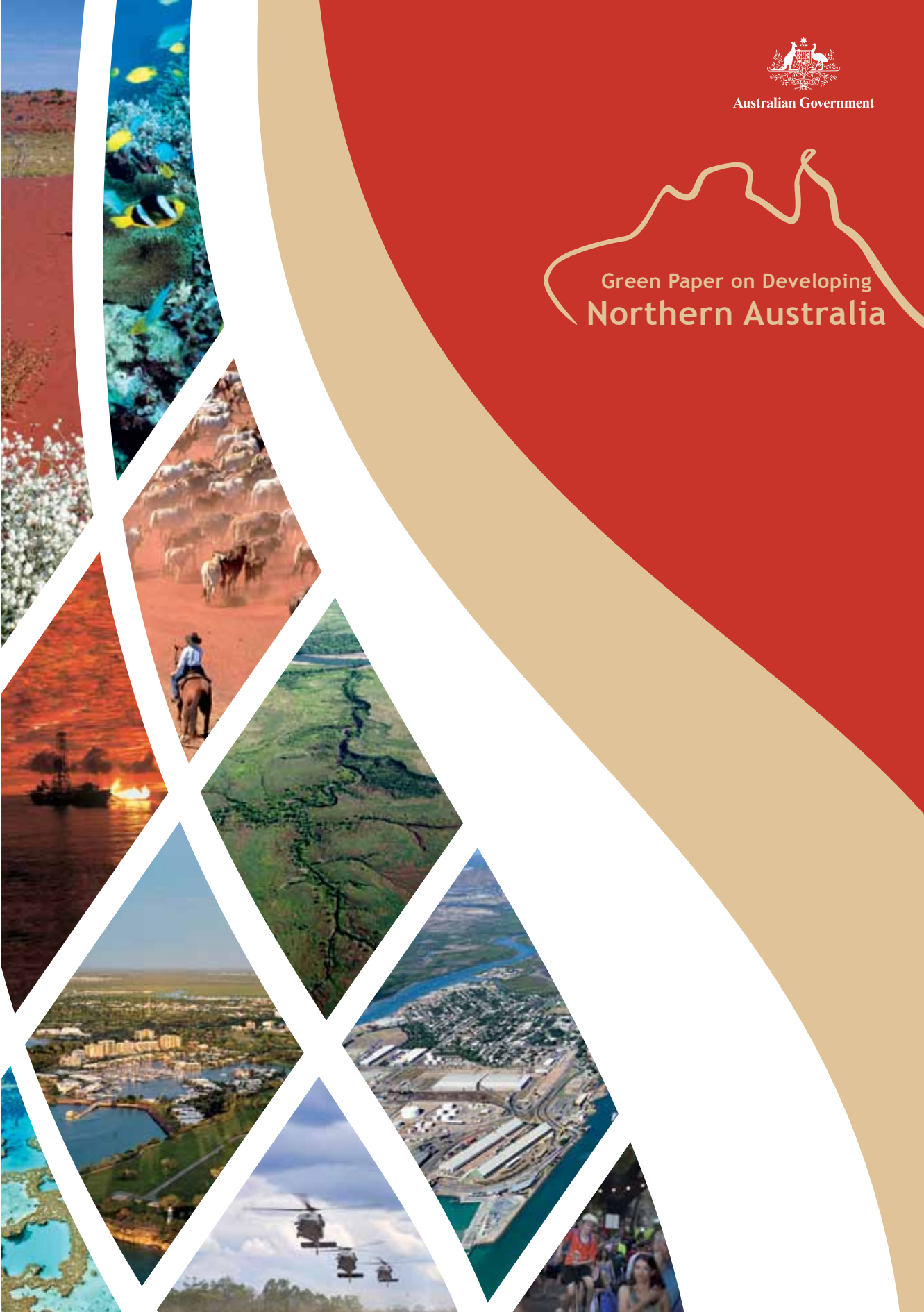




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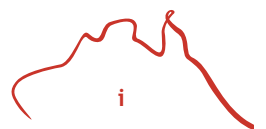


# Green Paper on Developing Northern Australia





# **Green Paper on Developing Northern Australia**



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## ■ Foreword

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### Foreword from the Prime Minister and Deputy Prime Minister



Northern Australia should grasp its full potential for the benefit of people living there and right around our country.

Northern Australia's proximity to the Asian and tropical regions provides unparalleled economic opportunity for the nation.

Northern Australia should no longer be seen as the last frontier: it is, in fact, the next frontier.

The Government is determined to put in place the policies and plans that will lay the right foundation for long term growth.

Northern Australia has existing strengths and natural advantages in agriculture, resources and energy and, with the right policy settings, can expand opportunities in tourism, education and health services as well.

Last year the Coalition committed to a comprehensive White Paper on Developing Northern Australia.

This Green Paper builds on our pre-election statement the Coalition's 2030 Vision for Developing Northern Australia. It is part of the Government's Economic Action Strategy to build a strong, prosperous economy for a safe, secure Australia.

The Green Paper sets out the Government's views on the major challenges and opportunities facing northern Australia, and the policy directions that could tackle them.

Most importantly, it invites your contribution to this debate.

We urge all interested parties, including communities, businesses and individuals, to have their say.

The Government is already working with the Queensland, Western Australian and Northern Territory Governments to remove impediments to growth and investment.

We want less duplication, less blame shifting and a federal compact that's modern and less at odds with the intent of our Constitution.

We want to work together with our partner Governments to deliver better infrastructure, less regulation and more services in the north.

We invite you to read the Green Paper and to participate in this debate.



**The Hon Tony Abbott MP**  
*Prime Minister of Australia*



**The Hon Warren Truss MP**  
*Deputy Prime Minister  
Minister for Infrastructure and  
Regional Development*



## ■ Executive Summary

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Northern Australia is a diverse and vibrant region rich in opportunities to drive growth in jobs and investment for the benefit of all Australians.

The Government is committed to the development of northern Australia and to that end will deliver a White Paper on Developing Northern Australia that sets out a clear, well defined policy platform for promoting growth across the region in order to realise its enormous economic potential.

The Green Paper on Developing Northern Australia seeks to facilitate feedback and further debate on the opportunities, risks, challenges and priority policy options to drive growth across the region.

Constructive consultation and feedback on the Green Paper will ensure the Government delivers a White Paper that provides a comprehensive, considered and clearly defined pathway for the longer term development of northern Australia.

Northern Australia, broadly defined as the parts of Australia north of the Tropic of Capricorn, spanning Western Australia, Northern Territory and Queensland, is an area of approximately three million square kilometres with a growing population of around one million people.

It is a region that holds abundant promise but faces significant economic, geographic, environmental and social challenges, including high transport and service delivery costs; harsh, extreme and often unpredictable weather; a sparse population; infrastructure challenges; and competition for skilled labour.

However, northern Australia also benefits from its many natural advantages and existing strengths, including in agriculture, tourism, tropical knowledge, mining and energy. The north sits at the intersection of the two great regions of global economic and population growth – the Asian region and the Tropical region. The Tropical region encompasses everything between the Tropic of Cancer and the Tropic of Capricorn and includes 40 per cent of the world's population.

The rise of these regions, underpinned by a set of global macro-trends, will create significant opportunities for northern Australia to capitalise on its strengths and unlock major economic value. This growth will ultimately create new jobs, greater income and better prospects for all Australians.

Northern Australia's existing comparative advantages have been leveraged to create a region that has achieved substantial growth over recent decades in particular. Northern Australia is home to sophisticated cities, vibrant regions and a diverse range of strong and growing industries.

Nonetheless, there is more that can be done to realise the region's significant potential to be a driver of growth and investment to the benefit of all Australians.

Unlocking the potential of northern Australia will require government leadership that fosters private sector investment and ingenuity.

The Northern Australia Strategic Partnership – comprising the Prime Minister, Deputy Prime Minister, Premiers of Queensland and Western Australia and Chief Minister of the Northern Territory – has been established to provide a

forum for coordinated national leadership on the development of northern Australia. The Strategic Partnership has already held its first meeting and is committed to working collaboratively to inform the development and implementation of the White Paper.

While government commitment and coordination is important, private sector initiative will be essential. The role of government in developing the north will be to create a regulatory and economic environment that fosters viable private sector investment.

In view of the challenges, strengths and opportunities that characterise northern Australia, the Government has identified six broad policy directions that could be pursued in the White Paper. These broad policy directions would build on existing initiatives and streamline consideration of any new initiatives proposed for the White Paper.

Table 1: Six broad policy directions for northern Australia

INFRASTRUCTURE	LAND	WATER
<div>Productive new infrastructure</div> <div>Better use of existing infrastructure</div> <div>Better planning and understanding of infrastructure opportunities and benefits</div>	<div>Diverse and longer pastoral leases</div> <div>Flexible leases for Indigenous landholders</div> <div>Efficient native title processes</div> <div>More accessible information</div>	<div>New infrastructure to support industries and communities</div> <div>Comprehensive water resource assessments</div> <div>Best practice planning and management</div> <div>Water markets</div>
BUSINESS, TRADE AND INVESTMENT	EDUCATION, RESEARCH AND INNOVATION	GOVERNANCE
<div>Deregulation agenda for the north</div> <div>Workforce availability and skills that meet business needs</div> <div>New markets and greater trade links</div> <div>Innovative business-friendly policies</div>	<div>Building capabilities and skills</div> <div>Partnerships with world leading institutions</div> <div>More international students</div> <div>Effective engagement with international development in the region</div>	<div>Collaboration across governments</div> <div>Effective engagement with, and presence in, northern Australia</div> <div>Efficient service delivery</div> <div>Capable and sustainable local institutions</div>

In progressing these policy directions, the Government will consider actions that:

- focus on economic development, trade and investment and jobs, with appropriate social, environmental and biosecurity safeguards
- create the right climate to maximise investment and innovation, avoiding prescriptive or interventionist approaches
- remain consistent with national approaches and deliver benefits to other parts of Australia
- seek to advance low or no cost solutions given the current tight fiscal environment, and facilitate private sector funding wherever possible
- respect and recognise the roles and responsibilities of state and territory governments.

The Green Paper on Developing Northern Australia builds on the Coalition's 2030 Vision for Developing Northern Australia (the 2030 Vision) by posing a range of questions to inform a considered approach to the development of the White Paper.

The 2030 Vision outlines a range of priority policy options that are canvassed by this Green Paper and will be considered in the preparation of the White Paper. These include establishing a Cooperative Research Centre on developing northern Australia; funding water infrastructure, such as dams, through a Water Project Development Fund; developing a 15 year rolling infrastructure priority list; relocating elements of some Commonwealth agencies to the north; and improving land use arrangements.

Feedback on these policy options, as well as other questions and policy options identified by this Green Paper will be crucial to stimulate debate and attract constructive input for the White Paper.

Through the White Paper, the Government will outline concrete, achievable actions that free business from red tape and foster private investment to realise the vision for northern Australia.

## INTRODUCTION

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For the purposes of the White Paper, northern Australia is broadly defined as the parts of Australia north of the Tropic of Capricorn, spanning Western Australia, the Northern Territory and Queensland. While using this definition as a guide, the intention is to be inclusive. Communities, industries and issues that fall below the Tropic will be considered where they form part of a northern development agenda.

A broad characterisation of ‘northern Australia’ is useful, but it belies the diversity across and within jurisdictions, communities and industries. The challenges and opportunities are different in large urban centres, fast growing service centres and remote Indigenous communities. These differences, where relevant, will be acknowledged and reflected in the White Paper.

Northern Australia is an area of approximately three million square kilometres with a growing population of around one million people. It is represented by three state and territory governments, 74 local governments, and the Australian Government. Most policies that affect the day to day lives of people in the north are determined by governments based in Darwin, Brisbane and Perth. To develop the region, closer cooperation and action will be needed from all levels of government and the private sector.

Developing northern Australia is by no means a ‘starting from scratch’ exercise. The north is already on a growth trajectory and has been developing for many decades, with much success. There are valuable lessons to be learned from these experiences, both to avoid repeating mistakes and to build upon past achievements.

In considering northern Australia’s future, there is a tendency to focus on remote mining and agricultural developments. These are very important, but at the same time the vast majority of northern Australia’s population — and much of its economic activity — is centred in its cities, such as Townsville, Cairns, Darwin, Mackay and Karratha. These cities, and their immediate surroundings, are growing rapidly. They face many of the pressures that confront expanding southern cities. Their performance in the decades ahead will influence the fortunes of northern Australia as a whole.

Outside the urban centres, northern Australia has a sparse population and long distances between settlements and to key markets. These areas support surrounding industries and also face many of the same issues affecting rural and remote communities across the country.

Northern Australia has natural advantages relating to resources, agriculture, energy, tourism and the environment. It has geographic advantages stemming from its proximity to a fast growing Asia and as one of the few developed tropical economies in the world. Australia’s strategic focus is shifting to our north, including an increased focus on trade, defence, border protection and engagement with our northern neighbours.

Economically, northern Australia has been strong in recent years, outperforming large parts of the south. The resources and energy boom has driven growth and a huge inflow of private investment, such as the Ichthys Liquefied Natural Gas Project — the Northern Territory’s largest ever construction project. Incomes have risen in many parts of the north and on current forecasts northern Australia’s population will continue to grow at above the national average.



This highlights the vital, yet sometimes overlooked, role the north plays in Australia's overall economic success. The region is an integral part of the national economy and helps underpin our international reputation. The task is to consolidate this existing growth, take advantage of the opportunities that flow from it — and provide a platform to go to the next level.

In doing so, it is important to recognise that northern Australia faces economic, environmental and social challenges. Infrastructure and service delivery, for example, can be more costly or limited in the north than elsewhere in the country. Housing costs in the Northern Territory are \$82 a week above the national average (Northern Territory Council of Social Services 2013). Competition for skilled labour is intense with high turnover. Almost 25 per cent of the mining workforce in Queensland is replaced each year — estimated to cost industry \$140 million annually (Kinetic Group 2014).

Comparatively harsh and extreme weather conditions are more common in northern Australia. For some, this can make the north a difficult place to live and work; for others it is an appealing feature of northern life. Average annual rainfall ranges from 300 mm to over 1,000 mm across the region (BOM 2014), and is extremely variable both seasonally and between years. This affects the cost effectiveness of infrastructure investment, makes water availability less reliable from year to year, and exposes irrigation developments to greater commercial challenges.

These are some of the challenges for northern Australia, but with the right planning and policies they can be managed and overcome.

## APPROACH TO THE WHITE PAPER

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All cities and regions in the north face particular challenges in growing and developing. Successful development depends on understanding what is possible and what is practical. This must be driven by careful analysis and planning, as well as close collaboration between all parties. Some policies will have broad relevance to northern Australia and others are likely to be location, industry or sector specific.

The Government's objectives for the White Paper and for northern Australia are to:

- focus on economic development, trade and investment and jobs, while retaining appropriate social, environmental and biosecurity safeguards
- create the right climate to maximise private sector investment and innovation, avoiding prescriptive or interventionist approaches
- remain consistent with national approaches and deliver benefits to other parts of Australia
- seek to advance low or no cost solutions given the current very tight fiscal environment, and facilitate private sector funding wherever possible
- respect and recognise the roles and responsibilities of state and territory governments.

The 2030 Vision emphasised that northern development is best maximised through private sector investment and ingenuity. This does not remove governments from the equation, but their main role is to put the right regulatory and policy settings in place to allow business to do what it does best — create jobs and wealth.

To achieve this, the Government will focus on settling long term policy directions and addressing the major barriers to northern development. This will allow the private sector to pursue specific opportunities.

The White Paper will:

- describe contemporary northern Australia, including its natural, cultural and infrastructure assets, as well as major current public and private sector initiatives and investments
- analyse the major strategic, economic, social and demographic trends that are creating opportunities or challenges
- analyse the major barriers to, and necessary conditions for, current and future development
- outline the Australian Government's agreed policy directions, supported by specific actions, for the development of northern Australia
- provide implementation plans (over two, five, 10 and 20 years) for delivering these policies.

This Green Paper follows a similar structure, but the opportunities, barriers and policy directions are presented to generate debate and comment, rather than as finalised Government policies. Rather than adopting a sector by sector approach, the Green Paper is framed around strategic issues, with industry examples used where relevant. Implementation plans are not included, but examples of current initiatives are provided. Each section includes questions to prompt feedback.

While the focus is on northern development, it is important to recognise that a prosperous northern Australia benefits the nation as a whole.

There are also many lessons from experiences in the north that can apply throughout the country. New initiatives to develop northern Australia, should they prove successful, need not be limited to the north.

The White Paper is being developed alongside other relevant Australian Government initiatives. These include the White Papers on Agricultural Competitiveness, Energy, the Reform of the Federation, Tax Reform and Defence and the Review of Indigenous Training and Employment Programmes. The White Paper will draw on and complement these initiatives.

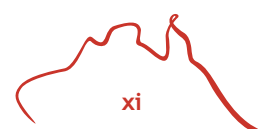
A number of other national policies will promote economic growth and development in the north. These include the one-stop-shop for environmental approvals, the abolition of the carbon tax and an annual \$1 billion reduction in red tape. These will be considered in the White Paper.

## ENGAGEMENT

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Past efforts to unlock the north have often been criticised for not considering the views and aspirations of those living and working there. The Government is determined to ground the White Paper in the reality of northern Australia. Rather than imposing solutions, the White Paper will be informed by:

- views on this Green Paper, including through formal submissions
- the report and recommendations of the Parliamentary Joint Select Committee on Northern Australia, following its extensive consultation across the region



- further targeted consultation with business, industry, Indigenous groups, communities and academia, to test ideas and ensure a practical focus on workable solutions.

The Government will also consider the options suggested in the 2030 Vision, which itself was based on extensive consultation by Coalition Members of Parliament and Senators. Infrastructure Australia is contributing to the Government's deliberations, through an examination of infrastructure needs in northern Australia commissioned by the Deputy Prime Minister.

At the government level, the Prime Minister, supported by the Deputy Prime Minister, has established a Northern Australia Strategic Partnership with the Premiers of Queensland and Western Australia and the Chief Minister of the Northern Territory. The Strategic Partnership will be informed by an Advisory Group drawn from northern Australia.

The Strategic Partnership has already met and is committed to working collaboratively to develop northern Australia. At this meeting, the Strategic Partnership outlined priorities, particularly around infrastructure, access to labour and governance. These are reflected in this Green Paper.

## OPPORTUNITIES

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Northern Australia's natural and cultural resources and proximity make it uniquely placed to help meet Asia's growing demand for minerals and energy, high quality food and fibre, tourism and education — and to function as a 'gateway to Asia'. In the coming decades, Asian markets will continue to grow rapidly, with Asia expected to account for almost half the world's economic

output by 2050 (Asian Development Bank 2011). While there will be fierce competition for the region's burgeoning trade and investment opportunities, with the right policies in place, northern Australia will feature prominently.

Similarly, northern Australia is well positioned to play a major role in meeting the global energy challenge. With its rich and diverse energy resources — including potential in gas and renewable energy — and proximity to markets, the north stands ready to capitalise on the increasing demands of emerging economies.

Northern Australia's strategic significance is growing in line with its rising economic importance. The north is important for defence and border protection and in supporting operations in Australia's northern and western approaches. This strategic value extends to biosecurity, which helps maintain and increase access to markets and manages pest and disease risks.

Advances in technology present significant opportunities for the north. In the short to medium term, innovations such as broadband and satellite technologies can benefit industries, including agriculture and mining, improve government service delivery and the attractiveness of living and working in more remote locations. In the longer term, transformational change through innovation and technology will help drive further development in the north.

As urbanisation increases, the cities of northern Australia have an opportunity to become service centres for vast areas that house important industries and small populations. This is already evident in Alice Springs, Cairns, Townsville and Darwin, where many services are centralised for more remote populations. Careful planning will

help ensure that growing cities can provide the liveability that citizens seek and that rural and remote communities are not disadvantaged.

There are also opportunities for education, research and development, skills and training services in northern Australia. The expertise and capabilities of northern universities and research institutions — particularly around tropical knowledge in the areas of medicine, infrastructure and land and water management — provides opportunities to deliver products and services to local industries and global markets. Education and training providers have an important role in skilling the local workforce, to ensure the north is ready to capitalise on economic growth.

Further opportunities for northern Australia rest with greater diversification of the economy, which is dominated by the resources and energy sector. This would lessen the impact of cyclical downturns in commodity prices, global resource and energy markets (especially for small and medium business). The northern economy will remain reliant on its natural resources, but further diversification into new industries, along with growth in current industries such as agriculture and education, is both possible and desirable.

Northern Australia is home to a large, relatively young Indigenous population, which will play a major role in the north's long term development. Indigenous people and business are already working in a range of sectors including mining, energy, agriculture, land management, conservation and tourism. But social and economic disadvantages persist. The Government's new approach to Indigenous policy is focussed on creating opportunities through education and economic development.

Northern Australia's unique environment, including its natural assets and resources, brings a range of development opportunities for industries and communities. Effective management of these assets and resources — underpinned by a clear understanding of their potential — will deliver long term benefits. There are particular opportunities around harnessing the north's water resources to support industry.

## BARRIERS

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Unfortunately development opportunities in the north are not always realised or are too costly and slow to progress. Like many parts of Australia, the north faces challenges creating, managing and sustaining growth. These challenges are wide ranging, encompassing infrastructure, the climate, sparse populations, service availability, institutional capacity, physical location and regulatory frameworks. They are generally not unique to northern Australia, but often manifest in more complex or acute ways.

For example, there are often claims that infrastructure limitations in northern Australia constrain growth, both in the north's cities and its regions. Perceptions around limited or lacking infrastructure can also act as a deterrent for investment and potential residents. These issues are compounded by proposals for new infrastructure — particularly those characterised as 'transformative' — often struggling to satisfy conventional cost benefit analysis, particularly when assessed against projects in the major southern cities.

Land access arrangements can be problematic in northern Australia. This reflects factors such as overlapping tenure arrangements and inflexible

conditions for land use. Stakeholders also raise concerns over the efficiency of the native title system and unrealised potential for Indigenous land owners to use their land to benefit from social and economic opportunities.

Water is a critical resource for both the northern economy and the environment. But northern Australia's variable climate, together with gaps in understanding of surface and groundwater systems, can hinder the development of new water infrastructure and more reliable access to water resources. This has negative implications for both industry and urban development.

Businesses of all sizes in northern Australia report challenges affecting their daily operations and potential to expand or innovate. They cite greater difficulty attracting and retaining skilled and unskilled labour than some businesses in southern Australia and their competitors overseas. The cost and availability of insurance can affect financing options. Liveability factors are relevant here, as are arguments that taxation regimes either do not, or should do more to, boost northern development (including through labour mobility).

Stakeholders express frustration around regulatory and approval processes, stating they are costly, lengthy and inefficient. Such inefficiencies can, for example, drive up the costs of transport infrastructure and delay resource investments and therefore profits. There are also concerns that some labour market arrangements limit business growth by imposing higher costs.

Business success is heavily dependent on reliable trade and access to markets, both domestic and international. Attempts to capitalise on the growth of Asia can be hampered by a range of trade barriers, including tariff and non-tariff measures. Conversely, potential overseas

investment in northern Australian business can be constrained by our own systems and processes. Such barriers can disproportionately affect northern Australia when they add to already high costs.

There are a number of governance challenges facing northern Australia. Stakeholders are concerned that local knowledge and local communities are not always considered when decisions are made that affect northern Australia. A lack of human, financial and institutional capacity in some organisations, communities and industries can also affect the quality of planning, investment and service delivery at the local level — and consequently constrain development at the regional level. A lack of clarity around the respective responsibilities of the levels of government can also create inefficiencies and duplication of effort.

Northern Australia's remoteness means that factors such as higher transportation costs and costs of living can have a greater impact than elsewhere. This reinforces the importance of identifying those barriers that can be removed — and doing so quickly.

## DIRECTIONS

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In view of the opportunities and the barriers facing northern Australia, the Government has identified possible policy directions that could be pursued in the White Paper. These would build on existing policies for development and be designed to support national, as well as northern, growth. Further information on some of the existing public and private sector initiatives relevant to northern Australia is at [Appendix B](#).

The Government recognises that economic infrastructure that caters for future growth, lifts productivity and opens up new opportunities for

business and industries is a priority for the north. Social infrastructure (schools, hospitals and public open spaces) can also act as a catalyst for development, by making northern communities more attractive places to live and work.

This means building on existing approaches to infrastructure prioritisation and investment in the north but also exploring new ones. It must include removing government barriers to greater private sector involvement. New investments, whether public or private, must be predicated on long term strategic planning for the relevant cities, townships and industries. They should also have regard for the national context.

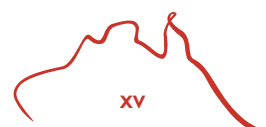
The arrangements around both land and water in northern Australia need to change if industries and communities are to take forward their development plans. The Government supports initiatives that will deliver more productive and sustainable land and water use. This can be achieved through better information on existing arrangements, greater understanding of resource potential and more flexible and simpler access or usage conditions. Water infrastructure should also be a focus, including dams, informed by the work underway by the ministerial working group chaired by the Minister for Agriculture. It also means improving planning and management, including through enhanced water market arrangements.

The Government is committed to ensuring the business environment in northern Australia can take full advantage of our booming region, promoting greater levels of trade, investment and growth. Critical to this is cutting red tape across all levels of government, reducing costs to business and ensuring a flexible and mobile labour supply. This must be driven by smart deployment of government resources and effective engagement with regional neighbours.

Industry priorities must be clear and reflected in such engagement. There are good initiatives underway to capitalise on northern Australia's trade and investment potential — and scope to achieve more.

The Government recognises the achievements and potential of tertiary education, research and innovation in northern Australia. Universities and institutions should be encouraged to continue to expand their activities and networks. There is more to do to foster education, research and innovation in northern Australia, including by building greater expertise, promoting research excellence and pursuing new domestic and international ventures. This will improve northern Australia's global reputation as a centre for education and innovation and help build the skills base in the north.

Finally, the Government sees good governance as essential to long term development in northern Australia. This means overcoming unhelpful divisions between the north and the south, ensuring the economic significance of the north to the nation is understood, clarifying the roles and responsibilities of the different levels of government, applying the principle of subsidiarity where appropriate, and better reflecting northern Australia in decision making. Boosting the capacity of representative bodies, business and communities will help position northern Australia as a more competitive and innovative region. Greater cooperation between all levels of government, communities and business — coupled with an improved regulatory environment — will be essential.



## NEXT STEPS

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These possible policy directions are relevant to northern Australia as a whole, but any potential actions to deliver them must reflect the nuances and differences across sub-regions, sectors and industries. They must be delivered systematically, and sometimes at the same time. A number of actions will coalesce around particular themes – for example, cities as the economic ‘engine rooms’ of the north, the critical role of Indigenous communities in northern development, and the specific opportunities for agriculture, tourism and resources and energy.

Many options for advancing economic development in the north do not require taxpayer money, but instead rely on Government better facilitating the private sector. The Government is committed to returning the budget to surplus — a sound and sustainable fiscal policy

benefits all of Australia, but particularly growth in the north given its significant investment needs. In view of the current budget challenges the Government will place particular emphasis on low or no cost actions, as well as more effective and efficient use of existing funding to deliver more meaningful results.

This Green Paper sets out the opportunities, barriers and potential policy directions in more detail and invites further insight, comment and debate on the issues and possible actions. Central to pursuing these directions is settling who has responsibilities to progress them and over what timeframes. The White Paper will set out the necessary policies and specific actions to achieve a long term vision for northern Australia.

Further information on how feedback can be provided is at Box D6.

## SECTION A

### Profile of Northern Australia

Northern Australia is characterised by rich cultures, unique landscapes and biodiversity, modern and growing cities, vast mineral and energy wealth, important agricultural developments and iconic tourist destinations.

It has a long history and has undergone many changes, particularly over the last century. For over 50,000 years Aboriginal and Torres Strait Islander peoples have lived on and managed northern Australia's lands and seas. In the late 1800s, the population grew as people from the south followed the paths of explorers such as Burke and Wills. Land was cultivated for crops or used for cattle grazing and townships were established.

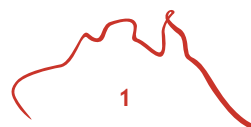
In recent decades, increasing migration from Europe, Asia and the Pacific has seen parts of northern Australia become more diverse and multicultural. Towns and cities continue to grow, particularly along the north east coastline. Most recently, the growth of the minerals and energy sectors (predominantly coal and gas), along with a highly mobile workforce, has seen the economy and culture of northern Australia undergo further change.

This section explores:

- population and demographics
- the natural environment and resources
- the economy
- education and health
- infrastructure
- land

A number of characteristics are integral to northern Australia's development, including:

- The north is not an uncharted frontier. It has a fast growing population, mostly located in coastal cities. These cities are grappling with the benefits and pressures of urbanisation, similar to other cities around the world.
- Northern Australia is already growing, with potential for further economic growth. It has benefited from the resources boom and been a major contributor to Australia's economic success.
- The north is extremely diverse. In addition to its fast growing cities, there are many smaller rural and remote communities. Some are experiencing rapid population and economic growth; others face entrenched disadvantage and uncertain futures.
- The northern climate and landscapes are highly variable. This presents challenges — perceived and real — around liveability and development.



## SECTION A: TELL US WHAT YOU THINK

1. Are these the major characteristics of northern Australia?
2. How do these characteristics differ across and within northern Australia?
3. What features of northern Australia are the most important to its current growth and future development?
4. What do the population, demographic, employment and urbanisation trends mean for northern Australia?
5. What are the prospects and major risks for the northern Australian economy over the next decade? What aspects of the northern Australian economy should be a focus for governments?

## DEFINING NORTHERN AUSTRALIA

Northern Australia is broadly defined as the parts of Australia north of the Tropic of Capricorn, spanning northern Western Australia, the Northern Territory and northern Queensland.

Areas south of the Tropic that are integral to the north's development will be viewed within the context of 'northern Australia', where relevant. Alice Springs, for example, is an important regional centre servicing a number of surrounding communities and industries in northern Australia.<sup>1</sup>

The rate of population growth varies across northern communities, in some areas reflecting the resources boom. Parts of the north have grown at more than three times the national average while others have grown at less than half this rate.

The northern population is geographically concentrated (ABS 2011a). The majority of people live along the coastline of north east Queensland, particularly in the growing cities of Townsville, Cairns and Mackay, along with Darwin in the Northern Territory. Outside these areas, most of northern Australia is either sparsely settled or has no permanent human presence (see Figure 1).

## POPULATION AND DEMOGRAPHICS

Despite covering almost half of Australia's mainland, northern Australia has a relatively small population of just over one million people — five per cent of all Australians. This is expected to continue to grow, with annual population growth of around 1.9 per cent over the past decade, above the national average of 1.5 per cent (ABS 2014).

Figure 1: Population density of northern Australia (2011)

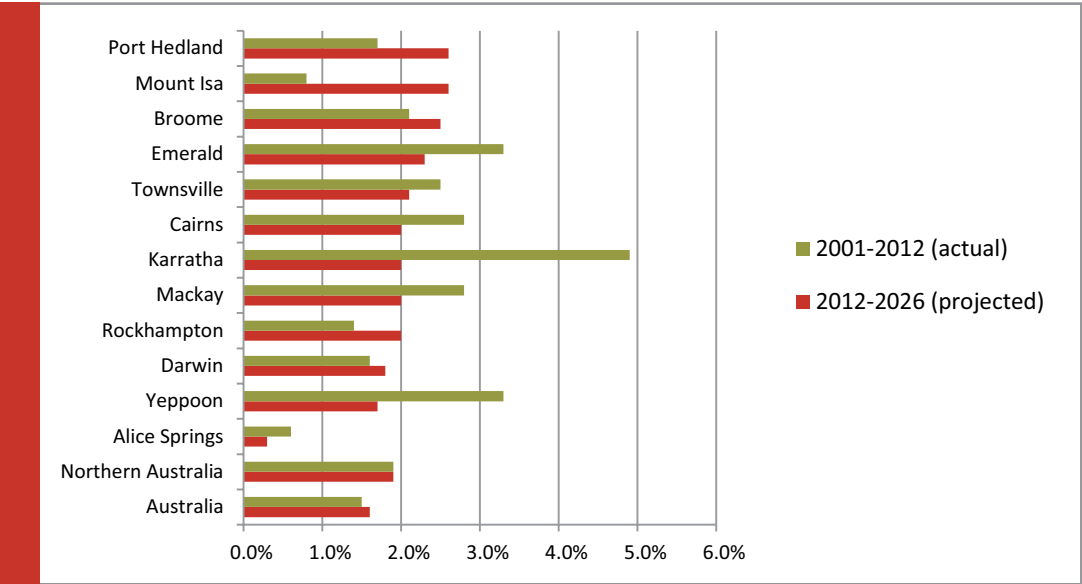


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The north’s major urban areas are expected to continue to grow in coming decades, consistent with global trends in urbanisation. Population projections indicate that the largest northern cities will increasingly dominate the region, with some of the highest growth rates in the country (see Figure 2 and Figure 3).

Darwin, for example, had the highest growth (191 per cent) of all Australian capital cities from 1973 to 2013 (ABS 2014). Expansion of these centres supports improved services and amenities, including domestic and international transport links. It has also created challenges for governments and communities alike — particularly in relation to water, energy, housing and other infrastructure.

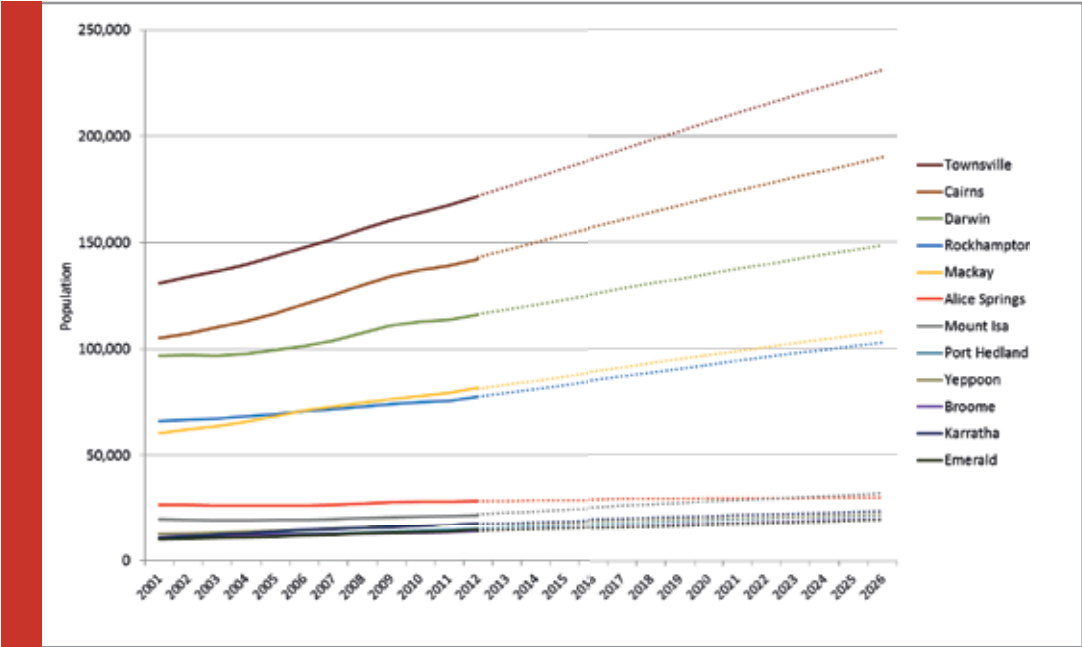
Figure 2: Annual population growth actual (2001-2012) and projected (2012-2026)



Source: Department of Infrastructure and Regional Development, unpublished, 2014.

Northern Australia’s cities are domestic and international gateways for goods, people and services and bring together businesses in one location. This allows businesses to share knowledge and costs, boosts innovation, increases employment opportunities and supports better matching of skills with jobs.

Figure 3: Estimated resident population (2001-2012) and projected population (2012-2026), significant urban areas



Source: Australian Bureau of Statistics, 2013, *Regional Population Growth Australia 2012-13*, cat. no. 3218.0; and Australian Bureau of Statistics, 2013, *Statistical Local Area population projections 2011 (base) to 2026 Preliminary* — customised projections prepared for the Department of Social Services by the Australian Bureau of Statistics (accessed on [www.health.gov.au](http://www.health.gov.au))

Urban centres in northern Australia also experience high rates of domestic departures and arrivals. Between 2006 and 2011, Darwin and Townsville had the highest average flows of people moving to and from the city (as a percentage of the population) of all Australia's major cities (Department of Infrastructure and Transport 2013). This can have implications for housing affordability, service provision and labour supply.

Outside the major cities, mining, energy, agricultural and tourism activities in the north are serviced by regional towns. Some are almost entirely dependent on these sectors for their ongoing viability. A small number of people live in rural and remote communities, many of which are Indigenous. These communities face many challenges, particularly around infrastructure and access to services.

Northern Australia has a relatively young population compared with the rest of the country. Around 22 per cent of people are under 15 years of age and only around 3.7 per cent are aged 75 and over, compared with 19 per cent and 6.3 per cent for Australia more generally (ABS 2012a). Working age males outnumber females. These statistics reflect the influence of the male dominated minerals and energy sectors (among the largest private sector employers in the region), the trend for people to leave northern Australia when they retire and the relatively low life expectancy among Indigenous Australians.

More than 30 per cent of Australia's total Indigenous population call the north home (ABS 2011a). Over 16 per cent of people in northern Australia identify as Indigenous, compared to three per cent for the rest of Australia (ABS 2011a). The Indigenous population is much younger than the

non-Indigenous population and is growing at a faster rate (BITRE 2009). These factors mean northern economic development is likely to improve opportunities for Indigenous Australians — and makes improving Indigenous outcomes a critical part of the development agenda.

## NATURAL ENVIRONMENT AND RESOURCES

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Northern Australia has a distinct climate, unique natural landscapes and abundant natural resources, including minerals and energy.

The north experiences a humid wet season from October to April, with average maximum temperatures above 33 degrees. Tropical cyclones typically develop during the wet season, bringing high winds and flooding rains along coastal areas, with large systems often moving inland. Conditions are cooler during the dry season, averaging 30 degrees in the far north and mid-twenties in the southern tropics (BOM 2014). In line with global temperature increases, northern Australia has warmed over the last century, by between 0.7 and 0.8 degrees. Projections indicate a continued warming trend in the tropics, consistent with that expected globally.

More than 60 per cent of Australia's total rain falls in the north. It is concentrated along the far northern coastal areas, with many regions experiencing over 1,000 mm of rain in the wet season — over 90 per cent of the annual rainfall (BOM 2014). Rainfall significantly decreases moving south and west. Communities such as those in the Pilbara and Alice Springs experience low annual rainfall (less than 350 mm) — in fact, the Pilbara experiences some of the lowest rainfall in coastal Australia (BOM 2013).

Since 1970, rainfall has increased by about 30 to 50 mm each decade in parts of the Northern Territory and northern Western Australia. Conversely, eastern and central Queensland have seen a drying trend of the same amount each decade for the same period (CSIRO 2012a). It is unclear if these trends will continue, however globally monsoon rainfall is likely to intensify this century (IPCC 2013).

High evaporation rates are a feature of the north — Lake Argyle in Western Australia loses a quarter of its volume through evaporation every year. This presents unique challenges for the development of water resources, with traditional methods of storing water less effective in the north than in the south.

Northern Australia's climate shapes its diverse landscapes, which include tropical rainforests, wetlands and mangroves, extensive grasslands and desert. Many of these are globally significant and support rich biodiversity, with plant and animal species found nowhere else in the world. This is an important part of Australia's international reputation and tourism offering. The north is home to seven World Heritage Sites with outstanding natural and scientific values: the Great Barrier Reef, the Wet Tropics of Queensland, Kakadu National Park, Uluru-Kata Tjuta National Park, Ningaloo Coast, Purnululu National Park and the Riversleigh Australian Fossil Mammal Site. The cultural values of Kakadu and Uluru-Kata Tjuta are also recognised on the World Heritage List.

The Government is committed to caring for the unique Australian landscape through direct and practical policy measures under the four pillars of clean air, clean land, clean water and national heritage. In accepting the science of climate change and the potential impacts, including on northern Australia, the Government

is implementing its Direct Action Plan to reduce emissions. This includes the Emissions Reduction Fund to provide incentives for cleaning up our environment through activities such as revegetation, investing in soil carbon, cleaning up power stations, capturing gas from landfill and increasing energy efficiency.

Northern Australia holds world class deposits of iron ore, uranium, base metals, bauxite and oil and gas (see Box A1). Australia has the world's largest economic demonstrated resource of recoverable coal (ABS 2012b), with 35 per cent of reserves in northern Australia (Geoscience Australia 2014). The Bowen Basin in Queensland holds one of the world's largest deposits of bituminous coal. All of Australia's known manganese ore and diamonds are in the north, along with almost all of Australia's phosphate rock. Over 70 per cent of Australia's known resources of iron ore, lead and zinc, as well as significant deposits of silver, bauxite, tungsten and molybdenum are found in northern Australia (Geoscience Australia 2013a). There are also substantial gas reserves across the region (Geoscience Australia 2013a).

## BOX A1: RESOURCES AND ENERGY IN NORTHERN AUSTRALIA

The resources and energy sector is a major contributor to northern Australia. It drives infrastructure investment and is a major employer.

The north contains a number of the world's largest resource provinces and mines, including the Pilbara iron ore province, Bowen Basin coal province, Argyle Diamond Mine, Mount Isa lead-zinc province and the world's largest manganese mine at Groote Eylandt. Australia's only producing phosphate mine is near Mount Isa, and there are vast quantities of bauxite at Gove in the Northern Territory and Weipa on Cape York in Queensland.

There is a pipeline of new mining ventures throughout the region, with the Bureau of Resources and Energy Economics estimating \$231 billion of major projects are committed, \$147 billion at the feasibility stage, and up to \$81 billion at the publicly announced stage. A further \$24 billion worth of major projects have been recently completed, such as the Argyle Diamond Mine's multibillion dollar expansion, and Fortescue's 40 million tonnes per annum Kings Valley iron ore mine (BREE 2014).

Northern Australia's mineral resources have also led to a thriving mining equipment, technology and services sector, particularly in Cairns, Townsville, Mackay and Rockhampton. Around 200 companies in the north supply resource projects around the world, providing leading edge technologies and services, with a niche in servicing operations in tropical or remote environments.

The north also has well established offshore oil and gas industries as illustrated by the Woodside operated North West Shelf Project. There has been unprecedented investment in this industry, with the six major projects under construction in northern Australia expected to treble Australia's liquefied natural gas (LNG) export capacity by 2017-18.

## THE ECONOMY

Northern Australia's recent success has been an important feature of Australia's overall economic resilience during a volatile period for the global economy. The northern Australian economy is significantly driven by the resources and construction sectors (which together have represented on average over 40 per cent of the north's industry output over the last decade) (ABS 2013) and, to a lesser extent, agriculture and tourism. The strength of the minerals and energy sector in particular — together with strong economic institutions and a flexible economy — was a major factor in helping Australia outperform most other developed countries during the global financial crisis.

Over the last decade, the global resources boom has transformed the northern economy

on the back of enormous levels of capital investment. It has also supported movement of large numbers of workers across Australia. Despite a recent slowdown in investment in Australia's mining sector, demand for northern Australia's minerals and energy resources is expected to remain strong over the longer term, underpinned by growth in the major emerging markets across Asia.

The performance of the northern economy has generally been reflected in solid employment and rising incomes (see Figure 4). Around 85 per cent of employment in the north is located in towns and cities (ABS 2011a). The northern cities have on average both higher workforce participation and lower unemployment than non-urban areas.

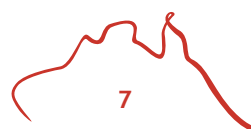
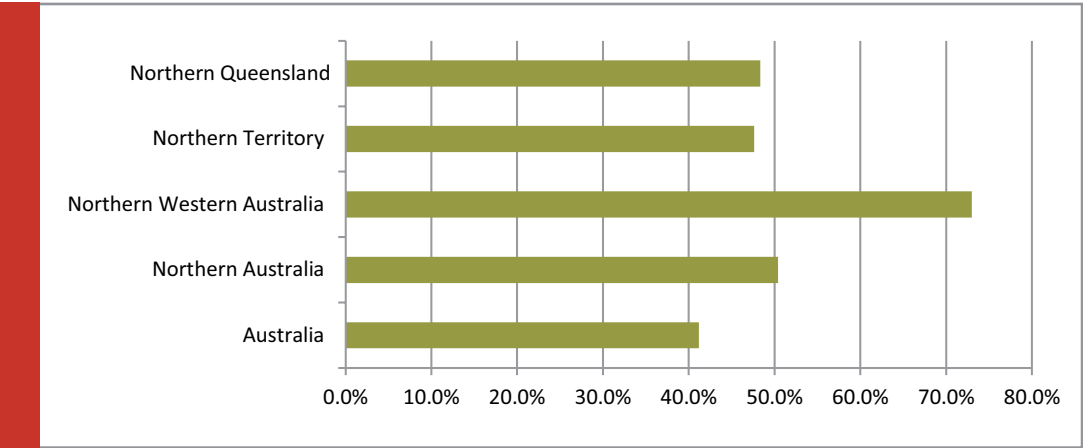


Figure 4: Wage and salary growth (2001-2012) (per cent)



Source: Australian Bureau of Statistics, 2011, *Estimates of Personal Income for Small Areas, Time Series*, cat. no. 6524.0.55.002, Australian Bureau of Statistics, Canberra.

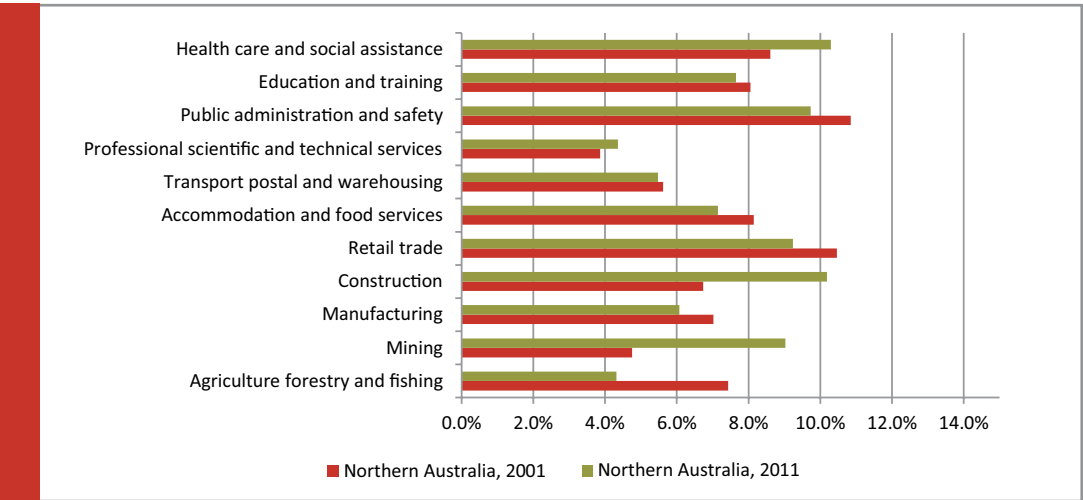
Unemployment across northern Australia has generally matched the low national rate over recent years, with the Northern Territory having one of the lowest unemployment rates in the country. More recently there has been a steady increase in northern unemployment and a sharp rise in northern Western Australia, reflecting the transition from the construction phase of the mining boom to the less labour intensive production phase.

Notwithstanding this recent slowdown, direct employment in the minerals and energy resources

sectors has grown significantly, increasing to nine per cent of total employment, up from around five per cent in 2001 (see Figure 5).

The strength of the mining sector has also supported growth in related services such as construction and transport. Since 2001, the construction sector’s share of total employment in northern Australia has risen from around seven per cent to over 10 per cent. At the same time the share of employment in agriculture (including forestry and fishing) has nearly halved, in line with national trends.

Figure 5: Northern Australian employment by industry (2001-2011)



The public sector also plays a major role in the northern economy. Public administration, education, health care and social assistance accounted for almost 30 per cent of total northern Australian employment in 2011 (ABS 2011a). The Australian Defence Force (Defence) has a longstanding and substantial presence, with over 15,200 service personnel and public servants based in the north, including Alice Springs. There are also 6,000 other Australian Government employees across northern Australia (see Figure 6).

Accommodation, food services and retail trade account for around 16 per cent of employment in the north, while the agriculture sector (including forestry and fishing) accounts for around four per cent.

Total capital expenditure in the northern jurisdictions has risen to around twice the level of investment in the rest of Australia over the last three years (see Figure 7). This is dominated by LNG investment, with six major LNG projects underway in northern Australia — including

## BOX A2: AGRICULTURE IN NORTHERN AUSTRALIA

Agriculture is integral to the economic, environmental, social and cultural fabric of the north, with northern Australia often associated with images such as mustering Brahman cattle, burning cane fields and, more recently, crocodile farms.

In 2005-06, the gross value of agricultural production at the farm gate in northern Australia was \$4.4 billion. This grew to \$5.2 billion in 2010-11 (ABARES 2013b), around 11 per cent of Australia's total production of \$46 billion (ABS 2012c).

The development of agricultural industries in the north has largely reflected the availability of water and the quality and locations of soils.

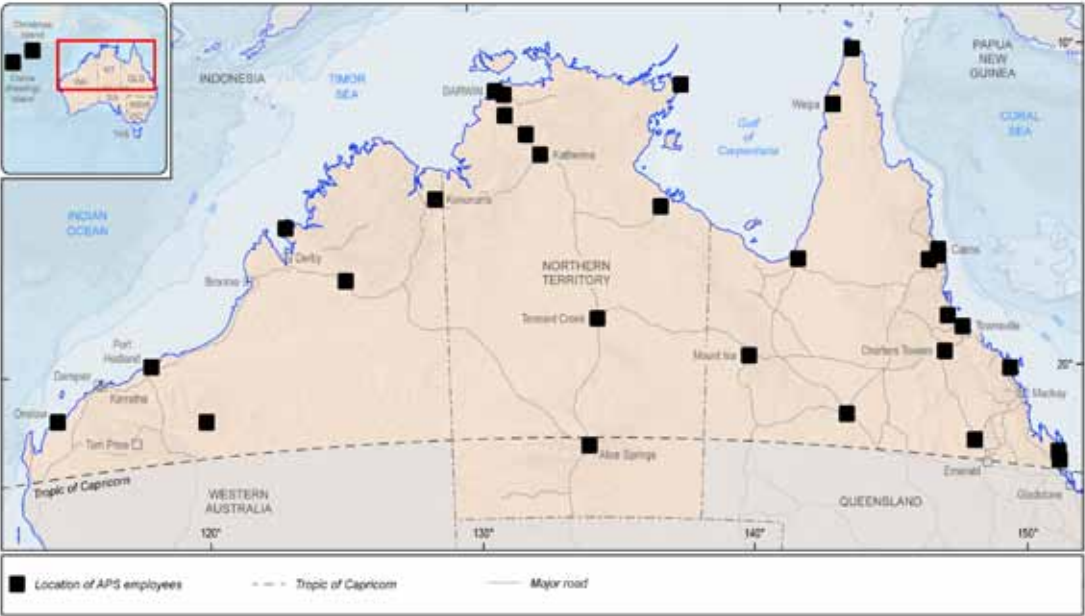
The pastoral industry is by far the largest industry, generating around 57 per cent of the region's total agricultural production. There are around 11.7 million cattle in northern Australia — 45 per cent of the entire national herd (ABARES 2013b).

Northern Australia is also an important producer of crops. It accounts for millions of tonnes of raw sugar each year and more than 90 per cent of Australia's mango and banana production. Many other products are also grown, such as melons, pumpkins, red grapefruit, maize, chia, chickpeas, beans, cotton, sunflowers, millet, sorghum and sandalwood. Other industries include native and plantation forestry, wild catch fisheries, pearls, prawns and barramundi aquaculture. The gross value of fisheries production in the north was around \$404 million in 2011-12.

Of the many attempts to establish large scale agricultural developments in northern Australia, the Ord River Irrigation Area in Western Australia is perhaps the most prominent. With its first stage established in the 1970s, today farmers in the Ord produce a range of high value horticulture, field crops and sandalwood. The completion of Ord Stage 2 will increase farm land from 14,000 to 28,000 ha, with a Stage 3 proposed to include expansion across the Northern Territory border.

Foreign investment plays an important part in the development of agriculture in northern Australia. In December 2010, one per cent of Australian agricultural businesses were wholly or partly owned by foreigners. In the Northern Territory 20 agricultural businesses (accounting for 3.2 per cent of agricultural businesses) were wholly or partly under foreign ownership — the largest proportion among the states and territories (RIRDC 2011a).

Figure 6: Location of Australian Public Service employees

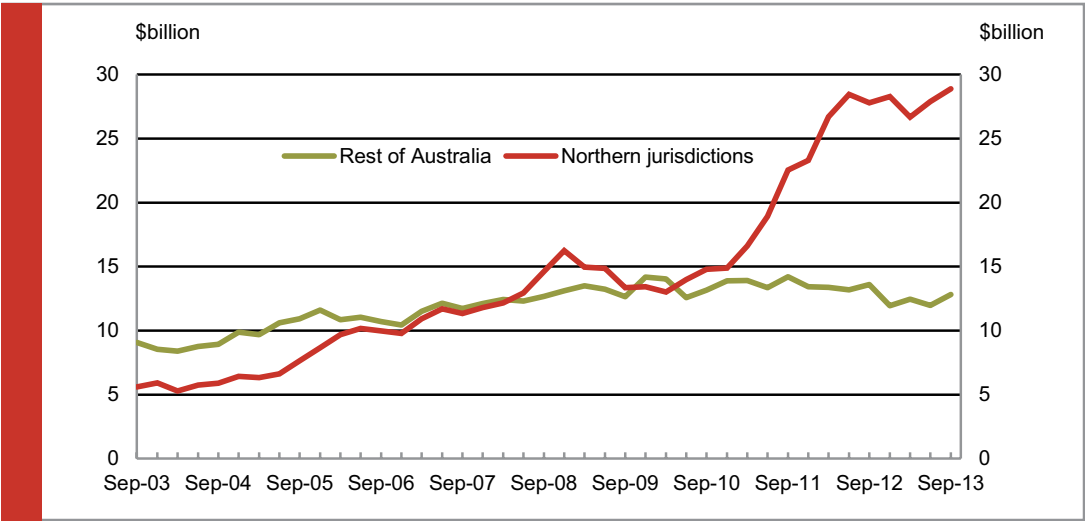


© Commonwealth of Australia (Geoscience Australia) 2014. Data sourced from Australian Public Service Employment Database

Gorgon LNG, which will be Australia’s largest single investment project, estimated at US\$54 billion (Chevron 2013). In addition, committed iron ore and coal projects in northern Australia are worth over \$23 billion (BREE 2014). In 2012, total foreign direct investment in Australia’s mining industry was \$206 billion (ABS 2012d), much of it in the northern jurisdictions.

Northern Australia accounts for a significant share of Australia’s exports. In 2012-13, the value of international exports by sea via northern Australian ports reached \$121 billion — 55 per cent of the Australian total. Of these exports, 84 per cent (by value) were coal, petroleum, gas (and related) and crude materials including iron ore (see Figure 8).

Figure 7: Capital expenditure, 2003 - 2013

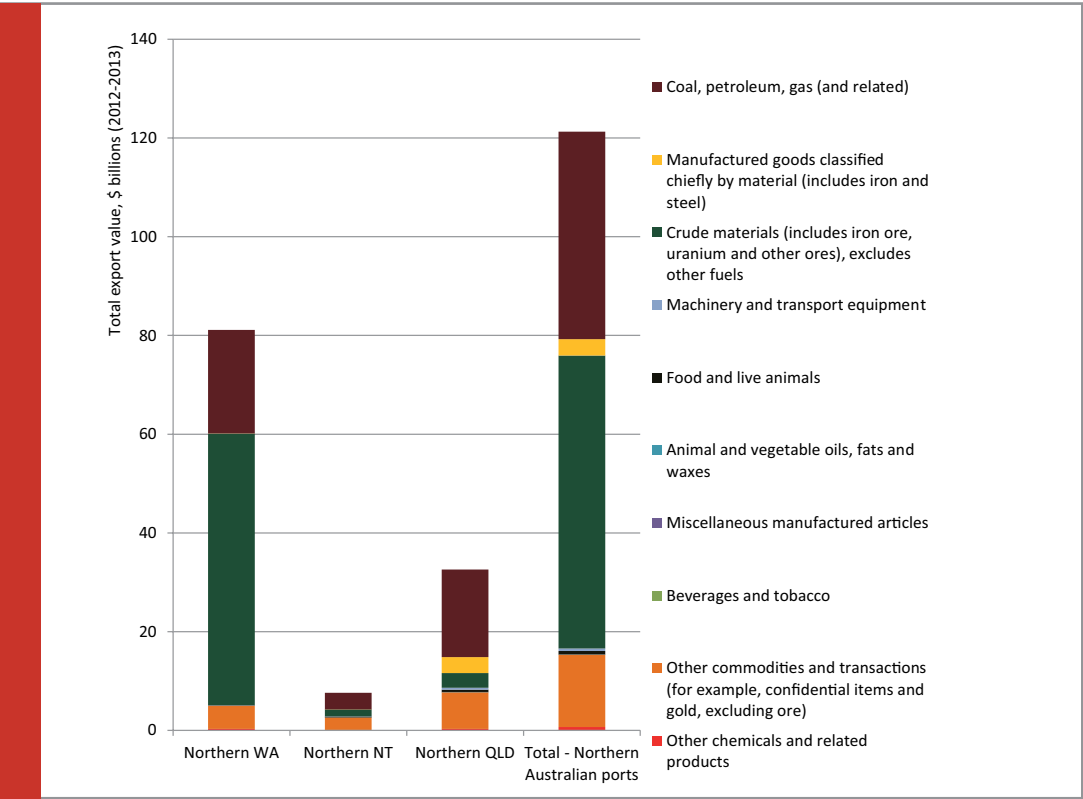


Source: Australian Bureau of Statistics, 2013, *Private New Capital Expenditure and Expected Expenditure, Australia* cat. no.5625.0

Two of Australia’s largest coal export ports are in the north — Hay Point and Abbot Point — with exports from Abbot Point in Queensland doubling between 1996 and 2013 (DFAT 2013). Western Australia’s iron ore ports at Port Hedland, Port of Dampier, Cape Lambert and Cape Preston are some of the largest in the country.

jurisdictions will account for nearly 42 per cent of the Australian economy (up from 35 per cent in 2011), and that gross regional product will increase by three per cent on average every year from 2020 (Deloitte Access Economics 2011).

**Figure 8: Exports through northern Australian sea ports by value and commodity classification**



Source: Bureau of Infrastructure, Transport and Regional Economics analysis based on Australian Bureau of Statistics International Cargo Statistics, unpublished, various years

The majority of northern Australia’s resources are exported to Asia — particularly China, Japan, Indonesia and South Korea. Meeting the energy needs of the Asia Pacific region this way has major geopolitical as well as economic significance.

Overall, long term prospects for the northern economy remain strong. Projections by Access Economics suggest that by 2040 northern

However, there are challenges. Strong aggregate economic growth masks diverse patterns between regions. High growth and high incomes tend to be linked to regions with significant mining activity, such as the Pilbara. While this does bring benefits, it places pressure on other industries and smaller businesses in these regions, including competition for labour.

## BOX A3: TOURISM IN NORTHERN AUSTRALIA

Tourism plays an important role in the northern Australian economy. In the Northern Territory, for example, the industry provides five per cent of the total income. Tourism related employment is nearly triple the national average in the Northern Territory (Tourism and Transport Forum Australia 2013), with one in eight Territorians employed in the sector (Tourism NT).

The vast majority of visitors to northern Australia (around 90 per cent) are domestic tourists (Tourism Research Australia 2013). Traditionally, international visitors have been European or American, but Asian markets (especially China) have recently improved (Tourism Research Australia 2013). With more direct flights from Japan and China, Cairns has directly benefited from this increase in Asian visitors.

Despite this, the recent performance of northern Australia's tourism industry has been somewhat disappointing. There has been a decline in international visitor numbers — down around 17 per cent since 2005 compared to national growth of almost 18 per cent (Tourism Research Australia 2014). International visitor numbers in the Kakadu, Arnhem and Katherine Daly regions have fallen by more than 50 per cent over the past decade (Tourism Research Australia 2013). Only 39 per cent of international tourists and five per cent of domestic tourists travelling to northern Australia engage in Indigenous experiences (Tourism Research Australia 2014).

While there has been ongoing marketing investment and government support for the industry, northern Australia is still seen by some as a relatively remote and high cost tourist destination (United Nations 2013). By global standards many local products are underdeveloped (Tourism Australia) and there is increasing competition from lower cost, more accessible destinations, including in south east Asia. The northern tourism industry is also challenged by many of the broader issues facing the region, such as infrastructure needs, workforce constraints, complex approvals processes and seasonal limitations.

A concerted effort to reinvigorate the north's tourism industry will ensure it meets its full potential. World class facilities, a well trained workforce and commercially sustainable transport links will be essential — but so will robust business models and sound market plans. This should be supported by a regulatory framework which encourages investment in the industry.

At the same time, some non-mining sectors and other communities have not experienced such growth and lag behind national averages in employment and incomes. The unemployment rate is over 20 per cent in some parts of all three northern jurisdictions. The tourism sector has also experienced weaker conditions in recent years (see Box A3).

State government forecasts suggest some easing in the pace of growth in Western Australia and Queensland in coming years. This reflects the transition to the less labour intensive production phase of the resources boom. Some potential

resource projects have recently been shelved, highlighting the importance of growing non-mining related investment.

The Northern Territory is expected to buck this trend in the short term, with investment activity forecast to increase by seven per cent in 2014-15. This reflects the expansion of the GEMCO mines at Groote Eylandt and the Xstrata mines at McArthur River, the development of the Montara and Kitan projects in the Timor Sea and the construction phase of the Ichthys LNG project.

## EDUCATION AND HEALTH

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Northern Australia has over 750 primary and secondary schools, six universities, a number of research institutes and centres, more than 200 registered training organisations and approximately 50 technical and further education (TAFE) institutions.

School sizes and enrolments in northern Australia are often smaller than elsewhere in the country and a lower proportion of people attend university and other educational institutions. Around 2.6 per cent of the population attend university, compared to 4.3 per cent nationally — 1.6 per cent undertake other further education (such as TAFE) compared to 2.2 per cent nationally (ABS 2011b).

Of Australia's 726 public hospitals, 102 (14 per cent) are in northern Australia, along with 20 of Australia's 597 private hospitals (3.4 per cent). Most of these hospitals are in the more populous areas of northern Queensland (Department of Health 2014). The proportion of health workers, including general practitioners, nurses, dentists, pharmacists, optometrists and psychologists is lower across northern Australia than Australia as a whole (1,835 per 100,000 people, compared with 2,017 per 100,000 respectively) (BITRE 2009). This proportion continues to fall as remoteness increases, consistent with national trends.

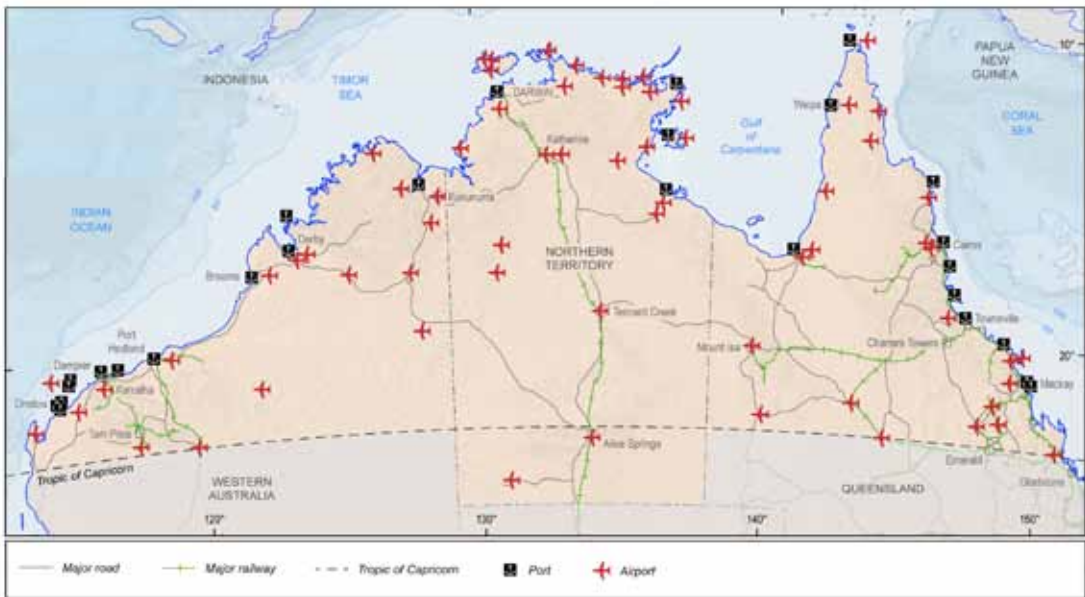
## INFRASTRUCTURE

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Northern Australia relies heavily on its transport infrastructure, including the major road networks, 20 major airports, 25 ports and three railway systems (see Figure 9). Energy and communications infrastructure and networks are also an important part of business and community life in the north.

The larger northern cities contain important sea ports, airports and major road and rail logistic centres that are key gateways for Australia into international markets. The Northern Territory is connected to Queensland by road principally via the Barkly Highway through Three Ways (Tennant Creek) to Mount Isa. From there, the major road networks go north to the Gulf, south to Boulia and Longreach, and east to Cairns, Townsville, Mackay and Gladstone. The Northern Territory and Western Australia are connected by road via the Victoria Highway through Kununurra to the Great Northern Highway, which extends through Broome and Port Hedland to just north of Perth.

Figure 9: Significant infrastructure – road, rail and ports in northern Australia



Source: Commonwealth of Australia (Geoscience Australia) 2014. Note the map includes some minor infrastructure.

Across northern Australia there are five energy networks. In the Northern Territory and northern Queensland the networks are government owned, while in northern Western Australia ownership is mixed. Outside these networks, towns and communities across northern Australia run on standalone power systems (off grid systems), which are mainly powered by diesel. Some of these systems are managed by the respective jurisdiction’s energy service provider, while others are privately supplied and contracted.

Communications infrastructure plays an important role in a region as large as northern Australia. Northern Australians currently have a proportionally greater access to broadband fibre to the premises (six per cent compared with three per cent) and fixed wireless services (two per cent compared with 0.4 per cent) than the south. However these technologies deliver only a small component of broadband services across Australia. When combined with other

‘high speed’ broadband technologies, such as hybrid fibre coaxial and fibre to the node, northern Australia has considerably less access than the south (seven per cent of premises compared to 30 per cent).

Mobile coverage is variable across northern Australia, with lower levels of access to 4G mobile broadband services (26 per cent of premises compared to 63 per cent in the south). This reflects the commercial challenges around expanding communications infrastructure into areas with very low population density.

## LAND

In a region almost half the size of Australia, the features of land ownership and use are an important part of its profile.

The majority (57 per cent) of land in northern Australia is used for grazing, followed by conservation and natural environments

(40 per cent). Mining in northern Australia takes up a very small share of the total land area (0.01 per cent), while cropping and horticulture uses only 0.15 per cent (BITRE 2011).

As with the south, arrangements relating to land tenure vary across northern state and territory boundaries (see Table 2).

Each jurisdiction has different legislation for the provision of land, either as freehold (unrestricted or inalienable) or non-freehold (generally leases over Crown land). Generally, more land in northern Australia is Crown land than in the south. Crown land can be leased, reserved for the public (for example, national parks or roads) or may have no conditions.

A pastoral lease is Crown land managed by state and territory government which is leased to the public, generally for the purposes of grazing livestock. The proportion of Crown land held under pastoral leases in northern Australia is

much higher than anywhere else. Queensland has the largest area held under pastoral lease (62 per cent of the state), followed by the Northern Territory (47 per cent) and Western Australia (34 per cent). By comparison, there are virtually no pastoral leases in Victoria, Tasmania and the Australian Capital Territory (Productivity Commission 2002).

Indigenous people hold rights or interests over significant parts of northern Australia. These interests are recognised in a number of ways, including communally held freehold or leasehold title under statutory land rights regimes, Aboriginal heritage sites, and exclusive and non-exclusive native title rights. Land granted is generally non-transferable (that is, it cannot be sold) but in most cases can be leased.

**Table 2: Land tenure legislation in northern Australia**

	PASTORAL LEASEHOLD	INDIGENOUS LAND
<b>Northern Territory</b>	<i>Pastoral Land Act 2011</i>	<ul style="list-style-type: none"> <li>• <i>Associations Act 2012</i></li> <li>• <i>Crown Lands Act 1992</i></li> <li>• <i>Special Purposes Leases Act 1953</i></li> </ul>
<b>Queensland</b>	<i>Land Act 1994</i>	<ul style="list-style-type: none"> <li>• <i>Aborigines and Torres Strait Islander Land Holding Act 2013</i></li> <li>• <i>Land Act 1994</i></li> <li>• <i>Aboriginal Land Act 1991</i></li> <li>• <i>Torres Strait Islander Land Act 1991</i></li> </ul>
<b>Western Australia</b>	<i>Land Aministration Act 1997</i>	<ul style="list-style-type: none"> <li>• <i>The Aboriginal Affairs Planning Authority Act 1972</i></li> </ul>
<b>Australian Government</b>	<i>n/a</i>	<ul style="list-style-type: none"> <li>• <i>Native Title Act 1993</i></li> <li>• <i>Aboriginal Land Rights (Northern Territory) Act 1976</i></li> </ul>

The Australian Government retains a direct interest in Indigenous land arrangements in the Northern Territory through its responsibilities under the *Aboriginal Land Rights (Northern Territory) Act 1976*. While land granted under this Act is inalienable freehold, the Act allows Indigenous people to issue long term leases over their land for a variety of economic and other purposes.

Australian law recognises the rights and interests to land held by Indigenous people under their traditional laws and customs, referred to as 'native title'. Native title groups receive

procedural rights under the *Native Title Act 1993*. Australian law recognises that native title may exist in land, even if the land has not been the subject of a native title claim or determined by the Federal Court as having native title. However, certainty regarding the native title holding group and their rights and interests only occurs upon determination by a Court. Indigenous held land (including due to native title and the *Aboriginal Land Rights (Northern Territory) Act*) covers a greater proportion of northern Australia than southern Australia.

# Opportunities for Northern Australia

Unlocking northern Australia's full potential has been debated for many years. There is a long history of governments, businesses and individuals pursuing northern development. Some have succeeded and others have ended in costly failures, highlighting the challenging and at times unforgiving nature of the north. These experiences provide valuable lessons for future development.

The global and domestic environment is constantly changing. Much of northern Australia is already growing — especially its cities — providing a solid platform for further development. New opportunities are emerging that play to its strengths, making this the right time to develop the north.

These include:

- **The rise of Asia:** the expanding Asian middle class is creating new global markets and unprecedented growth in demand for goods and services, including the north's agricultural and tourism sectors.
- **Global energy markets:** energy use is expected to increase in the next 25 years — led by emerging economies — and northern Australia is well positioned to take advantage of this trend.
- **Strategic importance:** more emphasis on regional security, border protection and biosecurity is shifting Australia's strategic focus (and associated resources) to the north.
- **Technology and innovation:** emerging technologies and innovation can transform industries and improve services in the north.
- **Education, research and skills:** proximity to Asia and the north's tropical expertise offer opportunities for education and training providers and research institutions to excel.
- **Economic diversification:** a more diverse northern economy, building on its strengths beyond minerals and energy, will reduce exposure to volatile commodity markets and unlock potential across other industries.
- **Indigenous economic development:** Indigenous Australians can play a greater role in the northern economy, including through leveraging cultural, intellectual and land assets.
- **Natural resources and landscapes:** The north's natural assets and resources — including minerals, energy, water and unique landscapes — provide opportunities for agriculture, tourism, mining and other industries, as well as communities.

## SECTION B: TELL US WHAT YOU THINK

1. Are these the major global and domestic trends that are creating opportunities for development in northern Australia?
2. What does the rise of Asia mean for northern Australia? How could new opportunities be pursued?
3. What are the prospects to further expand northern Australia's minerals and energy sectors?
4. What impact does the strategic environment have on northern Australia's economic development?
5. What are the major opportunities to grow education, research and skills development in the north? What comparative advantages do northern institutions have?
6. How can Indigenous Australians in the north more actively participate in economic development?
7. What are the opportunities to diversify northern Australia's economy? What could be done to grow established sectors, such as agriculture or tourism?
8. Are the north's natural assets and resources underutilised? What can be done to realise the opportunities provided by the region's unique natural qualities?

### THE RISE OF ASIA

Northern Australia's proximity to Asia's large and growing economies as well as its long established resources, energy, agriculture and education sectors, provide many opportunities. By 2050, Asia could account for half of global output, trade and investment through sustained growth in countries including China, India, South Korea and Indonesia (Asian Development Bank 2011).

Rapid industrialisation and urbanisation across Asia is boosting demand for minerals and energy, with consumption across Asia more than doubling since 1990. China is now the world's largest energy consumer, accounting for 18.4 per cent of global consumption. China's demand is expected to grow across every major industrial sector to 2035 (International Energy Agency 2013a).

By 2020, more than half of the world's middle class will be in Asia. This consumer class will demand better quality goods and a wider range

of services, creating export opportunities. It will spend more on services — including health, education and aged care — and is more likely to undertake international travel than ever before (OECD 2010).

These trends have already seen fundamental changes in global markets. For example, rising incomes have boosted demand for higher protein and more diverse diets, including for more seafood and meat. Asian meat consumption increased fourteen-fold between 1961 and 2009 (FAO 2012).

Competition for these markets will only intensify. Other countries, including within Asia, are focusing on improving access and increasing regional trade volumes. Some Asian countries are pursuing policies of self-sufficiency, which may dampen demand for foreign goods. But northern Australia is well positioned to capture the growing demand from Asia. Its industries have established links into Asian markets — the north's

mineral and energy exports mostly flow to Asia, and China recently overtook the United Kingdom as the largest source of overseas tourists to northern Australia (Tourism Research Australia 2013). Investment from Asia to Australia has more than doubled in the last 10 years.

Northern Australia's proximity to Asian markets provides a competitive advantage for exports over its southern and international counterparts. Darwin is closer to Jakarta than to Sydney and the closest major city to Darwin is Dili, the capital of Timor Leste, one of the 10 fastest growing — although volatile — global economies in 2013.

This can mean shorter transit times for exported agricultural products. For example, live cattle exports from Darwin to Jakarta can take less than five days on average compared

to nine days from Fremantle, contributing to better health and welfare outcomes for the cattle and a higher quality final product (Darwin Port Corporation 2013).

There are also opportunities for businesses in the north to establish and integrate within international supply chains — increasing their presence in the region and boosting their competitiveness through more cost effective inputs. While there are some industries that are already taking advantage of Asia's proximity, expanding these opportunities across the north will depend on the requisite supply chains, transport infrastructure (air and sea) and business strategies being in place.

#### **BOX B1: INDONESIA'S RISING MIDDLE CLASS**

Indonesia, Australia's northern neighbour, has a population of almost 250 million — the fourth largest in the world. It is the largest economy in south east Asia and expected to be the world's fourth largest economy by 2050 (Treasury 2013). Only three and a half hours flight from Darwin and with a rapidly expanding middle class, Indonesia is becoming an increasingly attractive market for northern Australian trade and investment. Despite this burgeoning market, there are some challenges to doing business in Indonesia, including complex regulatory systems and non-tariff barriers.

A relatively new middle income country, the percentage of Indonesians living in poverty has reduced from over 50 per cent in the 1960s to 12 per cent in 2012 (World Bank 2012). There are 45 million middle income earners and this could reach 135 million by 2030 (Oberman et al 2012).

The consequential rising wealth and changing consumption patterns are creating demand for Australian products and services, including many agricultural products from the north, as well as education and tourism. For example, Indonesia is the largest market for Australian live cattle exports, accounting for 43 per cent of live exports in 2012-13 (MLA 2013).

# GLOBAL ENERGY MARKETS

Between 2011 and 2035, global energy use is expected to increase by a third, led by emerging economies such as China, India and the Middle East (International Energy Agency 2013b). By 2030, China and India are expected to be the world’s largest importers of oil and coal respectively (DFAT 2013b). Energy demand in the major advanced economies of United States and Canada, Europe and Asia is expected to remain steady, with European demand increasing slightly by 2035 (International Energy Agency 2013). By then, oil, coal and natural gas will together make up around 76 per cent of global energy use.

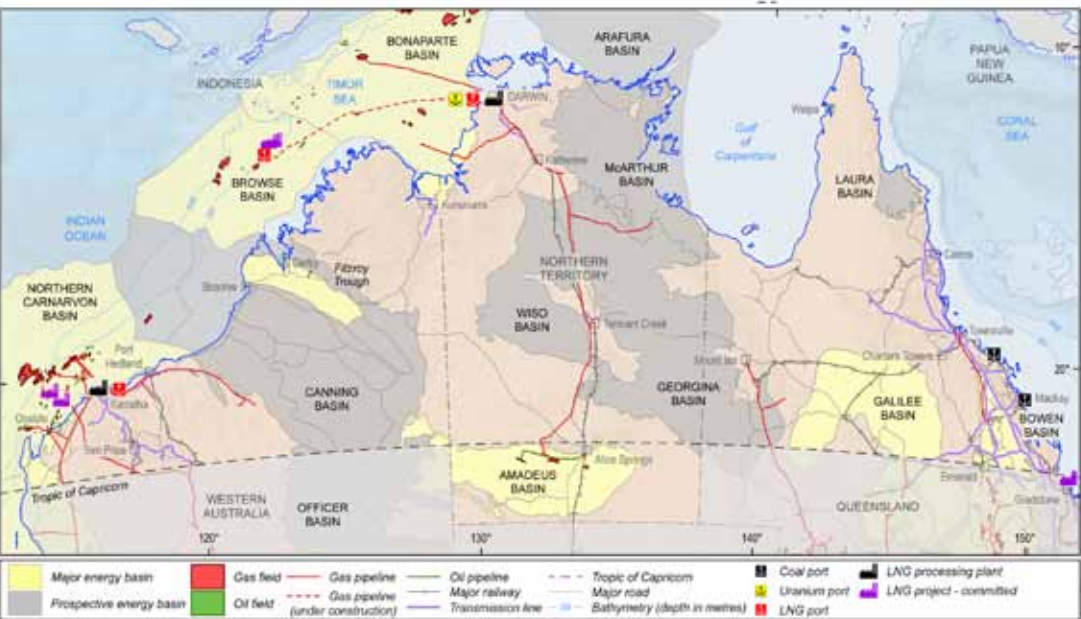
This all means a continuing, ready market — and more opportunities — for northern Australia’s traditional coal and natural gas exports.

As the emerging economies become more affluent, consumers will demand more reliable energy access, greater efficiency and better

environmental standards. At the same time, concerns over long term energy security will persist and remain a driver of national energy policies. New fuels and technologies will progressively capture market share and diversify the world’s energy supply. The share of renewables, such as hydroelectricity and solar power, in primary global energy use is expected to rise from 13 per cent in 2011 to 18 per cent in 2035.

Northern Australia is well positioned to take advantage of these trends and support the world’s emerging energy needs, drawing on its rich and diverse resources. This includes seeking to further expand coal and gas markets and to develop clean and efficient energy sources (see Figure 10) (Geoscience Australia 2013b). Despite being a relatively high cost producer, Australia is considered an attractive and stable location for energy projects, with a robust economy and low social, political and environmental risk.

Figure 10: Energy basins in northern Australia



© Commonwealth of Australia (Geoscience Australia) 2014

There has been much success harnessing opportunities in the energy sector, with resources driving the northern economy for some time. Australia has continued to grow as a major exporter of energy — exports to China alone increased from \$559 million in 2008 to \$2.26 billion in 2012 (DFAT 2013).

The Woodside operated North West Shelf is Australia's largest oil and gas development and accounts for more than 40 per cent of Australia's total production (Woodside Petroleum 2013). Other major gas projects are under construction, including the Gorgon and Wheatstone LNG Projects in Western Australia and the Ichthys LNG project in the Northern Territory. Together these represent almost \$120 billion in investment (BREE 2013).

Technological advances are providing further opportunities, especially in the gas sector. A number of floating LNG projects have been proposed, and one is underway, that is Shell's Prelude project off the Western Australian coast. Proponents argue that floating LNG has the potential to support investment in the offshore petroleum sector and place Australia at the forefront of LNG innovation, service provision and training. But some stakeholders are concerned that the technology may deliver less direct benefits to northern communities compared to onshore processing.

There are also opportunities to develop northern Australia's onshore tight and shale gas resources (Department of Industry 2013). The shale gas potential is viewed as among the best in the world and could be far more productive than Australia's current and past production of oil and gas (EIA 2013). Industry analysis and consultation with communities — including Indigenous communities — will be important in informing the further development of these resources.

## STRATEGIC IMPORTANCE

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Northern Australia is integral to Australia's long term security and regional stability, particularly through defence and border security. Australia's strategic focus is shifting to the north, with more emphasis on border protection and engagement with countries in the Asia Pacific. This will only increase over the next decade as the region assumes greater global significance.

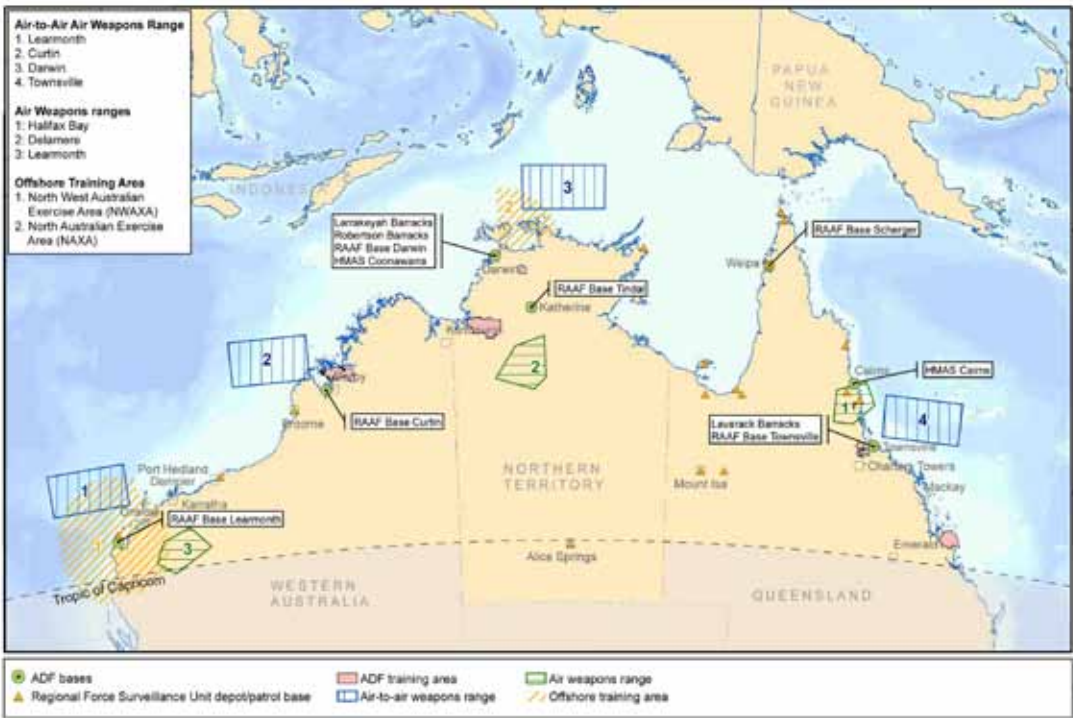
### *Defence and border protection*

Northern Australia has historical resonance for Defence dating back to at least World War II. It remains highly relevant today — in recent years northern Australia has served as a staging ground for Australia's assistance missions in Timor Leste and the Solomon Islands, and humanitarian assistance to Aceh (Indonesia) and Tacloban (Philippines).

Northern Australia is also significant in the border protection context — particularly the Government's commitment to halt illegal maritime arrivals to Australia. Many border protection activities are launched from northern Australia, including patrol boats and surveillance aircraft.

The day to day Defence presence in the north is considerable. There are more than 15,200 service personnel and public servants working for Defence in northern Australia. Defence has complete Air Force bases in Darwin and Tindal (Katherine), Navy bases in Darwin and Cairns and Army bases in Darwin, Townsville, Cairns, Rockhampton and Cabarlah. There are also a number of smaller assets and bases (Royal Australian Air Force Bases Curtin, Scherger and Learmonth) and Regional Force Surveillance Units.

Figure 11: Significant Defence facilities in northern Australia



Source: Commonwealth of Australia (Defence Imagery and Geospatial Organisation) 2014

Defence employs local staff and invests in local business, delivering infrastructure and services such as roads, sewerage, water and electricity. During 2009-10, Defence activity contributed \$864 million to the northern Queensland and the Northern Territory economies (KPMG 2009). The United States’ (US) policy to place greater focus on the Asia Pacific will see up to 2,500 US Marines in Darwin — generating further economic benefits to local businesses and community services. While this activity and strategic focus has led to significant growth in Defence personnel in the north, some stakeholders support a greater presence in north west Western Australia.

The Government’s 2015 Defence White Paper will consider enhancing Defence presence in northern Australia to meet Australia’s long term

defence and national security requirements. This could include expanding existing bases and infrastructure, as well as more training exercises and operational activities, planning and civil engagements. Regardless of the size of its presence, Defence, (along with the Australian Border Force) will continue activities in northern Australia, involving patrol boats, maritime patrol aircraft, sealift, airlift and intelligence capabilities.

Communities across northern Australia are supportive of Defence engagement in regional areas, recognising the potential benefits to local economies. But such engagement can place pressure on local services, urban planning and infrastructure. Any further Defence expansion would need to be built on effective engagement and cooperation with state and territory and local authorities, regional communities and industry.

## Biosecurity

Northern Australia's strategic importance also includes protection of industries, the environment and communities from exotic animals, plants, pests and diseases. The biosecurity task in the north has always been great, given the vast coastline and proximity to northern neighbours. But increasing trade flows and people movements have made managing biosecurity even more challenging.

Australia is free from many exotic pests and diseases which are prevalent in other countries, some close to northern Australia's borders. This status has built Australia's reputation as an exporter of high quality, clean and safe agricultural produce, which supports access to overseas markets.

Given the potential for the agricultural sector to capitalise on the rise of Asia — and the direct trade benefits to northern industries and communities — biosecurity risks must be effectively managed. Initiatives such as the Northern Australia Quarantine Strategy assist in managing these risks. As economic activity increases in the north, so will the importance of biosecurity, including through improved collaboration across governments, industry and local communities. Equally the regulatory arrangements around biosecurity must not act as an unreasonable barrier to inward trade.

## TECHNOLOGY AND INNOVATION

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Technological improvements and innovation can transform industries and open up opportunities for businesses in the north. Predicting major technological advances and their benefits is difficult. Approaches not contemplated 20 years ago are now routine, with lasting impacts in areas as diverse as agriculture, mining, military and border control. The difficulty is predicting what technology will be available in 20 years' time and

how this could transform the way industries in the north go about their work. But innovations that help overcome some of the geographic and climate challenges will be particularly relevant to achieving the north's economic potential.

A range of technological developments are already being deployed across the north. Many farmers in the north are managing their operations remotely using GPS for satellite imagery, yield mapping and livestock and machinery tracking. This reduces reliance on travel in difficult terrain and improves productivity. Sensors and GPS systems in tractors ensure they traverse the same path reducing land that becomes compacted and unusable for crops.

Gravity gradiometry — initially developed for the US military during the Cold War to aid covert submarine navigation — is now used to detect undiscovered mineral ore deposits and ground water resources in northern Western Australia and remote areas of the Northern Territory. This has reduced the need for drilling sites and helped identify specific areas of potential for researchers and industries — reducing the impact of exploration.

Advancements in breeding techniques can deliver crops that are more suited to the northern climate with increased tolerances to pests, diseases, droughts and water logging. Such crops can produce higher yields with fewer inputs — reducing production costs.

Government service delivery has also been transformed by the internet. People can now apply for government payments, grants and services at their convenience. Examples such as eHealth and Telehealth services — where doctors consult remotely — increase access to health services for remote populations and enhance information sharing among service providers.

The opportunities stemming from technology and innovation are limitless for the north. An environment which encourages research and development — and brings together industry and researchers to inform and encourage greater adoption of new technologies — will be crucial in ensuring the opportunities are realised.

## EDUCATION, RESEARCH AND SKILLS

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In addition to its more traditional strengths and expertise in mining, agriculture and tourism, northern Australia has expertise in tertiary education, research and development, and training. There are many opportunities to build on existing work in this area and contribute to northern development, including in areas of comparative advantage — increasing linkages with other institutions and industries, expanding the skills base of the local workforce and growing student numbers.

A number of research institutes are pursuing research agendas that reflect the north's unique characteristics such as tropical ecosystems, conservation and climate change, Indigenous knowledge, creative technologies and innovation. These institutes include the Australian Institute of Marine Science, the Australian Institute of Tropical Health and Medicine, the Commonwealth Scientific and Industrial Research Organisation (CSIRO), the Cooperative Research Centre for Remote Economic Participation and the Northern Research Futures alliance. This knowledge will continue to support growth in the region.

A particular area of potential is the concept of the 'tropical economy'. As part of one of the world's few developed countries that includes the tropics, northern Australian businesses

and institutions can meet the needs of tropical markets. This includes providing services and expertise in areas such as mining, agriculture, fisheries management, building design, marine science, disaster management and conservation.

Several institutions are actively engaged in the tropical economy. James Cook University, for example, has partnered with universities from across the world to develop the State of the Tropics report, which will assess critical issues facing the global tropical region and the resulting opportunities.

Northern institutions and industries are also forming new partnerships, particularly in Asia, as it emerges as a centre of innovation and technological development (Australian Government 2012). These partnerships help to enhance research expertise and reputations domestically and overseas, as well as foster better educational and professional networks.

For example, the Northern Territory Government and the Indonesian province of East Kalimantan have agreed to a Joint Statement of Cooperation to promote links between both governments and Charles Darwin University. Within industry, the Northern Territory Cattlemen's Association has developed the Indonesia Australia Pastoral Industry Support Program, which provides Indonesian university students with intensive pastoral industry training, including placements on northern Australian cattle stations.

Northern institutions are working with industry, governments, other providers and stakeholders to identify skills and education gaps which contribute to labour shortages. There are further opportunities to address skills gaps that can make it hard for business to source workers locally. Improving the skills base in the north helps attract investment and

assists industries and businesses to diversify and respond to external economic shocks (RAI 2013). It also ensures the north has the skills and capabilities required to realise the opportunities presented by a growing population.

These are also opportunities for vocational education and training providers and universities to increase their overseas student numbers. James Cook University and Charles Darwin University have doubled international student enrolments over the last decade, with a further 20 per cent increase in the last 12 months. The growing Asian middle class, the desire for a world class education and Asia's proximity to the north means providers can grow their international student numbers and their reputations overseas.

## ECONOMIC DIVERSIFICATION

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Much of the success of northern Australia's economy has been tied to the mining and energy sector, which has delivered major benefits, both to the region and Australia more generally. Despite a transition to the production phase in recent years, long term prospects for the sector remain strong. But economic diversification — and the consequential growth and development of a range of industries — has great potential for northern Australia.

Heavy reliance on a single industry (particularly one prone to boom and bust cycles) poses risks to any economy. As recently as the early 2000s, the mining sector was considered part of Australia's 'old economy', with prices for major resource exports at their lowest in real terms for a century (Connolly & Orsmond 2011). While economic diversity does not guarantee economic growth, it can stimulate innovation, provide stable demand for employment and services, and mitigate the impact of an industry downturn on communities.

The mining industry will inevitably play an ongoing major role in the northern Australian economy, given the region's vast mineral wealth. The potential for discovery of new mineral and energy resources remains high, with many prospective areas largely unexplored. There are opportunities to diversify within the extraction industries — the success of northern Western Australia's coloured diamonds in China is an example of a new and expanding market.

Beyond these new opportunities in mining and resources, there are excellent prospects for expanding agricultural industries, including aquaculture, to add to the diversity of the northern Australian economy. This includes growth of well established industries such as cattle and sugar. Non-traditional crops such as chia and sandalwood, and the commercial production of dragon fruit, farmed prawns and poppies are also being pursued. There is also potential to grow the crocodile meat and skins industry, with European fashion houses buying crocodile skins from northern Australian farms (ABC 2013). Ten per cent of the world crocodile skin market comes from Australian crocodiles.

The tourism industry in northern Australia is pursuing new and emerging markets and an increase in Asian visitors. These markets provide opportunities for high-end approaches to tourism, including capacity to deal with large tour groups and good access to remote attractions. Improved access to natural landscapes and Indigenous tourism will help expand domestic and European visitor markets.

Diversification should build on the north's existing strengths — particularly in tourism and agriculture — and continue to develop local services and business innovation in urban centres. Economic diversification should not be

about picking winners. Governments can play a facilitating role but should focus on policy settings that encourage the private sector to innovate and diversify into new areas when it is appropriate. This includes improving conditions (such as tax and regulatory settings) to create incentives for business to invest, innovate and employ.

This approach underpins the Government's national growth strategy and will be developed in the Industry, Investment and Competitiveness agenda. It will support economic diversification in northern Australia, allowing emerging markets to be explored by innovative businesses with sound business plans.

## INDIGENOUS ECONOMIC DEVELOPMENT

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Northern Australia's Indigenous population has a vital role in the region's long term development. The north cannot achieve its full potential unless Indigenous communities and individuals are able to pursue economic development and employment opportunities. There is considerable need for this in the north with the unemployment rate for Indigenous Australians around five times higher than for non-Indigenous Australians (ABS 2011a). The Australian Government's new approach to Indigenous affairs — focused on improving education and getting people into real jobs — is aimed at lifting participation to make a real difference to Indigenous people around Australia.

Indigenous Australians are already leveraging off their economic, intellectual and cultural assets to play an active role in developing northern Australia. Through employment and business ownership they are involved across numerous sectors in the north, including mining, agriculture, environmental management and tourism, providing a strong foundation for Indigenous economic development.

Indigenous Australians also have rights and interests in a large proportion of northern Australian land. As land underpins public and private investment (including access to resources, business creation and home ownership) Indigenous land will play an essential role in encouraging development.

For example, community owned enterprises like the Tiwi Plantations Corporation are entering into partnerships with multi-nationals to facilitate export trade, while organisations like Centrecorp Aboriginal Investment Corporation are helping Indigenous groups invest in local business and property development.

There will be further economic development opportunities for Indigenous people over the coming years. Greater trade with Asia and diversifying the north's economy will open up more employment, business and investment opportunities. In pursuing them, it will be important to recognise that different Indigenous communities have different priorities and that approaches to economic development should accommodate these.

## NATURAL RESOURCES AND LANDSCAPES

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Many opportunities for northern development flow from the region's unique natural qualities, including valuable resources and environmental assets found nowhere else on earth. The region hosts a range of mineral and energy deposits, including world class mineral deposits of iron ore, uranium, base metals and bauxite and equally significant gas resources. Iconic land and seascapes such as the Great Barrier Reef, Purnululu National Park, Kakadu National Park and the Wet Tropics of Queensland are major tourist destinations.

As well as supporting the multi-billion dollar tourism industry, the region's natural landscapes are integral to the lifestyles of northern Australians. Connection to country is an important part of Indigenous culture, and boating, recreational fishing, and four wheel driving are important recreational activities for many northern Australians.

The conservation and natural resource management sector also makes an important contribution to the northern Australian economy. The growth markets for biodiversity and ecosystem services could provide further economic opportunities, particularly for Indigenous communities.

Effective management of these unique landscapes will create opportunities for increased tourism and ensure future generations continue to enjoy these world class environments.

Much of northern Australia's natural resources, such as land and water, are currently underutilised. The north's vast and rich mineral and energy resources will continue to offer opportunities for further discoveries and exploration. Parts of the region are largely under explored, with potential large deposits not yet identified (Geoscience Australia 2013c). Advances in exploration and mining technology as well as a conducive investment environment, will help to continue the strong resource growth in the north.

There are also opportunities for greater use of land and water resources through expanding existing initiatives such as the Ord Irrigation Scheme or investigating new opportunities elsewhere. The Ord Irrigation Scheme currently produces agricultural product for domestic and international markets to the value of approximately \$100 million per year. In late 2013, the Western Australian Government announced an agreement for the development

of an additional 13,400 ha in the Ord, nearly doubling the existing 15,000 ha currently under irrigation. The Ord Stage 3 project proposes expansion of the scheme into the Northern Territory, increasing the total irrigated area by approximately 14,500 ha.

A current proposal for a large scale integrated farm and processing precinct in the Gilbert catchment in north west Queensland — the Etheridge Integrated Agriculture Project — is an example of a private sector led irrigation development, with the potential to attract foreign investment. The 65,000 ha of irrigated sugar and guar cropping planned within this precinct would be a similar scale to the current Ord Irrigation Scheme and would support long term plans for a sugar mill, meat processing plant, aquaculture operation and alternative energy facilities. Other opportunities for establishing irrigated agriculture in the Pentland and Hughenden area of Queensland are also being examined.

Groundwater resources could also be further utilised to increase development. CSIRO estimates the area for potential irrigated agriculture supported by groundwater in northern Australia to be between 50,000 to 120,000 ha (CSIRO 2013a) — more than double current usage. A trial at Beetaloo station in the Northern Territory is demonstrating that greater use of groundwater to create a distributed network of stock watering points, combined with smaller paddocks and rotational grazing,

increases the carrying capacity of the land while delivering environmental benefits. Water extracted from underground and deeper open cut mines presents opportunities to recycle the water for different purposes, such as irrigation. For example, in the Pilbara Rio Tinto is trialling an irrigation project with its Marandoo expansion that would provide hay for up to 10,000 cattle (RIRDC 2011b).

The Government has established a ministerial working group, chaired by the Minister for Agriculture, to identify ways to accelerate investment in water infrastructure and identify priorities for Government investment. The group will look at the merits of already well developed proposals for new and existing dams, as well as other water infrastructure options such as storing water in underground aquifers or water reuse. The outcomes of this work will inform the White Papers on Developing Northern Australia and Agricultural Competitiveness.

### Barriers to Development

While there are many opportunities for development in northern Australia, a number of barriers must first be understood and managed. Some barriers are complex and require a sustained effort over the long term by governments, business and communities to address them. Some also affect other parts of the country — cities, regions and remote areas — but the impacts can be more pronounced in the north.

These include:

- **Remoteness, climate and liveability:** less services, extreme weather events and distance from other major centres can make it difficult to attract people and workers.
- **Infrastructure:** some transport, energy and communications infrastructure is limited, which can constrain industry and community growth.
- **Land access and use:** land tenure arrangements are complex and often criticised as being too restrictive, stifling investment and innovation.
- **Water use:** capturing and storing water can be difficult and costly due to rainfall variability, topography, high evaporation rates and knowledge gaps.
- **Business, trade and investment:** high costs and red tape constrain business and affect productivity.
- **Governance:** geography and relatively small population heighten the risk that governance will be a barrier to development, particularly when institutional capacity and capability are stretched.

Not all challenges can be directly overcome and instead must be managed. Governments should therefore not add to the barriers, but look for cost effective ways to reduce their impacts on business and communities.

## SECTION C: TELL US WHAT YOU THINK

1. Are these the major barriers to further economic development in northern Australia? What are the impacts on industries and communities?
2. What are the main factors that attract or deter people from living and working in northern Australia?
3. What are the infrastructure limitations across northern Australia?
4. How effective are the arrangements for accessing and using land in northern Australia?
5. How effective has investment in water infrastructure and planning been in northern Australia? What impact has this had on economic development, industry growth and the environment?
6. What is impeding further business growth, trade and investment in the north? How do these challenges affect different industries?
7. What are the governance challenges in northern Australia? How do they manifest in cities, towns and remote communities? How do they affect economic development in the north?

### REMOTENESS, CLIMATE AND LIVEABILITY

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Governments do not direct people to live in particular areas, but they can make it more attractive by facilitating business growth and effective services.

Many people are attracted to the idea of living and working in northern Australia. This is reflected by above average population growth in the larger urban centres. Others can be daunted by the north's heat and humidity, variable climate, the distance from Australia's major southern centres and limited service availability. The remoteness of many northern population centres is striking. It can both drive up costs and contribute to a sense of isolation.

Northern Australia sometimes experiences disruptive or extreme weather events, including floods and cyclones. These events require preparedness and awareness, but do not always cause damage. The best available scientific

information indicates that northern Australia is likely to experience an increase in the number of extreme hot days (over 35 degrees Celsius), increased coastal inundation risk due to rising sea levels and storm surge (CSIRO 2007), and potentially an increase in the number of intense cyclones but a decrease in the number of cyclones overall (CSIRO 2012b).

The severity and occurrence of such events can take its toll on infrastructure and drive up insurance costs. To better understand how to mitigate, prepare and recover from natural disasters, the Australian Government has asked the Productivity Commission to undertake a public inquiry into national natural disaster funding arrangements. It will consider effective natural disaster mitigation and reducing the impact of disasters on communities. The Government has also released a discussion paper for consultation on options to address the high cost of home and strata title insurance in north Queensland.

Despite these weather events, stakeholders argue that perceptions about the northern weather — including its depiction in the south — are worse than the reality. They also note that millions of people live and work in similar climates around the world. Nevertheless, climate is a commonly cited barrier to population growth.

Beyond location and climate, other factors influence where people choose to live, including housing, access to hospitals and schools, healthcare and communication services. The availability of other amenities is also influential, such as cafes, restaurants, retail outlets, parks, playgrounds, sporting and cultural facilities — particularly for families and skilled professionals. People place different values on different features, with choices often connected to life stage — for example, parents with school age children are more likely to prioritise quality education facilities.

Parts of northern Australia can struggle to provide and maintain quality services and amenities — especially in rural and remote communities. Some remote communities lack basic infrastructure, have poorer health and education outcomes (ABS 2008), and face higher costs of living, particularly for groceries and fresh produce. For example, average food prices in the Kimberley are 14.5 per cent higher than in Perth (Western Australian Government 2013). These conditions can act as a barrier to economic participation within local communities and as a barrier for those wishing to take up economic opportunities elsewhere. Rural and remote communities in the north also have a higher proportion of Indigenous people who continue to face significant social and economic disadvantage.

## INFRASTRUCTURE

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Infrastructure in northern Australia — including transport, communication and energy — can be limited in quantity and quality, or not used productively. Infrastructure is often identified as the main barrier to industry growth across the north.

The impacts of infrastructure on economic development vary between cities and regions, and across different types of infrastructure. Regions face constraints due to the vast distances and challenges of the northern climate, such as the wet season. Cities are coming under increasing pressure, with population growth and increasing demand on key economic infrastructure such as ports, airports, roads and railways.

Some stakeholders point to government approvals as a barrier. Delays and costs in gaining regulatory approvals drives up the cost of infrastructure, sometimes prohibitively. Similarly, regulations limiting charging regimes for users can reduce the incentives for private investment in infrastructure.

A lack of appropriate infrastructure flows through to the broader economy and society. For example, inadequate or inefficient roads, railway networks and ports increase the cost of doing business and can limit the development of export supply chains. A lack of productive infrastructure can also make it difficult to attract and retain workers, families and visitors. Even where infrastructure is available, its durability (especially to climate challenges) can be a concern.

The competition for public and private infrastructure funding nationally and the smaller population size in the north can make it harder to build a case for infrastructure spending.

## Cities and regions

Cities and regions are in many respects interdependent and must each have effective infrastructure to support the overall development of the north. Economic activity is concentrated in cities as connecting points between producers, suppliers and consumers. As cities grow, pressure on infrastructure increases and demands emerge for new infrastructure. Poor planning to address these infrastructure needs can inhibit productivity growth, prosperity and good social outcomes (see Box C1).

The population centres of the north already face challenges in infrastructure provision. For example, the Queensland Government has identified that without additional water

storage, population growth in Cairns will lead to a shortfall of approximately 20,000 mega litres each year by 2055 (Queensland Government 2010). The City of Darwin has identified a lack of social infrastructure and the need to provide appropriate transport corridors to the airport as key impediments to future growth (City of Darwin 2014).

The vast distances and low population density outside cities in northern Australia make it difficult to deliver cost effective infrastructure. For example, moving cattle to markets involves long distances that are exacerbated by some poor quality roads — estimates suggest that road conditions in the north almost doubles the cost of transporting cattle (City of Darwin 2014).

### BOX C1: PLANNING FOR URBAN ZONES

Good planning helps ensure cities and regions remain desirable places to live, by enhancing growth and cultural amenities and by ensuring that development is coordinated and prioritised.

Northern Australia's population is centred in urban areas, a trend which is expected to continue. Half the population lives in just six cities: Townsville, Cairns, Darwin, Mackay, Rockhampton and Gladstone. More people depend on these cities than actually live in them. Population statistics reflect city boundaries and do not always include people working in and being served by the city. For example, people who work in Cairns commute from Palm Cove in the north to Babinda in the south, while in Darwin workers travel in everyday from Palmerston, Litchfield and the Cox Peninsula. Others rely on the cities for shopping, services, freight and logistics.

Urban growth needs careful planning, with the structure and layout of cities closely linked to the structure of the economy and transport systems (Kelly & Mares 2013). The interactions and relationships are complex: planning is critical to shape development patterns, guide infrastructure decisions, and cater to forecast population and economic growth.

Population growth places increased pressure on infrastructure. Long term planning in the north needs to consider the needs of people living beyond city boundaries, including how they travel to and from the city and use the services. Cities are shaped and formed by a wide range of policies and initiatives from governments at all levels. They are also affected by the activities of the private sector, community groups and global or national trends. Effective strategic planning for the north needs commitment and action from all levels of government, as well as communities and industry.

Climate further complicates infrastructure challenges in the north, in regions and cities. Cyclones and floods can impede construction and increase costs, both to repair after damage and because resilient infrastructure is more expensive. The wet season can reduce days available for works, cause mines to flood and disrupt transport, including restricting the movement of cattle at times.

There is a range of long term land use planning strategies to guide economic development — including infrastructure investments — in northern Australia. Western Australia has a state planning strategy, Queensland has a state planning policy and the Northern Territory a (draft) regional land use plan. These are supported by numerous specific regional and industry strategies, including for infrastructure, energy and tourism.

### ***Roads and rail***

Industries and communities in the north rely on the road network, with few alternative routes. Some roads are constructed for dry season conditions and closed or subject to tighter weight restrictions during the wet season, reducing access for local producers and isolating communities (Coomalie Community Government Council 2014). Dirt roads can become impassable in the wet and require time to dry out for grading. In north Western Australia, the Great Northern Highway is the only sealed road linking with the Northern Territory and other centres in Western Australia. The Northern Territory has only five major sealed roads outside Darwin. Queensland has a more extensive highway system but there is heavy reliance on access roads that are not highway grade or are frequently flooded.

Railway networks in the north are seen as underdeveloped by some stakeholders. The

Kimberley region does not have railway lines, the north west regions of Western Australia are not connected to the rest of Australia and there is no railway between the Northern Territory and Queensland. Limited rail options can put further pressure on road networks, depending on the size and nature of the freight task.

### ***Ports and airports***

Limited ground transport in the north and the vast distances involved increase reliance on air transport for purposes as diverse as medical emergencies, cattle mustering and movement during floods (ABC 2012). There is limited interstate transport service across the north, meaning it is virtually impossible to fly directly within the region without stopping in cities further south. These distances also mean that aircraft have to carry significantly more fuel in case of emergencies, which reduces the amount of passengers and freight that can be transported. This challenge is particularly difficult for international flights that need sufficient fuel to reach another airport with appropriate facilities. Some stakeholders suggest that international carriers should be permitted to move passengers between domestic airports in the north.

Northern Australia has some of the most used sea ports in Australia. The bulk ports that service the resources sector have experienced extraordinary growth in the last decade. In Western Australia, the use of ports in Dampier rose by around 80 per cent between 2004-05 and 2009-10 and by over 64 per cent in Port Hedland (BITRE 2013).

The rapid growth in demand for ports by the resource and energy sectors, coupled with increasing competition from the agriculture, tourism and defence sectors, could create capacity constraints. This can create delays

and drive up costs, affecting productivity. Such constraints could be overcome by building new ports, as some stakeholders propose, but also by making better use of existing ports and improving the landside networks feeding into them.

Inefficiencies in and around ports and airports will become an increasing barrier to development in the north as industries expand and realise new markets.

### **Energy**

The lack of reliable, affordable energy is cited as a barrier to the expansion of business and industry in the north, as well as liveability. Most of northern Australia is not connected to eastern Australia's national electricity market grid. North Western Australia and the Northern Territory are not connected at all and have separate energy networks. For Queensland the grid only extends to Port Douglas along the north Queensland coast (meaning that communities like Mount Isa are not on the grid).

Communities and industries outside the main grid run on stand alone power systems and rely mainly on diesel fuel which is more expensive and has limited capacity. These off-grid systems are managed by government energy providers or private contractors. Renewable energy, such as photovoltaics and wind turbines, is increasingly being used as an energy source but still at modest levels.

Residential energy costs are generally regulated by jurisdictions but commercial customers often negotiate directly with the energy supplier and through long term supply contracts. This allows commercial customers to negotiate for a more reliable service if they are willing to pay for it. New businesses are often required to provide a 'customer contribution' to upgrade the network to meet their needs. This is not a requirement placed on subsequent businesses, which can act as a disincentive for the initial investor.

### **Communications**

Communications infrastructure in northern Australia has limitations, with less coverage of mobile and broadband services compared to southern Australia. Seven per cent of premises in northern Australia have access to very fast broadband, whereas 30 per cent have access in the south. In addition to the challenges of poor mobile phone access, lack of connectivity reduces access to online education and social services, which has particular ramifications for regional and remote communities.

Effective use of communications technology is integral to business competitiveness, particularly through innovative uses of mobile and broadband services. Without reliable broadband, northern Australian businesses are less able to access wider markets through online commerce or pursue flexible working arrangements. Limited access to applications such as cloud computing and videoconferencing also make it harder to collaborate and compete.

### **Investment**

Limited transport networks, communications infrastructure and energy supplies are a source of frustration for many in the north. Many plans and strategies for long term growth, at both industry and community levels are predicated on overcoming these limitations. But for northern Australia, factors such as a relatively small population and lower usage rates mean that potential infrastructure projects often struggle to compete with those in the south. While it can be argued that particular projects will be 'transformational' — supporting urban growth, new or expanded industries — such projects can carry significant risks and the benefits can be difficult to quantify. This makes it difficult to attract public or private investment under current arrangements — representing a significant barrier to development in northern Australia.

# LAND

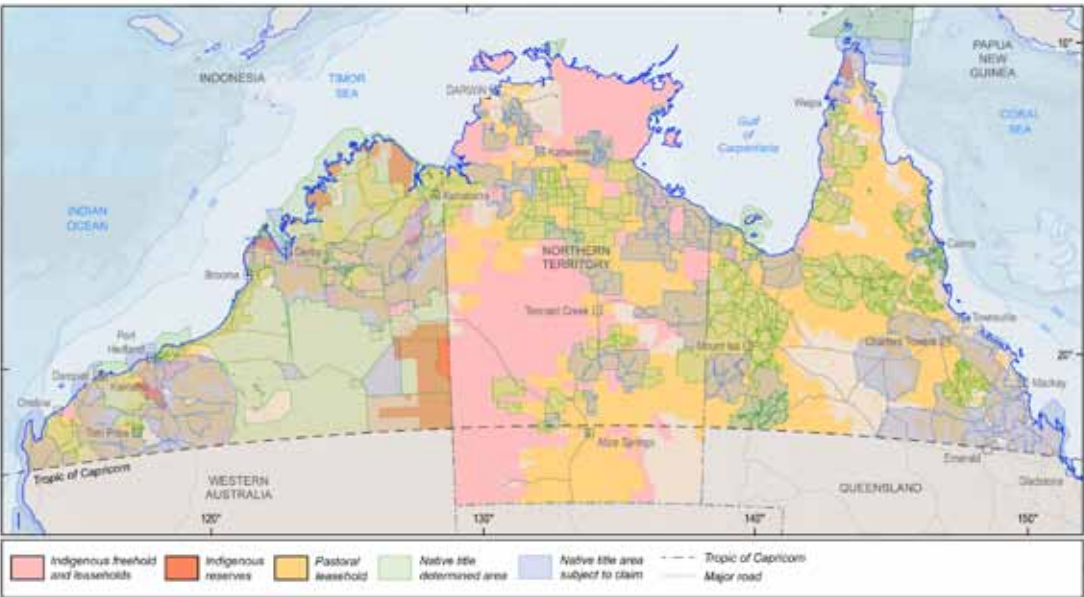
Many stakeholders argue that land in northern Australia is not being used effectively. Restrictive land tenure arrangements can drive up business costs and increase project risks, stifle innovation and deter potential investment.

Land in the north tends to have multiple, sometimes overlapping arrangements. All three jurisdictions have separate tenure arrangements (and legislation) that cover pastoral leases, Indigenous freehold and leaseholds, and native title. This poses challenges for businesses operating across jurisdictions. For example, a property could be on Crown land, held under a pastoral leasehold entitlement and include Indigenous rights under native title (see Figure 12). Also, information on tenure and land administration — and the processes involved with leasing or purchasing land — is not easily accessible.

Pastoral leases allow landholders to undertake specific activities, usually grazing livestock, but restrict other land use. These were established in the early 1800s (when few other industries existed) to assert government ownership over land in the face of uncontrolled pastoral occupation. But times have changed. Now, the limited nature of pastoral leases can restrict investment and stifle innovation. Leaseholders are generally unable to use their land for alternative activities, such as horticulture or tourism— and only with approval from various government bodies.

Indigenous land arrangements in Western Australia and the Northern Territory do not usually allow for land to be converted to unrestricted freehold. This inhibits Indigenous communities seeking to use their land for social and economic activities. Mainstream lending institutions generally do not lend against land holdings that cannot be sold.

Figure 12: Land tenure in northern Australia



©Commonwealth of Australia (Geoscience Australia) 2014. Data Sourced from Australia Land Tenure 1993 and native title 2014

The native title system also affects land access and use in northern Australia. Almost all of north Western Australia is subject to a native title claim or determination, as is around half of north Queensland and over a third of the Northern Territory (Native Title Tribunal 2014). The Government is committed to native title, which recognises Indigenous Australians' traditional connection to the land. Similarly, the Government supports the rights of Indigenous people both to influence and benefit from the use and development of land. But Indigenous and non-Indigenous stakeholders alike highlight the complexity and uncertainty that native title processes can create and the time they can take to conclude.

The efficiency of the native title system has improved. The average time to resolve a claim has fallen and the number of determinations in 2011-12 was three times higher than in 2009-10. Since 2009, there have been 108 determinations, 93 settled by consent (Native Title Tribunal 2013). But an average of seven years to settle claims still creates uncertainty for all parties. Indigenous land use agreements have provided an alternative and at times faster way of resolving native title issues.

There can be a lack of accessible information on land tenure, such as planning and development requirements, and the processes for leasing and purchasing land in the north. Some businesses struggle to understand the underlying land tenure, associated conditions, and the process required to acquire and develop the land.

This information is held by land authorities but is not always easy to find or navigate. A lack of simple and easily accessible information on land tenure arrangements can create uncertainty for those considering investment in the north. Similar uncertainty over Indigenous tenure arrangements also undermines Indigenous

land owners' capacity to explore the significant benefits of their land and engage effectively in private sector developments.

## WATER

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A lack of reliable access to water can impede economic development across northern Australia. Agricultural production, in particular, is highly dependent on water. Many manufacturing and service industries, as well as all stages of mining, also require reliable water access. Without sufficient and reliable water, industry and community growth are constrained.

A combination of factors — including a unique climate and geographic profile, underdeveloped infrastructure and markets and the lack of detailed information on water systems — has limited the development of water resources in northern Australia. Water is simply not used as effectively or efficiently as it could be.

Average daily temperatures and evaporation rates are higher in the north than other parts of Australia. For three quarters of the year evaporation rates actually exceed rainfall rates, causing loss of water from crops, soils and surface waters, creating potential salinity issues, and reducing storage efficiency. For example, water caught in pools in the Gilbert catchment in north Queensland evaporates at more than twice the average annual rainfall (CSIRO 2014a).

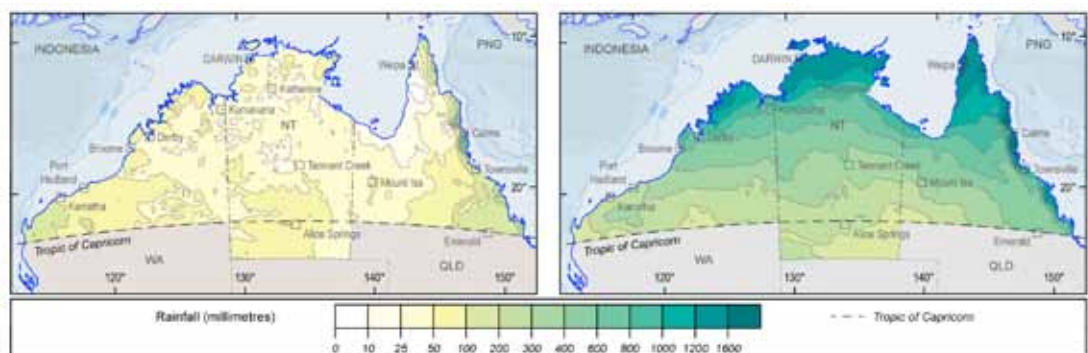
Water issues are further complicated by where the rain actually falls. Unlike other parts of Australia, such as the Murray-Darling Basin, 60 per cent of the rain in northern Australia falls in the lower reaches of the river basins — close to the sea, where it is hard to capture. Less than three per cent falls inland (see Figure 13) (CSIRO 2013b). The placement of water storage can be affected by the natural features of an area — for example a dam cannot be built on sandy

or saline soil. Also, the most suitable sites for water infrastructure are not always near established industries, affecting the economic viability of new developments.

Even when it can be secured, a reliable supply of water is not in itself enough to support development. Successful agricultural ventures must also have suitable soils, transport links and other infrastructure. Some large scale irrigation and dry land agriculture ventures in northern

Water use is less effective if new diversions or storage are introduced without understanding the impacts on other users and the environment. Water systems support multiple uses, including recreational and commercial fisheries, domestic consumption, irrigated agriculture, stock watering, mining and aquatic and terrestrial ecosystems (and the tourism based on them). The amount of water available is finite, so any new use inevitably limits the amount available for existing industries and communities.

**Figure 13: Northern Australia rainfall patterns (dry and wet season)**



©Commonwealth of Australia (Geoscience Australia) 2014. Data sourced from Bureau of Meteorology based on a standard 30-year climatology (1961-1990)

Australia have failed over the years, including sorghum and maize cropping at Lakeland Downs (1968-74) and Territory Rice (1955-63). Despite significant private investment and stakeholder support, these initiatives were characterised by inadequate planning and management with respect to climate, soils, agronomy, finances, supply chains and market access (Northern Australia Land and Water Taskforce 2009).

## BUSINESS, TRADE AND INVESTMENT

Businesses operating in the north face many similar challenges to those in the south: managing red tape, attracting and retaining labour and coping with rising costs. But there are unique challenges affecting the north. Some stakeholders claim that regulatory access and pricing regimes deter investment in crucial infrastructure in the north or leave insufficient returns to investors. For example, insurance taxes and regulatory barriers may be more costly in a region subject to extreme climatic events. The cost of insuring a home in far north Queensland can be over three times higher than a similar house in Brisbane (Advance Cairns 2014).

## Labour

Northern Australia's generally tight labour markets have been tightened further by the rapid growth of the mining and energy sectors, with workers from other sectors attracted by better wages and conditions. Defence, for example, often competes with these sectors for skilled workers, which can make it difficult to sustain Defence activities in the north.

Over the coming years, the north will need to manage changes in demand for workers across and within industries. In some cases this could mean lower wages growth or fewer employment opportunities — for example, where industries transition from construction to production phases. In other cases it will mean new jobs and greater need for new and different skills — for example where industries are expanding to capitalise on new markets.

In all scenarios, the provision of high quality education and training will be vital in ensuring the workforce can respond to these changes, both through up-skilling and re-skilling. Similarly, despite generally tight labour markets in the north, participation rates can be poor (particularly in some remote Indigenous communities), which raises issues both of incentives and skill levels.

Despite their success attracting workers from other sectors, even resource intensive industries still have difficulty filling vacancies for technicians, trade workers and machinery operators and drivers. A recent survey showed that more than a quarter of such vacancies remained unfilled for 12 months in Mount Isa, Gladstone and Capricornia — well above the average of 7.3 per cent across Australia's resource regions (DEWR 2013).

Small businesses can find it particularly difficult to access skilled and unskilled labour, and this is compounded by the largely transient workforce. Temporary or seasonal staff often come with high training costs, a challenge for the 73 per cent of horticultural farmers who rely on backpackers as their main source of labour. Some businesses, including tourism operators also cite labour conditions as a challenge in managing costs. Other factors can impede migration from the south (and within northern Australia), adding to labour challenges for business — for example, the impacts of housing stamp duties on families and businesses wishing to relocate. These factors are particularly relevant in a region with such a high turnover in population.

Many businesses seek skilled workers from southern Australia or overseas, but liveability challenges can deter workers from moving permanently. Some larger companies have adopted fly-in-fly-out or drive-in-drive-out practices (see Box C2). Such arrangements can be contentious, involve considerable cost and are not practical for smaller or less profitable businesses.

While unemployment in northern Australia has been generally low compared to the rest of Australia, there are also areas of low workforce participation, particularly in remote or Indigenous communities. Economic development is a critical means of addressing such disadvantage. There may also be elements of the transfer system which affect decisions to find and accept work.

## BOX C2: THE FLY-IN-FLY-OUT WORKFORCE

The practice of fly-in-fly-out (or 'FIFO') has expanded in Australia over the last decade, as employers seek to attract and retain workforces in remote locations. Typically, workers are provided with food and accommodation onsite while rostered to work for consecutive days, and then flown home for a similar period.

Northern Australia is both a source and destination for FIFO operations. For example, parts of north west Western Australia engage a large FIFO workforce, while Darwin and parts of eastern Queensland supply FIFO workers across the country. The Pilbara region saw a 173 per cent increase in FIFO workers between 2007 and 2011 – approximately 41 per cent of the workforce is now FIFO (Minerals Council of Australia 2013).

There are differing views on the merits of FIFO. Some businesses maintain that FIFO allows them to attract and retain a productive and skilled workforce, spreading benefits across the national economy. Others have concerns about the social impacts on FIFO employees, and the regional communities that support FIFO without the benefits of permanent settlement.

The Government is considering the recommendations of the 2013 House of Representatives House Standing Committee on Regional Australia's Inquiry into the use of FIFO workforce practices in regional Australia.

### **Red tape**

Complex regulation can constrain businesses of all sizes in the north. Red tape creates uncertainty, adds to costs and increases the time required for completion of projects. The Business Council of Australia has found that major projects often need 70 different primary and secondary approvals, licences, permits and authorisations (Productivity Commission 2013a). A single LNG project can require up to 390 regulatory approvals (Productivity Commission 2013a).

Stakeholders point out that regulations affecting transport infrastructure can be more costly in the north due to long distances. Similarly, regulatory regimes that unnecessarily delay or impede resource investment can be particularly costly in the north where it is the key economic activity.

Regulation is important to maintain high environmental standards, but it should be efficient, avoiding duplication and unnecessary 'green tape'. Major projects in the north are subject to environmental assessments under both the Australian Government and state or territory laws.

The Productivity Commission has found that environmental assessment processes can cause delays and involve a range of costs, including those relating to administration and compliance (Productivity Commission 2013a). The Western Australia Environment Protection Authority, for example, estimate that the average costs of environmental assessments involve around \$50,000 in regulator expenses (Productivity Commission 2013a). The Government's one-stop-shop for environmental approvals will simplify the approvals process for businesses, lead to swifter decisions and improve Australia's investment climate, while maintaining high environmental standards.

## International markets

Overseas investors sometimes find the complexity and cost of dealing with different levels of government in Australia a deterrent (Fraser Institute 2013). They argue that some processes — including around foreign investment — lack transparency and are too restrictive, especially for state-owned enterprises. Such concerns need to be balanced against longstanding policy approaches to foreign ownership of assets within the national interest, such as land. Australia still has a low general tariff of five per cent, along with more restrictive barriers for imported motor vehicles.

Northern Australian businesses seeking to take advantage of new export markets, particularly in fast growing Asia, face a range of trade barriers. Many countries still have tariffs that impact Australia's access and competitiveness, particularly in beef and horticulture.

Non-tariff barriers also restrict businesses' ability to maintain and increase market access. Opaque approvals processes and an inability to find suitable local partners can limit Australian exports. Emerging businesses can lack the capability to engage productively in a complex international operating environment.

Governments across northern Australia are very active in pursuing and promoting overseas investment opportunities, including through trade delegations. These efforts are valuable, but can also create or heighten confusion for overseas governments and investors unless they are well coordinated.

## GOVERNANCE

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The relatively high cost of doing business in the north, the needs and diversity of many local communities can make the task of government more difficult than elsewhere. The north also faces challenges around capacity and capability in delivering government services.

Local governments are responsible for delivering important community infrastructure and services, but face constrained revenue bases. Local governments in northern cities face particular challenges, including maintaining service delivery and progressing new developments to meet community needs. Local governments in more remote areas can face different challenges — including the high cost of servicing sparsely populated communities. A local government in the Northern Territory can commonly incur \$20,000 in costs to hold a council meeting (including travel costs of elected members and staff) (LGANT 2013).

Some northern communities face difficulties developing and maintaining the human, financial and institutional capacity to provide services and support economic development. Remote communities, in particular, face the dual constraints of a limited population to fill roles and difficulty retaining expertise.

Diversity within and among northern Australian communities adds to the challenge of meeting community needs and expectations. This can affect the quality of planning, financial and risk management, and undermine investor confidence. Coordinating service delivery across governments, while ensuring community participation in decisions, is also difficult in the north.

The responsibilities of different levels of government vary and need to be well understood, including in areas of overlap and mutual interest. This consideration should, where possible, apply the principle of subsidiarity. This is where responsibility lies with the lowest level of government possible, allowing flexible approaches to improving outcomes. State and territory governments also need to cooperate when issues or initiatives cross territorial boundaries. Local governments face high community expectations sometimes coupled with difficulty coordinating or cooperating with different jurisdictions.

Many government and non-government agencies, bodies and networks have important decision making roles in the north. Indigenous land councils, for example, are responsible for determining access arrangements and major investments on Indigenous land. A lack of access to information, inadequate consultation, limited connectivity and human and financial capital can undermine the effectiveness of community groups in northern Australia.

Government presence in the north, with the exception of the Northern Territory, tends to be operational, service delivery or research based, with decision makers mostly located further south, in Canberra, Brisbane and Perth. Decisions may not always reflect the challenges and needs of northern communities and industries — which can result in poor policies.

Governments are often criticised for a lack of meaningful engagement with local organisations and communities. Australian Governments have sometimes been seen as not understanding the needs of individuals, communities and businesses in the north. These perceptions can be exacerbated by a lack of coordination between agencies and activities, both at the national level and between governments, resulting in inconsistent or even contradictory policies.



### Policy Directions

The Government has identified six possible policy directions to develop northern Australia.

- **Delivering economic infrastructure:** including through planning and prioritising projects and identifying effective ways to fund and finance them, particularly through leveraging private sector investment.
- **Improving land use and access:** including through more flexible and longer term tenure, greater consistency across jurisdictions, new ways for Indigenous Australians to use their land for development, efficient native title processes and more accurate information.
- **Improving water access and management:** including through better understanding of systems, planning and investing in new infrastructure (such as dams) and reforming water management and planning, including functional water markets.
- **Promoting trade and investment and strengthening the business environment:** including through boosting population, improving labour availability, cutting red tape and increasing trade, especially with Asia.
- **Fostering education, research and innovation:** including through developing research networks, improving local workforce and industry skills and engaging with international education and training markets.
- **Enhancing governance:** including through better coordinating government and non-government activities, greater engagement with the north and building local capacity.

These directions are not mutually exclusive. For example, industries such as agriculture, tourism and mining all stand to benefit from reduced business costs, productive infrastructure, secure land tenure and reliable access to water.

The actions needed to drive development in the north coalesce around major themes, including:

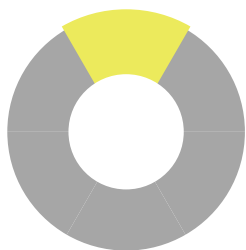
- the specific opportunities for industries, particularly agriculture, tourism and mining
- the importance of well functioning cities as the economic engine rooms of the north
- the critical role of Indigenous communities in northern development.

Developing northern Australia is not an exercise for the Australian Government alone — many policy responsibilities do not rest with the national Government. All governments need to act and work together, along with the private and community sectors, to implement practical plans with timeframes to achieve this vision.

## SECTION D: TELL US WHAT YOU THINK

1. What are the right policy directions for further developing northern Australia? How can we support industry and community growth?
2. How effective are programmes and policies affecting northern Australia? How could they be improved?
3. What should be the respective roles of the Commonwealth, state, territory and local governments, the private sector, non-government organisations and communities in pursuing these policy directions?
4. How should national approaches be tailored to support development in northern Australia? What would this mean for other parts of Australia?
5. In view of these possible policy directions, what specific actions should be taken to develop northern Australia? By whom? Over what time period?

### INFRASTRUCTURE



The right infrastructure is crucial to northern Australia's future. The infrastructure challenge in the north does not necessarily reflect a lack of investment in the past — there has

been considerable public and private investment. Examples of infrastructure projects funded by the Australian Government are included in Box D1. The view that there is still a great need for infrastructure reflects the ambition and potential for northern development. A long term commitment is needed, involving all jurisdictions and the private sector.

Addressing infrastructure barriers will boost economic development in several contexts.

It will reduce business costs, encourage new investment and make northern Australia more attractive to visit, live and work. It will support regional communities, help meet the needs of urban centres and be an enabler to industry growth.

To achieve this, a systematic approach is needed, both to identify the priority infrastructure and the best funding and financing strategies to deliver it.

## BOX D1: CURRENT INFRASTRUCTURE PROJECTS IN NORTHERN AUSTRALIA

The Australian Government's investment in large scale infrastructure in northern Australia is managed through the Infrastructure Investment Programme. Significant projects funded or recently committed to include:

- Outback Way upgrade (\$33 million commitment)
- Bruce Highway upgrade (\$6.7 billion commitment over 10 years from 2013-14, with over \$3 billion to be located in north Queensland)
- Cape York Regional Package (\$208.4 million commitment) to upgrade key roads and infrastructure
- other north Queensland roads upgrades (\$139 million commitment)
- Port Hedland Improvements Project (\$190.2 million)
- North West Coastal Highway upgrades (\$174 million commitment)
- Great Northern Highway upgrade (Muechea to Wubin, \$307.8 million commitment)
- Tiger Brennan Drive Duplication (\$70 million commitment)
- Northern Territory Regional Roads Productivity Package (\$90 million commitment)
- rail overpass south of Alice Springs (\$13 million commitment)
- Northern Territory Road Package (improving flood immunity, road safety and productivity - \$77 million).

The Government has recently committed \$128 million for Community Development Grants in northern Australia, funding a range of small scale community infrastructure. The Government also provides targeted support for aerodrome infrastructure and air services to remote areas where they are not commercially viable, with up to \$3.1 million funding assistance being provided in northern Australia.

### *Planning and prioritising*

Before taking decisions on new or improved infrastructure, it is necessary to determine what is needed most — and when. Sound planning should always inform investment, but in a time of constrained government budgets it is even more important to be clear on priorities and the benefits of particular infrastructure in areas such as transport, communications, energy and water.

All jurisdictions are already undertaking considerable infrastructure planning. At the national level, Infrastructure Australia is examining northern Australia's infrastructure needs. This includes four economic infrastructure

sectors — water, energy, transport and telecommunications — that are critical to the long term development of the north. As part of this examination, Infrastructure Australia will consider existing infrastructure, current and future gaps and pressures and infrastructure requirements for the next 20 years. This work will help inform the Australian Government's infrastructure agenda and the White Paper on Developing Northern Australia.

In addition, planning for the rollout of the National Broadband Network is being reassessed to prioritise areas with limited or no access to

fixed-line broadband (where logistically and commercially feasible). The Energy White Paper is considering Australia's supply and use of energy resources, including how new energy sources can meet demand. Such work will also inform the White Paper on Developing Northern Australia.

Planning and prioritising infrastructure need not focus exclusively on large scale or 'mega' projects. Smaller scale projects, upgrades, maintenance, or better use of existing infrastructure can all deliver productivity benefits, often outweighing those of larger and more costly projects. This is especially the case for transport infrastructure that completes or improves a supply chain.

A number of submissions to the Joint Select Committee on Northern Australia highlight the sorts of projects with strong stakeholder support (MITEZ 2014; Outback Highway Development Council 2014; Northern Territory Government 2014a; Ord East Kimberley Expansion Project 2014). These include new rail links between Mt Isa and Tennant Creek and between the Kimberley and Katherine, base load power generation in north west Queensland and upgrades to the Savannah Way (a group of highways from Cairns to Broome) and Tanami Road.

The reasons that such projects have not yet proceeded need to be examined. The fact that northern Australia has less densely populated areas and, in some cases, less developed industry, makes it harder to demonstrate the cost benefit of infrastructure that governments and the private sector typically demand when prioritising investments. Even potential infrastructure in populated urban centres can be less attractive on a cost benefit basis compared to southern counterparts. Infrastructure Australia's current list of national priorities includes two projects for the north, out of 16 rated 'ready-to-proceed'

or 'threshold' (Infrastructure Australia 2014). On a per capita basis this could be seen as over representative — but some stakeholders argue it does not reflect true potential and that the north is missing out.

Projects framed as 'transformative' or 'enabling' can pose greater risks than those where uptake or use is more certain. But just because the benefits may be uncertain, it does not mean they do not exist. There may be options to better capture and analyse the potential of projects when prioritising infrastructure in the north.

The Council of Australian Governments has commissioned work on "ways to prioritise [infrastructure] projects that improve productivity or unlock economic growth potential including in regional economies" (COAG 2013). Focus on northern Australia as a region helps ensure spill over benefits of infrastructure across jurisdictions are recognised. Governments could support more detailed analysis of such potential benefits. For example, recent CSIRO work identifies potential substantial savings along the northern beef supply chain through targeted infrastructure projects (CSIRO 2014b). Infrastructure decisions affecting the north could also be more closely linked to tangible regional economic benefits or industry development targets.

Any new approaches to infrastructure planning and prioritising in the north need to balance potential long term benefits with more immediate implications for national productivity. Changes to infrastructure prioritisation could mean that northern Australia features more prominently in investment decisions. But it could also mean that infrastructure elsewhere in the country assumes a lower priority — even if it has superior cost benefit ratios.

Regardless of the approach, value for money must remain a cornerstone of public funding and sound cost benefit principles not abandoned. Even transformative infrastructure projects should still have a robust business case and strategies to minimise costs and risks.

The White Paper will examine potential approaches to infrastructure in northern Australia. This includes identifying the respective roles of governments and the private sector, as well as other options to deliver priority economic infrastructure. Alternative ways to plan and prioritise infrastructure — and any national implications — will also be considered. Roles and responsibilities of different levels of government in Australia, including for transport infrastructure, will be considered by the White Paper on the Reform of the Federation.

### **Public and private investment**

Demand for infrastructure funding, both in the north and nationally, is high. The first point of call for funding infrastructure should be the users who directly benefit or the local community if there are flow on benefits. Most infrastructure costs are ultimately borne by taxpayers one way or another. But with government budgets constrained, the role of the private sector in facilitating infrastructure — including in northern Australia — assumes particular significance. Improving the business environment will help encourage this but innovative approaches to infrastructure funding and financing could also be considered.

The private sector is already heavily involved in infrastructure in the north. Industry has invested over \$15 billion in infrastructure related to resource and energy projects since 2009 (BREE 2014). Private infrastructure such as railways, roads and energy generation and transmission is sometimes made available for other users. There may be opportunities to take

this further. There is also private investment in community infrastructure. For example, Rio Tinto is working with local governments in the Pilbara to deliver better infrastructure, events and services to towns near its operations (Shire of Roebourne 2013; Shire of Ashburton 2013).

Various financing solutions have been applied to infrastructure over the years. Governments have extended concessional loans or guarantees to investors, to reduce project finance costs and private risk. Governments have issued infrastructure bonds to raise private funds for reinvesting in priority infrastructure. Several forms of public-private partnerships have also been pursued. These approaches have potential benefits, but each has risks. For example, concessional loans and guarantees transfer private risk to the government, which is difficult to value and better managed by the private sector. Rather than applying one model, the range of options should be considered on a case by case basis.

More recently, Infrastructure Australia has noted the economic productivity benefits of transferring existing infrastructure to the private sector (Infrastructure Australia 2013). The Northern Territory is considering direct private investment in Darwin's port infrastructure, while Queensland is considering the long term lease of the Townsville port to the private sector. The Australian Government recently committed to a partnership with states and territories on incentives to sell existing assets and reinvest the proceeds into new productive infrastructure.

The Productivity Commission is examining how to encourage private financing and funding of infrastructure projects (Productivity Commission 2013b). Its work will also be considered in the northern Australia context, in light of any new approach to planning and prioritisation.

## LAND



Opening up land in the north for new and different purposes, through administrative reforms and collaboration across jurisdictions, will be vital to economic development and industry

growth. Less restrictive leases, more privately owned land and longer tenure will provide opportunities for business and Indigenous land holders.

Improvements to tenure arrangements are underway in each jurisdiction to simplify processes, encourage more flexible and innovative land use and increase certainty for business. Some stakeholders question whether these changes go far enough, what more could be done and how quickly new approaches could be implemented.

Indigenous communities in northern Australia should be able to use their land for further economic development. This means making better use of existing ways, or exploring new options, for land holdings to support business opportunities and more jobs. More efficient native title processes could also improve business certainty and benefit Indigenous and non-Indigenous people.

Most direct responsibilities for these issues rest with the states and territory. But there may be opportunities for the Australian Government to help maintain momentum for land reforms and new ways to improve land use across the north.

### **Flexibility and certainty**

Reforms that make it easier and less costly for leaseholders to diversify their land use are

more likely to encourage investment than current arrangements. Longer leases provide business with more certainty to commit to developments that involve significant time and expense.

The Northern Territory's recent changes to the *Pastoral Land Act 1992* allow leaseholders to diversify land use and create new income streams. With ministerial agreement, leaseholders may be granted permits of 30 year terms for new activities such as tourism, mining, agricultural developments and forestry without altering their lease (Northern Territory Government 2014b).

Western Australia is considering a rangelands lease that allows for multiple uses of areas covered by pastoral leases. Use would need to be consistent with the preservation and ongoing management of the land. This means rangelands leases could be issued solely for conservation activities or Indigenous use, or for multiple purposes such as tourism, horticulture or agriculture. Western Australia is also considering the merits of perpetual pastoral leases (Western Australian Government 2014).

Queensland is reforming the *Land Act 1994* and related legislation. The changes will modernise land administration and reduce paperwork, processing times and costs associated with existing leasehold arrangements. The reforms include new rolling extensions for rural and tourism island leases and a simpler process for leases to be upgraded to freehold title. The reforms will take effect from 1 July 2014.

Implementing such reforms in each jurisdiction is an immediate priority. In the medium term, there may be opportunities for more consistency across state and territory boundaries, should all jurisdictions support such arrangements. It will be important to understand the potential benefits of any harmonisation — for example, less complexity and costs for business, local and overseas investors.

## **Indigenous land**

Indigenous land owners should be able to use their land to create economic opportunities and jobs. This could include new ways to convert land holdings to unrestricted freehold if desired. Freehold title is a secure form of land ownership that financial institutions will lend against.

In the Northern Territory and Queensland transferrable 99 year leases can be granted to support commercial enterprise for Indigenous landholders (Queensland Government 2014a). This makes it easier for people to own their homes and establish businesses on Indigenous land.

In the township lease community of Wurrumiyanga in the Tiwi Islands, 15 families are buying their own homes and traditional owners have built a supermarket using funds raised through the township lease and a loan from a commercial bank. The township lease arrangements have delivered confidence to business and financial institutions, while retaining traditional ownership of the land. The Tiwi Land Council is also considering ways to leverage land outside of Tiwi townships for economic development purposes.

The Queensland Government has passed legislative amendments to enable Indigenous land holders to convert portions of their communally held freehold land to unrestricted freehold for home ownership and economic development (Queensland Government 2014b).

Many Indigenous communities are unable to generate economic benefits from the land in which they have interests. Building on these reforms could improve Indigenous land arrangements across the north, creating new economic opportunities, including the ability to attract private investment. But this will require

ongoing engagement and cooperation between traditional owners and governments.

## **Native title**

Native title recognises Indigenous rights to and interests in land. It also provides native title holders and registered claimants with economic and commercial opportunities. This can include capacity to negotiate training and employment outcomes with business on particular areas of land, engage in cultural heritage programmes, and get jobs in national parks and other conservation areas.

There have been recent improvements to the native title claims process. For example, in 2009, reforms to the *Native Title Act 1993* gave the Federal Court a central role in managing claims and determining whether the Court, the National Native Title Tribunal, or another individual or body should mediate a claim. This has contributed to more resolutions of native title claims.

There may be opportunities to improve the efficiency of the native title system and encourage greater economic development for Indigenous and non-Indigenous people. One objective could be to reduce the average time of seven years to resolve claims. However, any further reforms need to be broadly consistent with fundamental legal principles, balance the rights struck by the *Native Title Act 1993* and support economic opportunities for Indigenous communities. The focus should be on improving the prospects for Indigenous Australians to influence and benefit from their interests in land, without compromising their cultural integrity.

## **Information**

Accurate and timely information on land tenure across the north, and the process to lease or

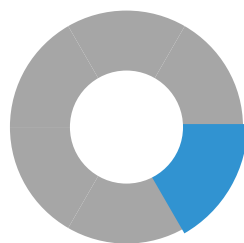
purchase land, will make it easier for business to identify different tenure types and make informed investment decisions. It will also help support economic opportunities in Indigenous communities.

The quality of land tenure data in the north is improving. In the Northern Territory and Queensland several survey projects are underway, including developing a more efficient method of digital tenure searching. Western Australia is simplifying its process for providing tenure information to the public.

Building on this, there may be options to develop more consistent and easily accessible data on land tenure. This could include more business friendly information on the process involved with acquiring freehold, or pastoral leases, or investing in Indigenous land or land subject to native title. Information on existing Indigenous land arrangements will help Indigenous communities explore the potential benefits of their land and engage in private sector developments. Stakeholders should be involved to ensure the information is consistent with the community's understanding of existing leasehold arrangements.

## WATER

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Water is integral to development in northern Australia. Improving access to reliable water supplies and better managing water resources are

essential for the continued growth of agriculture, energy, minerals and other industries — as well as a number of urban communities.

While there is, *prima facie*, plenty of water in northern Australia, better storage and more productive use will ensure it is utilised to the best practical extent. This could be achieved by building dams in appropriate locations — the last major dam built in the north was in 2001 — or by making greater use of groundwater. Actions must be informed by scientific data, good planning and cooperation by all jurisdictions and the private sector.

### ***Information to support development***

Better access to and management of water relies on having good information on surface and groundwater systems, to help identify practical options that suit local conditions. To be most productive, water developments should be sufficiently close to arable land, appropriate infrastructure and communities, with manageable impacts on the environment. Water systems in the north support industries such as agriculture, fishing, aquaculture and tourism. In order to avoid negative impacts on existing industries, the consequences of greater water use need to be well understood and carefully managed.

Resource assessments improve understanding of water systems and inform industry planning. A recent CSIRO agricultural resource assessment

of the Flinders and Gilbert catchments in north west Queensland identified a number of water storage options (CSIRO 2014a). It concluded that the Gilbert catchment would be more suited to in-stream water storages (including two river dams) while in the Flinders catchment off-stream storages (such as farm dams) may be viable. This was the first wide ranging study along these lines.

Other research has identified opportunities to develop groundwater resources in northern Australia. CSIRO estimates that 600 giga litres per year of extractable groundwater could be available to irrigate between 50,000 and 120,000 ha (CSIRO 2013c). This could enable greater use of 'mosaic agriculture' — small patches of intensive irrigated crop and pasture production, interspersed with native grass and deep rooted perennial vegetation.

While specific research findings can and should be debated, these examples illustrate the benefits of tailored, fact based approaches to improving water access in the north. Information gaps remain, including on prospective surface and groundwater systems, and the evidence base for water related decisions can be improved. Assessments of water resources in other catchments may identify opportunities to boost storage, increase irrigated agriculture, improve fisheries, inform ecosystem management and attract tourists — or caution against options unlikely to succeed.

To inform the White Paper, CSIRO will undertake a rapid appraisal of river catchments across northern Australia to identify the most likely opportunities for new water storage. Detailed assessments can then be commissioned to determine the most appropriate infrastructure needed to expand water storage in the north.

### *Investing in infrastructure*

Once resources are well understood and the best opportunities to expand storage capacity have been identified, consideration should turn to planning and funding water infrastructure. The most appropriate infrastructure depends on local conditions and can range from small scale on-farm infrastructure to large dams and reservoirs.

The right infrastructure at the property level — such as bore pumps, channels and formed paddocks — can be used to tap into groundwater resources for small scale mosaic irrigation developments. There may be options for encouraging greater uptake of such infrastructure at the individual or business level.

Potential large water projects need to be prioritised and agreed by relevant stakeholders, including governments and industry. The costs and logistics of such infrastructure in northern Australia can be considerable — which means the related industry or community benefits need to be understood. Water infrastructure should also be integrated into relevant planning strategies, to provide confidence to industry and investors.

The financial implications of developing water resources go beyond the immediate costs of new storage infrastructure. Investment decisions need to have regard for any other necessary irrigation works, and whether additional transport, energy or processing infrastructure is needed to fully utilise the increased storage. These factors can have a significant impact on the overall economic viability of new infrastructure.

Water infrastructure can be the responsibility of governments, industry, communities, business or individuals, depending on the circumstance, the type and scale of infrastructure contemplated, and the desired outcome. In northern Australia, there may be opportunities for governments

to lead in the development of large scale infrastructure, particularly where multiple industries and communities stand to benefit.

The White Paper will consider a Water Project Development Fund for northern Australia. The 'Supporting More Efficient Irrigation in Tasmania Programme' is a possible model. Investments follow studies to identify the scale and reliability of available water and sustainable levels of extraction. Projects are subject to business case assessment, with a focus on economic, social, environmental and value for money criteria. Capital infrastructure costs are then met by the Australian and state governments and industry, with ongoing costs met by irrigators. There may be scope for similar approaches in northern Australia.

The recently established ministerial working group chaired by the Minister for Agriculture will identify ways to accelerate investment in water infrastructure, as well as priorities for Government investment. This will assist in determining the water infrastructure with the greatest potential to support development. It will also inform the White Paper.

### ***Management and planning***

Even with the ideal infrastructure in place, long term water security requires good planning backed by effective pricing. Balancing the water needs of industries, communities and the environment is a complex task. This means preventing costly mistakes that can result in over (or under) allocation, uncertainty and hardship in vulnerable communities, and poor environmental outcomes.

In areas where water supply is highly variable — as in much of northern Australia — the price of water should reflect its true value. There should also be a clear definition of water rights

with the security and flexibility required to underpin investment and trade in water markets. Although water supply is highly variable, markets can reduce uncertainty by allowing participants to manage their risks. For example, during the 2005-08 drought, the Murray-Darling Basin water market helped maintain the value of irrigated production, which fell by only eight per cent, even though the actual water available for irrigation fell by 57 per cent (National Water Commission 2012). Plantings that had taken years to establish were kept alive through the purchase of water allocations from farmers giving up less valuable annual crops. This preserved long term investments for some while allowing others to convert their available allocations into income.

The National Water Initiative — a shared commitment by Australian and state and territory governments — provides a blueprint for water reform. Water reform is less advanced in northern Australia than in areas such as the Murray-Darling Basin. This is largely due to the small number of water users in the north compared to the south. While there has been progress in recent years, it will be important to continue the reform process to allow for future increases in water use. The Queensland Government, for example, is reviewing its water legislation to ensure it reflects contemporary approaches to water management, government service delivery and technology (Queensland Government 2014c).

The White Paper will examine water management reform in northern Australia and options for further improvement.

## BOX D2: A BRIGHT FUTURE FOR NORTHERN AGRICULTURE

Northern Australia is already an important food and fibre producer for consumers in Australia and major export destinations such as China, Japan, Indonesia, Europe, the Middle East and North America. World food demand could increase by 77 per cent by 2050 — this, combined with Australia's proximity to emerging markets in Asia (Linehan et al 2012), will provide growth opportunities for existing and new agricultural industries in the north.

The north's endowment of land and water suggest there is potential for the north to become a major 'food bowl'. The region receives up to a million giga litres of rainfall each year (CSIRO 2009) and there are arable soils suitable for irrigation and pasture production. There is considerable interest from investors in developing more land for agriculture, establishing new meat processing facilities and aquaculture production.

But there are practical considerations affecting the expansion of agriculture. Soils, where suitable, still require careful management to avoid degradation. Capturing and storing large amounts of water is difficult. There are challenges managing endemic tropical and sub-tropical pests, diseases and weeds. Distance from some suppliers, consumer markets and towns, coupled with limited transport, energy and water infrastructure, can increase the cost of farm products, services and labour. Business diversification is constrained by complex land tenure arrangements.

Despite these challenges, there is great potential to increase the size and scope of agriculture in northern Australia. Farming businesses and entrepreneurs are developing more sophisticated supply chains, marketing strategies and business plans to leverage the region's competitive advantages. Surveys, audits and assessments of land and water resources are better informing investors and policy makers, for example through the National Soil Research, Development and Extension Strategy. Breakthroughs in research and development are helping to tailor agriculture to regional soils, geography and climate. Governments have increased trade promotion and improved regulatory oversight.

The continued development of vibrant and sustainable agricultural industries is essential to northern Australia's status as a progressive, innovative and prosperous place to live and work. The policies and actions in the White Paper will therefore be integral to the future of agriculture in the north. Further strategies for strengthening agriculture at a national level will be considered in the Agricultural Competitiveness White Paper, due later this year.

## BUSINESS, TRADE AND INVESTMENT

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The Government is committed to relieving pressure on business and encouraging companies and small businesses to do what they do

best — invest, innovate and create wealth and jobs. This commitment extends to the north. The operating environment needs to support private sector innovation.

The Government has already announced major reforms that will go a long way to addressing the challenges facing northern businesses (such as reducing red tape by \$1 billion per year). But more can be done to reduce business costs and promote trade and investment and the business environment. This means meeting workforce needs (including through facilitating population increase), forging better links with Asia, more trade liberalisation and removing the regulatory barriers to domestic and international investment.

### ***Population and workforce needs***

Businesses often cite the limited availability of skilled and unskilled labour in the north, and challenges in attracting and retaining workers. The relatively low population in northern Australia is also seen by some as inhibiting economic development. There are three main ways to increase population: natural increase, relocation from elsewhere in Australia or international migration.

Natural population increase in northern Australia as a whole is already above the national average. The projected populations of northern cities

in the decades ahead, even on a ‘business as usual’ scenario, mean their development will be increasingly important in achieving national economic and social outcomes. This population increase will need to be supported by high quality education and training, to ensure the local workforce is able to meet the needs of these growing cities and surrounding regions. Beyond this forecast growth, the White Paper will consider options for building on existing key urban zones — such as Darwin, Cairns, Townsville and Karratha — with the aim of substantially increasing their population.

Greater migration from elsewhere in Australia would help boost population. Some stakeholders argue that targeted incentives should be provided directly to businesses and individuals. In particular, taxation arrangements are cited as one way to encourage internal migration (see Box D3). There are also questions of whether the region could make better use of the labour it already has available. Labour market regulations have been cited by some stakeholders as limiting the potential of some northern Australian industries, particularly tourism.

### BOX D3: TAXATION AND NORTHERN AUSTRALIA

Taxation is an unavoidable fact of life. However, some taxes may disproportionately affect those living and working in the north.

Many people living in northern Australia receive the Zone Tax Offset that provides assistance for those in designated remote areas of Australia. The base rate of the offset varies from as little as \$57 a year to as much as \$1,173 depending on where the taxpayer lives, plus either 20 or 50 per cent of a relevant rebate amount that varies depending on the number, and type, of dependants that the taxpayer maintains. While much of northern Australia is considered 'remote' for zone tax purposes, the zones include significant cities such as Darwin, Karratha, Townsville, Cairns and Mackay.

Some of the major industries in the north can also access business deductions not always available to other industries, such as deductions for capital expenditure on landcare operations, mining, exploration and prospecting and write-offs for capital expenditure on water facilities.

Some stakeholders argue that taxes on goods and services, including transportation, increase the cost of living and doing business in an already high cost region. Similarly, taxes and charges which impact upon transport networks are more likely to affect 'gateway' regions, already subject to remoteness and long distances. There are also arguments that taxes on the transfer of property disproportionately burden families and workers that need to move more often for employment.

The overall impact of the tax (and transfer) system on northern Australia is unclear. The actual policy outcomes sought need to be front of mind — for example, the tax system tends not to be the most effective means of addressing disparities in economic and social opportunity across regions. The quality of health care, education and local amenity may be more important to many families than tax concessions, which can often be poorly targeted. Alternatives such as improved social infrastructure and local services can be more effective in assisting communities or businesses without increasing the complexity of the tax system.

The tax system should also not encourage businesses to relocate from one region to another to the cost of the nation overall. But there may be areas where the tax system unnecessarily impedes the development of the north, to the detriment of the broader national interest.

There is also interest in special economic zones covering parts or all of northern Australia. These zones, which often seek to make business easier by reducing taxes and red tape, exist in around 135 countries and are estimated to account for over \$500 billion in global trade. The benefits can include increased foreign investment, employment opportunities, foreign exchange earnings and growth in exports, as well as expanded government revenue (Kituyi 2013). Often these zones are used to pilot business reforms that may eventually be applied to the whole economy,

meaning they have been more successful in developing countries or regions, where institutions or policies are comparatively weak.

The merits of such arrangements in northern Australia — and the implications for other parts of the country — need to be carefully examined. As well as policy considerations, changes that target a specific region need to take into account budgetary impact, complexity and legislative limitations. The Constitution places constraints

on what laws may be validly enacted by the Commonwealth Parliament. For example, federal taxation cannot discriminate between states (or within states) and preference cannot be given to one state (or part of a state) over another in laws or regulations of trade, commerce or revenue.

Employment opportunities remain a major influence on decisions to relocate, but other factors affect where people choose to live and work. These include public and private transport, social and family connections, quality healthcare and education, affordable housing, access to recreational outdoor environments and cultural entertainment options, safe communities, attractive and well maintained civic spaces and climate. Stakeholders argue such factors in particular discourage internal migration to the north. Government policies can sometimes unintentionally exacerbate them.

The White Paper will explore practical options to remove some of the impediments to internal migration to northern Australia — recognising governments have limited ability to directly affect people's decisions as to where they live and work.

International migration can also help boost population (not always permanently) and support workforce needs. Current national immigration schemes of relevance to northern Australia include the Regional Sponsored Migration Scheme and the 457 Temporary Worker Program. The Working Holiday Visa Program helps meet the workforce needs of the tourism, agriculture, mining and construction industries. The Seasonal Worker Program allows people from developing countries near Australia to work in selected industries, if employers can demonstrate unmet demand for low-skilled labour.

There are also mechanisms to allow companies or governments to bring in workers in some occupations that are considered semi-skilled. These include Labour Agreements (which are specific to an industry or employer), Designated Area Migration Agreements and Enterprise Migration Agreements (which are project based agreements).

Several such agreements are being progressed in the north. For example, the Australian Government has in place a pilot Designated Area Migration Agreement with the Northern Territory. A national trial is also underway to expand the scope of the Seasonal Worker Program and allow accommodation providers, aquaculture ventures and cane farmers to access the programme. This programme already has a high level of uptake with 1,615 workers placed across Australia in 2013, including in and around Broome in Western Australia, Humpty Doo and Katherine in the Northern Territory and Lakeland, Innisfail, Mareeba and Bowen in north Queensland.

The White Paper will consider further opportunities to increase the effectiveness and applicability of these programmes in the north. More broadly, the Australian Government is consulting across governments, industry, business and communities on ways migration policy can help increase the availability of skilled and unskilled labour, including in the north.

### **Red tape**

The Government is implementing a national deregulation agenda to improve the business environment across Australia, including northern Australia. Improving regulation is a national priority but has particular resonance in a region with great potential to unlock new opportunities for domestic and foreign investment.

The Government's commitment to reduce the regulatory burden by \$1 billion per year will reduce the cost of doing business in the north. This includes repealing costly and excessive regulations, reforming how new regulations are created and administered and helping investors understand those regulations that are necessary. Jurisdictions have also agreed to work through the Council of Australian Governments to reduce red tape in four areas: manufacturing, higher education, early childhood and 'end-to-end' regulation of small business.

A number of current reforms are relevant to northern Australia. The Government is delivering a one-stop-shop for environmental approvals. The new system will involve federal accreditation of state environmental processes, creating a single assessment and approval process while maintaining environmental standards. It will have particular benefits for northern Australia by improving certainty around major project developments — including in mining, agriculture and tourism.

Poor regulations can reduce competition and choice, and increase prices. Businesses build higher costs into the prices for the goods and services they sell, raising the cost of living in the whole region. Regulations may be justifiable but need to be examined carefully to ensure they are not unintentionally impacting on those living in northern Australia.

Some stakeholders have cited regulations that make the cost of transportation particularly costly in regions where long distance travel is routine or people need to access remote areas, with few public transport alternatives. Regulations can also make it difficult for foreign ships to transport people and cargo between domestic destinations (the Government is considering the issues around shipping regulations). International

arrangements have a similar effect on foreign aircraft. Stakeholders have also raised the impact of regulatory restrictions limiting international flights and tourists at Darwin airport. Regulations also effectively ban the importation of used motor vehicles.

Even more minor changes to red tape can improve the business environment. For example, the Government's commitment to streamlining visa requirements for Chinese tourists will provide immediate returns, helping boost tourism numbers in northern Australia (ABARES 2013a).

Where regulation is necessary, governments can help investors understand their responsibilities and the requisite processes. For example, in Queensland the Office of the Coordinator-General acts as a single entry point to improve the efficiency of regulatory approvals for new major projects. There may be scope for a similar approach in the northern Australian context, also drawing on overseas models of investment coordination, including Singapore's Economic Development Board and the Malaysia's Industrial Development Authority.

## BOX D4: INDIGENOUS EMPLOYMENT

The financial independence of Indigenous Australians will be integral to the development of northern Australia. The Government's new agenda for improving Indigenous quality of life includes a focus on schooling, workforce participation and financial independence. The Prime Minister's Indigenous Advisory Council is informing the agenda and includes Indigenous and non-Indigenous Australians with experience in the public sector, business acumen and a strong understanding of Indigenous culture.

The Government's Review of Indigenous Training and Employment Programmes ('The Forrest Review') will provide practical recommendations to ensure Indigenous training and employment services connect unemployed Indigenous people with real and sustainable jobs. It will consider ways to improve services to employers who want to provide ongoing employment and end Indigenous disadvantage.

The consultation process associated with this Review demonstrated a high level of goodwill in the community and from business leaders and employers to see a genuine improvement in the lives of Indigenous people.

The Government has committed up to \$45 million to support Indigenous training and employment through the Vocational Education and Training Centre (VTEC) model. This will see up to 5,000 unemployed Indigenous Australians, including many in northern Australia, provided with training and guaranteed employment. With VTEC expected to be located in northern Australia, they will help make Indigenous job seekers "job ready".

A new approach to Indigenous employment will have significant impacts on Indigenous Australians in northern Australia. Actions to develop the north still need to build on existing work — at both the government and community level and recognise the central role of Indigenous Australians and communities in unlocking northern Australia's potential.

### *Trade promotion and liberalisation*

For northern Australia, the business opportunities presented by the rise of Asia are vast, but competition is fierce. Concentrated efforts are required on three fronts: firstly, to promote both Australia and northern Australia as a preferred trade and investment destination for Asian consumers and investors; secondly, to secure further trade liberalisation; and finally through improved engagement with Asian (and other global) trading partners.

Greater links into expanding Asian markets will improve the business and investment environment in northern Australia. For agriculture, there are opportunities to expand the

perishable goods and live cattle markets through more integrated supply chains. For tourism, there are opportunities to increase the number of visits from Asian tourists, including high end visitors and Indigenous tourism experiences.

There is considerable work underway to improve access to Asian markets for Australian business. Northern Australia's agricultural exporters will be major beneficiaries of the recently concluded Free Trade Agreement with South Korea (DFAT 2014a), with tariffs of up to 300 per cent to be eliminated on beef and sugar (DFAT 2014a). The recent Japan-Australia Economic Partnership Agreement (JAPEA) will support northern Australian sugar and horticultural producers with preferential access to the Japanese market.

The Government is prioritising a Free Trade Agreement with China and negotiating with India and Indonesia — all vital markets for the north (DFAT 2014b). The Government is also negotiating plurilateral free trade agreements, including the Trans-Pacific Partnership and the Regional Comprehensive Economic Partnership. Such agreements are most successful when they reflect the priorities of relevant business, industry and non-government organisations. As a region heavily reliant on further market liberalisation to realise its full potential, the views of northern stakeholders will be important.

A well targeted approach to promoting northern Australia internationally will also help boost trade and investment. Australian ministers with responsibility for trade and investment recently committed to priorities that reflect many of the comparative advantages of northern Australia: agribusiness and food, resources and energy, major infrastructure, tourism infrastructure and advanced manufacturing, services and technologies (Robb 2014). There may be opportunities for governments to work more collaboratively when planning trade missions, in line with these priorities, to ensure a consistent ‘brand’.

Governments and many businesses in northern Australia have a long history of engagement in the region and recognise the importance of understanding how Asian markets operate and the preferences of its consumers. For example, to capture the growing Chinese tourist market, northern Australian operators need to offer services that reflect the preferences of Chinese consumers, including by catering for large tour groups and providing culturally appropriate rooms (United Nations 2013).

In progressing northern Australia’s engagement with Asia, direct government-to-government

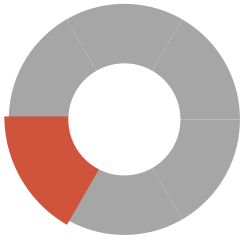
links are vital. Australia remains engaged through a range of regional forums and dialogue with neighbouring Asian, Pacific and Indian Ocean partners. Governments can also facilitate industry links with international counterparts and markets, with businesses responsible for pursuing economic opportunities. In order to assist international investors understand the Australian business environment, the Government is also establishing ‘investment brokers’ to provide a single entry point for investors dealing with a range of Australian and state and territory bodies.

The Government is reviewing Australia’s international diplomatic network. The White Paper will consider whether there is scope for Australia’s overseas missions to do more to build the international profile of northern Australia and to develop trade and investment opportunities. In Indonesia, trade and investment opportunities could be a focus. East Kalimantan, for example, has a strong oil and gas sector, while Makassar has strong tertiary education links with northern Australia. The resource implications of an expanded focus by Australia’s diplomatic missions on northern Australia would need to be considered alongside Australia’s other national interests.

Economic development in the north will be driven by the private sector, including domestic and foreign investment. The Government is committed to work with business, industry, and major trading partners to establish a business environment that is conducive to growth. The White Paper will consider ways to lift business investment through access to labour, efficient legislation and international engagement. It will also examine red tape that poses particular constraints to business in northern Australia and the best options to reduce the regulatory burden for individuals, businesses and community organisations.

## EDUCATION, RESEARCH AND INNOVATION

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Further development of education, science and research services in the north will support innovation and development, grow and skill the local workforce, and

diversify the northern economy. The north has potential as an education hub, with world class vocational and higher educational facilities delivering economic benefits both to urban areas (where the facilities are situated) but also regional and remote areas (where the results are often applied). There are also opportunities to meet the needs of emerging tropical economies around the world as the north is one of the few established economies with this expertise.

These efforts should largely be driven by education and training providers and research institutions, with some targeted investment and other assistance by governments. For example, the Government has committed \$42 million to the Australian Institute of Tropical Health and Medicine. This will support research and training and the development of vaccines for tropical diseases.

There may also be a role for further government support or action, consistent with Australia's research priorities and broader approach to promoting research and innovation. Any future plans for expansion would need to focus on increased collaboration and build on existing strengths and capabilities to achieve the necessary scale for impact, rather than risk creating fragmentation and duplication of effort. Although the north's institutions are performing well across a range of disciplines,

they share these accolades with other institutions across the world — many of which are world leaders in their respective fields. To remain internationally competitive, institutions should look to target areas of comparative advantage, including building partnerships with high calibre institutions and the private sector.

The White Paper will consider how best to realise northern Australia's potential to foster education, research and innovation, including the establishment of centres of excellence in tropical medicine in the north.

### ***Networks and capabilities***

Building on partnerships with world leading institutions within Australia and internationally will provide northern institutions with opportunities to leverage world class facilities and expertise. This will help to strengthen research capabilities, but also improve their reputation and competitiveness. For example, there may be merit in exploring partnerships with institutions considered to be world leaders in their particular fields.

These networks and capabilities are being developed through initiatives such as the Australian Research and Education Network — a telecommunications network that connects Australian universities and research institutions with each other and international collaborators. Other partnerships such as the North Australia Marine Research Alliance and the Northern Research Futures alliance are also improving networks between institutions in the north and with institutions in the south.

Investment in research capacity and infrastructure is improving the capabilities of northern Australia's institutions. For example, the Government has funded James Cook University to develop digitally-enabled teaching and learning methods, to increase access to and participation in tertiary education.

Despite these efforts, there are challenges. The tertiary education and research sectors are highly competitive. Institutions in the north will continue to vie with others within Australia and internationally for students, staff, researchers and funding.

### ***Skills and industry development***

The development of the north depends on local industries being well connected with emerging technologies and deploying a skilled workforce. Northern institutions have an important role in meeting these needs, through tertiary and vocational education and training.

The White Paper will examine private and public education provider options to best develop technical skills in resources, agriculture, tourism, healthcare, infrastructure and education. This will need to involve the northern institutions, business and state and territory governments, who each have their own training and skills reforms and programmes. It will also need to consider national efforts to build a skilled and flexible workforce, including the work of the Vocational Education and Training Reform Taskforce, the Review of Indigenous Training and Employment Programmes and the National Partnership Agreement on Skills Reform.

Actions in this area may include promoting online or distance education, as well as other less traditional delivery models. Charles Darwin University, for example, is a dual-sector university with more than 5,000 students studying online. The Batchelor Institute of Indigenous Tertiary Education is another dual sector provider in the north, delivering education and training under a 'both-ways' philosophy, which brings together Indigenous knowledge and traditions with Western academic models.

Northern institutions can also drive industry development by disseminating research and development outcomes and supporting local businesses and industries to apply emerging technologies. The White Paper will consider the establishment of a Cooperative Research Centre (CRC) responsible for developing northern Australia. The CRC model supports end user driven research through partnerships between researchers, industry, businesses and communities.

The emerging tropical economy offers a unique opportunity for northern Australia. Northern Australian research institutions and industries have valuable knowledge and experience in tailoring their practices and products to suit the tropical environment. This includes expertise in areas such as health, mining, agriculture, fisheries management, building design, disaster management and conservation.

For example, James Cook University is a member of TropLinks, a network of over 300 research institutes, industry groups and individual companies working to build the capacity of members to develop, commercialise and export tropical expertise. The Australian Institute of Marine Science has conducted collaborative research which has informed the management of Australia's iconic Great Barrier Reef, and contributed to the information base needed to assess future impacts of industry development activities on marine ecosystems.

There may be other opportunities for northern institutions to foster more similar alliances. This would help businesses better identify product and service needs, domestically and overseas, and partner to create new products.

## ***International markets***

There is a growing international education market in Asia for northern Australia. Australian education providers already benefit from the growing middle class in Asia: in 2012 over 400,000 international students were studying in Australia, almost 30 per cent from China (Australian Education International 2013). Given its proximity to Asia and the focus and expertise of many of its institutions, northern Australia could be the education destination of choice for Asian students and researchers. This could be achieved through training and university education places that reflect areas of expertise for the north — such as medicine, nursing, dentistry, allied health, biosecurity and veterinary science.

Northern Australia is already forging deeper education links into Asia. James Cook University, for example, has established two campuses in Singapore and has over 2,500 students from Singapore, China, India, Indonesia and Malaysia. Charles Darwin University has student exchange agreements with universities in Malaysia, Indonesia and China. These efforts are complemented by Government initiatives such as the New Colombo Plan; under the first phase of the Plan students from James Cook and Charles Darwin universities will be supported to undertake studies in Asia.

## ***Development in the region***

The purpose of the Australian Government aid programme is to promote Australia's national interests by contributing to the international economic growth and poverty reduction in our partner countries. Under this Government, the aid programme will have a stronger focus on our region, the Indo-Pacific, particularly south east Asia and the Pacific. A more prosperous, stable and growing region is good for Australia. A growing region generates jobs and wealth for Australians.

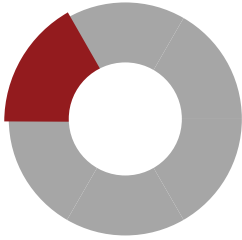
Northern Australia's expertise and facilities in areas such as tropical health and medicine and disaster response can help improve conditions in neighbouring countries. For example, research into tropical medicine can support development objectives in tropical economies. Tropical diseases such as malaria and dengue remain enormous problems globally, with up to 100 million cases of dengue annually (Queensland Government 2014b). Australia is already leading efforts to eliminate drug-resistant malaria in the region.

Institutions in northern Australia are working with counterparts in neighbouring countries to share knowledge and provide medical care training to healthcare professionals. For example, the Royal Darwin Hospital has received funds to progress a sister hospital agreement with Bali's Sanglah Hospital, to help improve clinical care, clinical governance and patient safety.

There may be opportunities to further train doctors, nurses and other health professionals from countries such as Papua New Guinea, Indonesia and the Pacific Islands in northern Australia. The White Paper will explore the possibility of accessing funds, through competitive mechanisms, from the foreign aid budget where activities meet the criteria of official development assistance. This would need to be considered against Australia's broader national interests, other development priorities, and be driven by partner country needs.

## GOVERNANCE

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Greater cooperation and coordination across government can reduce costs and deliver better services for businesses and communities. While political leadership is

important, community participation is essential in avoiding 'government knows best' approaches.

### ***Coordination and accountability***

All governments recognise that more effective coordination can reduce duplication in services and policies. Closer engagement with local communities and organisations will also help governments ensure policies reflect the needs of the north.

The recently established Northern Australia Strategic Partnership, comprising the Prime Minister, the Deputy Prime Minister, the Premiers of Queensland and Western Australia and the Chief Minister of the Northern Territory is bringing a more cooperative approach to developing the north. In the first instance, it has helped inform this Green Paper and will also inform the White Paper, but a longer term partnership could drive coordination and engagement in areas such as service delivery, infrastructure and regulation.

The Government has committed to a White Paper on the Reform of the Federation to clarify the roles and responsibilities of the different levels of government that will be relevant to good governance in northern Australia. In determining how best to advance its work with the northern states and territory, the Government will consider where the competitive aspects of federalism are healthy and where they hamper development or create inefficiencies.

The Government's Office of Northern Australia provides policy advice on development issues in the north and helps coordinate work across the Australian Government and between governments, business and communities. There may be opportunities for this Office, or a similar function, to be more prominent in work on national government initiatives affecting northern Australia.

The various government agencies administering services in the north could be better coordinated and engaged with local communities. There may be potential to co-locate local, state and national government services, giving communities and business better access to government. The effectiveness of consolidating multiple services and approaches could be assessed through pilots at one or two sites.

## BOX D5: DEFENCE ENGAGEMENT IN NORTHERN AUSTRALIA

Defence has a substantial presence in northern Australia, with more than 15,200 service personnel and public servants located there.

The Government's 2015 Defence White Paper will consider enhancing Defence presence in northern Australia. Decisions will reflect strategic considerations, but may impact parts of northern Australia.

Close cooperation between Defence and governments, industry and communities is essential in managing pressures around planning for urban development and Defence activities. For example, there are often competing demands for access to essential infrastructure, such as ports, and issues of traffic and maintenance of infrastructure around Defence facilities.

Defence engages with communities, industry and governments, particularly to identify emerging infrastructure pressures with sufficient lead time for planning. For example, in 2012, Defence and the Northern Territory Government jointly established a Darwin Land Use Study to balance strategic needs in Darwin and the housing pressures facing the Darwin community.

Defence also works closely with remote communities in the north. The Army's Regional Force Surveillance Units (NORFORCE), recruit soldiers from local Indigenous communities. Around 60 per cent of NORFORCE — responsible for surveillance of the largest area of any military unit in the world — are local Indigenous soldiers.

With good cooperation and planning, new infrastructure investments can support shared use, benefitting both industry and Defence. The Australian Marine Complex Common User Facility at Henderson in Western Australia is a good example. It includes more than 150 businesses, many with maritime and technological skills that have completed substantial works and repair programmes for the submarines, frigates and tankers.

### **Community engagement**

In addition to better coordination across governments, all levels of government could improve their engagement with the communities they represent in northern Australia.

The White Paper will consider increasing the Australian Government's presence in the north by relocating parts of, or entire, government agencies. This could include agencies with responsibilities relevant to northern Australia, such as CSIRO and the biosecurity functions of the Department of Agriculture. Several agencies already have a presence in the north, which could be increased. An on the ground presence helps improve understanding of the practicalities of the north and communication with non-government

stakeholders. There can also be local economic and social benefits, as the Defence experience has shown (see Box D5).

In considering the government presence in the north, the costs and implications of relocation need to be understood, including any potential adverse impacts on communities. Also, relocating staff to the north would not in itself ensure devolution of decision making or guarantee better outcomes for northern Australia. All government agencies should be well placed to deliver quality services, programmes and policies — regardless of their location. There may be options to deliver better results for northern Australia in this area, including through target setting, monitoring and reporting.

There may also be opportunities to increase community participation in policy development and implementation. In the north, all levels of government work with business and community groups to support regional development — for example through the network of Regional Development Australia committees. The Government is currently considering these arrangements as part of its vision for regional Australia.

### ***Building capacity***

Local communities are best placed to find solutions to local problems. Local organisations, such as Indigenous councils, industry associations, environmental networks, business advocacy groups and local government, play a key role in developing the north. There may be opportunities to strengthen institutional capacity within — and encourage more collaboration between — these organisations. Industry can tackle areas of mutual interest by pooling resources and expertise. For example, the northern Australian beef industry recently convened workshops with industry, national, state and territory governments to consider land tenure, trade, research and logistics issues. Similar approaches could be adopted more widely.

State governments are responsible for ensuring that revenue sources are stable and secure to meet local needs. Local governments maintain local amenities and road and bridge networks, and grant planning permissions. Some local governments face financial difficulties in light of the high costs of service delivery and a heavy reliance on rates, charges and state and federal grants for funding. The role of local government is likely to be considered in the White Paper on the Reform of the Federation.

Improving coordination, building community engagement and strengthening local capacity are an essential part of the Government's ongoing commitment to the north. The White Paper will consider the best approaches to deliver these improvements.

## BOX D6: PROCESS FOR SUBMISSIONS

This Green Paper forms part of a wider consultation process. It outlines the issues and asks questions to prompt discussion as input into the White Paper. Individuals and organisations are encouraged to have their say in this process by making a submission.

The deadline for submissions is 8 August 2014.

The White Paper will also consider submissions to the Joint Select Committee on Northern Australia and the Committee's report and recommendations.

Submissions can be made:

**ONLINE** <http://northernaustralia.dpmc.gov.au>

**BY MAIL** Northern Australia Taskforce  
Department of the Prime Minister and Cabinet  
PO Box 6500  
CANBERRA ACT 2600, Australia

### Publication of submissions

Submissions will be published on the White Paper on Developing Northern Australia website, shortly after receipt, unless you request otherwise, they are marked as in-confidence, have inadequate contact details or are inconsistent with the publication guidelines (see below). Submissions will remain on the website indefinitely as a public document. All personal contact details other than your name and postcode will be removed from your submission before it is published on the website. For further information, please refer to the Website Privacy Statement and Privacy Policy at <http://northernaustralia.dpmc.gov.au>.

Please indicate clearly on the front of your submission should you wish your submission to not be published or to be treated as confidential, either in full or in part.

### Guidelines for publication

The Australian Government reserves the right to refuse to publish submissions, or parts of submissions, in particular if a submission contains offensive language, potentially defamatory material or copyright infringing material.

### Freedom of information

All documents in the possession of Department are subject to the *Freedom of Information Act 1982* (FOI Act). For requests under the FOI Act, the public has a general right of access to documents but documents may be exempted from release under specific provisions in the FOI Act in limited circumstances.

A request may be made under the FOI Act for any submission (including those which are not published on the White Paper on Developing Northern Australia website and/or are treated as confidential) to be made available. Any such requests will be determined in accordance with provisions under the FOI Act, and decisions regarding requests for access will be made by the authorised decision-maker in accordance with the requirements of the FOI Act.

## NEXT STEPS

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This Green Paper has set out for debate some of the opportunities, barriers and potential policy directions for developing the north.

Each policy direction includes possible actions which could be implemented in the short, medium and long term.

In considering these, and other possible actions, the Government's objectives for the White Paper are to:

- focus on economic development, trade and investment and jobs, while retaining appropriate social, environmental and biosecurity safeguards
- create the right climate to maximise private sector investment and innovation, avoiding prescriptive or interventionist approaches
- remain consistent with national approaches and deliver benefits to other parts of Australia
- seek to advance low or no cost solutions given the current fiscal environment, and facilitate private sector funding wherever possible
- respect and recognise the roles and responsibilities of state and territory governments.

The White Paper on Developing Northern Australia will set out two, five, 10 and 20 year implementation plans. It will build on existing work underway across the public and private sectors. For example, it will draw on the Government's other White Papers on Agricultural Competitiveness, Defence, the Reform of the Federation, Energy and Tax Reform and its work on Indigenous affairs.

It will also have regard for state and territory government initiatives on planning, Indigenous development, investment, transport, housing and conservation. Many local governments are also working to meet short and long term local needs. In addition, industry bodies, research institutes, non-government organisations, regional groups and natural resource management boards have developed plans and strategies to address specific challenges and opportunities for the north.

Further information on state and territory initiatives relevant to northern Australia is at [Appendix B](#).

The Government invites further insight, discussion, comment and debate on the issues and possible actions. The White Paper will draw on these ideas in setting a long term vision for northern Australia and the actions necessary to achieve that vision.

## ABBREVIATIONS

2030 Vision	The Coalition's 2030 Vision for Developing Northern Australia
ABARES	Australian Bureau of Agricultural and Resource Economics and Sciences
ABC	Australian Broadcasting Corporation
ABS	Australian Bureau of Statistics
BITRE	Bureau of Infrastructure, Transport and Regional Economics
BOM	Bureau of Metrology
BREE	Bureau of Resources and Energy Economics
COAG	Council of Australian Governments
CRC	Cooperative Research Centre
CSIRO	Commonwealth Scientific and Industrial Research Organisation
DEEWR	Department of Education, Employment and Workplace Relations
Defence	The Australian Defence Force
DFAT	Department of Foreign Affairs and Trade
DIDO	Drive-in-Drive-out
EIA	United States Energy Information Administration
FAO	Food and Agriculture Organization of the United Nations
FIFO	Fly-in-Fly-out
GEMCO	Groote Eylandt Mining Company
GL	Giga litre
GPS	Global Positioning System
Ha	Hectare
IPCC	Intergovernmental Panel on Climate Change
LGANT	Local Government Association of the Northern Territory
LNG	Liquefied natural gas
MITEZ	Mount Isa to Townsville Economic Development Zone
MLA	Meat & Livestock Australia
NORFORCE	North-West Mobile Force
OECD	Organisation for Economic Cooperation and Development
RAI	Regional Australia Institute
RIRDC	Rural Industries Research and Development Corporation
TAFE	Technical and Further Education
VTEC	Vocational Education and Training Centre

## GLOSSARY

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Agromony	The science of soil management and crop production.
Biosecurity	The protection of the economy, environment and human health from the negative impacts associated with entry, establishment or spread of exotic pests (including weeds) and diseases.
Bituminous coal	A relatively soft coal containing a tarlike substance called bitumen.
Bulk ports	For the purposes of the White Paper, bulk ports are ports which handle bulk cargo (homogenous unpacked cargo). Bulk cargo can be categorised into three categories: dry bulk (for example coal, iron ore and grain), liquid or wet bulk (such as oil and other petroleum-based products) and gas-based commodities (such as liquefied petroleum gas and liquefied natural gas).
Cabotage	The term often applied to the international practice that, to varying degrees, restricts coastal shipping (and domestic aviation) to domestic carriers.
Cloud computing	Refers to style of computing in which various resources—servers, applications, data, and other often virtualised resources—are integrated and provided as a service over the Internet.
Designated Area Migration Agreement	Designated Area Migration Agreement is a custom-designed programme which supports a tailored, localised response to labour needs. It assists Australian businesses in geographically defined areas facing acute skills and labour shortages, to access suitably qualified skilled and semi-skilled workers.
Dewater	Removing underground water to facilitate construction or other activity.
eHealth	For the purposes of the White Paper, eHealth is the cost-effective and secure use of information and communications technologies in support of health and health-related fields, including health-care services, health surveillance, health literature, and health education, knowledge and research.
Economic infrastructure	Physical assets available for conducting business activities, including communications, transportation and distribution networks.
Electricity grid	An interconnected network for delivering electricity from suppliers to consumers.

Enterprise Migration Agreement	Enterprise Migration Agreements are custom-designed, project-wide migration agreements, located at a single geographical area and available to resource projects with capital expenditures of more than two billion Australian dollars and a peak workforce of more than 1500 workers.
Energy-off grid systems	Stand-alone systems, typically for providing electricity to a smaller community.
Gravity gradiometry	Gravity gradiometry is a scientific method used by oil and mineral prospectors to more accurately target oil, gas and mineral deposits.
Green tape	Refers specifically to processes or requirements associated with environmental or heritage protection perceived to impose an unwelcome burden on business, community organisations or individuals.
Jurisdictions	For the purposes of the White Paper, jurisdictions are defined as Queensland, Western Australia and the Northern Territory.
Liveability	For the purposes of the White Paper, liveability is defined as encompassing the many characteristics that influence people to live in a place. These characteristics cover the essentials of living as well as the enjoyment of preferences. This can include transport, amenity, environment, social inclusion and infrastructure.
Mobile broadband	Data services provided over the mobile telephony network. Available in 3G which offers download speeds between 1-20 Mbps or 4G, which offers download speeds between 2-50 Mbps.
Mosaic irrigation	Irrigation schemes in which small patches of irrigation occur within a region rather than irrigation of one large contiguous area.
Northern Australia	For the purposes of the White Paper, northern Australia is broadly defined as the parts of Australia north of the Tropic of Capricorn, spanning Western Australia, the Northern Territory and Queensland.
Public-private partnerships	An agreement between public and private sector entities on the financing and provision of public infrastructure.
Plurilateral free trade agreement	Free trade agreements between more than two countries.
Red tape	The term in general usage for a process or other requirement of government perceived to impose an unwelcome burden on business, community organisations or individuals.

Special economic zone	Special economic zones can be defined as specific geographic areas offering particular incentives, for a defined period of time, to businesses and industries which physically locate within the zones.
Social infrastructure	Physical assets that support the social development of a community, including education, health and public housing facilities.
Urbanisation	For the purposes of the White Paper, urbanisation refers to the increase in the proportion of a population living in urban areas.
Value for money	Value for money is about striking the best balance between economy, efficiency and effectiveness. It is not a tool or a method, but a way of thinking about using resources well. In Australia, it is often used as a framework for assessing cost effectiveness across the public sector.
Water – surface water	Water that flows over land and in watercourses or artificial channels and can be captured, stored and supplemented from dams and reservoirs.
Water – groundwater	Water occurring naturally below ground level (whether in an aquifer or other low permeability material), or water occurring at a place below ground that has been pumped, diverted or released to that place for storage there. This does not include water held in underground tanks, pipes or other works.
Water system	A system that is hydrologically connected and described at the level desired for management purposes (e.g. subcatchment, catchment, basin or drainage division, or groundwater management unit, subaquifer, aquifer, groundwater basin).
Zone Tax Offset	An offset (or rebate) that can be claimed if an individual lives or works in a remote or isolated area of Australia, not including an offshore oil or gas rig, for at least half the income year. It directly reduces the amount of tax payable on an individual's taxable income.

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## APPENDIX A: Terms of Reference

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### **Purpose**

The Government will produce a White Paper on Developing Northern Australia within 12 months. The White Paper will set out a clear, well-defined and timely policy platform for realising the full economic potential of the north, including a plan for implementing these policies over the next two, five, 10 and 20 years.

Northern Australia is broadly defined as the parts of Australia north of the Tropic of Capricorn, spanning Western Australia, Northern Territory and Queensland; an area of approximately 3 million square kilometres with a population of around one million people.

The north has some natural advantages relating to agriculture, mining, energy and tourism. It also has geographic advantages from its proximity to the fast-growing Asian and Tropical regions, presenting opportunities in services such as education and health.

The north also has strategic importance, with defence having an important role in the security and development of northern Australia.

However, it faces significant economic, environmental and social challenges, including: a sparse population; infrastructure, transport and service delivery costs; competition for skilled labour; harsh and extreme weather; and possible constraints around water resource development.

The White Paper will:

1. produce a stocktake of northern Australia's natural, geographic and strategic assets, and the potential for further development of the region's minerals, energy, agricultural, tourism, defence and other industries, as well as a comprehensive assessment of risks and impediments to growth;
2. set out agreed policy actions to:
  - harness opportunities which capitalise on the region's strengths, including ways to advance trade, cultural and investment links with the Asia Pacific region and provide a regulatory and economic environment that is conducive to business investment, competitiveness and competition.
  - manage impediments to growth, including from regulatory frameworks, land access arrangements, environmental constraints, the lack of coordinated planning, participation of Indigenous people in the economy and access to markets, skills and services, and
  - create the right conditions for private sector investment, innovation, enterprise growth and business formation (including in and for Indigenous communities);
3. identify the critical economic and social infrastructure needed to support the long-term growth of the region, and ways to incentivise public and private planning and investment in such infrastructure; and
4. include consideration of the policy options identified in the Coalition's 2030 Vision for Developing Northern Australia.

# APPENDIX B: Selection of Existing Government and Non-Government Programmes and Initiatives

AUSTRALIAN GOVERNMENT	
Agriculture	
Carbon Farming Futures Programme	Research programme to assist farmers and land managers cut greenhouse gas emissions and increase storage of carbon in soil while maintaining or improving farm productivity in northern Australia.
Indigenous Pastoral Project	Provides Indigenous pastoralists with the resources to develop commercially viable and sustainable practices.
Indonesia-Australia Partnership on Food Security in the Red Meat and Cattle Sector	Funding to increase agricultural cooperation, improve long term trade and boost Australian investment in Indonesia’s red meat and cattle sector.
Northern Australia Quarantine Strategy	Identifies and evaluates the biosecurity risks facing northern Australia; develops and implements measures for the early detection of targeted pests, diseases and weeds; contributes to national and international initiatives on pest and disease monitoring; and manages the biosecurity aspects of border movements through the Torres Strait.
National Plant Health Surveillance Programme	Enables early detection of exotic pests that may enter northern Australia, which is vulnerable due to its sparse population and close proximity to other countries.
Communications	
National Broadband Network	A national, open access communications network is being built to deliver high speed broadband and telephone services across Australia.
Mobile Black Spot Programme	Funding to improve mobile phone coverage in some outer metropolitan, regional and remote communities which do not have reliable coverage.
Education	
Asian Languages	Funding supports the inclusion of Asian languages and studies in Australian school curricula.

Broadband enabled education and skills services programme	Provides schools and teachers in remote areas with education and teaching resources unavailable through traditional approaches. Remote-based teachers receive live online tuition from specialists from national institutions or undertake self-paced professional development modules through distance learning.
<b>Environment</b>	
Lake Eyre Basin Rivers Assessment 2013	Review and report on the condition of watercourses and catchments in the Lake Eyre Basin at least every decade.
COAG Strategy on Water and Wastewater Services in Remote (including Indigenous) Communities	Funding upgrades water supply and wastewater infrastructure including treatment facilities, increased water storage capacity and replacement of pipe networks. Funding also supports communities to manage their water supply and develop water conservation programmes.
Management of the Great Barrier Reef Marine Park	Funding for the long term protection, ecologically sustainable use, understanding and enjoyment of the Great Barrier Reef for all visitors to the reef.
Australian Government Reef Programme	Supports land managers to adopt improved land management practices that will reduce the discharge of nutrients, sediments and pesticides into the reef lagoon, as well as supporting a broad range of managers and researchers to address the threats of declining water quality and climate variability.
Arafura and Timor Seas Ecosystem Action Programme	Supports the sustainable management and use of the Arafura and Timor Seas through collaboration between government and non-government stakeholders in Australia, Indonesia and Timor Leste.
Australia's National Landscapes	Partnership led by Parks Australia and Tourism Australia with stakeholders from industry, government and communities to deliver a national, long-term approach to tourism and conservation. The programme operates nationally and includes Australia's Red Centre, Kakadu, Ningaloo-Shark Bay, the Kimberley, north Queensland's tropical forests and the Great Barrier Reef.
Environmental Research Institute of the Supervising Scientist	Undertakes world class scientific research and monitoring of the environmental effects of uranium mining to support the Supervising Scientist and contributes to scientific research initiatives.
Torres Strait Treaty - Environmental Management Committee	Assesses environmental issues of concern to the Treaty Zone communities, including protection of the marine environment and biodiversity in and around the Protected Zone.

Biodiversity fund - Northern Australia Targeted Investment 2013-14	Provides \$50 million over four years to restore and manage northern Australia's biodiversity.
Reef 2050	The Reef 2050 Plan will guide the sustainability and management of the Great Barrier Reef, to continue efforts to protect species such as turtles and dugongs, and deal with the key threats like poor water quality and crown-of-thorns starfish.
Management of Uluṟu-Kata Tjuṯa National Park and Kakadu National Park	Funding supports the conservation and appreciation of these national parks in partnership with traditional owners and includes safe visitor access, maintenance of biodiversity and ecosystems and management of cultural and natural heritage.
National Environmental Research Programme	Supports research investments across northern Australia, through the Northern Australian Research Hub, Tropical Ecosystems Hub and the Marine Biodiversity Hub. The programme aims to improve the understanding, management and conservation of Australia's unique biodiversity and ecosystems.
National Water Account	Annual reporting of water assets, liabilities, and transfers of water for the Ord River and Daly River basins.
<b>Social Services</b>	
Income Management	A budgeting tool to help people receiving income support to manage their money for themselves and their families.
Remote Jobs and Community Programme	Assists unemployed people transition into jobs with wages and conditions to help build sustainable communities.
<b>Labour and Immigration</b>	
Initiatives to Increase Migration to Regional Australia	Includes the Regional Sponsored Migration Scheme, Temporary (Long Stay) Business visas (subclass 457), Regional Migration Agreements and Enterprise Migration Agreements. Regional Migration Agreement target high growth regional areas where local labour is in short supply and the Enterprise Migration Agreements introduce a new temporary migration option designed to address the growing skill needs of the resources sector.
Skilled Migrant Selection Model	Enables prospective migrants to indicate their willingness to live and work in regional Australia. The model enables state and territory governments and regional employers to access skilled workers through a central database.

Seasonal Worker Program	Enables workers from participating countries to undertake between 14 weeks and six months work with Australian employers who can demonstrate an unmet demand for low-skilled labour.
Relocation Assistance to Take Up A Job	Provides financial assistance for job seekers to relocate to take up jobs or apprenticeships.
<b>Industry</b>	
AusIndustry Regional Manager Network	AusIndustry provides grant assistance, taxation offsets and other incentives to support invention, research and development, commercialisation and structural adjustment.
Entrepreneurs' Infrastructure Programme	The Entrepreneurs' Infrastructure Programme will offer market and industry information, business management advice and skills from experienced private sector providers, access to researchers and innovators to re-engineer business operations, products and services, connections with supply chains and potential markets, and commercialisation support through specialist sector expertise
Industry Skills Fund	The new Industry Skills Fund will commence on 1 January 2015 and will deliver close to 200,000 targeted training places and training support services over four years. The fund will assist small and medium size businesses to successfully diversify and improve competitiveness in a global market.
Exploration Development Incentive	The Exploration Development Incentive will provide small exploration companies with better access to capital from private sector investors via a refundable tax offset for greenfield exploration costs.
<b>Infrastructure and Regional Development</b>	
Infrastructure Investment Programme	Includes National Network construction, Off-Network projects, National Network maintenance, Roads to Recovery, Black Spot, Heavy Vehicle Safety and Productivity Programme. Recent funding commitments include the Bruce Highway, Outback Way, Cape York Peninsula, the NT Regional Roads Productivity Package, the WA North West Coastal Highway and the Bridges Renewal Programme.
National Stronger Regions Fund	\$200 million will be invested annually on local capital works projects to help communities with poor socio-economic circumstances and higher than average unemployment, by improving local facilities, creating local jobs and building needed infrastructure.

Northern Australia Sustainable Futures	Focuses on addressing key challenges in regional development between the Commonwealth, state and territory governments.
Remote Airstrip Upgrade Programme	Funding for remote airstrip upgrades in isolated outback communities.
PortLink Inland Freight Corridor Concept Plan	Considers linking ports at Port Hedland, Geraldton, Esperance and the proposed Oakajee Port with Kalgoorlie, as a freight hub, to improve freight movements and the productivity of Western Australian resource industries.
<b>Indigenous</b>	
Stronger Futures in the Northern Territory	Provides \$3.4 billion for programmes and services, on community health, housing, community safety, municipal, schooling, alcohol abuse and remote engagement and coordination services, to improve the wellbeing of Indigenous Australians living in the Northern Territory.
Support for Indigenous Training and Employment	The Government supports Indigenous training and employment through the Vocational Education and Training Centre model which will see up to 5,000 unemployed Indigenous Australians provided with training and guaranteed employment.
Empowered Communities	A reform initiative to strengthen local leadership and ensure that Indigenous people have a greater say on local issues.
Working on Country	Builds on Indigenous traditional knowledge to protect and manage land and sea country. More than 680 Indigenous rangers are employed in around 95 ranger teams across Australia to deliver environmental outcomes and around 730 rangers will be trained and employed through the programme by June 2015.
National Partnership Agreement on Remote Service Delivery	Provides a remote service delivery model that identifies service standards, roles and responsibilities and service delivery parameters.
National Partnership on Indigenous Housing	Funding is provided to the states and the Northern Territory to address significant overcrowding, homelessness, improve housing conditions and increase the housing stock in remote Indigenous communities.

## QUEENSLAND GOVERNMENT

### Mining and Energy

Bowen and Galilee Basins	The Bowen Basin has over 25 proposed mines or mine expansions under construction or recently completed. Further west, the Galilee Basin has potential new export markets to create jobs in mining, construction and other supporting industries to exploit its very large low-sulphur thermal coal deposits.
North West Queensland Mineral Province	Produces metals including large quantities of major gold and phosphate rock.

### Infrastructure and Construction

Queensland Ports Strategy	The Strategy provides certainty to industry and the wider community that ports will grow, while protecting environmental assets including the Great Barrier Reef.
Construction of new port facilities at Abbot Point	Development of the Galilee Basin coal resource will involve the construction of over 400km of duplicated standard gauge railway, loading and unloading facilities, over 400km of water pipeline from the Burdekin Dam, and a 1GW power station – an investment of over \$20 billion from the private sector.

### Projected infrastructure and associated opportunities in northern Queensland includes:

- New rail infrastructure connecting the Mount Isa to Townsville rail line into the Northern Territory to access Darwin Port facilities. Opportunities exist to shift increasingly large supply lines across to rail freight (for example, diesel fuel from Mackay Port to Bowen Basin), taking advantage of back loading efficiencies, while gaining some additional capacity on the road network.
- The use and disposal of waste and sustainable development principles and technology will play a significant role in the future of the minerals industry.
- Development of facilities and industry capability to accommodate and support a new class of Offshore Combatant Vessels for the RAN by 2025-2030.
- Logistics infrastructure to support petroleum oils and lubricants supply for future defence needs in the north is under scrutiny with recommendations due in mid-2014.

## Agriculture

- Strathmore Station has approval to develop over 28,000 ha to establish dry land sorghum crops for both grain production and forage following changes to the *Vegetation Management Act*, and the Integrated Food and Energy Development (I-FED) at Georgetown has been declared a coordinated project under consideration by the Coordinator-General.
- The Flinders River Agricultural Precinct in northern Queensland envisages mosaic style irrigation along the Flinders River Valley by harvesting river water and pumping from underground streams and river bed sands.

Queensland Government supports :

- Working with proponents to facilitate private investment, infrastructure and resource access around agricultural precincts, including the agricultural precinct west of Rockhampton , I-FED, Flinders Area Irrigation Project and the Pentland Project.
- Assisting private sector proponents with the allocation of water entitlements.

## Tourism

- Tourism Opportunity Plans to provide strong direction – including for investment and product development – and define actions to drive sustainable development of tourism in each region.
- DestinationQ Tourism Plans and associated tourism investment attraction projects aimed at doubling visitor expenditure by 2020.
- The recently released Next Generation Tourism Planning Guideline will be used by local government planners when writing plans, or considering tourism proposals.
- Destination Tourism Plans guide tourism and events in each destination towards 2020, highlighting the resources to create sustainable and competitive tourism destinations. Destination Tourism Plans link to state (and national) targets to double the value of tourism, while recognising local challenges and opportunities and each destination's unique tourism assets, unique development, marketing and management needs.

## Education and Health

- Establishment of the tropical health hub with James Cook University and Townsville Hospital.
- Development of the Discovery Rise (a new residential, knowledge community being developed alongside James Cook University's Townsville campus) to create a university town which incorporates academic, social, artistic and commercial environments.

## NORTHERN TERRITORY GOVERNMENT

Darwin Marine Supply Base	The base will include three marine berths with water, fuel, chemical and drilling mud connections, hard stand and lay down areas, warehousing, waste management facility, storage capacity for drilling muds, chemicals, water and fuel, office space and associated facilities. One berth will be used initially as a rock load out facility for the INPEX Ichthys LNG project.
Project 13	<p>Install mobile telephony and / or ADSL2+ services in 13 remote communities:</p> <ul style="list-style-type: none"> <li>• Eight communities will have new mobile phone sites installed. This will also increase mobile coverage in the NT, including two areas along the Stuart Highway.</li> <li>• Fixed broadband services will be made available in another five communities and one will get mobile phone service for the first time. Infrastructure will be installed to upgrade broadband services in those communities.</li> </ul>
Pastoral Lease diversification	Working with pastoral leaseholders to diversify their business to capitalise on new NT laws allowing a portion of leases to be sub-leased or developed for horticulture, aquaculture or tourism ventures.
Creating Opportunities for Resource Exploration	Initiative aimed at stimulating minerals and petroleum exploration through new geoscience and exploration incentives.
Tiwi Islands Economic Development Partnership Agreement	The Tiwi Land Council, Commonwealth and NT governments are negotiating an Economic Development Partnership Agreement to coordinate opportunities for business and industry development, investment and trade, and create jobs across the Tiwi Islands region.
Harbour Foreshore	Development of an over-arching strategy to attract investment in economic infrastructure around Darwin harbour and the industrial foreshore. It will also include long term planning for industrial and residential land use.
Ord Stage 3	Expansion of Ord River Irrigation Scheme into the NT.
International engagement and strategic partnerships, including formal government to government relationships	A number of formal arrangements such as Memoranda of Understanding (e.g. China Development Bank, Ho Chi Minh City), Statements of Cooperation (e.g. East Kalimantan), or international engagement forums exist and more will be negotiated in future.

Strategic planning and land release for residential commercial and industrial development	The NT Government has undertaken an audit of the Crown Land Estate it manages to make suitable land available to the market, and to ensure land is available for the highest and best use.
<b>WESTERN AUSTRALIA GOVERNMENT</b>	
<b>Agriculture</b>	
Seizing the Opportunity in Agriculture	<p>This programme aims to position the agricultural sector to capitalise on the growing global demand for food and agricultural products. Projects within this programme directly related to northern WA are:</p> <ul style="list-style-type: none"> <li>• Water for Food Fund - to support the expansion of irrigated agriculture in the East Kimberley and develop environmentally and culturally appropriate irrigated agriculture in the Fitzroy River catchment and La Grange area south of Broome.</li> <li>• Northern Beef Industry Development Centre - \$15 million to establish this Centre in Broome.</li> </ul>
Pilbara Hinterland Agricultural Development Initiative – this includes crop trial and the Agricultural Pathways project	Development of irrigated agriculture opportunities through the use of surplus mine dewater (the removal of water from solid materials). The large volumes of surplus mine dewater will increase as mining operations intensify production, and provide an opportunity to investigate how surplus dewater can be used to irrigate land.
<b>Commerce</b>	
Regional Mobile Communication Program (RMCP)	Ensuring critical mobile communications infrastructure is built in regional WA, in partnership with industry, to support regional emergency services and improve the communications capacity for regional industries. The \$45 million RMCP, plus co-investment by Telstra Corporation Ltd, has a target of installing 16 towers in the Pilbara and 24 towers in the Kimberley.
<b>Housing</b>	
Housing for Workers	A further \$162 million is budgeted for regional housing for workers over the next four years.
Improving Water Quality in Remote Aboriginal Communities	This \$12 million State Government project is assisting in ensuring safe and sustainable water supplies for the residents of remote Aboriginal communities in the Kimberley and Pilbara regions.

## Parks and Wildlife

### Kimberley Science and Conservation Strategy

Implementation of the \$81.5 million Kimberley Science and Conservation Strategy will involve a range of WA Government agencies, traditional owners, local governments and non-government and commercial organisations. The centrepiece of the strategy is to establish and manage a network of marine and terrestrial parks. The parks will be jointly managed with traditional owners and provide opportunities for Aboriginal employment. They will add to the nature and culture based tourism opportunities in the region.

## Pilbara Cities

### Pilbara Cities Initiatives

The implementation of the Pilbara Cities vision, spanning from its inception in 2009 until 2017, will see in excess of \$1.5 billion invested in the Pilbara region, transforming it into a vibrant network of communities that are economically successful and socially sustainable.

## Regional Development

### Royalties for Regions funded projects in total

Royalties for Regions has funded \$4.2 billion on 3,500 wide ranging projects across the whole of regional Western Australia since late 2008.

### Ord-East Kimberley Expansion Project

\$322 million was spent to increase the size of the Ord River Irrigation Area through developing agriculture and constructing irrigation infrastructure. Further commitments are planned to expand the Ord River Irrigation Area into the NT and other areas on the Western Australian side of the State border, to help realise the full potential of irrigated agriculture in the East Kimberley. The total investment from Royalties for Regions for infrastructure and services in the Kimberley region in 2012-13 was \$198.8 million.

### West Kimberley Revitalisation

\$61.3 million has been allocated for this revitalisation. Seven programs include Broome China Town Redevelopment, West Kimberley Transitional Housing Program, West Kimberley Strategic Development Unit, Fitzroy Crossing Courthouse, Broome Wharf Extension of Life, Broome Road Industrial Area.

### Regional Community Services

#### • Regional Workers Incentive

\$516.7 million over four years has been allocated to fund a suite of regional programs providing greater regional capacity including:

#### • Parks for People

\$110.3 million over four years to provide incentives to attract and retain key workers in the regions.

\$38.7 million to improve camping and caravanning facilities.

Aboriginal Initiatives	\$104.2 million over four years to provide services with and Indigenous focus including remote clinics, drug and alcohol support and regional youth justice programs.
<b>Small Business</b>	
Regional Buy Local Program	The Regional Buy Local Program assists regional small businesses identify and address gaps in their knowledge and skills, and facilitate opportunities to supply to major government and resource projects. The Program has been allocated \$1 million annually for 2014-15 and the out-years.
<b>State Development</b>	
Anketell Port and Strategic Industrial Area	The WA Government is developing a new deep water port and strategic industrial area at Anketell for the development of iron-ore exports and industry in the Pilbara. The Anketell Port and Strategic Industrial Area will include: a multi-user port with more than 350 million tonnes per annum export capacity; industrial land to accommodate future heavy industry development by third parties; and a multi-user infrastructure corridor to accommodate utilities and transport infrastructure including roads and rail lines.
Ashburton North Strategic Industrial Area	The Ashburton North Project is establishing the Ashburton North Strategic Industrial Area (ANSIA) at a greenfield site 12 kilometres south west of Onslow, primarily to enable the \$29 billion Wheatstone LNG Project to proceed. It is also creating an industrial precinct and port facilities to accommodate hydrocarbon processing and related industries, including the \$1.5 billion Macedon domestic gas project. The main elements of the ANSIA have been established, construction of the Wheatstone Project commenced in December 2011, and the Macedon project became operational in September 2013.
<b>Training and Workforce Development</b>	
Pilbara and Kimberley	Funding for a new Electrical Instrumentation Centre of Specialisation in Karratha and a new \$15.5 million trade training centre is under construction at Broome. In Derby a \$6.2 million project is underway.
<b>Transport</b>	
Regional Airports Upgrades	The WA Government will provide a total of \$8.2 million in 2014-15 under its Regional Airports Development Scheme to provide infrastructure upgrades to regional airports.

## PRIVATE SECTOR

### Complete

Pluto LNG	Woodside LNG project in Western Australia
Hope Downs mine	Rio Tinto iron ore project in Western Australia
Pilbara 230 to 290 expansion	Rio Tinto iron ore project in Western Australia
Marandoo expansion	Rio Tinto iron ore project in Western Australia
Western Australia Iron Ore inner harbour	BHP Billiton iron ore project in Western Australia
Sino Iron	CITIC Pacific Mining iron ore project in Western Australia
Fortescue Metals Group Chichester iron ore, rail and port development	FMG iron ore project in Western Australia
BHP Rapid Growth and Expansion projects	BHP Billiton iron ore project in Western Australia
Western Australia Iron Ore power station and orebody station	Joint project between BHP Billiton and Mitsubishi Development in Western Australia
Jimblebar iron ore mine expansion	BHP Billiton project in Western Australia
Danunia and Broadmeadow mine	BHP Billion coal project in northern Queensland
North Rankin Redevelopment project	Oil and gas joint project between Woodside, BHB Billion, BP, Chevron, Japan Australia LNG and Shell

### Under construction

Ichthys LNG processing plant	Located on Blaydin Point on Middle Arm Peninsula in Darwin Harbour, the processing plant is expected to produce 8.4 million tonnes of LNG and 1.6 million tonnes of LPGs (propane and butane) each year, along with 15,000 barrels of condensate per day at peak.
Subsea optical fibre cable system	Joint project between INPEX, Shell and Nextgen Group to construct a subsea optical fibre cable system

Pilbara 2030 expansion (phase 1)	Rio Tinto iron ore project in Western Australia
Yandicoogina expansion	Rio Tinto iron ore project in Western Australia
Roy Hill ore mine and infrastructure	Hancock Prospecting iron ore project in Western Australia
Gorgon Project (Barrow Island)	Joint LNG project between Chevron, Exxon Mobile and Shell in Western Australia
Wheatstone LNG development	Chevron LNG project in Western Australia
Greater Western Flank Phase 1	Joint oil and gas project between Woodside, BHP Billiton, Chevron, Japan Australia LNG and Shell in Western Australia
Cavel Ridge mine	Joint BHP Billiton and Mitsubishi Development coal project in Queensland
Hay Point Coal Terminal expansion	BHP Billiton coal project in Queensland
Wiggins Island Coal Export Terminal	Joint project between Aquila Resources, Bandanna Energy, Caledon Resources, Cockatoo Coal, Northern Energy Corporation, Wesfarmers, Yancoal and Xstrata Coal in Queensland
Darwin abattoir – Northern Australia Beef Limited	Northern Australia Beef Limited — Will be the only facility in northern Australia processing cattle that cannot be live exported (350kg live weight). Will have the capacity to process 200,000 cattle a year, enabling the northern cattle industry to double production by 2050 and will inject \$126 million a year into the northern Australia economy (ACIL Tasman – The economic impact of the proposed AACo abattoir, May 2012).

### Projects where an EIS has been completed

Alpha Coal	An open cut coal mine with an initial export capacity of 30 million tonnes per annum (mtpa), supported by new rail and port infrastructure.
Ella Bay Integrated Resort	Redevelopment of a 470 ha cattle station into an integrated tourism and residential community.
Great Keppel Island Resort	Redevelopment including demolition of the existing resort and construction of a substantial low-rise, eco-tourism resort.

Kevin's Corner	Combined underground and open cut mine with ultimate capacity of 30 mtpa.
South of the Embley	New bauxite mine, initially producing 22.5 million dry product tonnes per annum (mdpt/a) with the potential to increase to 50 mdpt/a.
Galilee Coal Project	Open cut and underground coal mines with total yield of 40 mtpa; and a railway line from the mine site to the Abbot Point state development area.
Shute Harbour Marina	An integrated marina, resort hotel and residential community development.
Carmichael Coal Mine and Rail	Open cut and underground coal mine with an expected yield of 60 mtpa and 189km railway line.

### **Projects where an EIS process is underway**

Aquis Resort at the Great Barrier Reef	Redevelopment of 323 ha of rural land into a large-scale integrated tourism resort.
Cairns Shipping Development	Expansion of the Port of Cairns shipping channel in Trinity Inlet to accommodate larger cruise ships and upgrade associated land-based infrastructure and services.
Capricorn Integrated Resort	Development of a 1500 ha integrated resort community.
China Stone	Large scale, greenfield coal mine with an expected peak production of 60 mtpa.
Central Queensland Integrated Rail	Integrated heavy haul rail system linking coal mines in the Galilee Basin and Bowen Basin to eastern Queensland ports.
Etheridge Integrated Agricultural Project	Development of large-scale farm and integrated agri-processing facilities.
Pisolite Hills	Integrated bauxite mine and port project.
South Galilee Coal	Up to 17 mtpa open cut and underground coal mining in the Galilee Basin.
Townsville Port Expansion	Expansion of the Port to accommodate forecasted growth in trade and address capacity constraints.
Wongai project	Underground coking coal mine with an expected yield of 1.5 million tonnes per annum and export facility.

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**Inquiries**

Developing Northern Australia White Paper Taskforce  
Department of the Prime Minister and Cabinet  
PO Box 6500  
Canberra ACT 2600  
Email: [northernaustralia@pmc.gov.au](mailto:northernaustralia@pmc.gov.au)

## FRONT COVER IMAGES

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From top left to right

- 1.** Uluru-Kata Tjuta National Park – Tangled Mulla Mulla with Uluru in the distant background  
(Credit - Allan Fox and the Department of the Environment)
- 2.** Sea Anemone and Clownfish – Great Barrier Reef  
(World Heritage Listed site) (Credit - Great Barrier Marine Park Authority and the Department of the Environment)
- 3.** North West Shelf oil rig – (Credit - Department of Agriculture)
- 4.** Mustering, Buchanan Highway, Savannah Way Tourism Drive (Credit - Tourism NT)
- 5.** Darwin city – Waterfront precinct (Credit - Tourism NT)
- 6.** The Ord River (Credit - Department of Agriculture)
- 7.** Great Barrier Reef (Credit - Department of Agriculture)
- 8.** Army Black Hawks at the Townsville Field Training Area (Credit - Department of Defence)
- 9.** Arial shot of Townsville (Credit - Townsville City Council)
- 10.** Mindil Beach markets (Credit - Tourism NT)





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