.
- Defence will continue to establish opportunities to engage with local industry to ensure they can build capability for the next tendering process, expected in 2019.
- The US recently awarded a local Darwin business, Sunbuild Pty Ltd, with the contract to build an aircraft maintenance and support facility.29 This demonstrates the opportunities that USFPI will provide to local businesses in northern Australia. It also highlights the competitive nature of local industry and its capability to deliver projects to the world’s most technologically advanced armed forces.

Ongoing economic benefits

- The economic benefits of the USFPI investments are broader than just the infrastructure projects. There will be spending associated with supporting the USFPI rotations and supporting and maintaining infrastructure, facilities and equipment.
- The design and construction projects associated with USFPI will contribute to employment and growth in northern Australia over the next 10 years. The maintenance of facilities and equipment will also increase demand for local suppliers, resulting in benefits to local sectors in the region.
- The benefits of US procurements in Australia are broader than economic. Exposure to US procurements will mature Australian Industry, and make local suppliers more competitive in a global marketplace.

The remainder of the report provides a more detailed assessment of the economic (Section 4) and social (Section 5) impacts.

Economic Impact Assessment
Economic Impact Assessment

This section of the report outlines the economic contribution of Defence and USFPI related activity to the Northern Territory.

KPMG has considered three scenarios for analysis, which were developed with the following objectives in mind:

- Provide a sense of relativity between the aggregate economic contribution of both Defence and USFPI to the Northern Territory and the standalone contribution made by the USFPI.
- Demonstrate how USFPI activity is expected to provide a significantly greater contribution to Northern Territory in future rotations, through:
  - An increase in the expected number of Marines on rotation from 1,250 to between 1,600 (similar to the 2018 rotation) and 2,500 (the anticipated full complement).
  - Significant investment in capital works that are expected to be carried out on Defence assets in the Northern Territory during the 2020 rotation.
- The impacts relating to the EAC have not been considered in this economic impact assessment. The EAC is expected to make a small positive contribution to the Northern Territory economy. However, the initiative is relatively new and relevant data, suitable for a robust economic impact assessment, is not yet available.

The three alternative scenarios are summarised below.

- Scenario 1 considers the annual impact of current Defence and USFPI activity on the Northern Territory. The current Scenario is based on the latest available Defence financial data (FY 2016-17) which aligns with the 2016 rotation (the 5th rotation). Our Computable General Equilibrium (CGE) model, KPMG-REG contains industry data built on the latest available 2016-17 ABS data.
- Scenario 2 considers the annual impact of the USFPI only on the Northern Territory in 2016 (the 5th rotation). Scenario 2 will use the same inputs as Scenario 1, without the Defence contribution.
- Scenario 3 considers the potential future annual impact of the USFPI on the Northern Territory in 2020, which was the agreed mature state goal noted in the 2016 Defence White Paper. This Scenario captures how estimated USFPI related expenditure and investment (including Defence investment in USFPI related capital works) in 2020 (the 9th rotation) could impact the Northern Territory economy today (2016-17) if the number of Marines in rotation was between 1,600 (similar to the levels in the 2018 rotation) and 2,500 (the anticipated full complement of Marines).

Each scenario is effectively an individual economic impact assessment, under the alternative assumptions outlined above. Each economic impact assessment captures both direct and indirect (or flow-on) economic impacts.

- Direct impacts are those that can be directly attributed to the Defence and US Forces, such as employment of defence personnel, operating expenditure and capital investment.
- The overall economic contribution to the Northern Territory goes beyond those direct employment and expenditure impacts and includes indirect impacts. These indirect contributions include:
  - increased demand for goods and services along the supply chain due to Defence and US Forces presence and operations within the Northern Territory;
  - increased demand for consumer-orientated industries that cater to the spending of Defence personnel and US Marines working within the Northern Territory; and
  - impacts on the cost of business inputs generated through changes in the price of some goods and services and labour as a result of Defence and USFPI activities within the Northern Territory.

Indirect impacts are captured by KPMGs CGE model, KPMG-REG. A detailed overview of KPMG-REG is provided in Appendix A.
4.1. Current Contribution of Defence and USFPI activity

Defence activities generate significant economic contributions to the economy, at the national, state/territory and regional levels. These contributions are largely driven by Defence employment, operational activity and investment (capital spending on Defence capability projects).

As outlined in Section 3 the USFPI also makes numerous social and economic contributions towards the Northern Territory economy. For this economic impact assessment KPMG has considered the following quantitative direct impacts:

- expenditure by USFPI Forces on Northern Territory Defence services via ADF Base Service Contracts (i.e. training support, messing, meals and waste management);
- expenditure by USFPI Forces on Northern Territory services outside of the Base Service Contracts (i.e. aero-medical evacuation, private transport hire and additional waste management); and
- personal spending in the local economy by USFPI Marines during their time in the Northern Territory.

4.1.1. Direct Expenditure and Employment

Direct impacts are determined using data that is publically available or has been provided to KPMG by Defence. A summary for each of the direct impacts relating to Scenario 1 is presented in the following sections.

Defence employment in the Northern Territory

Of the 98,000 Defence personnel employed in 2017, 5,588 were located in the Northern Territory (around 6 per cent). 30 Table 3 shows that the majority of Defence personnel in the Northern Territory are part of the permanent ADF forces (Navy, Army and Air Force).

Table 3: Defence employment in the Northern Territory, headcount, as at 30th June 2017

<table>
<thead>
<tr>
<th>Permanent Force</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Navy</td>
<td>578</td>
</tr>
<tr>
<td>Army</td>
<td>3,175</td>
</tr>
<tr>
<td>Air Force</td>
<td>949</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td><strong>4,702</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Reserves</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Navy</td>
<td>77</td>
</tr>
<tr>
<td>Army</td>
<td>418</td>
</tr>
<tr>
<td>Air Force</td>
<td>124</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td><strong>619</strong></td>
</tr>
<tr>
<td><strong>Total ADF</strong></td>
<td><strong>5,321</strong></td>
</tr>
<tr>
<td><strong>Total Australian Public Service (APS)</strong></td>
<td><strong>267</strong></td>
</tr>
<tr>
<td><strong>Total Defence</strong></td>
<td><strong>5,588</strong></td>
</tr>
</tbody>
</table>

**Source:** Defence Annual Report 2016–17.

Figure 4-1 illustrates the relative importance of Defence employment to the Northern Territory. Of approximately 140,000 employed persons in the Northern Territory in 2017, Defence directly employed 5,588 (4 per cent). Defence’s contribution to employment in the Northern Territory is similar to that made by the Mining; Manufacturing; and Administrative and Support services industries.

**Figure 4-1: Employed by industry (headcount), Northern Territory, 2017**

Source: ABS Labour Force Data, Defence Annual Report 2016–17, KPMG estimates.\(^{31} \) \(^{32} \) \(^{33} \)

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\(^{31}\) Percentages may not sum to 100% due to rounding.

\(^{32}\) Note 1. Employment by industry is as of March 2017 (ABS), except for Defence (5,588 FTEs), which is as of June 2017, the closest available count to the quarterly ABS data.

\(^{33}\) Note 2. Defence employment includes APS employees and ADF reserves.
Defence expenditure in the Northern Territory

At the national level, Defence comprises the fifth largest area of spending in the Commonwealth Government budget. In 2016-17, total Defence spending was estimated at nearly $28.5 billion, equivalent to slightly more than 1.6 per cent of national GDP. The Australian Government has committed to increase Defence spending to two per cent of GDP by 2020-21, which will bring it closer to the OECD average.34,35

Defence expenditure includes wages to military personnel, operations and maintenance, capital expenditure on materiel, and military research and development. Defence expenditure in the Northern Territory has averaged around $700m, annually, over the past decade (see Figure 4-2).

Figure 4-2: Aggregate Defence expenditure in the Northern Territory, 2006/07 to 2016/17

Source: Department of Defence (2017).

Total Defence expenditure in the Northern Territory in 2016/17 was $719m.

This expenditure significantly contributes to the local economy, with Defence expenditure alone accounting for 2.6 per cent of Northern Territory’s State final demand36. Figure 4-3 provides a breakdown of Defence expenditure in the Northern Territory in 2016/17. Of the $719m spent in the Northern Territory, the large majority was allocated to military employee expenses (63 per cent), followed by capital expenditure (24 per cent).

Figure 4-3: Breakdown of total Defence expenditure in the Northern Territory, 2016/17 ($719m total)

Source: Department of Defence (2017)37

34 The Organization for Economic Cooperation and Development (OECD) refers to a group of 30 countries that are considered “developed”.
35 According to the World Bank, OECD members on average spent almost 2.2 per cent of their GDP on defence activities in 2014.
36 ABS cat. 5206. NT State Final Demand as of June 2017 was $2.78bn (current prices).
37 Note: Grants ($0.24m, <1%) and major capital equipment ($0.34m, <1%) are included in the Capital Expenditure figure in this chart. Facilities operating costs includes USFPI related costs that are later reimbursed by the US Forces.
USFPI related expenditure in the Northern Territory

During the course of a rotation, US Forces require local services to support training operations. The US Forces engage with service providers through either the ADF’s Base Service Contract framework, or directly with selected Australian service providers operating in the Northern Territory. Expenses incurred through the ADF’s Base Service Contract framework are settled by Defence, who are later reimbursed by the US Forces.

The types of services that the US Forces require during a rotation vary depending on the size of the rotation, the type of training activities conducted and the location of training activities. In total, the US Forces spent an estimated $11.7m on service contracts during the 2016 rotation. Figure 4-4 provides a breakdown of this expenditure by broad service type. Meal related services (messing) accounted for the majority of contracted service expenditure by the US Forces, followed by various training activity related support services, including Air Medical Evacuation (AME).

*Figure 4-4: US Forces estimated total service contract expenditure, 2016 rotation ($11.7m AUD total)*

![Chart showing breakdown of US Forces service contract expenditure]

Source: Department of Defence, KPMG estimates.

38 Percentages may not sum to 100% due to rounding.
39 Estimated US Forces expenditure during the 2016 rotation does not include utilities.
40 Billeting costs during the 2016 rotation were capped at $2.2m. Under current cost sharing agreements, this figure is likely to have been higher.

US Forces expenditure on service contracts flows through to Northern Territory industries, both those with existing Defence contracts via Base Service Contracts (i.e., food wholesalers) and those who are hired directly by the US Forces (i.e., transport hire companies).

United States Marines personal expenditure in the Northern Territory

During their time in the Northern Territory, US Marines are likely to engage with the local economy through private purchases of goods and services. KPMG conservatively estimates that US Marines spent a total of $1.45m AUD in the Northern Territory during the 2016 rotation ($1,164 per Marine). This spending can have positive benefits for local business and employment.

The types of goods and services purchased by US Marines and the total amount spent during a rotation varies depending on a number of factors including:

- duration of a given exercise (length of stay);
- type of leave (liberty or recreation leave);
- current training location (proximity of the base to local towns); and
- intensity of training programs (some training exercises may extend into late hours and or weekends).
US Marines are generally granted liberty on weekends and weeknights. Defence-provided transport between the base and a local town is available on weekends only, which limits the uptake of locally-spent liberty time on weekdays. When on liberty, local spending by US Marines is mainly limited to purchases of consumables. In addition to liberty, US Marines can also choose to take recreation leave in Australia. However, uptake of recreation leave is limited since days of leave taken are counted against the thirty annual days of leave that each US service member is entitled to annually. Of those that do take recreation leave, few do so in the Northern Territory.

Figure 4-5 breaks down US Marine expenditure during the 2016 rotation into expenditure categories. The majority of spending occurs on food and drink during liberty leave. A relatively small amount of expenditure in categories besides food, drink and accommodation flows from activities undertaken during recreation leave in the Northern Territory.

**Figure 4-5: Total US Marines personal expenditure in NT, by spending category, 2016 rotation**

<table>
<thead>
<tr>
<th>Category</th>
<th>Expenditure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Food, drink and accommodation</td>
<td>$1,304,903</td>
</tr>
<tr>
<td>Organised tours</td>
<td>$40,327</td>
</tr>
<tr>
<td>Shopping - items to take home</td>
<td>$32,742</td>
</tr>
<tr>
<td>Taxi and local public transport</td>
<td>$19,617</td>
</tr>
<tr>
<td>Shopping - items for use in Australia</td>
<td>$15,320</td>
</tr>
<tr>
<td>Rental vehicles</td>
<td>$14,008</td>
</tr>
<tr>
<td>Entertainment</td>
<td>$11,578</td>
</tr>
<tr>
<td>Other</td>
<td>$8,710</td>
</tr>
<tr>
<td>Petrol and oil for self-drive cars or other vehicles</td>
<td>$7,793</td>
</tr>
</tbody>
</table>

**Source:** Tourism Research Australia⁴¹, Department of Defence, KPMG estimates.
**Note:** Billeting and messing are not part of the food, drink and accommodation data in this chart, as these costs form part of the USFPI service contract expenditure

⁴¹ TRA US tourist spending profile - Darwin (2017)
4.1.2. Economy-wide Impacts

Indirect impacts are captured by KPMGs CGE model, KPMG-REG. Using the direct impacts derived under the parameters of Scenario 1, KPMG-REG has captured the flow on economic benefits to the Northern Territory arising from Defence and USFPI activity during the 2016 rotation.

**Territory Impacts**

The direct impacts associated with Defence and USFPI activity during the 2016 rotation (as outlined in the previous section), in combination with additional flow on benefits, contributed a total of **$704m towards Northern Territory’s Gross State Product**. Figure 4-6 illustrates the changes in the components of Northern Territory’s GSP following from Defence and USFPI activity in the State.

**Figure 4-6: Economy-wide impacts ($ million change, deviation from baseline)**

- **Total GSP**
- **Household Consumption**
- **Federal Government Expenditure**
- **Investment**
- **Exports**
- **Imports**

Source: KPMG Analysis

Note: GSP = Household Consumption + Government Expenditure + Investment + (Exports – Imports)

The impacts on the components of GSP are discussed below.

- Federal Government expenditure ($535m) is the largest contributor to the GSP impacts and reflects the Defence operational expenditure (employee benefits and other operating expenditure) in the Northern Territory.
- Investment ($221m) represents direct Defence investment in the Northern Territory and the additional stimulated increase in investment across the Territory following Defence and USFPI related activity.
- With more employment in the Northern Territory generated by Defence and USFPI activity, household consumption ($325m) is also higher than it would have otherwise been.
- Additional investment and consumption drive additional import activity ($368m) and also draw resources away from exports (-$9m).

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42 Note that this is the activity stimulated in the Northern Territory economy as measured in value-added terms. That is, it includes the proportion of the $(719+ 11.7 + 1.45)$ million Defence and USFPI related purchases that are produced by Northern Territory businesses, and the flow-on impacts up and down the supply chain (it does not include imports or purchases from interstate used directly by the USFPI or along the supply chain).
Industry Impacts – Output and Value-added

The wider economic impacts associated with Defence and USFPI activity will vary across sectors. The industry distribution of output and value added (output less goods and services inputs from other sectors and imports) is illustrated in Figure 4-7. These industry impacts provide an indication of the strength of the Defence industry and, to a lesser extent, USFPI activity related economic linkages across the different sectors in the Northern Territory.

Figure 4-7: Output and value-added by industry ($ million change from baseline)

Source: KPMG analysis

Whilst US Forces directly support various industries via service contracts and personal consumption, the most significant contribution to the State economy in Scenario 1 is driven by Defence activity. Defence activity leads to a significant boost to real value added in the Defence sector. The Defence related expenditure in the Northern Territory also translates to more spending on inputs into the Defence sector, including wages and salaries.

- This supports real value added for the Defence sector of around $480 million, directly attributable to the Federal Government funding to this sector. (See Section 1.2 for a reminder of the economic definition of value-add).
- The remainder is spent on inputs used by Defence from other domestic sectors or imports. This is reflected in the value-added impacts observed across supplier industries such as construction and other business service sectors.

Specifically, the Defence activity drives higher real value added in the construction, healthcare and other business service sectors (including accommodation and food services, rental, hiring and real estate, and professional and technical services), as these industries benefit from demand from the Defence sector and USFPI related activity for their products. Trade (wholesale and retail), arts and recreation, transport and telecommunications also benefit, as a result of additional business, household and US Marine demand for their outputs. As resources are diverted into domestic activities, and there is higher demand for imports, activity is lower in trade exposed industries such as mining and agriculture.
Industry Impacts – Employment

Defence and USFPI activity in the Northern Territory is expected to support higher employment in the State. In addition to the 4,969 permanent Defence employees (ADF and APS) working in the Northern Territory in 2016, Defence and USFPI activity indirectly supported the employment of a further 996 personnel in the state (5,965 total). Figure 4-8 shows change in employment across the other industries (excluding Defence) as a result of Defence and USFPI activity.

Figure 4-8: Employment impacts by industry (change in employment, deviation from baseline)

Source: KPMG analysis
Note: Public administration and safety excludes defence employment

Defence and USFPI related activity stimulates activity in other sectors upstream and downstream of the Defence sector, and in response, these other sectors also demand more labour. Higher Defence and USFPI related activity is expected to stimulate higher employment across most sectors, particularly the accommodation and food services, retail trade, construction and health care and social assistance sectors, as they support the additional Defence and USFPI related activity.

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43 Includes ADF permanent forces and Defence APS staff. Excludes Reserves.
4.2. Current contribution of the USFPI

4.2.1. Direct Expenditure

Scenario 2 considers the same USFPI related direct impacts outlined in Scenario 1. In summary, the USFPI related direct impacts during the 2016 rotation are:

**USFPI related expenditure in the Northern Territory**
- US Forces spent an estimated total of **$11.7m** on service contracts during the 2016 rotation.

**United States Marines personal expenditure in the Northern Territory**
- US Marines spent an estimated total of **$1.45m USD** in the Northern Territory during the 2016 rotation (**$1,164 per Marine**).

4.2.2. Economy-wide Impacts

Indirect impacts are captured by KPMG’s CGE model, KPMG-REG. Using the direct impacts derived under the parameters of Scenario 2, KPMG-REG has captured the flow on economic benefits to the Northern Territory arising from USFPI activity during the 2016 rotation.

**Territory Impacts**

The direct impacts associated with USFPI activity during the 2016 rotation (as outlined in the previous section), in combination with additional flow on benefits, contributed a total of **$7.5m towards Northern Territory’s Gross State Product**. In isolation, the USFPI’s current contribution to the Northern Territory is relatively small yet positive. Figure 4-9 illustrates the changes in the components of Northern Territory’s GSP flowing from USFPI activity in the State.

![Figure 4-9: Economy-wide impacts ($ million change, deviation from baseline)](source: KPMG Analysis)

**Source**: KPMG Analysis

**Note**: GSP = Household Consumption + Government Expenditure + Investment + (Exports – Imports)

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**Note**: This note is the production stimulated in the Northern Territory economy as measured in value-added terms. That is, it includes the proportion of the **$(11.7 + 1.45)$** million USFPI related purchases that are produced by Northern Territory businesses, and the flow-on impacts up and down the supply chain (it does not include imports or purchases from interstate used directly by the USFPI or along the supply chain).
The impacts on the components of GSP are discussed below.

- **Investment ($1.5m)** represents the stimulated increase in investment across the Territory flowing from USFPI related activity.
- **With more employment in the Northern Territory generated by USFPI activity, household consumption ($3.8m)** is also higher than it would have otherwise been.
- **US Forces expenditure on service contracts and US Marines personal consumption** provides a lift to export figures ($8.5m).\(^{45}\)
- **Additional investment and consumption drive additional import activity ($6.3m).**

### Industry Impacts – Output and Value-added
The wider economic impacts associated with USFPI activity will vary across sectors. The industry distribution of output and value added (output less goods and services inputs from other sectors and imports) is illustrated in Figure 4-10. These industry impacts provide an indication of the strength of USFPI activity-related economic linkages across the different sectors in the Northern Territory.

**Figure 4-10: Output and value-added by industry ($ million change from baseline)**

<table>
<thead>
<tr>
<th>Industry</th>
<th>Output</th>
<th>Value Add</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture, forestry &amp; fishing</td>
<td>-1.5</td>
<td>-0.2</td>
</tr>
<tr>
<td>Mining</td>
<td>-0.7</td>
<td>-0.1</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>-1.0</td>
<td>0.3</td>
</tr>
<tr>
<td>Electricity, gas, water and waste services</td>
<td>0.3</td>
<td></td>
</tr>
<tr>
<td>Construction</td>
<td>0.3</td>
<td></td>
</tr>
<tr>
<td>Wholesale trade</td>
<td>0.2</td>
<td></td>
</tr>
<tr>
<td>Retail trade</td>
<td>0.1</td>
<td></td>
</tr>
<tr>
<td>Accommodation and food services</td>
<td>0.2</td>
<td></td>
</tr>
<tr>
<td>Transport, postal and warehousing</td>
<td>0.1</td>
<td></td>
</tr>
<tr>
<td>Information media and telecommunications</td>
<td>0.1</td>
<td></td>
</tr>
<tr>
<td>Financial and insurance services</td>
<td>0.1</td>
<td></td>
</tr>
<tr>
<td>Rental, hiring and real estate services</td>
<td>0.1</td>
<td></td>
</tr>
<tr>
<td>Professional, scientific and technical services</td>
<td>0.1</td>
<td></td>
</tr>
<tr>
<td>Administrative and support services</td>
<td>0.1</td>
<td></td>
</tr>
<tr>
<td>Public administration and safety</td>
<td>0.1</td>
<td></td>
</tr>
<tr>
<td>Defence</td>
<td>3.6</td>
<td>5.1</td>
</tr>
<tr>
<td>Education and training</td>
<td>0.1</td>
<td></td>
</tr>
<tr>
<td>Health care and social assistance</td>
<td>0.0</td>
<td></td>
</tr>
<tr>
<td>Arts and recreation services</td>
<td>0.0</td>
<td></td>
</tr>
<tr>
<td>Other services</td>
<td>0.0</td>
<td></td>
</tr>
</tbody>
</table>

Source: KPMG analysis

Under the USFPI, US Forces directly support various industries via service contracts and personal consumption. USFPI related expenditure in the Northern Territory means more spending on inputs into the various supporting industries, including wages and salaries.

- **US Forces requirement for Defence sector services, such as training support, leads to a boost to real value added in the Defence sector of around $3.6m.**

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\(^{45}\) Domestic purchases by foreign buyers are considered exports.
US Forces requirement for service contracts during the rotation leads to a noticeable boost in the accommodation and food services ($2.1m), health care and social assistance ($1.1m) and rental, hiring and real estate services ($1.0m) sectors.46

Personal expenditure by Marines during rotation also supports activity in the accommodation and food services sector ($2.1m). Note that this level and mix of expenditure will contrast with that of permanent Defence personnel, who incur more general living expenses and often have families posted with them.

Spending by Marines on other industries is negligible, and not sufficient enough to offset the lower activity in the manufacturing and transport, postal and warehousing sectors. The USFPI affects the level of activity in these industries, as inputs to these sectors (such as labour and the production of intermediate goods) are redirected towards industries that support US Forces service contracts (where expenditure is relatively larger).

As resources are diverted into domestic activities, activity is lower in trade exposed industries such as Mining and Agriculture, forestry & fishing.

**Industry Impacts – Employment**

USFPI activity in the Northern Territory is expected to support higher employment in the State. **USFPI activity during the 2016 rotation indirectly supported the employment of a further 45 personnel in the Northern Territory.** Figure 4-11 shows change in employment by industry as a result of USFPI activity.

**Figure 4-11: Employment impacts by industry (change in employment, deviation from baseline)**

USFPI related activity stimulates a small amount of activity in the Northern Territory economy and in response, industries may demand more labour. USFPI related activity during the 2016 rotation is expected to have had negligible impacts on employment across most sectors. The accommodation and food services, and health care and social assistance sectors experience small gains in employment, as they support the large majority of USFPI related activity.

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46 The Rental, Hiring and Real Estate Services sector is predominately supported by US Forces privately hiring or leasing passenger vehicles. The Health Care and Social Assistance sector is predominately supported by US Forces direct expenditure on Aero Medical Evacuation (outside of BSC framework).
4.3. Potential Future Contribution of USFPI and related activity

4.3.1. Direct Expenditure

USFPI related expenditure during the 2020 rotation is expected to be significantly larger than expenditure during the 2016 rotation. The size of the rotational force is anticipated to increase from 1,250 Marines to between 1,600 (similar to the level seen during the 2018 rotation) and 2,500 (levels at full complement), which will increase service requirements and costs. Furthermore, significant investment in USFPI capital works is expected to be made by both US Forces and Defence in the future, with a portion of capital works in the pipeline expected to be realised in 2020.

Scenario 3 captures how estimated USFPI related expenditure and investment in 2020 could impact the Northern Territory economy today (2016/17). To capture the future economic impact relative to 2016/17, estimated 2020 expenditure has not been adjusted for inflation. All figures in this section are presented in 2016-17 Australian Dollars.

**USFPI related expenditure in the Northern Territory**

KPMG estimates that the US Forces could spend around $17.1m - $19.2m on service contracts during the 2020 rotation.\(^{47}\) This figure has been estimated using historical average costs per-Marine based on Base Service Contract expenditure data captured during rotations 1 to 6.\(^{48}\) Since Defence and US Forces are unable to provide information regarding planned training activities in future rotations, KPMG has assumed that expenditure on training activity related contracts will remain similar (on an average per-Marine basis) as was the case for rotations 1 to 6. Thus, this estimate is indicative only.

Figure 4-12 provides a breakdown of estimated US Forces contract expenditure by broad service type. Unlike the current scenario (Scenario 1 and 2), it is anticipated that various training activity related support services will account for the majority of contracted service expenditure, followed by meal related services (messing). This is because the meal cost per-Marine is expected to decrease as the number of Marines on rotation increases (via economies of scale), whereas training support costs will rise as exercises become more intensive (to accommodate increased Marine numbers).

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\(47\) $17.1m is based on 1,600 Marines; $19.2m is based on 2,500 Marines.

\(48\) Department of Defence, KPMG calculations.

\(49\) Estimated US Forces expenditure during the 2020 rotation does include utilities. A portion of the difference between estimated 2016 and 2020 expenditure is due to the inclusion of utility costs which were previously paid for by Defence.

\(50\) Assumed economies of scale in messing and billeting costs.

\(51\) Billeting costs are likely conservative given that projections are based on billeting costs that were capped in previous rotations.
United States Marines personal expenditure in the Northern Territory

KPMG estimates that US Marines could spend a total of between $1.86m and $2.9m AUD in the Northern Territory during the 2020 rotation ($1,164 per Marine) on liberty and recreation leave.\(^{52}\) This estimate is based on the assumption that the spending preferences of US Marines, and the willingness for US Marines to take recreational leave in the Northern Territory, remain the same as was the case during the 2016 rotation.

USFPI related capital works in the Northern Territory

To support the USFPI, Australia and the United States will be investing in Defence infrastructure and facilities at existing Defence sites in the Northern Territory. Sites include RAAF Base Darwin, Robertson Barracks and RAAF Base Tindal, and training facilities at Kangaroo Flats, Bradshaw Field and Mt Bundey. It is anticipated that these capital works could include:

- airfield upgrades;
- accommodation upgrades (including physical fitness facilities, messes); and
- upgrades to training areas and ranges.

This Defence and US Forces investment in the Northern Territory will support local industries and directly benefit Gross State Product. The exact amount of investment, and detail regarding the sharing of costs between the US and Defence has not yet been finalised and is not available for release in this report. KPMG has received indicative investment figures that will be used to estimate the economy wide impacts of potential capital works in the Northern Territory during the 2020 rotation.\(^{53}\)

This assessment only considers the portion of USFPI related capital works proposed to be delivered in the year 2020/21, giving an understanding of the likely magnitude of the annual impacts while the capital works are developed. It is an annual measure and, as such, does not show the overall impact of the aggregate amount of USFPI related investment anticipated over the next 5-10 years.

4.3.2. Economy-wide Impacts

Indirect impacts are captured by KPMGs CGE model, KPMG-REG. Using direct impacts derived under the parameters of Scenario 3, KPMG-REG has captured the flow on economic benefits to the Northern Territory arising from estimated USFPI activity during the 2020 rotation, assuming the number of US Marines on rotation is between 1,600 Marines (similar to the level seen during the 2018 rotation) and 2,500 Marines (levels at full complement).

Territory Impacts

The estimated direct impacts associated with USFPI activity during the 2020 rotation (as outlined in the previous section), in combination with additional flow on benefits, could today contribute a total of around $250m towards Northern Territory’s Gross State Product.\(^{54}\) The MRF-D (excluding the USFPI associated capital works) is expected to contribute $12.3 million to $14.1 million of this GSP impact. Thus, the additional GSP generated is largely driven by the capital works due to be delivered during the 2020 rotation.

\(^{52}\) $1.86m is based on 1,600 Marines; $2.9m is based on 2,500 Marines. ($1,164 per marine is constant).

\(^{53}\) Indicative investment figures provided by Defence.

\(^{54}\) $247.4m is based on 1,600 Marines; $250m is based on 2,500 Marines.
Figure 4-13 illustrates the difference in total GSP contribution between the current contribution of the USFPI (1,250 Marines, no capital works), and the potential future contribution of the USFPI (1,600 – 2,500 Marines, including capital works).

**Figure 4-13: USFPI contribution to Northern Territory GSP ($ million change from baseline)**

The impacts on the components of GSP, in order of magnitude, are discussed below.\(^5\)

- Investment contributes strongly towards GSP as a result of the capital works in 2020 funded by both ADF and USFPI. USFPI related activity further stimulates an increase in investment across the Territory.

- Additional investment and consumption drive additional import activity, mainly to provide intermediate inputs for local capital works.

- With more employment in the Northern Territory generated by USFPI activity and capital works, household consumption is much higher than it would have otherwise been.

- US Forces expenditure on service contracts and US Marines personal consumption supports a strong boost in export figures.

- The difference in the size of the rotation force between 1,600 Marines and 2,500 Marines has a relatively small impact on the overall contribution of the 2020 rotation to the Northern Territory. The difference in total contribution to GSP is just $2.5m, or around 1 per cent. This highlights that the additional economic activity generated in the 2020 rotation is largely driven by the capital works due to be delivered during the 2020 rotation.

**Industry Impacts – Output and Value-added**

The wider economic impacts associated with estimated USFPI activity in 2020 will vary across sectors. The industry distribution of output and value added (output less goods and services inputs from other sectors and imports) is illustrated in Figure 4-14. These industry impacts provide an indication of the strength of USFPI activity-related economic linkages across the different sectors in the Northern Territory. Similar to the overall impacts, the industry impacts are largely driven by the capital works due to be conducted during the 2020 rotation.

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\(^5\) A figure illustrating the components of GSP is not provided in this section, as indicative USFPI related investment figures are not yet finalised nor able to be published in this report.
Whilst US Forces directly support various industries via service contracts and personal consumption respectively, the most significant contribution to the Northern Territory economy in Scenario 3 is driven by USFPI related capital works. USFPI capital works leads to a significant boost to real value added in the construction ($93m) and professional, scientific and technical services ($25m) sectors. The impact of USFPI capital works (including more spending on inputs such as wages and salaries) flows through to all industries, and accounts for the majority of the economic impact associated with the 2020 rotation. As resources are diverted into domestic activities, activity is lower in trade exposed industries such as mining and agriculture.

Results from Scenario 2 indicated that US Forces contribute towards industry value add via expenditure on service contracts and personal consumption. Whilst the majority of the economic impact realised in Scenario 3 is tied to USFPI capital works, an increase in Marine numbers is also expected to lead to a (slightly) greater contribution towards output and value add in the following sectors:

- Accommodation and food services
- Arts and recreation services
- Defence
- Electricity, gas, water and waste services
- Health care and social assistance
- Information media and telecommunications
- Manufacturing
- Rental, hiring and real estate services
- Transport, postal and warehousing

Of these sectors, those most sensitive to the size of the rotation were accommodation and food services ($6.2m in value add given 1,600 Marines, $7.1m in value add given 2,500 Marines); Defence ($6.4m in value add given 1,600 Marines, $6.8m in value add given 2,500 Marines); and health care and social assistance ($3.8m in value add given 1,600 Marines, $4.0m in value add given 2,500 Marines). The remaining sectors were largely unaffected by the assumed number of Marines on rotation (the difference of 900 Marines had negligible impacts on both value add and output in these sectors).
Industry Impacts – Employment

USFPI activity in the Northern Territory during 2020 is expected to lead to higher employment in the State. It is estimated that USFPI activity conducted during 2020, including capital works, could (directly and indirectly) support the employment of up to 1,062 personnel in today’s labour market.\textsuperscript{56} The MRF-D (excluding the USFPI associated capital works) is expected to support between 64 and 80 of these personnel.

The assumed size of the rotation force has a relatively small impact on the labour market in the Northern Territory. The difference in the amount of personnel supported between a rotation size of 1,600 Marines and 2,500 Marines is 16 personnel. Figure 4-15 shows how estimated USFPI activity (including capital works activity) during the 2020 rotation could change employment by industry today.

\textbf{Figure 4-15: Employment impacts by industry (change in employment, deviation from baseline)}

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{employment_impacts_by_industry.png}
\caption{Employment impacts by industry (change in employment, deviation from baseline)}
\end{figure}

Source: KPMG analysis

\textbf{Note:} Where a difference in results occurs (>3\% difference), a range of results is shown in the format ‘(1,600 Marines) to (2,500 Marines)’

Irrespective of the rotation size (1,600 or 2,500 Marines), USFPI related activity during the 2020 rotation is expected to have reasonable impacts on employment across all sectors except agriculture and mining. Similar to value add effects, the difference in employment by industry, conditional on the size of the rotation force, is negligible. The majority of the employment effects borne out of the USFPI in 2020 will be related to capital works.

The construction sector experiences the largest gain in employment opportunities, as this industry strongly supports USFPI capital works. Higher construction activity stimulates activity in the professional services sector (i.e., architects and engineers). Additional employment in the economy lifts household consumption, which supports growth in the retail trade, wholesale trade and accommodation and food services sectors.

\textsuperscript{56} 1,043 is based on 1,600 Marines; 1,062 is based on 2,500 Marines.
4.4. Key Messages – Economic Impacts

This section of the report provides a summary of the key economy-wide impacts pertaining to each of the three scenarios.

**Current Impact of both ADF and USFPI (Scenario 1)** considered the annual impact of Defence and USFPI activity during the 2016 rotation (the 5th rotation) on the Northern Territory.

Overall, it is estimated that **Defence and USFPI related activity attached to the 5th rotation** contributed up to **$704 million** towards Gross State Product (GSP) for the Northern Territory economy and supported around **5,965 personnel employed** directly and indirectly compared to a baseline without Defence presence or the USFPI.

**Current Impact of USFPI only (Scenario 2)** considered the annual impact of USFPI activity only during the 2016 rotation (the 5th rotation) on the Northern Territory.

Overall, it is estimated that **USFPI related activity attached to the 5th rotation** contributed up to **$7.5 million** towards annual GSP for the Northern Territory economy and supported **45 personnel employed** directly and indirectly compared to a baseline without the USFPI.

**Potential Future Impact of USFPI (Scenarios 3 and 4)** considered the future annual impact of USFPI activity during the 2020 rotation (the 9th rotation) on the Northern Territory today, on the basis that the amount of US Marines in rotation is between 1,600 Marines (levels seen during the 7th rotation) and 2,500 Marines (levels at full complement).

Overall, excluding capital works, **USFPI related activity attached to the 9th rotation**, with 1,600-2,500 Marines on rotation, could contribute up to **$14.1 million** towards GSP for the Northern Territory economy today, and support up to **80 personnel employed** directly and indirectly compared to a baseline without the USFPI.

Overall, including capital works, it is estimated that **USFPI related activity attached to the 9th rotation**, with 1,600-2,500 Marines on rotation, could contribute up to **$250 million** towards GSP for the Northern Territory economy today, and support up to **1,062 personnel employed** directly and indirectly compared to a baseline without the USFPI.
Social Impact Assessment
Social Impact Assessment

In addition to the economic impacts of the USFPI, these type of initiatives necessarily have social, environmental and other effects on the community that hosts it.

The USFPI is significant to Darwin and the Northern Territory not just because it is a tangible demonstration of Australia’s support for the US’ continued presence in the Indo-Pacific, or because of the significant investments it requires. The USFPI is also a living, breathing representation of the decades-old Australia-US alliance, an opportunity for the community in an Australian city to interact and engage with a key ally over a sustained period.

As the social impact assessment conducted in 2013 noted, there are a range of social and community benefits that can come from such an engagement, but there are also risks. In addition to the economic impacts identified in the previous section, Defence is also keen to better understand the social, community, and environmental impacts of the USFPI through consultation with key stakeholders and the community. By taking a broad view, meeting face-to-face with stakeholder representatives from the community sector, government, and business, as well as conducting qualitative research, this assessment will assist Defence in understanding community perceptions, and quantify and manage these benefits and risks. Importantly, it will also allow Defence to identify opportunities to continue supporting the success of the USFPI itself.

Our approach to conducting this assessment, and the social impact assessment itself, builds on the 2013 social impact assessment, incorporating direct comparisons where possible. As discussed in the Approach section, the themes and impact areas of this social impact assessment reflect both the evolution of the USFPI itself, the priorities of Defence, and the findings of the 2013 assessment.

This social impact assessment combines qualitative and quantitative research to provide insights and identify risks and opportunities regarding the perceived and actual impacts of the USFPI on community life, safety, Indigenous culture, the environment, local business and the economy, and national security. It also explores experiences and perceptions related to working with or doing business with the USFPI. One key area where this assessment extends the 2013 report is where it makes an effort to place the USFPI and its impacts in the context of the broader ADF presence in the Northern Territory. While avoiding where possible to draw crude comparisons, this assessment explores differences in the approaches and impacts of the two Defence forces.

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57 Deloitte, Social Impact of rotations of up to 1,100 US Marines and associated equipment in Northern Australia, April 2013
5.1. Approach and Methodology

The approach employed for the social impact assessment is an adaptation of the standard model presented by the Queensland Government58 (The NT Government is in the process of developing its own standard assessment model).

5.1.1. Impact Areas

This report is structured around a number of key themes, outlined below. These have been developed in consideration of a number of areas, including the themes considered in the 2013 Social Impact Assessment59, the evolving nature of the MRF-D and the EAC initiatives, the community’s maturing understanding of the impact of the USFPI and the feedback received throughout the consultation process.

These themes are:

- **Community engagement**, including an assessment of the impacts on the ‘sense of community’ in the Northern Territory and impacts of community engagement and outreach activities;
- **Indigenous culture**, including an assessment of the understanding and respect received by the Indigenous community in the Northern Territory, the relationship between the USFPI and ADF and the Indigenous community, and processes and protocols observed;
- **Business and the economy**, including an assessment of the impact of the USFPI on various local industries and businesses, communication and protocols, contracting and procurement issues, and economic development more broadly;
- **Community safety**, including an assessment of the USFPI’s impact on public safety and levels of anti-social behaviour, as well as the prevalence of assaults and perceptions of accountability for US military personnel;
- **Environmental impacts**, including an assessment of impacts on perceived noise levels, biosecurity, and impacts on the natural environment; and
- **National security**, including an assessment of community and stakeholder views and perceptions regarding the Australia-US alliance, and the impacts of the USFPI on national security and defence.

Across each of these themes, our research explored the social impact of the USFPI, along with the broader ADF presence in the NT. The approach taken for this report included both qualitative and quantitative research elements, including:

- face-to-face interviews with key stakeholder representatives from business, government, and the community;
- a telephone survey;
- public submissions; and
- public consultation sessions.

Further details on each of these are included in the subsections below.

All consultation activities and materials clearly articulated the USFPI’s two core elements (the MRF-D and EAC initiatives), though the latter is naturally less relevant in the context of a social impact assessment as many activities occur far from Darwin, and little relevant commentary was received regarding the EAC.

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Telephone survey

Market and social research firm TKW was engaged to conduct a stratified random telephone survey of Northern Territory residents living around Darwin. A randomly selected sample of 408 people completed the telephone survey, with surveys conducted between 19 July 2018 and 11 August 2018. The NT’s estimated resident population is approximately 246,000. A sample size of 384 survey responses was required to achieve a 95% level of confidence in the results.

The survey included a number of questions updated from the script used in the 2013 social impact assessment. This allowed for comparisons with responses 5 years ago, across a number of key measures. The survey also included additional questions, including a number of questions seeking open-ended responses, especially regarding business impacts, impacts on national security, and the impact of the broader ADF presence in the Northern Territory.

Written Public Submissions

A project email address was created to receive written public submissions, with the submission process advertised prominently in the NT News (on 3, 8, 10, 13, and 15 August 2018) and provided during public consultation sessions. A total of nine written submissions were received from community members. These responses are outlined in Appendix D. Written submissions received from organisations that were also invited to be consulted face-to-face have been incorporated and provided to Defence.

Public Consultation Sessions

Two public sessions were held during the week of 13 August 2018. Both were held outside of standard office hours to provide the greatest opportunity for attendance.

- Tuesday 14 August – 5:30- 7:30pm – 18 Smith Street, Darwin
- Saturday 18 August – 9:00am- 11:00am – 18 Smith Street, Darwin

The meetings were advertised prominently in the NT News (on 3, 8, 10, 13, and 15 August 2018).

The social impact assessment also garnered media coverage, with ABC News Darwin running a radio story on the assessment, and the NT News publishing an article in the preceding week. Both instances included mention of the public consultation sessions during the same week, providing details for the open forums and the other consultation opportunities available.

There were approximately 20 attendees on Tuesday 14 August and 10 attendees on Saturday 18 August. Community members present participated in a focus-group style mediated discussion which explored the key themes of the social impact assessment. Researchers facilitated discussions to ensure that all attendees present were given the opportunity to express their views.

Key stakeholder consultations

Direct consultations were held with 27 key stakeholders from federal, territory, and local government, community organisations and businesses. The vast majority of key stakeholder consultations were conducted face-to-face in Darwin, Palmerston, and Canberra, with a phone consultation for the Alice Springs consult. A list of those invited to be consulted, and a final list of those consulted is included in Appendix C.
5.1.2. Context

It is important to acknowledge the following two key elements which contributed to the context surrounding the social impact assessment:

1. The previous social impact assessment, which was used in many cases throughout this report as a benchmark, was conducted in 2013. Since then, the USFPI itself has grown in size and scope (most notably through increased numbers of US Marines on rotation, and the commencement of the EAC initiative). In recognition of the changes that have occurred since 2013, Defence sought to include in this assessment:

- A more detailed exploration of the perceived business and economic impacts of the USFPI to the community, especially perceptions of the USFPI’s impact on small businesses;
- Across impact areas, to place the USFPI in the context of the broader ADF presence in the Northern Territory; and
- A deeper exploration of perceived national security impacts.

To achieve this, some themes and data points explored in the 2013 report were replaced. The themes and data points removed were restricted as much as possible to areas that were identified in the 2013 report as very unlikely to be impacted, or where no meaningful comparison could be drawn, including:

- Traffic accidents;
- Access to education;
- Access to health and hospital services;
- Access to public transport services;
- Effects on local council resources;
- Access to accommodation for tourists; and
- Binary support for Marine deployments.

2. The timeline for this project led to the consultation period taking place during Exercise Pitch Black\(^{63}\), which may have resulted in noise issues receiving prominence in the results. Researchers took pains to point out the separate nature of the USFPI and Exercise Pitch Black during stakeholder consultations and public sessions.

\(^{63}\) The Royal Australian Air Force’s largest and most important international air defence exercise, held from 27 July to 17 August 2018.
5.2. Key Messages – Social Impacts

This section of the report provides an overview of the key messages arising from the social impact assessment. More detail behind these key messages are then provided in Section 5.3.

General Sentiment
After six years in operation, the general sentiment of the Greater Darwin community is positive towards the USFPI. The vast majority of key stakeholders across sectors expressed strong support for the USFPI, with several government and business representatives in particular making calls for the rotational presence to be made permanent. Many key stakeholders expressed a desire for increased communication and outreach from the USFPI and the ADF, both to promote successes and raise awareness of activities and opportunities for partnership. This was further supported by positive sentiment from a small majority (51%) of phone survey respondents (with only 6% expressing a negative sentiment towards the USFPI).

Indigenous culture
Survey results suggested that the public’s views of how the Indigenous community was treated were polarised. However, the ADF was considered by both stakeholders and the public to have a respectful and understanding relationship with Indigenous landowners, culture, and land.

Community safety
On average, the Greater Darwin community felt safer in public spaces than they did in 2013, while simultaneously, there is a perception that anti-social behaviour has increased. The community did not believe that the USFPI had a negative impact on community safety, with 47% of phone survey respondents reporting that they felt safer as a result of the US military presence and 6% reporting that they felt less safe. This sentiment was reflected in the views of stakeholders across government, business and the community. However, a small minority remain concerned by the perceived risk of anti-social behaviour and sexual assault, as well as the adequacy of safeguards to address community safety issues that may arise.

Community engagement
The USFPI has been highly effective in its community engagement activities, with an overwhelmingly positive reaction from both stakeholders and members of the public who had personally encountered US military personnel. There was also a strong level of awareness from members of the public and key stakeholders of outreach activities undertaken by US military personnel. The ADF’s role in the community was highly valued by stakeholders and residents, with 71% of phone survey respondents reporting that the ADF presence improved the sense of community in their local area.

Business and the economy
Strong majorities of the community as a whole believed that the presence of the USFPI and the ADF (77% and 82% of phone survey respondents respectively) had brought benefits to the local economy. However, many stakeholders, especially in government and business, believed that more of the economic benefits of military investments by both countries could flow to local businesses and communities. There was a strong view that processes and protocols may be preventing local business from accessing business opportunities associated with the USFPI and the ADF.

Environmental impacts
Both key stakeholders consulted and the public did not express significant concerns regarding the USFPI’s impact on the environment, including at the Bradshaw Field training area. Regarding noise, almost two-thirds (64%) of phone survey respondents believe that noise levels have increased as a result of the US military presence, while close to a third (32%) disagree, suggesting that noise issues are localised.

National security
Australia’s alliance with the United States was considered important by most stakeholders and phone survey recipients, and the USFPI is considered by and large to have a positive impact on Australia’s national defences, and relationship with neighbouring countries. Phone survey respondents also had a positive view of the adequacy of Australia’s national defence.
5.3. Social Impact Assessment

This section of the report explores each of the aforementioned impact areas in more detail, beginning with an analysis of the level of awareness of the USFPI.

5.3.1. Community Awareness

The structured elements of the social impact assessment began by gauging the awareness of stakeholders and the public regarding the USFPI. Community awareness of the USFPI was high, with 86% of those surveyed reporting awareness, with just 13% of respondents being unaware. Understandably (given that the EAC commenced in 2017 and the MRF-D has been occurring since 2012), fewer respondents were aware of the EAC, though at 73%, this is still a high rate of awareness. This was reflected in stakeholder consultations, where the vast majority of stakeholders were aware of both the USFPI as a whole and the EAC component, with community and business stakeholders less likely to be aware of the EAC.

![Figure 5-1: Awareness of USFPI & EAC](image)

A slim majority (51%) expressed positive sentiment towards the USFPI, and while only 6% felt negatively towards the Initiatives, 40% described their feelings as neutral. These sentiments were reflected in phone survey respondents’ open-ended responses to the USFPI. Here, a significant number of respondents made comments to the effect of: “I don’t notice they’re here”, “They are not present where I am”, and other similar responses. This could reflect the ‘small footprint’ approach of the USFPI, and the likelihood that the Initiatives have not impacted the day-to-day lives of many respondents. This was not the case for the stakeholders consulted, who overwhelmingly felt positively towards the USFPI, with a few exceptions.

![Figure 5-2: Feelings towards the USFPI (phone survey)](image)

Would you describe your feelings towards the USFPI as positive, negative, or neutral?
Placing the USFPI in context

The opinions of phone survey respondents were evenly divided as to whether there is a difference between the activities of the USFPI and the ADF’s broader presence in the Northern Territory.

The largest proportion of respondents (37%) felt unable to provide a response to this question, suggesting that while community members in Greater Darwin are aware of the USFPI, there is a relative lack of understanding regarding its scope and relationship to the ADF.

Figure 5-3: Perceived Differences between USFPI and ADF Activities

Phone survey respondents were also asked whether they think the USFPI is a part of Australia’s overall alliance with the US, or a separate US initiative. Almost two thirds (63%) of respondents view the USFPI as part of Australia’s overall alliance with the US, while 14% see it as being a separate US initiative. Close to a quarter could not answer this question.

Figure 5-4: Part of Australia’s overall alliance with the US?

When prompted, 63% of phone survey respondents recognised all of the three core purposes of the USFPI:

- To increase the ability of the US and Australian militaries to work together;
- To strengthen security in our region; and
- To improve readiness to deal with crisis or disaster events.

Only 7% believed that the USFPI had another purpose, and 5% were unable to answer the question. The remainder were able to nominate one or two of the three core purposes.
When it came to the success of the Initiatives, 43% of respondents believe that the USFPI has been successful in improving the readiness of the US Military and the ADF to deal with crises, with a higher proportion (58%) rating the USFPI as successful in improving the ability of the Australian and US Militaries to work together. The third purpose – strengthening security in our region – is explored in the “National Security” section of this report.

**Figure 5-5: Perceptions of success**

<table>
<thead>
<tr>
<th></th>
<th>Total Successful:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deal with crises</td>
<td>43%</td>
</tr>
<tr>
<td>Ability to work together</td>
<td>58%</td>
</tr>
</tbody>
</table>

On a scale of 1 to 5, 1 being very unsuccessful and 5 being very successful, how would you rate the USFPI’s performance in improving the readiness of the US Military and the ADF to deal with crises, such as humanitarian and disaster relief?

On a scale of 1 to 5, 1 being very unsuccessful and 5 being very successful, how would you rate the USFPI’s performance in improving the ability of the Australian and US Militaries to work together?

**Note:** Percentages may not sum to 100% due to rounding.
5.3.2. Community Engagement

The social impact assessment conducted in 2013 identified that “most Territory and local government officials considered that the 2012 rotation of Marines had ‘earned their social licence’.”64 Broadly, this mirrored the response received in 2018. Five years on, this sense that the US military presence had earned and maintained a social licence to operate continued to be felt by the majority of key stakeholders consulted. One key stakeholder told our researchers that “the NT has sort of adopted them (the US military personnel)”.  

USFPI community engagement

Stakeholders from business and local government in particular were aware of USFPI activities conducted as part of the MRF-D’s ‘Hearts and Minds’ program65, including assisting the ADF with clean-up activities in Darwin following Cyclone Marcus in March 2018, and USFPI participation in ANZAC day activities. The Cyclone Marcus clean-up was singled out by key stakeholders as an example of the community benefits of the USFPI: “We couldn’t have done it without them – but the ADF were exactly the same.”

Multiple stakeholders also identified the US Marines’ role in providing assistance during a fire at the Darwin RSL Club. This event also gained traction in the media, commending those involved for their bravery and assistance. The USMC’s enthusiastic participation in school visitation programs was also positively received by the community, and was raised across stakeholder and community consultations as well as in local media reporting.

Perceptions of community

In 2018, respondents rated the sense of community in their area a 3.7 (where 1 was very low and 5 was very high), which fell slightly to 3.6 when including the presence of US Military personnel.

Figure 5.6: Sense of Community (Mean score out of 5)

<table>
<thead>
<tr>
<th>Sense of community</th>
<th>2018 Survey</th>
<th>2013 Survey</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.2</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| Sense of community with US Military personnel present (2018)/1,000 US Marines present (2013) |
| 2018 Survey | 2013 Survey |
| 3.6         | 3.2         |

64 Social Impact of rotations of up to 1,100 US Marines and associated equipment in Northern Australia (Report for the Department of Defence), Deloitte, 2013
Many respondents identified the Marines’ support following Cyclone Marcus, their role in charity work and at schools, and their participation in sporting events as positives for the community. In the words of one phone survey respondent: “we had a cyclone here and they all pitched in cleaning up the streets and everything. They came together in a time of need. The troops on the ground stepped up and helped out.”

However, a small but significant number of phone survey respondents (14%) answered “don’t know” when asked to rate the sense of community when US personnel were present. A similar sentiment was shared by many of those who attended public consultations, “we don’t hear from them much, they’re always on base”, “we never see them”, and “I don’t see them in my everyday life as a presence.”

It was noted by many stakeholders and members of the public that the USMC living quarters are in Robertson Barracks, and that the Marines are often away on exercise, so their visibility amongst the community on a regular basis is reasonably minor. One key stakeholder said “they just get here, go on exercise, and go, don’t they?” NT Government stakeholders contrasted this with the experience at Pine Gap, where they perceived US personnel to be “more embedded within the community.”

**USFPI Interaction**

Almost all stakeholders and members of the public who attended the public sessions had had positive personal interactions with US Marines or military personnel, with the phrase “extremely polite” being repeated again and again. Despite some scepticism of US foreign policy goals at the public consultation sessions, government and community stakeholders noted that there is no noticeable anti-US sentiment in the community, regardless of the US military presence. Stakeholders and members of the public were broadly aware that there are rules that the USMC are required to abide by, such as the buddy system and curfews. Stakeholders believed that this has had a positive impact on their perception within the community, though some were unsure if the same rules still applied (see “Community Safety” section). References made by some phone survey recipients to perceived US military transgressions in foreign jurisdictions highlights the potential for referred reputation damage from other US military activities in the region.

**Figure 5-6: US Military’s role in the community compared to ADF**

Thinking about the role the US Military personnel play in the community, on a scale of 1 to 5, with 1 being much smaller, and 5 being much larger, how would you compare it to the role played by the ADF in the community?

**Note:** Percentages may not sum to 100% due to rounding

Close to half (48%) of all respondents believed that the US Military personnel played a smaller role in the community compared to the role played by the ADF. 13% of respondents felt that the US military played a greater role in the community than the ADF.
The ADF and the community

71% of phone survey respondents felt that the ADF presence improved the sense of community in the NT. Key stakeholders commented that “the ADF tend to naturally integrate into the community”, and that “the ADF are a part of the fabric of this town.”

Figure 5-7: Perceptions of ADF contribution to sense of community

Across key stakeholders and public consultations, the ADF was viewed positively as an important part of the community, playing a larger role when compared to the USFPI. Many stakeholders felt that both the ADF and the USFPI could do more to publicise the role they play in the community.

Respondents were also asked if they would like to see the ADF playing a greater role in the community, and close to two thirds (64%) answered positively.

Figure 5-8: Should the ADF play a greater role in the community

And would you like to see the ADF playing a greater role in the community?
5.3.3. Indigenous Culture

In 2016, 8.7% of the population of Greater Darwin were Aboriginal or Torres Strait Islander, a figure which has decreased from 9.2% in 2011. The proportion of Aboriginal and Torres Strait Islanders in Greater Darwin in 2016 was considerably higher than in Australia as a whole (3%), though lower than the Northern Territory, where more than one-quarter (27%) of the population in 2016 identified as Aboriginal or Torres Strait Islander. This is far higher than other states and territories (by comparison, Victoria was 0.8%). Much of the land in the Northern Territory is owned by Indigenous people – making respect for indigenous culture and land a critical issue for the success of the USFPI.

The attitudes of phone survey respondents regarding indigenous culture and respect were polarised. When asked to rate the “level of understanding and respect the Indigenous community currently receives from the non-Indigenous community in the NT”, respondents gave an average rating of 3.1 (where 1 is none, and 5 is excellent) higher than the 2.6 rating recorded in 2013.

However, respondents were evenly divided in their views, with one-third (32%) feeling that the Indigenous community currently received a good or excellent level of understanding and respect from the non-Indigenous community. In contrast, 32% of respondents were neutral (assigning a rating of 3) on this question, and 28% felt that there is little or no respect from the non-Indigenous community.

In terms of the respect the Indigenous community receives from the US Military personnel, a positive rating of 3.5 was reported. However, it is important to acknowledge that almost half (43%) of respondents did not feel able to provide an answer to this question. Respondents appear to have felt more confident in their views with regard to the respect accorded to the Indigenous community by the ADF, providing a rating of 3.6 (with only 21% of respondents indicating that they were unable to answer).

![Figure 5-9: Understanding and Respect for Indigenous Community](image-url)

On a scale of 1 to 5, with 1 being none and 5 being excellent, how would you rate the level of understanding and respect the Indigenous community currently receives from the non-Indigenous community in the NT?

On a scale of 1 to 5, with 1 being none and 5 being excellent, how would you rate the level of understanding and respect the Indigenous community receives from the US Military personnel when they are present in the NT?

On And on the same of 1 to 5, with 1 being none and 5 being excellent, how would you rate the level of understanding and respect the Indigenous community receives from Australian (ADF) Military personnel?

![Figure 5-9: Understanding and Respect for Indigenous Community](image-url)

Note: Percentages may not sum to 100% due to rounding

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68 2016 Census – Counting Persons, Place of Usual Resident (MB), INGP Indigenous Status by GCCSA (UR)
Key stakeholders also view the relationship between the ADF and traditional landowners favourably, informing our researchers that the ADF are “very aware of their responsibilities to traditional owners and sacred sites”. Stakeholders observed that this positive relationship has facilitated greater communication with the USFPI regarding indigenous land and culture, and that “we’ve never had an incident with a lack of respect at Bradshaw (training area).” Positive feedback was also received in relation to support for Indigenous business: “the ADF don’t take the credit they deserve. They have had a massive economic and social impact in certain communities.” Talisman Sabre was specifically identified by stakeholders as a model that future activities can take lessons from in its successful provision of employment for local indigenous companies in the preparation, execution and clean-up phases of the exercise.

However, stakeholders also noted that whilst US Military Personnel typically make reasonable efforts to ensure appropriate approval is received, issues can still arise. One instance was highlighted where, in 2017, according to the stakeholder, an amphibious landing was conducted involving up to 100 US Marines. In this case, some traditional owners had been consulted, but others had not, and this resulted in some concerns being raised by affected parties.
5.3.4. Perceived impacts on business and the economy

Defining business and the local economy in the Northern Territory

Small and medium businesses (SMBs) employ the majority of the resident workforce of Greater Darwin. SMBs range in size from sole traders up to businesses employing almost 200 workers. In Greater Darwin, SMBs are represented by businesses in a range of sectors, including construction, real estate, financial and professional services, accommodation, food and retail.

Greater Darwin residents’ view of what constitutes ‘the local economy’ can vary depending on who you are speaking to. One third (33%) defined the local economy as the entire Northern Territory, while 17% believe it was inclusive of a broader region including parts of Western Australia. More than one-third (37%) believed it to be within a smaller area encompassing Darwin and surrounding areas and centres, while only 10% thought it to include just Darwin itself.

Figure 5-10: Perceptions of Local Economy

When you think of the local economy, what areas would you include?

- 10% Just Darwin itself
- 21% Darwin and surrounding areas like Palmerston
- 16% Darwin and centres like Katherine
- 33% The entire Northern Territory
- 17% A broader region including parts of WA
- 3% Don’t know/can’t say

Income and affordability

Across all stakeholder groups, and in public consultations, the USFPI was not considered to have affected local incomes or affordability, whether in housing, cost of living, or any other sense. This is consistent with the finding of the 2013 Social Impact Assessment, that “The presence of the Marines is unlikely to have any adverse impact on the Darwin housing market” and “there is virtually no risk of the Marines exacerbating the Darwin rental market conditions, nor of the presence of 1,100 Marines for six months causing any discernible reduction in the affordability of goods and services.”

Stakeholders cited a range of proposed reasons for this view, including the limited amount of time US personnel were in Australia; the fact that they spend most of their time in the Northern Territory on base or on training exercises and have minimal time off; the inability to bring family members along with them; and that they have relatively low incomes compared with those in the Northern Territory. Many stakeholders mentioned that any impact the USFPI might have had on the cost of living would have been dwarfed by the impact of the Ichthys gas project.

69 ABS Catalogue 8165.0
70 Greater Darwin is comprised of the local government areas (LGA) of Darwin, Litchfield and Palmerston. This differs slightly from the Greater Capital City definition of Greater Darwin on which the majority of the other data is based on. The data set for SMB is only available at LGA area
71 Social Impact of rotations of up to 1,100 US Marines and associated equipment in Northern Australia (Report for the Department of Defence), Deloitte, 2013
USFPI impact on business

Northern Territory Chief Minister Michael Gunner was reported in the *NT News* in February 2018 as saying that “American troops contribute greatly to the Territory socially and also economically.”

On the latter point, an overwhelming majority of those surveyed agreed with the Chief Minister. In response to the question “Do you think the presence of US military personnel has benefited the local economy?” 77% of phone survey respondents answered “Yes” with only 14% of respondents disagreeing. One stakeholder also expressed a desire for the USFPI to be made permanent: “the more they’re embedded economically and socially, the better.”

**Figure 5-11: Impact of US Military on Local Economy**

Do you think the presence of US Military personnel has benefited the local economy?

Key stakeholders agreed broadly with this sentiment, but painted a more complex picture in face-to-face discussions. The majority of stakeholders were of the view that the local economic benefits of the USFPI had been less significant than they had initially anticipated. This is in line with the findings of the 2013 social impact assessment, which noted that “the first rotation of Marines did engage with local businesses, although perhaps not to the extent businesses had hoped.”

Phone survey respondents in 2018 did not appear to be surprised by the local economic impacts of the USFPI, with 54% saying that the local economic benefits were “about the same” as they expected. The difference in perceptions and expectations cited between the public and stakeholders in government and business is likely due to the latter group’s direct engagement with the USFPI and ADF, and their motivation to seek direct benefits for the Northern Territory.

**Figure 5-12: Assessment of Impact**

Would you say that the presence of US Military personnel has benefited the local economy more, less, or about as much as you expected?

Stakeholders consulted were of the view that retail and hospitality businesses in Palmerston and Darwin City experience a “small, but welcome in the tough times” increase in business during the annual MRF-D rotations. When asked why they thought that the impacts were only minor, stakeholders reported to our

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73 Social Impact of rotations of up to 1,100 US Marines and associated equipment in Northern Australia (Report for the Department of Defence), Deloitte, 2013
researchers that they assumed this to be because the USMC are largely away on exercise for extended periods throughout their rotation. Multiple stakeholders in government and business also informed our researchers that meaningful benefits to the tourism industry had yet to materialise, with US military personnel taking occasional short trips out of Darwin, but that “from a tourism perspective, we think they’ve been quiet, removed.” Stakeholders were realistic about the limited free time and disposable income of US military personnel: “I don’t think anyone (in the tourism and hospitality industry) was banking on a windfall out of the USFPI”. This was viewed by some stakeholders as an opportunity: that there is “currently an untapped opportunity to inspire the families of the marines to either holiday in the Territory, or come with access to work for longer rotations.”

An even greater majority of phone survey respondents (82%) believed that the ADF presence created economic benefits for the economy. More generally, stakeholders and the public were clear in their belief that the ADF formed “part of the bedrock” of the Northern Territory’s economy, with sustained positive impacts. Stakeholders made the point that the economic benefits from the ADF’s presence came directly through investment, as well as indirectly through ADF personnel in the community engaging with local businesses.

**Figure 5-13: Impact of ADF on Local Economy**

82% Yes, 9% No, 9% Don’t know

**Working with the USFPI and the ADF**

Our researchers also asked phone survey respondents if they (through their work or business) had had an opportunity to provide services to the ADF or the USFPI. More than a third of all survey respondents reported having provided services to either the ADF (15%), the USFPI (2%) or both (19%). 47% of these respondents own or work for an organisation with less than 50 employees.

**Figure 5-14: Business Size (work of business of those who had provided services to ADF or USFPI)**

- Sole trader: 9%
- 1-15 employees: 25%
- 15-50 employees: 13%
- 50-100 employees: 7%
- More than 100 employees: 40%
- Don’t know/can’t say: 6%

And finally, what is the approximate size of your business or employer?
The vast majority of commentary provided by the respondents when asked “how would you describe your experience working with the ADF/USFPI?” was positive. Of the few who expressed neutral or negative sentiments, some found their experience to be “frustrating because you have to go through so many people” or “very regimented and inflexible”.

When asked to compare their experience working with the ADF/USFPI to other clients, many respondents used words like “efficient” and “professional” to describe working with the military, with some describing their experience as “more difficult” with “more paperwork.”

USFPI processes

A majority of stakeholders consulted believed that local businesses have had difficulty accessing opportunities to provide support and construction services to the USFPI. One phone survey respondent who had worked with the USFPI said that while the ADF was “relatively easy (to work with), but very procedural”, the US military had “different contractual arrangements, very difficult for an Australian company to work with.” This was a sentiment shared by government and business stakeholders, who raised the issue of US government standards as a key stumbling block for Australian businesses.

When it came to larger contracts for infrastructure works, USFPI bond requirements were identified as a potential barrier for local business. This was also mentioned by one phone survey respondent. Business, industry, and government stakeholders in the Northern Territory believe that the requirement to fund a 100% bond is the “single largest impediment to doing business with the US”.

Further, a lack of clarity for Australian businesses regarding the US procurement process was a common concern across consultations, and was considered a potential barrier to engagement. It was noted that key local industry development bodies are developing educational tools to assist local businesses to better understand US procedures to enable further engagement.

Stakeholders in government and business said that they think local businesses are also “unsure how to establish direct communication” and that relevant personnel are “typically not easily accessible”. Smaller contracts were seen as “ad hoc, not enough to keep a business going” and there was a perception that larger contracts were often awarded to businesses from outside the NT.

However, the fact that a local company, Sunbuild, had recently won a $2.4 million contract with the USFPI had been received positively across the community, instilling a degree of hope in other businesses that this relationship will develop further and “open up additional opportunities.”

One stakeholder identified equipment maintenance as an area where they believe local industry could be utilised more effectively: “One big challenge for them (the USFPI) is biosecurity checks on their equipment (when leaving the country), so they often leave the equipment here for the rest of the year. It needs to be maintained. In the past they’ve used a ‘tiger team’ to do that, but we would like to see there be more utilisation of local industry for maintenance, repairs, storage, and the like. It doesn’t matter whether it’s through the ADF supply chains, or direct to locals.” Some stakeholders had a clear sense of a preferred procurement process: “Ideally, everything would be procured here - local businesses could be repairing all their vehicles like they do for the ADF.”

ADF processes

Stakeholders also expressed some frustration regarding what they perceive as a lack of opportunities for local contractors to “have a crack” at the large-scale projects being undertaken by both the USFPI and the ADF. There was a perception amongst stakeholders that Defence preferred to use so-called ‘prime’ contractors, who then subcontract down the value chain, with little investment eventually flowing to local businesses. Stakeholders were encouraged by recent policy developments, but several stakeholders called on the Federal Government to look to the principles of the “Developing the North” and “Closing the Gap” strategies in order to provide greater opportunities to businesses in the Northern Territory.

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Regarding the ADF specifically, most stakeholders agreed that the relationship between local business and ADF was reasonably strong at an operational level, however, there are perceived limitations in the “capacity of local Defence staff to make local decisions”. A number of key stakeholders consulted believed that it had become more difficult to engage with Defence locally in recent years, even as procurement processes had improved, as they believed that “decision-making is occurring interstate” and told our researchers that “there is a view that we (businesses in Darwin) don’t get access to opportunities we could or should, because of Defence procurement”.

One stakeholder contrasted the ADF with the US military, saying the US military “seem invested in a positive outcome – at every level of command, they want this to work and are invested in making it work – without stepping outside of the process.” The stakeholders view was that while the ADF are supportive, “their attitude is that ‘you’re an Australian company, you know the process, just follow the process’.”

Another stakeholder warned that “times are tough here, the economy is hurting. We aren’t seeing the Defence spend coming in strongly enough to create the jobs we need.”

Opportunities

One local business representative commented that “as an Australian business, we want to see the USFPI work and (we) think that continued communication is key to this occurring”. Stakeholders suggested that establishing greater transparency and communication with local industry, Defence and the USFPI could have a positive impact on the local Darwin economy and create opportunities for new business relationships.

Regarding ADF activities, many stakeholders suggested that Defence could do more to “break down” large-scale contracts, or to require prime contractors to do so, in order to ensure that lower-tier, Northern Territory-based contractors could compete for smaller pieces of work. The Australian Industry Defence Network’s supplier readiness programs, still in the process of being rolled out, was identified by multiple stakeholders as another means to better connect businesses along the value chain.
5.3.5. Community safety

**Anti-social behaviour**

The 2013 social impact assessment identified “a low risk of alcohol-induced misbehaviour” as a result of US Marine rotations. It also noted that “on the available evidence, the risks of anyone being subject to physical violence by US Marines, apart from in self-defence, are low. Participants consider the Marines may have a slightly beneficial effect on levels of anti-social behaviour.”

‘Anti-social behaviour’ was defined for phone survey respondents in 2013 and 2018 as occurring “when people do things that show a lack of consideration for others such as drinking in public places and damaging property.” Key stakeholders and phone survey respondents in 2018 spoke to their broader concerns about anti-social behaviour in Darwin and the NT, with one phone survey respondent telling our researchers “It is more a domestic safety issue (than the USFPI or ADF) with the itinerants in town and the attempted break-ins of houses that makes me feel unsafe.”

Figure 5-15: Community safety and anti-social behaviour (mean score out of 5)

<table>
<thead>
<tr>
<th>Perception of safety in public places</th>
<th>Level of anti-social behaviour in the NT</th>
</tr>
</thead>
<tbody>
<tr>
<td>2018 Survey</td>
<td>2013 Survey</td>
</tr>
<tr>
<td>Perception of safety in public places</td>
<td>Perception of safety in public places</td>
</tr>
<tr>
<td>4.3</td>
<td>4.3</td>
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<tr>
<td>4.0</td>
<td>4.0</td>
</tr>
<tr>
<td>Level of anti-social behaviour in the NT</td>
<td>Level of anti-social behaviour in the NT</td>
</tr>
<tr>
<td>3.7</td>
<td>3.7</td>
</tr>
<tr>
<td>3.3</td>
<td>3.3</td>
</tr>
</tbody>
</table>

On a scale of 1 to 5, with 1 being very unsafe and 5 being very safe, how safe do you feel in public places?

Antisocial behaviour occurs when people do things that show a lack of consideration for others such as drinking in public places and damaging property. On a scale of 1 to 5, with 1 being very low and 5 being very high, how would you rate the level of anti-social behaviour in the NT?

The 2018 phone survey results found that, on average, respondents felt safer in public spaces than they did in 2013. Respondents rated “how safe you feel in public places” an average of 4.3 out of 5 (where 1 is very unsafe and 5 is very safe), up from 4.0 in 2013. Conversely, respondents rated the “level of anti-social behaviour” in the Northern Territory at 4.7 out of 5 (where 1 is very low and 5 is very high), up from 3.3 in 2013.

Indeed, 60% of phone survey respondents in 2018 rated the level of anti-social behaviour in the Northern Territory as “high” or “very high”. However, phone survey respondents in 2018 reflected stakeholder views when it came to the impact of US military personnel on the level of anti-social behaviour, with 75% rating this impact as “low” or “very low”. The consensus amongst key stakeholders was that, if anything, the marines were less likely to have a negative effect on community safety than existing community members: “We’ve got more of a problem with youth crime than anything else, be it Marines or ADF.”; and another: “We’re more worried about ice addicts than defence personnel from either country.”

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75 Social Impact of rotations of up to 1,100 US Marines and associated equipment in Northern Australia (Report for the Department of Defence), Deloitte, 2013
Antisocial behaviour occurs when people do things that show a lack of consideration for others such as drinking in public places and damaging property. On a scale of 1 to 5, with 1 being very low and 5 being very high, how would you rate the level of anti-social behaviour in the NT?

On a scale of 1 to 5, with 1 being very low and 5 being very high, what effect do you believe the presence of US Military personnel has had on the level of anti-social behaviour?

Note: Percentages may not sum to 100% due to rounding

One stakeholder compared the US personnel to the ADF, saying that “unlike the ADF, when the Marines are out and about, you sense the presence of the military police, they are so worried about their reputation.” Politeness was a familiar theme in both public consultations and stakeholder consultations, with one stakeholder reporting to our researchers that the US military personnel “behave themselves extremely well. They are polite to a fault.”

Crime and community safety

The 2013 social impact assessment identified concerns regarding the potential for increased alcohol-related anti-social behaviour and sexual assault in Darwin as a result of the US Marine rotations. The US military presence in Okinawa, Japan, was taken as an approximate benchmark to assess the risk of US military personnel committing sexual assault in Australia. The 2013 assessment found that there was a relatively low risk of an increase in sexual assault prevalence, noting that “a worst case Scenario is that Marines would be as likely to commit such crimes as an equivalent sized group of NT males, which could lead to 4.4 sexual assaults (reported or unreported).”

These early concerns were noted during stakeholder and public consultations in 2018, with respondents (including all stakeholders with the exclusion of BaseWatch) mostly in agreement that any fears of increased sexual assault prevalence had not been borne out. One phone survey respondent told our researchers “There were bad things that happened with the US Marines when they came in when I was younger but that has been cracked down on.” One key stakeholder consulted said that “USFPI personnel are probably more accountable than average people when it comes to sexual assault and other criminal activity” noting that “Marines are under quite strict rules and watch their behaviour because they are being watched by military police”.

The 2018 phone survey found that 79% of respondents advised they were not aware of any safety related issues resulting from the presence of actions of US Military presence. One key stakeholder commented that “They deal with a lot of stuff in house, but I’ve never seen an issue with the US Marines being here.” Northern Territory Police representatives told our researchers that US military personnel “conduct themselves very well.”
The most highly-publicised criminal case related to the USFPI that we are aware of was the case of a Marine Corporal Matthew Mueller, who in February 2016 was cleared by a Darwin court of allegations of assault against a massage parlour owner.\textsuperscript{76} Another case is currently before the courts relating to the alleged assault of a woman in Brisbane in July 2018 by a US Marine.\textsuperscript{77} Further, the ABC has alleged in its reporting that “a series of investigations into alleged sexual crimes committed by US marines in and around Darwin have been quietly dropped by Australian and American authorities.”\textsuperscript{78} While the actual number of recorded or alleged sexual assaults appears low, negative perceptions and concerns in this area remain for some Darwin residents.

Survey respondents were concerned about safety issues related to the presence of US military personnel. While only 6\% of phone survey respondents said that the presence of US military personnel made them feel more unsafe, 11\% said they thought that US military personnel had a high or very high impact on the level of anti-social behaviour in the Northern Territory, and 16\% said they were aware of safety issues arising from the US presence. One phone survey respondent stated that “as a nation they benefit us, but when we talk about individual marines being here it just increases violence against women. There have been cases in court where US marines were involved in assaulting a woman.” Reflecting these concerns, in a written submission and face-to-face consultations, the BaseWatch organisation stressed the risk of crimes being committed by US personnel, particularly sexual assault. BaseWatch referenced the well-publicised cases of former MRF-D liaison USMC Colonel Daniel Hunter Wilson (who was the subject of complaints of inappropriate behaviour while in Australia, and was later convicted of sexual offences committed in the United States)\textsuperscript{79}, and the aforementioned Corporal Matthew Mueller. BaseWatch also expressed concerns regarding the requirements placed on US military personnel entering schools (while conducting community engagement activities), claiming that while Australian citizens entering NT schools require police clearance (in the form of a working with children clearance card), “in the case of the Marines, it appears that the NT Solicitor-General has merely declared their presence lawful.”

Some members of the public who attended the consultation sessions expressed a desire for improved communication regarding the procedures and protocols US military personnel are subject to while in Australia.

**ADF and safety**

Stakeholders and the majority of the public believed that the ADF presence in the Northern Territory improved their safety. Phone survey results show that while 47\% of respondents felt safer as a result of the presence of US Military personnel, 67\% felt safer as a result of the ADF presence in the Northern Territory.

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\textsuperscript{76} “US Marine cleared of massage parlour assault allegations”, *NT News*, 19 February 2016.


On a scale of 1 to 5, with 1 being much more unsafe and 5 being much more safe, how does the presence of US Military personnel (Marines and Air Force) make you feel?

On a scale of 1 to 5, with 1 being much more unsafe and 5 being much more safe, how does the presence of the ADF in the NT make you feel?

Note: Percentages may not sum to 100% due to rounding

This sentiment reflected confidence in the ADF, which was broadly reflected across the key stakeholder and community consultations. One key stakeholder commented that “We’ve always had some sort of ADF presence in Darwin. Even before they built Tindal, and I’ve never seen an issue”.

Specific concerns related to the perceived safety implications of development activity close to Darwin Airport in the context of increased aircraft activity were raised at one of the public sessions.

**Jurisdiction**

Community consultations and local news articles discussed concerns that alleged sexual crimes committed by US Marines in around Darwin may not be adequately investigated. An ABC article (referred to earlier in this section) suggested that this “echoes decades of international concern about the cover-up of those crimes by US military personnel serving abroad”\(^80\). It was noted across key stakeholder and community consultations that the Status of Forces Agreement (SOFA) establishing the legal framework under which US personnel are to operate in Australia is seen as a “dated, token document” that does not necessarily apply in all situations. Stakeholders believed that the US military did not have jurisdiction within Australia and Australian laws effectively supersede those of SOFA for USMC on rotation.

**Figure 5-19: Safeguards to Address Community Safety Issues**

In 2013, 65% of respondents believed that sufficient legal safeguards were in place, in 2018 this had decreased slightly to 58%. This may be a result of media coverage, and the sentiment expressed in reports such as the ABC news piece previously referred to, which alleged that an investigation into an allegation of inappropriate behaviour was stalled due to jurisdictional issues\(^81\). Key stakeholders did not share this view, and in one specific case, a relevant stakeholder said that “we feel confident (regarding legal accountability). The US Marine that was involved (in an incident) left, but they brought him back for the trial – so he was held accountable”.

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\(^81\) ibid
5.3.6. Environmental Impacts

Noise

Key stakeholders and community members raised the issue of aircraft noise. However, these comments were largely focused on Pitch Black, which was an active exercise at the time of the consultations. There were limited concerns from stakeholders and the public on the impact of aircraft noise as a result of the USFPI specifically. While a larger proportion (64%) of phone survey respondents believe that noise levels had not increased as a result of the presence of US Military personnel and equipment for the USFPI (up from 56% in 2013), there was still close to a third of all respondents who believed that noise levels had increased.

Figure 5-20: Have noise levels increased

Do you believe that the presence of US Military personnel and equipment has increased noise levels where you live or work or both?

Note: Percentages may not sum to 100% due to rounding

Key stakeholders consulted identified that the community is more generally accepting of aircraft noise “as a part of living in the Territory.” Government stakeholders noted that only a “handful” of complaints were received per annum regarding noise. Those who said noise levels had increased as a result of US military personnel and equipment indicated a significant average increase in these noise levels (38%).

Figure 5-21: % Noise Level Increase

By what percentage do you think the noise levels have increased? (Asked of those who believed that noise levels have increased, 32%, or n=133)

Biosecurity

While our consultations with the Department of Agriculture made clear the strict biosecurity measures that US personnel and equipment were subject to, it was not clear that members of the public were aware of this. The issue of biosecurity, particularly as it relates to food and equipment, was raised at public consultations, with community members again suggesting that the USFPI could be more effective in communicating the standards that US personnel and equipment are subject to.
Natural Environment

When it came to broader impacts on the natural environment, multiple stakeholders expressed a view that “Defence has better environmental controls than National Parks”. The Northern Land Council specifically mentioned species monitoring, water quality and weed control programs at Bradshaw as positive examples of the ADF’s environmental impacts. A total of 70% of phone survey respondents were not concerned about negative impacts on the Bradshaw Field Training Area.

Figure 5-22: Environmental Impact on Bradshaw Training Area

The US Military personnel have been using Defence training areas including the Bradshaw Field Training Area. On a scale of 1-5, with 1 being not at all concerned and 5 being very concerned, how concerned are you that the presence of US Military personnel has had a negative environmental effect in the Bradshaw training area?

Note: Percentages may not sum to 100% due to rounding

In 2013, phone survey respondents were asked to rate their concerns around potential negative environmental impacts at Bradshaw\(^2\) from 1 to 5 (where 1 is “completely unconcerned” and 5 is “very concerned”), returning a mean rating of 1.8. In 2018, phone respondents’ attitudes had changed little, returning a rating of 1.6, suggesting that the community is largely unconcerned by environmental impacts at Bradshaw.

Figure 5 24: Environmental impact at Bradshaw (Mean score out of 5)

The US Military personnel have been using Defence training areas including the Bradshaw Field Training Area. On a scale of 1-5, with 1 being not at all concerned and 5 being very concerned, how concerned are you that the presence of US Military personnel has had a negative environmental effect in the Bradshaw training area?

In a written submission, the Environment Centre NT expressed concerns regarding communication and approval processes, questioning the status given to Defence activities and arguing that “exercises and activities conducted by Defence should conform to the same formal assessment tools and processes as any other proponent would be required to engage with.”

\(^2\) Bradshaw is a primary training area for the USFPI
5.3.7. National Security

Darwin and the Australia-US alliance

Darwin is a city with a high proportion of ADF personnel and their families, and was described as a “defence town”, or a “garrison town” by various stakeholders. Darwin also suffered significant bombing during the Second World War, a point noted by a number of stakeholders consulted, and cited as a basis for the expected strong support for the ADF presence and the US Alliance. A total of 78% of phone survey respondents believed that the US alliance was either “important” or “very important”, and 68% of those surveyed believed that the alliance had had a positive impact on Australia’s national security.

Figure 5-23: Importance of Australia’s alliance with the US

When you think of Australia’s broad network of defence alliances, do you see the US alliance as important? How would you place its importance on a scale from 1 to 5, 1 being not important and 5 being very important?

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<thead>
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<th>Importance Level</th>
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<tr>
<td>Not important</td>
<td>3%</td>
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<tr>
<td>Neutral</td>
<td>13%</td>
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<tr>
<td>Very important</td>
<td>50%</td>
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<tr>
<td>Don’t know/can’t say</td>
<td>4%</td>
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</tbody>
</table>

Q When you think of Australia’s broad network of defence alliances, do you see the US alliance as important? How would you place its importance on a scale from 1 to 5, 1 being not important and 5 being very important?

Figure 5-24: Impact of Australia’s alliance with the US

And do you think that the US alliance is negative or positive for Australia’s national security? How would you rate this on a scale from 1 to 5, 1 being very negative and 5 being very positive?

<table>
<thead>
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<th>Impact Level</th>
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<tr>
<td>Very negative</td>
<td>3%</td>
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<tr>
<td>Neutral</td>
<td>19%</td>
</tr>
<tr>
<td>Very positive</td>
<td>39%</td>
</tr>
<tr>
<td>Don’t know/can’t say</td>
<td>3%</td>
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Q And do you think that the US alliance is negative or positive for Australia’s national security? How would you rate this on a scale from 1 to 5, 1 being very negative and 5 being very positive?
**Australia’s place in our region**

When exploring Australia’s place in our region, close to two in three (65%) survey respondents rated Australia’s relationships with our neighbours as good or excellent, while just 1% of respondents rated these relationships as “poor”. This perhaps reflects Darwin’s status as Australia’s most northerly and “Asian” capital city.

![Figure 5-25: Australia’s relationships with our neighbours](image)

**The USFPI and Australia’s relationships**

26% of phone survey respondents believed that the USFPI had a positive effect on Australia’s relationship with our neighbours. In contrast, 16% believed that the USFPI had a negative effect on those relationships. The majority of respondents (43%) believed that the USFPI has had no impact in this regard.

A number of key stakeholders and phone survey respondents believed that the USFPI had improved Australia’s standing in the region. One stakeholder reported that “Investors from Japan and other regional economies take strength from the US presence, and are more likely to invest in Australia.”

![Figure 5-26: Effect of USFPI on Australia’s relationship with our neighbours](image)

**Q** Thinking about Australia’s place in the region and relationships with neighbouring countries, on a scale of 1 to 5, where 1 is poor and 5 is excellent, how would you rate Australia’s relationship with our neighbours?

**Q** And on a scale of 1 to 5, where 1 is very negative, 3 is no change, and 5 is very positive, what would you say that the effect of the USFPI has been on our relationships with our neighbours?
Adequacy of Australia’s national defence

Phone survey respondents rated the adequacy of Australia’s national defence arrangements at 3.7 (on a scale of 1 to 5 where 1 is poor and 5 is excellent) on average, an increase from 3.1 in 2013.

Figure 5-27: Australia’s national defence arrangements (Mean score out of 5)

A total of 58% of respondents believed that the USFPI had successfully improved the “ability of the Australian and US militaries to work together” (as discussed in the “Awareness and Details” section), and a similar 53% believed that the effect of the USFPI on Australia’s national defence had been positive. Only 5% of respondents believe it has had a negative impact on Australia’s national defence. Many phone survey respondents think: “it’s good for Darwin, it’s good for national defence”; and “we are better equipped to defend ourselves.”

Figure 5-28: Effect of USFPI on Australia’s national defence

Negative sentiments expressed regarding the USFPI’s impact on national security through the phone survey and public consultations focused on the potential risks associated with Australia’s military alignment with the United States. Comments included: “send them home, we don’t need them. We should be partnered up with China, they are our biggest trading partner.”

Negative sentiment regarding the national security aspects of the USFPI was also articulated by the representatives of the BaseWatch organisation, who believed that the US military presence and the broader Australia-US alliance itself had negative implications for Australia’s national security. In a written submission and face-to-face consultations, the BaseWatch representatives indicated that they believed the presence of US military personnel and equipment in Australia limited the decision-making power of the Australian Government regarding its participation in future US military activities.
A minority of respondents to the phone survey also expressed concerns regarding Darwin or Australia becoming more of a target for terrorist or other attacks as a result of the US military presence. As one phone survey respondent stated: “They’re pretty much the targets of the world…We don’t have terrorists here, but America has been attacked by terrorists.” BaseWatch also raised this as a risk: “Of far greater concern is the attractive soft target posed by Marines and other USA service personnel on recreational leave in our city.”

In April 2017, during a period in which the North Korean nuclear weapons program was at the forefront of global news bulletins, one Australian media outlet reported that “Darwin is being used by North Korea as proof that the United States is preparing for nuclear war.” It was reported that the North Korean Worker’s Party newspaper Rodong Sinmun singled out the USFPI, and the marine rotations in particular, as “the largest scale US military presence in Australia after World War 2.” A small but significant number of phone survey and public consultation respondents held concerns about the USFPI increasing the risk of foreign attack, commenting: “they make Darwin a target for military action. If China wants to fire a shot it makes Darwin a potential target.” In contrast, this incident was also raised by other stakeholders saying that they did not consider it to represent a significant risk. As one key stakeholder put it: “when North Korea flared up, people got worried, but people didn’t blame the US, and it dissipated.”

Stakeholders consulted across government, business, and the community were not significantly concerned by perceived national security issues associated with the USFPI. While key stakeholders acknowledged the clear strategic statement made by hosting the USFPI: “the alliance, and the USFPI, shows we are with the US”, many cited international exposure and links, and all said that there was no evidence it had affected relationships with neighbouring countries. One key stakeholder said that “1,500 troops in Darwin is not a threat to China.”

Several key stakeholders mentioned the case of the Port of Darwin, which was recently leased to a company with links to the Chinese Government. The contrast between this commercial arrangement and the increased US military presence in Darwin was viewed as a metaphor for the strategic questions facing Australia by multiple stakeholders. As the New York Times put it in a 2017 article, “Darwin, a humid, crocodile-infested coastal city at the northern end of this vast country, captures the past, present, and future of Australia’s alliance with the United States.”

84 ibid
85 New York Times, May 1 2017
Appendices
Appendix A: Modelling Framework

KPMG-REG is one of KPMG’s proprietary computable general equilibrium models of the Australian economy. It has been specifically designed for policy analysis. KPMG-REG is a well-established model that has been used to model a wide range of policies and scenarios. These include:

- **Commonwealth Treasury Tax Review** – A major project undertaken during 2015-16 involving the provision of economic analysis and modelling of tax reform options for the Tax Review. This involved estimating marginal excess burdens for all major taxes and modelling a range of tax reform scenarios involving the GST, personal income tax and company income tax.

- **Financial Services Council (FSC)** – “The Economic Impact of a GST-funded Company Income Tax Cut” examining the impacts of a 22 per cent company tax rate, lower personal income taxes, and a higher GST on a broader base. The proposed tax reform formed the basis of the FSC’s 2015 submission to the Tax White Paper.

- **NSW Business Chamber (NSWBC)** – A 2015 report to the NSWBC entitled “Economic Modelling of Property Tax Reform Options” that quantified the economic effects on NSW and Australia of four scenarios to replace conveyancing stamp duties on property with land taxes.

- **Australian Mines and Metals Association (AMMA)** – Analysis of workplace relations and the competitiveness of the Australian resources sector. This report was part of the AMMA’s submission to the Productivity Commission 2015 inquiry into Australia’s workplace relations framework. The report focussed on the competitiveness of the resources sector and economy-wide impacts associated with potential changes in the Australian workplace relations framework.

- **CPA Australia** – A study of the impacts of GST reform and tax simplification. This was a 2015 update of a similar 2011 study that analysed the potential impact on the Australian economy of CPA Australia’s proposed GST-based tax reform agenda. Four GST reform scenarios were evaluated: (i) 10 per cent GST on a broader base; (ii) 15 per cent GST with current exemptions; (iii) 15 per cent GST and applied to health and education; (iv) 15 per cent GST on a broader base.

In basic form, KPMG-REG distinguishes 114 sectors and commodities, based on the 2013-14 input-output tables published by the Australian Bureau of Statistics (see ABS (2016) Australian National Accounts: Input-Output Tables (Product Details), 2013-14, Cat. No. 5215.0.55.001). Primary factors are distinguished by 114 types of capital (one type per industry), nine occupations, two types of land, and natural resource endowments (one per industry).

KPMG-REG models the economy as a system of simultaneous equations that represent interrelated economic agents operating in competitive markets. Economic theory specifies the behaviour and market interactions of economic agents, including consumers, investors, producers and governments. These agents operate in domestic and foreign goods markets and capital and labour markets. Defining features of the theoretical structure of KPMG-REG include:

- Optimising behaviour by households and businesses in the context of competitive markets with explicit resource constraints and budget constraints;
- The price mechanism operates to clear markets for goods and primary factors; and
- At the margin, costs are equal to revenues in all economic activities.
Producer behaviour
A representative firm in each sector produces a single commodity. Commodities are distinguished between those destined for export markets and those destined for domestic markets. Production technology is represented by nested CRESH functions (Hanoch, G. (1971), ‘CRESH production functions’, *Econometrica*, vol. 39, September, pp. 695–712.) allowing a high degree of flexibility in the parameterisation of substitution and technology parameters. Energy goods are treated separately to other intermediate goods and services in production, and are complementary to primary factors.

Labour market
The supply of labour is determined by a labour-leisure trade-off that allows workers in each occupation to respond to changes in after-tax wage rates, thus determining the hours of work they offer to the labour market. The overall supply of labour is normalised on working-age population.

Household behaviour
Household consumption decisions are determined by a linear expenditure system (Stone, R. (1954), ‘Linear Expenditure Systems and demand analysis: an application to the pattern of British demand’, *The Economic Journal*, vol. LXIV, pp. 511–27) that distinguishes between subsistence (necessity) and discretionary (luxury) consumption. The linear expenditure system in KPMG-REG is calibrated using income and expenditure elasticities that have been estimated using Australian time series data on household income and expenditure.

Households can also change their mix of imported and domestically-produced commodities depending on relative prices and tastes. In the short term, total household spending moves with household disposable income. In the long term, total household spending adjusts to ensure there is a constraint on the economy’s accumulation of net foreign liabilities.

Investment behaviour
Investment behaviour is industry specific and is positively related to the expected rate of return on capital. This rate takes into account company taxation, a variety of capital allowances and the structure of the dividend imputation system.

Foreign sector
Foreign asset and liability accumulation is explicitly modelled, as are the cross-border income flows they generate and that contribute to the evolution of the current account. Along with other foreign income flows such as labour payments and unrequited transfers, KPMG-REG takes into account primary and secondary income flows in the current account. These are particularly important for Australia as they typically comprise a significant share of the balance on the current account.

Government sector
KPMG-REG’s theoretical structure and database facilitates detailed modelling of state government (including local) and Commonwealth Government fiscal accounts and balance sheets, including the accumulation of public assets and liabilities. Detailed government revenue flows are modelled, including all major direct and indirect taxes, and income from government enterprises. Government spending includes public sector consumption, investment and the payment of various types of transfers (such as pensions and unemployment benefits).

Calibration
The key data inputs used by KPMG-REG are input-output tables. The tables quantify the flows of goods and services from producers to various uses: intermediate inputs to production, inputs to capital creation, household consumption, government consumption and exports. The input-output tables also quantify the flows associated with primary factor inputs: labour, capital, land and natural resources. In KPMG-REG, the data inputs are combined with the model’s theoretical structure to quantify behavioural responses, including:

- price and wage adjustments driven by resource constraints;
- tax and government spending adjustments driven by budget constraints;
- input substitution possibilities in production; and
- responses by consumers, investors, foreigners and other agents to changes in prices, taxes, technical changes and taste changes.
Simulation design

KPMG-CGE has a flexible simulation design: it can be run in comparative-static or dynamic mode. In comparative-static form, the economy moves from the baseline equilibrium to a new equilibrium representing a long-term outcome, usually indicating the effects of a change 10 years after it has occurred. The long-term outcome is an equilibrium where adjustment is complete in all markets. Thus, industry investment and capital usage has fully responded to perturbations in rates of return. Similarly, the labour market has fully responded to perturbations in unemployment rates.

The dynamic mechanisms in KPMG-REG relate to the accumulation of physical capital, foreign liabilities and government debt. The dynamic properties of KPMG-REG provide for gradual adjustment of industry investment to perturbations in rates of return. Similarly, the labour market gradually returns to equilibrium after a perturbation to the unemployment rate.

In dynamic mode, KPMG-REG is run twice; first, to create a baseline (or business-as-usual) representation of the economy; second, to create a policy scenario that includes the economic shock of interest (e.g., a tax change). The baseline scenario is designed to be a plausible projection of how the economy will evolve in the short term. In the long term, the baseline scenario evolves to a balanced growth path consistent with the long-term properties of well-specified dynamic macroeconomic models (McCandless, G. (2008), The ABCs of RBCs: An Introduction to Dynamic Macroeconomic Models, Harvard University Press, Cambridge, Massachusetts.). The policy scenario comprises the baseline scenario in addition to the economic shock of interest. The difference between the value of a particular variable in the policy scenario and its value in the baseline scenario quantifies the impact of the economic shock of interest on that variable.

Why use a CGE model?

The theory described above is necessary to quantify the effects of a project or policy across the entire economy. Models without general equilibrium linkages ignore feedback effects across different parts of the economy (i.e., economic agents). Input-output models are a popular example of a model without general equilibrium linkages. Thus, input-output models are often criticised for providing overly-optimistic economic impact assessments of projects and policies. The Australian Bureau of Statistics summarises the limitations of input-output models as follows:86

- **Lack of supply–side constraints**: it is assumed that extra output can be produced in one area without taking resources away from other activities, thus overstating economic impacts.
- **Fixed prices**: Prices are assumed to be unaffected by policy and any crowding out effects are not captured.
- **Fixed ratios for intermediate inputs and production**: it is assumed that there is a fixed input structure in each industry and fixed ratios for production.
- **No allowance for purchasers’ marginal responses to change**: it is assumed that households consume goods and services in exact proportions to their initial budget shares. This equally applies to industrial consumption of intermediate inputs and factors of production.
- **Absence of budget constraints**: it is assumed that household and government consumption is not subject to budget constraints.

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Inherent Limitations
This report has been prepared as outlined in the Scope section. The services provided in connection with this engagement comprise an advisory engagement, which is not subject to assurance or other standards issued by the Australian Auditing and Assurance Standards Board and, consequently, no opinions or conclusions intended to convey assurance have been expressed.

No warranty of completeness, accuracy or reliability is given in relation to the statements and representations made by, and the information and documentation provided by the Department of Defence and other stakeholders consulted as part of the process.

KPMG has indicated within this report the sources of the information provided. We have not sought to independently verify those sources unless otherwise noted within this report.

KPMG is under no obligation in any circumstance to update this report, in either oral or written form, for events occurring after the report has been issued in final form.

The findings in this report have been formed on the above basis.

Third Party Reliance
This report is solely for the purpose set out in the Scope section and for the information of the Department of Defence, and is not to be used for any other purpose or distributed to any other party without KPMG’s prior written consent. In that regard, we note that KPMG has consented to the public release of the deliverable by the Department of Defence.

This report has been prepared at the request of the Department of Defence in accordance with the Official Order dated 3 May 2018. Other than our responsibility to the Department of Defence, neither KPMG nor any member or employee of KPMG undertakes responsibility arising in any way from reliance placed by a third party on this report. Any reliance placed is that party’s sole responsibility.

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