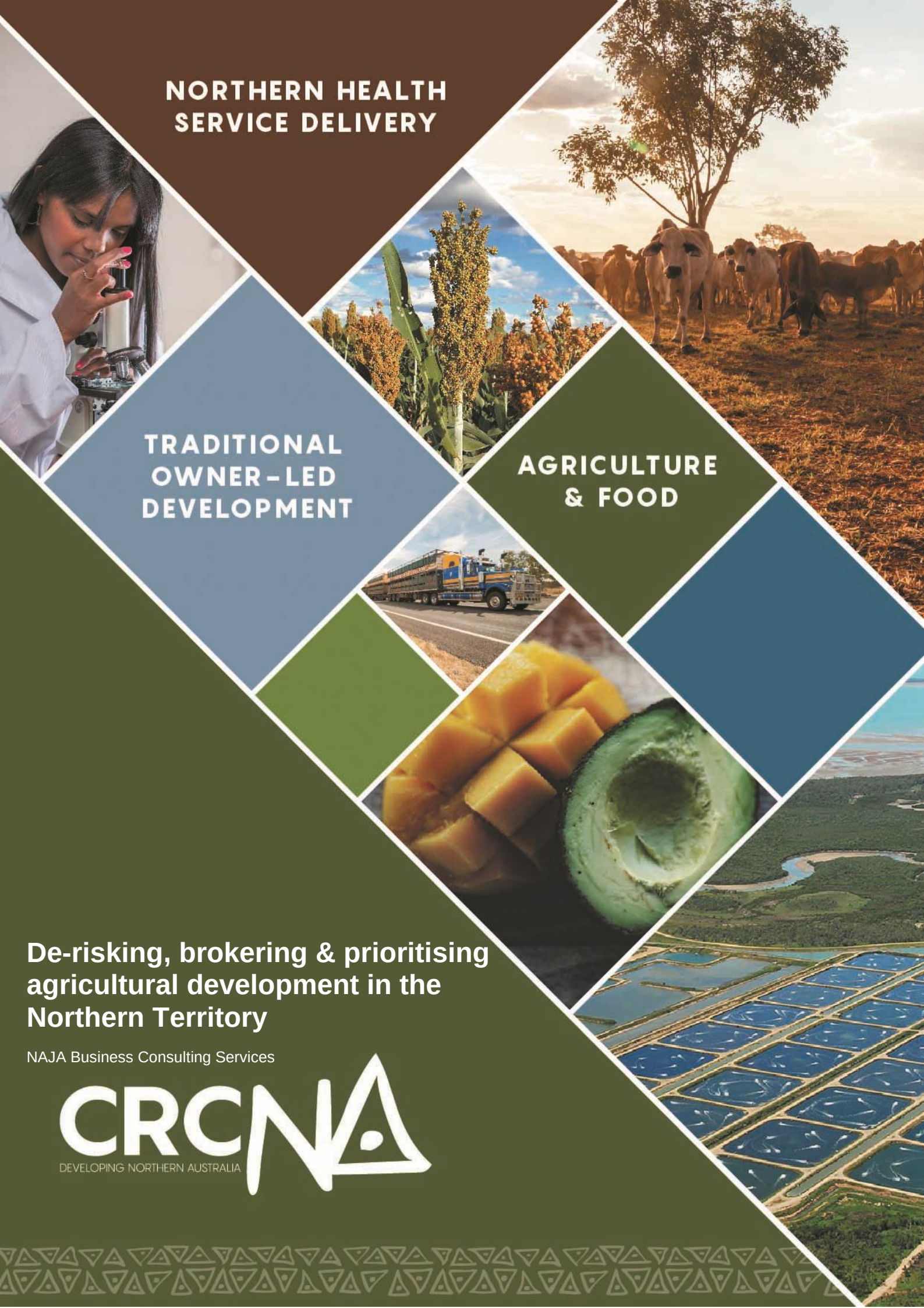

De-risking, brokering & prioritising agricultural development in the Northern Territory

NAJA Business Consulting Services

CRCNA
DEVELOPING NORTHERN AUSTRALIA

ISBN no: 978-1-922437-12-9

Acknowledgements

This research is funded by the CRC for Developing Northern Australia (CRCNA) is supported by the Cooperative Research Centres Program, an Australian Government initiative. The CRCNA also acknowledges the support of its investment partners: the Western Australian, Northern Territory and Queensland Governments.

The authors wish to acknowledge all the people and organisations who have contributed significant feedback and ideas during the development of this report. Without the significant contributions from so many people this report could not have been written.

We would also like to acknowledge and pay respects to the Traditional Custodians of the lands across Australia on which our project participants live and work, and to their Elders past, present and future.

Disclaimer

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Acronyms and Abbreviations

ABC	Australian Broadcasting Corporation
ALSEDA	Aboriginal Land and Sea Economic Development Agency
Austrade	Australian Trade and Investment Commission
CAG	Central Agri Group
CDU	Charles Darwin University
CRCNA	Cooperative Research Centre for Developing Northern Australia
CSIRO	Commonwealth Scientific Industrial Research Organisation
DCM	Department of Chief Minister, NT
DIPL	Department of Infrastructure, Planning and Logistics
DENR	Department Environment and Natural Resources, NT
DPIR	Department of Primary Industry and Resources, NT
DRWCD	Darwin Rural Water Catchment District
DTBI	Department of Trade, Business and Innovation
GL	Gigalitres
Ha	Hectares
ILUA	Indigenous Land Use Agreement
IRG	Indigenous Reference Group
NAIF	Northern Australia Infrastructure Facility
NAILSMA	North Australian Indigenous Land and Sea Management Alliance
NAWRA	Northern Australian Water Resource Assessment
NGO	Non-government organisation
NPU	Non-Pastoral Use (permits)
NRM	Natural Resource Management
NT	Northern Territory
NTBIC	Northern Territory Buffalo Industry Council
NTCA	Northern Territory Cattlemen's Association
NTEPA	Northern Territory Environment Protection Authority
NT Farmers	Northern Territory Farmers Association
NTIAFS	Northern Territory Irrigated Agriculture Feasibility Study
ONA	Office of Northern Australia
PLB	Pastoral Lands Board

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Foreword

Northern Australia, and more specifically the Northern Territory, has traditionally been seen as the last frontier for agricultural development. Realising the potential of the north has not always been straightforward, and negative commentaries still remain surrounding the difficulties in unlocking the opportunities that are known to exist. There are, however, many success stories where, through persistence, innovation and support, sustainable agricultural development has occurred. This report highlights some of those success stories and builds on them to provide a roadmap for further sustainable agriculture development to realise some of the visions for the North.

It has long been acknowledged that targeted and environmentally responsible investment in agriculture could generate additional income, serve new (predominantly Asian export) markets and benefit local communities, as well as investors, farmers and entrepreneurs. The *White Paper on Developing Northern Australia* proposes to unlock the region's natural resources through encouraging private sector investment, investing in transport and other infrastructure, reducing employment barriers and improving regional governance were considered sound (Australian Government, 2015).

The *White Paper* outlined Governments' role as creating successful business environments, not successful businesses. This was considered best achieved through:

- prudent economic policies
- the right infrastructure to get things moving
- regulation that minimises costs on business
- a workforce with the right skills
- basic research necessary for business to identify opportunities in the north.

The *White Paper* also emphasised that developing the north should be a partnership between investors (local and international) who provide capital and know-how, and governments that create the right investment conditions.

It should be acknowledged that government-facilitated, rather than government-led growth, still requires some government action. The Commonwealth Government can remove impediments to growth by reducing regulatory risk (while maintaining protections), providing essential information, and underwriting enabling infrastructure. This will lift the growth speed limits in the north on the foundations of land, labour, water and infrastructure. If this is achieved, more private sector capital will follow.

Five years after the release of the *White Paper*, there remains unmet opportunity. Concerns over environmental impacts of some development options have been raised and continue to be addressed with every proposal to develop northern agriculture and aquaculture initiatives. The NT and Australian Governments have nonetheless maintained their interest in creating an investment environment and overcoming risks and impediments in order that the identified potential can be met. Continued government commitment and public infrastructure investment must be viewed with care to ensure maximised public outcomes.

Since this project commenced the COVID-19 outbreak has altered the social and economic landscape of Australia. Not only did it have a major impact on our society, it highlighted how vulnerable industry is worldwide. The opportunities now exist for the Australian agriculture/aquiculture sectors to showcase the green, clean, virus free elements of the sector in marketing its products globally.

Executive Summary and Recommendations

NAJA Business Consulting was engaged by the Cooperative Research Centre for Developing Northern Australia (CRCNA) to undertake a study into de-risking, brokering and prioritising agricultural and aquacultural development in the Northern Territory.

This Northern Territory-focused project is part of a wider collaboration between the CRCNA and the Northern Territory (NT), Queensland (Qld) and Western Australian (WA) Governments to support the development of new agricultural activity across northern Australia. Solutions to key policy, regulatory, budgetary and regional development challenges at the Commonwealth, State/Territory level need consideration, analysis, solution building and negotiated resolution. The Department of Trade, Business and Innovations Investment Territory team and partner agencies, the Commonwealth, industry and other stakeholders this project has explored the issues at hand and proposed innovative and NT-specific policy, regulatory and other solutions to facilitate agricultural development which balances economic, environmental and social outcomes.

The opportunity for agricultural development in the Northern Territory is enormous - but the development of northern Australian agriculture has, despite considerable confidence and rhetoric, largely failed to meet its potential or aspirations, particularly when compared and contrasted with southern Australian agriculture.

This report explores constraints identified that inhibit agricultural development in the Northern Territory, reflecting upon:

- Complex land tenure arrangements
- Limited understanding of water availability and soil suitability
- Secure water rights and water infrastructure
- Transport and communications infrastructure
- Supportive regulatory environment
- Supportive investment environment

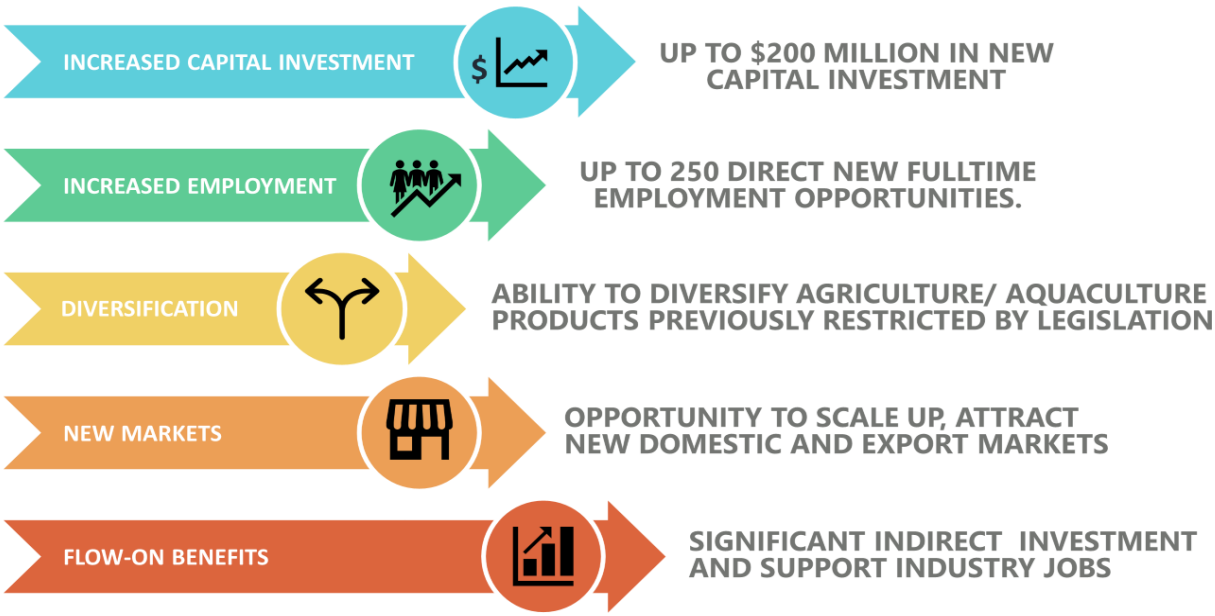
Extensive stakeholder engagement informed many aspects of this report, with workshops being held in December 2019 and March 2020, one-on-one consultations (with government department representatives, Indigenous people, industry body representatives and consultants), government and community/industry surveys and case studies undertaken to identify risks and impediments which have affected existing business growth in the NT.

A comprehensive methodology shortlisted four case studies which were then assessed to provide insights into the opportunities for de-risking, brokering and prioritising agricultural development. These case studies included the Tipperary Group (Tipperary, Litchfield and Douglas West Stations); Flying Fox Station; Humpty Doo Barramundi and Rum Jungle Meat Exports (Batchelor Meatworks).

Each of the case study proponents identified similar issues and impediments to agricultural development and also corresponded with information sourced from the other methods of stakeholder engagement and the extensive research/literature reviews carried out as part of this report. These issues and impediments relate mainly to the following areas:

- Land planning, tenure and non-pastoral use permits
- Regulatory requirements
- Approvals
- ILUAs/Native Title
- Logistics and Infrastructure
- Information / Telecommunications infrastructure

Alone the four case study proponents estimate that the potential impact of government de-risking and brokering agricultural development as suggested could deliver:



These four case studies represent 13 percent of an initial thirty-one project developments identified. Extrapolating the data, there is the potential that, if each of these project developments had improved opportunities through government de-risking and brokering as suggested, the economic impact could conservatively be estimated to be:

- Up to $1 billion in further capital investment; and
- Up to 1,500 direct new fulltime employment opportunities.

Opportunities for governments to assist in brokering and de-risking agricultural development can be grouped as follows:

- Soil and water resource assessment, allocation and supply (Including Land Planning)
- Effective approval processes
- Infrastructure provision (Including transport and telecommunications)
- Research and development
- Negotiating market access
- Supporting indigenous agricultural development
- Investment facilitation
- Facilitating trust Between Parties

Recommendations relating to each of these themes have been proposed in order that pathways to sustainable (economic, environment, and social) development can be pursued, including:

- Developing an efficient approach to converting parts of pastoral leases to freehold
- De-risked agricultural precincts that provide certainty for investors
- Enabling aboriginal agricultural development
- Targeting infrastructure to facilitate development
- Providing a supportive regulatory environment
- Strategic de-risking in coordinated and targeted research
- Improving trust, relationships and culture

Recommendations

Recommended Action	Responsible entity & partners	Proposed implementation
Recommendation 1 – Unlocking land for agricultural development Develop and trial an approach to convert parts of a pastoral lease to freehold lots	NT Government	Develop an approach (particularly within agricultural precincts) to converting part of a pastoral lease to freehold in a way that meets short timeframes and appropriate native title and environmental approvals.
Recommendation 2 – Developing de-risked agricultural land Establish agricultural precincts based on agreed evaluation criteria	NT Government with support from Commonwealth Government	Prioritise and evaluate potential agricultural precincts with industry which provide a basis for shared planning and provide certainty for proponents and regulators. Jointly identify and prioritise precincts, develop and monitor an action-oriented implementation plan. Develop a funding package for submission to the Commonwealth Government regarding priority precincts. Implement precinct plans by undertaking coordinated approval and land tenure/land planning processes. Facilitate the development of logistics, infrastructure and agribusiness hubs to facilitate new agricultural industries (such as cotton) in the NT.
Recommendation 3 – Enabling Aboriginal agricultural development • Partner and support Indigenous land interests to streamline processes for leasing Aboriginal land. • Support Aboriginal businesses to identify opportunities and partnerships • Provide pre-feasibility information for targeted Aboriginal-led development. • Support Indigenous communities to achieve economic outcomes from allocated Indigenous water reserves. • Support coordinated cross-agency investment in Aboriginal-led land development.	Commonwealth and Northern Territory Government departments in partnership with Land Councils and NAILSMA	Establish an Aboriginal Agricultural Development Steering Group involving government, key Aboriginal groups, and industry which is responsible for developing a clear, implemented and monitored agricultural opportunities plan. Establish a brokering model, particularly for small scale Indigenous-led developments, to continuously improve the relationship between Land Councils, Traditional Owners and the development industry. Develop appropriate principles and improvement strategies via an MOU and agreed action plan between all parties and Government. Develop governance building and small business assistance, technical support and grants.

Recommended Action	Responsible entity & partners	Proposed implementation
Recommendation 4 – Infrastructure to facilitate agricultural development Facilitate infrastructure for key agricultural development opportunities with a focus on: • Telecommunications • Road Network • Energy • Water • Processing	NT Government with support from Commonwealth Govt	Develop a prioritised agricultural infrastructure plan for the NT that priorities jointly agreed with industry and communities. Develop a business case for Commonwealth and State/Territory Government funding as a priority for the Katherine cotton gin proposal. Prioritise and develop critical Commonwealth investments and applications to the Northern Australia Infrastructure Facility and assign appropriate proponents to take responsibility for any loans Plan for and develop proposals for Commonwealth Government funding to fast track improved telecommunications for priority agricultural areas across the NT.
Recommendation 5 – Unlock regulatory barriers to agriculture/aquaculture development To facilitate development there needs to be: • Reduced approval timelines • Facilitated and easier interactions with Government • Streamlined licensing regulation and approvals, visa and migration applications • Licensing and approvals that create greater investment certainty • A case management framework which helps proponents navigate the relevant approval processes proactively (a lead department with the authority to work across the public sector • A fast-track approach for minor or small-scale agricultural developments • Rangelands reform to introduce more streamlined approaches to land tenure change with respect to pastoral leases	NT Government with support from Commonwealth Govt	Establish, with industry and Government, a red-tape reduction initiative, including the combination of approvals into a single process for low-risk small-scale proposals. Reforms to pastoral lands legislation to incorporate more streamlined approaches to land tenure change. Provide a clear, staged regulatory process map with supporting checklists and guidance statements. Build capacity across Government departments, proponents and consultants Review and monitor post-approval conditions to ensure they are critical and essential. Identify a lead department with clear case management responsibilities to work with proponents in proactively developing proposals: • Navigating the approval processes (including a fast-track approach for minor or small-scale agricultural developments), • Resolving issues and/or conflict across all regulatory departments • Developing formal agreements with departments to set targets for improved inter-departmental referral and assessment timelines and ensuring timely information transfer across departments. • Developing (potentially independent of government) an evaluation and monitoring framework to measure the impacts and approval time targets as a result of these changes

Recommended Action	Responsible entity & partners	Proposed implementation
		• Implement application tracking and monitoring (including identifying and escalating non-standard applications)
Recommendation 6 – Supportive development environment • Target de-risking to industry needs and outcomes • Target research into priority industry needs	Commonwealth and Northern Territory Government departments	Develop a coordinated research plan with key industry and community groups so that it leads to uptake and targeted industry outcomes. Work with the Commonwealth to align NESP Hub outcomes to landscape scale derisking priorities. Target information on soils, water and crops in locally relevant and priority areas as identified by Government and industry. De-risk issues related to water security and vegetation management by having targeted water management allocation and management plans specific to locally relevant and priority areas as identified by Government and industry. Develop an agreed financial coordination plan with NT Government, Commonwealth Government, and relevant Research Development Corporations Identify and support existing businesses who contribute to agricultural economic growth in local NT. Establish a grants program to provide opportunities to increase capacity and community benefit Develop a capacity building program for emerging businesses and for emerging technical issues
Recommendation 7 – Improve relationships and culture Establish a group representing government, industry and Traditional Owners, with a focus on developing principles on how to work together and build trust across government departments and key stakeholders. Representational group to work on agricultural pilot or case studies with the ultimate aim to extrapolate learnings across government and stakeholder dealings into the future	NT Government, Industry Groups Native title groups	Establish a standing collaborative group involving NT Government (possibly third party facilitated), industry groups and native title groups (with independent facilitator) to establish principles of how to work together in agricultural developments. Align agency strategic and operational plans to deliver better decisions faster for agricultural developments. Agencies to foster an outcome focused culture with KPIs for service delivery based on time and cost associated with government support and approvals. Develop pilot studies into agricultural development which involve a more supporting and trusting relationship rather than a purely regulatory focused approach (co-regulation).

1 Introduction

This report presents the findings of the '*Prioritising, De-risking and Brokering Agricultural Development in the Northern Territory'* project ("the project") delivered by NAJA Business Consulting Services 2019/2020 on behalf of the Cooperative Research Centre for Developing Northern Australia (CRCNA) and the Northern Territory Government (NTG).

The Northern Territory is a key player in the Australian agriculture and aquaculture sectors. The Territory's agricultural production is currently valued at $771M (agriculture - $651M and aquaculture $120M), with the potential to further increase through expansion and diversification.

This project sought to identify and explore issues impeding agricultural and aquaculture development, and to propose innovative and Northern Territory-specific policy, regulatory and other solutions to address these impediments. The approach used to inform the report and recommendations incorporated:

- A comprehensive review of existing documentation relating to NT agricultural development
- Stakeholder interviews with representatives from government departments, industry bodies, Aboriginal groups, and individual agriculturalist/aquaculturalists and consultants
- Workshops with relevant parties
- Surveys – separate set of questions for Government and industry

1.1. Background and context

This Northern Territory-focused project is part of a wider collaboration between the CRCNA and the Northern Territory (NT), Queensland (Qld) and Western Australian (WA) Governments, to support the development of new agricultural activity across northern Australia. The initiating parties have identified that policy, regulatory, budgetary and regional development challenges at Commonwealth and State/Territory levels require consideration, analysis, solution building and negotiated resolutions.

This project sits within the context of the broader 'developing northern Australia' agenda pursued by Commonwealth, State and Territory governments, supported by the CRCNA, and underpinned by the *Our Future Our North White Paper on Developing Northern Australia* (Australian Government, 2015). Similar reviews are occurring of WA and Qld specific issues and impediments to northern agricultural (and aquaculture) development. The aggregated information will be used to inform future policy, planning, management and investment trajectories across the CRCNA's northern region (illustrated in Figure 1 - *CRCNA's*).

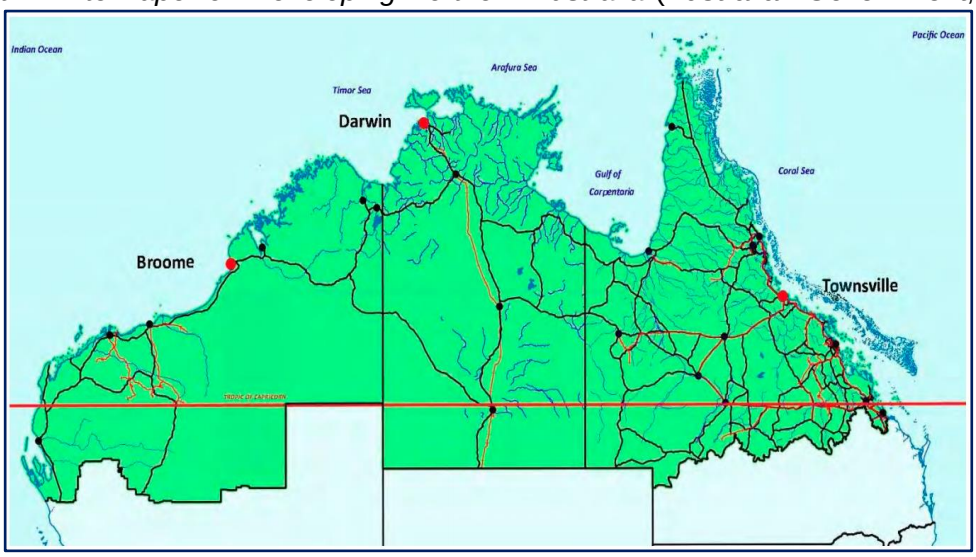


Figure 1 - CRCNA's area of operation

For the NT, capitalising on opportunities and visions to increase agricultural and aquacultural activity and output requires consideration of policy and legislation, markets, infrastructure, labour access and other factors which integrate to impact upon the attractiveness of development, Aboriginal economic enhancement and territory investment. Processing issues associated with land tenure, Native Title, heritage clearances, diversification permits and environmental controls on pastoral land affect the majority of the Territory's landscape. Figure 2 illustrates the extent of the pastoral estate in the NT, while Figure 3 provides an overview of Aboriginal lands and communities.

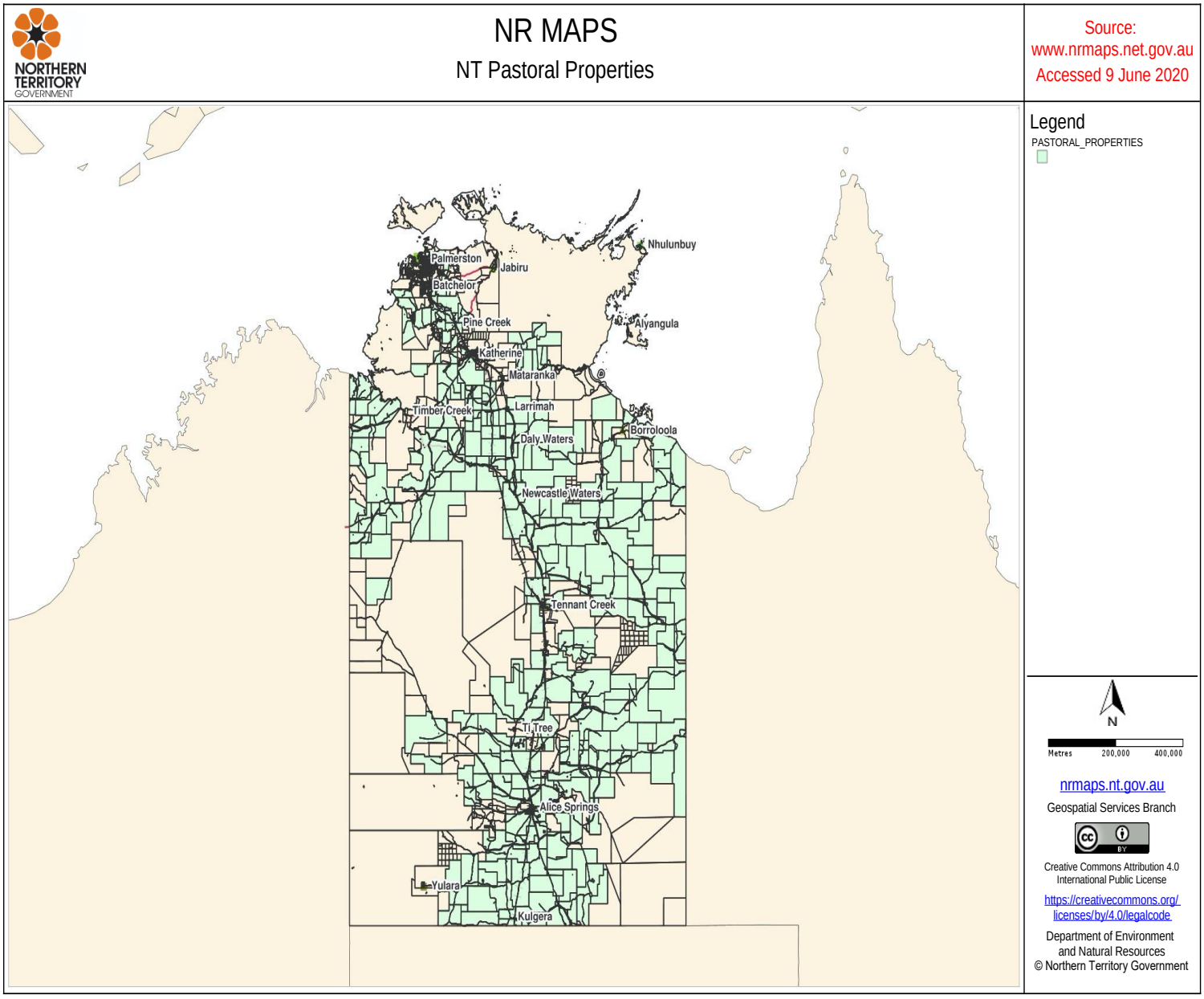


Figure 2 - NT pastoral leases (stations)

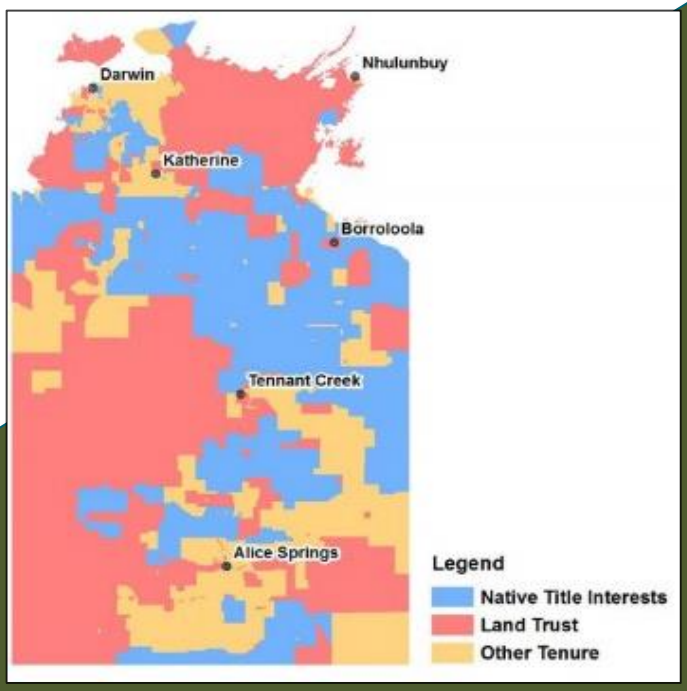


Figure 3 - Northern Territory Aboriginal Estate comprises lands seas controlled as follows: 52% Aboriginal Land Rights Act; 46% Title Interest in Pastoral Leases; (~9,000km) Aboriginal Freehold Coastline (Centrefarm, 2019)

1.2. Approach

The project has conducted a range of activities to obtain multiple perspectives from researchers, government, current and potential agriculture and aquaculture businesses, and other relevant stakeholders.

The approach involved:

- Approximately 80 reports, industry publications, government studies, and research papers reviewed. (***Appendix A***).
- Multi-criteria assessment of 31 projects across agricultural processing and logistics, horticulture, livestock intensification, broadacre cropping, forestry, biofuels, aquaculture and niche products.
- Detailed consultation with representatives of four case study projects (***Appendix B***).
- Consultation with over 120 stakeholders, including >65 stakeholder interviews/meetings. (***Appendix C*** and ***Appendix D).***
- >9 separate workshop presentations aimed at (a) scoping issues and impediments, and (b) evaluating proposed recommendations. (***Appendix D***).
- Targeted survey distributed to industry and government stakeholders (21 industry and 9 government responses received). (***Appendix E***).
- Social media coverage through LinkedIn (2500+ contacts) and Twitter (1200+).
- Direct email project promotion and input requests to over 350 stakeholders

This report provides a summary of the findings of this investigation into opportunities for de-risking agricultural and aquaculture investment in the Northern Territory. It is supported by further documentation contained in the appendices noted above.

2 Setting: Strategic Development of Northern Australia

The Northern Territory is a place of agricultural and economic potential. Its land mass allows for scale development, supported in many parts by reliable tropical rainfall and its proximity to Asia provides a further substantial opportunity.

It has long been acknowledged that targeted and environmentally responsible investment in agriculture could generate additional income, serve new (predominantly Asian) export markets and benefit local communities, as well as investors, farmers and entrepreneurs. The *White Paper on Developing Northern Australia* proposes to unlock the region's natural resources through encouraging private sector investment, investing in transport and other infrastructure, reducing employment barriers and improving regional governance were considered sound (Australian Government, 2015).

Five years after the release of the *White Paper*, there remains unmet opportunity. The NT and Australian Governments have nonetheless maintained their interest in creating an investment environment and overcoming risks and impediments in order that the identified potential can be met. However, concerns over environmental impacts of some development options have been raised, and continue to be addressed with every proposal, to develop northern agriculture and aquaculture initiatives.

Continued government commitment and public infrastructure investment must be viewed with care to ensure maximised public outcomes. The *White Paper* outlined Governments' role as creating successful business environments, not successful businesses. This was considered best achieved through:

- prudent economic policies,
- the right infrastructure to get things moving,
- regulation that minimises costs on business,
- a workforce with the right skills, and
- basic research necessary for business to identify opportunities in the north.

The *White Paper* also emphasised that developing the north should be a partnership between investors (local and international) who provide capital and know-how and governments that create the right investment conditions.

Government-facilitated, rather than government-led growth, still requires some government action. The Commonwealth Government can remove impediments to growth by reducing regulatory risk (while maintaining protections), providing essential information, and underwriting enabling infrastructure. This will lift the growth speed limits in the north on the foundations of land, labour, water and infrastructure. If this is achieved, more private sector capital will follow.

Surveys conducted during the course of this project confirmed that there are areas considered by both industry and government where government involvement is deemed to be "a must", (particularly surrounding provision of development-enabling infrastructure and assistance with some issues such as land tenure), whilst government's intervention is considered less or not necessary in some areas.

To unlock the north's full potential, the *White Paper on Developing Northern Australia* identified key areas for the Australian Government to focus on:

- making it easier to use natural assets, in close consultation with, and the support of, Indigenous communities
- providing a more welcoming investment environment
- investing in infrastructure to lower business and household costs
- reducing barriers to employing people
- improving governance.

This report endorses that position and provides clear recommendations on how the NT government can proceed to further create a supportive and versatile business environment, on which the private sector can then capitalise.

The NT-specific socio-political, economic and investment context is outlined in Section 3.

Oyster farming South Goulburn:

Source: Department of Primary Industry and Resources

"Expanding Oyster Aquaculture in the Northern Territory"

3 Agriculture and Aquaculture in the NT: Setting the Scene

The Northern Territory covers a total area of around 1.4M km^2 and is home to approximately 247,500 people (ABS 2018) with over 30% of the population being Aboriginal and/or Torres Strait Islander people. Agricultural land occupies 615,000 km^2, or around 43 per cent of the Territory. Areas classified as conservation and natural environments (nature conservation, protected areas and minimal use) occupy 716,600 km^2, or 53 per cent of the state. The most common land use by area is grazing native vegetation (pastoralism), which occupies 611,600 km^2 (ABARES 2016).

3.1 Value of Agricultural Production

In 2018–19, the gross value of agricultural production in Northern Territory was $759M, which was 1.2 per cent of the total gross value of agricultural production in Australia ($60Bn) (ABS, 2020), with 90 per cent accruing from beef, mangoes and melons.

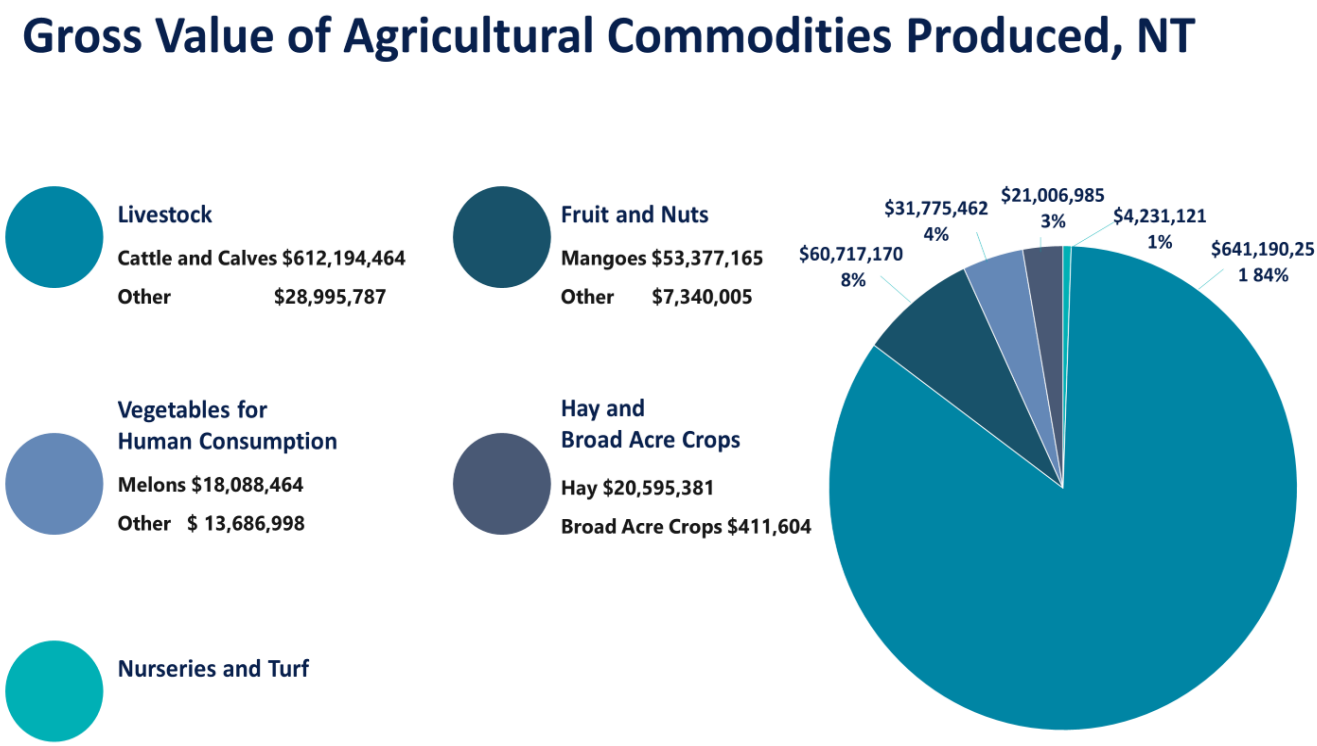


Figure 4 - Gross Value of Agricultural Production (NT) 2018-19 (Source: ABS Catalogue 75030DO002)

Fishing and aquaculture contribute an additional $120M per annum, in addition to the agricultural output noted above (NT Government, 2020).

Approximately 400,000 live cattle per annum are exported through the Darwin Port (Mercado, 2018), reflected in the nearly half billion dollar industry value to the NT. In 2018-2019, 397,000 head of cattle were exported from the Darwin port, with 79% exported to Indonesia, 14% to Vietnam, 4% to Philippines, and 3% to Malaysia.

The Northern Territory now produces about 50% of Australia's mangoes (NT Government, 2020).

3.2 Legal and statutory context

There is a complex legal and statutory framework in the Northern Territory particularly given the role of the Commonwealth Government in northern Australia.

3.2.1 Statutory arrangements

The Northern Territory Government (NTG) is the primary administrative authority for the NT. Statutory arrangements administered by the NTG which have direct or indirect implications for agriculture, aquaculture and associated industries (see Table 1).

Table 1 - Summary of statutory frameworks for agriculture and aquaculture in the NT

Statute	Jurisd-iction	Subject Matter	Comments / Notes
Environmental Assessment Act 1982	NT	Environment	Projects that could have significant environmental impacts require assessment by the Environmental Protection Authority (EPA) under the Act.
Heritage Act 2011	NT	The *Heritage Act* protects three classes of places and objects: • Aboriginal and Macassan archaeological places and objects • places and objects declared to be heritage places and objects under Part 2.2 of the Act • places and objects declared to be protected classes of places and objects of heritage significance under Part 2.3 of the Act	Under the Act, it is an offence to knowingly damage a heritage place, to remove something from a heritage place or damage or remove a heritage object, unless one of the exemptions applies. Most relevantly, these exemptions include when the activity is carried out under a work approval issued, or heritage agreement made, under the Act.
Aboriginal Land Rights (Northern Territory) Act 1976	NT	Establishes four land councils: • Anindilyakwa Land Council • Central Land Council • Northern Land Council • Tiwi Land Council.	The Land Councils are statutory authorities established to express the wishes and protect the interests of Traditional Owners, and other Aboriginal people in the Northern Territory.
Native Title Act 1993	Cwth		Establishes Prescribed Bodies Corporate for the delivery of land use agreements. The NLC represents the people of the Tiwi Islands and Groote Eylandt in this capacity.
Northern Territory Aboriginal Sacred Sites Act 1989	NT	Protects sites that are sacred to Indigenous people or are of significance according to Indigenous tradition. The Act prohibits entry onto sacred sites, the carrying out of work on or use of sacred sites and the desecration of sacred sites, other than in accordance with certificates issued under the Act by the Aboriginal Areas Protection Authority or responsible minister.	
Planning Act 1999	NT	Land use planning / development proposals	

Statute	Jurisd-iction	Subject Matter	Comments / Notes
Pastoral Land Act 1992	NT	Facilitates the sustainable use of land for pastoral purposes and the economic viability of the pastoral industry. The Act also provides for permits for non-pastoral use of pastoral land.	
Waste Management and Pollution Control Act 1998	NT	Regulation of polluting and waste generating activities.	Certain types of water-related developments could require approval under this Act.
Water Act 1992	NT	Taking of water and infrastructure relating to taking of water.	Includes water control district declarations and water allocation plans, and rules for managing licences and permits.
Plant Health Act 2008	NT	Control of pests and facilitates the production and trading of plants and plant material.	

3.2.2 Land tenure

Four main types of land tenure are in place in the NT:

- Crown Land, reserves and unallocated Crown Land
- Freehold
- Aboriginal freehold
- Pastoral leasehold

Most land in the Territory, outside of townships, is either Aboriginal freehold or pastoral leasehold land over which Native Title rights can exist. Non-pastoral use (NPU) permits are required to conduct agricultural, horticultural, aquacultural or other non-pastoral grazing activity on pastoral stations.

3.3 Policy, management and support context

The general policy framework supporting agriculture and aquaculture development in the NT includes the 'Major Projects' framework, and the activity of agencies, non-government organisations (NGOs), local governments and statutory bodies for which policy, planning, assessment and decision-making processes impact upon development outcomes

3.3.1 Major Projects

The NT Government's *Major Project Status Policy Framework* and associated support team has been established to assist major project proponents to navigate through government approval requirements. Under the policy, major project status is awarded to developments by the Northern Territory Government having regard to six main criteria:

- project significance (e.g. capital expenditure, employment)
- strategic impact (e.g. flow on benefits to other industries)
- complexity (government approval requirements and environmental, economic and social impacts beyond the project footprint)
- project feasibility
- proponent's capacity to deliver the project
- ancillary (such as the need for government support and local industry participation, local workforce development and social impacts on the community) (source NT Government 2017)

While these criteria are used as a guide, ultimately, decisions on major project status are made at the discretion of the Northern Territory Government.

If major project status is awarded, the proponent receives assistance with the identification of relevant government approval processes, whole of government coordination and facilitation of the project and project-related government approvals, and a dedicated government project case manager who works as a single point of contact on the project.

Seafarms Group Limited's *Project Sea Dragon* is the only agricultural or aquacultural project with current major project status.

3.2 Agencies, Statutory and Other Organisations

Table 2 summarises the agricultural (and aquacultural) development-related responsibilities and/or impacts of organisations operating within the NT. The policies and processes of the organisations listed, in addition to the statutory parameters within which they operate, affect the development outcomes sought by government. Representatives were engaged through the stakeholder process discussed through this document.

Table 2 - Summary of agencies and organisations supporting development in the NT

Agency / Organisation	Key focus / purpose in relation to agricultural and aquacultural developments	Organisation type
Department of Primary Industry and Resources (DPIR)	Fostering and enhancing development through: • supporting Aboriginal and regionally-based businesses to provide economic and employment opportunities • ensuring the NT optimises benefits from its agriculture, fisheries, minerals and energy sectors	Territory Government
Department of Environment and Natural Resources (DENR)	Roles and responsibilities include: • Strategic integrated assessments of ground and surface water systems, land resources and biodiversity values • Information systems, mapping and resource data provision • Advice on environmental impact assessment and approvals	Territory Government
NT Environment Protection Authority (NTEPA)	Provides advice to government on the environmental impacts of development proposals	Independent statutory authority
Department of Trade, Business and Innovation (DTBI)	Seeks to support a globally competitive investment environment in the NT, grow local business, facilitate diverse investments and connect business and government	Territory Government
Department of Infrastructure,	Land use and infrastructure planning and administration, including development assessments.	Territory Government

Agency / Organisation	Key focus / purpose in relation to agricultural and aquacultural developments	Organisation type
Planning and Logistics (DIPL)		
NT Pastoral Lands Board (PLB)	Established under section 11 of the Pastoral Land Act 1992. Administers NT pastoral leases. Responsibilities include being the consent authority for clearing of native vegetation and non-pastoral use of pastoral land	Statutory Authority
NT Local Governments and Regional Councils	Local governance function which includes planning and local infrastructure responsibilities with implications for agricultural and aquaculture development.	Local Government
NT Land Councils	Statutory authorities established to express the wishes and protect the interests of Traditional Owners, and other Aboriginal people in the Northern Territory: Anindilyakwa Land Council; Central Land Council; Northern Land Council; and Tiwi Land Council.	Statutory NGOs
NT Farmers (NTF)	Peak body for plant-based industries in the Northern Territory	Industry organisation
NT Cattlemen's Association (NTCA)	Peak body for the NT cattle industry, providing leadership at the Territory, national and international level on industry, trade, resource management, and economic and social policy.	Industry organisation
NT Seafood Council (NTSC)	Support for and sustainable development of the seafood industry	Industry organisation
NT Buffalo Industry Council (NT BIC)	Facilitate the continued growth and sustainable development of the Northern Territory Buffalo Industry.	Industry organisation
Office of Northern Australia (ONA)	Policy analysis and advice to support the continued development of Northern Australia. Reports to the Minister for Resources and Northern Australia. Oversees the implementation of northern Australia agenda initiatives including the *Our North Our Future: White Paper on Developing Northern Australia*.	Commonwealth agency
Charles Darwin University (CDU)	Tertiary education. Research focus includes understanding and improving the management of freshwater, estuarine, coastal and marine systems in northern Australia.	Tertiary and vocational education and research
Batchelor Institute of Indigenous Tertiary Education t	Aboriginal and Torres Strait Islander training and higher education	Tertiary and vocational education

4 Key Stakeholder Views

As part of the research for this project, extensive engagement with key stakeholders was undertaken through targeted surveys, direct stakeholder consultation and workshops.

Detailed survey and workshop findings and discussion points with key stakeholders are provided in Appendices B to E.

4.1 Surveys

4.1.1 Industry and Non-Government Stakeholders Survey Results

There were 21+ industry and non-government participants in the survey, representing business owners, contractors, labour providers, consultants, industry development personnel and landowners. The issues identified by the participants as providing an extreme impediment for development were land tenure, water licences, Native Title, logistics and telecommunications. (Figure 5)

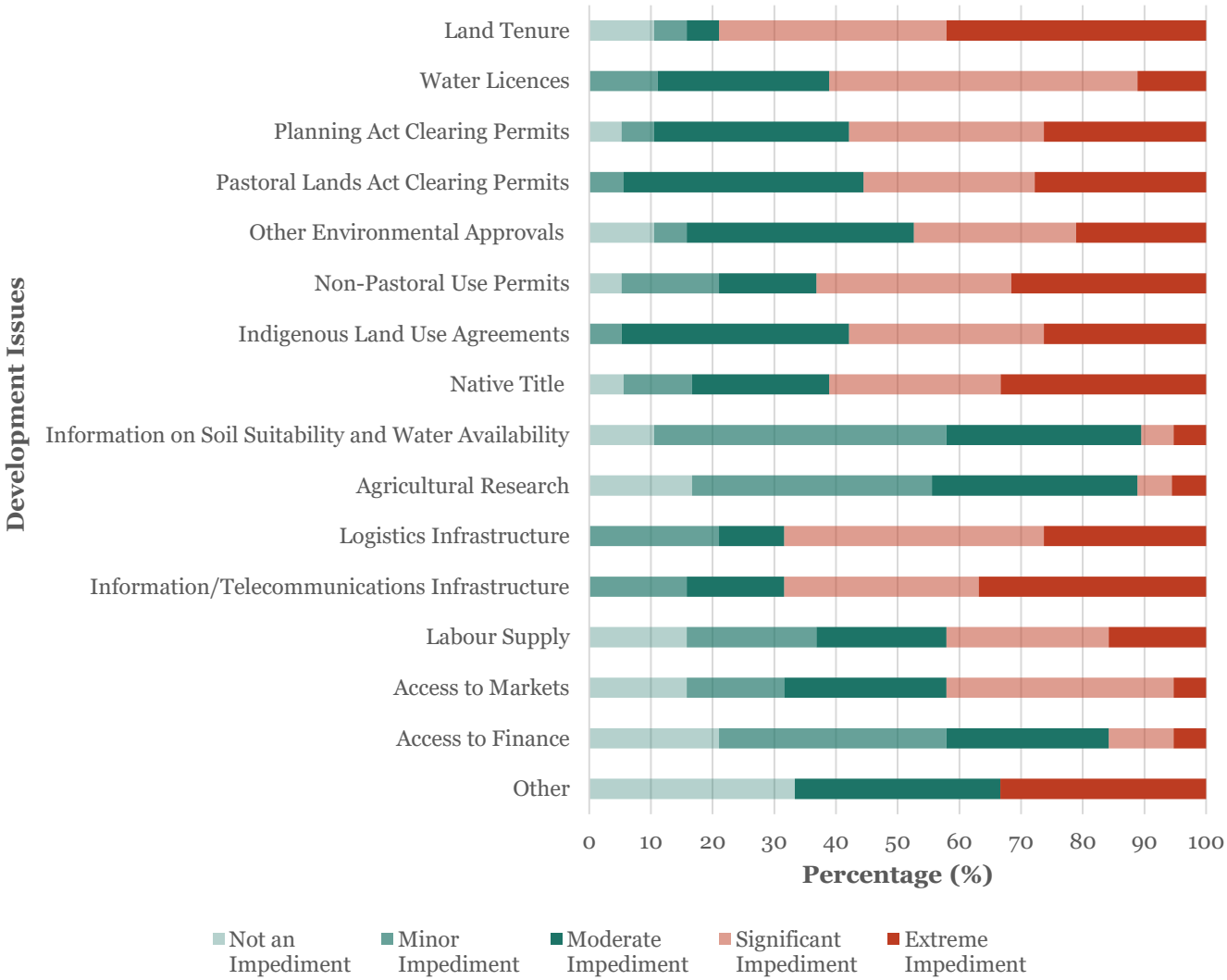


Figure 5 – Stakeholder-identified impediments to development in the NT

The experience with regulatory bodies (Figure 6) highlights perspectives from survey respondents that Indigenous Land Use Agreements (ILUAs), land tenure, clearing permits, and migration and work visas involve difficult or otherwise poor processes. Comments provided indicated a general theme of the time taken for approvals and permits to be assessed/granted.

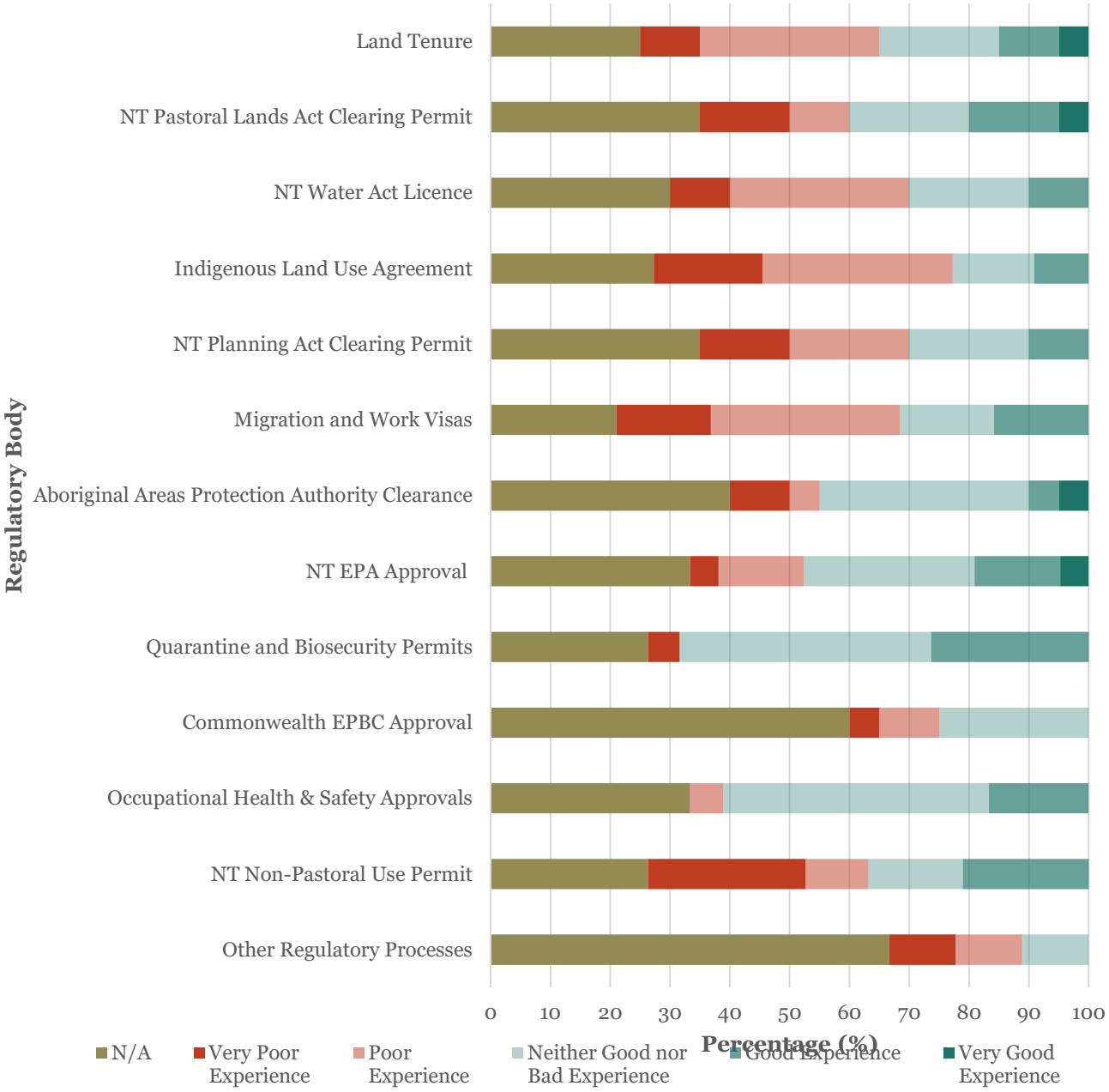


Figure 6 – Industry and non-government stakeholder experiences with regulatory bodies and processes

Figure 7 shows industry perspectives on government roles in agricultural and aquacultural development in the NT. The overwhelming responses for what the Government should or must be involved in include an investment in improved infrastructure (communications, road, rail, ports), biosecurity risk management and a "can-do" culture within and between departments that process permits and approvals.

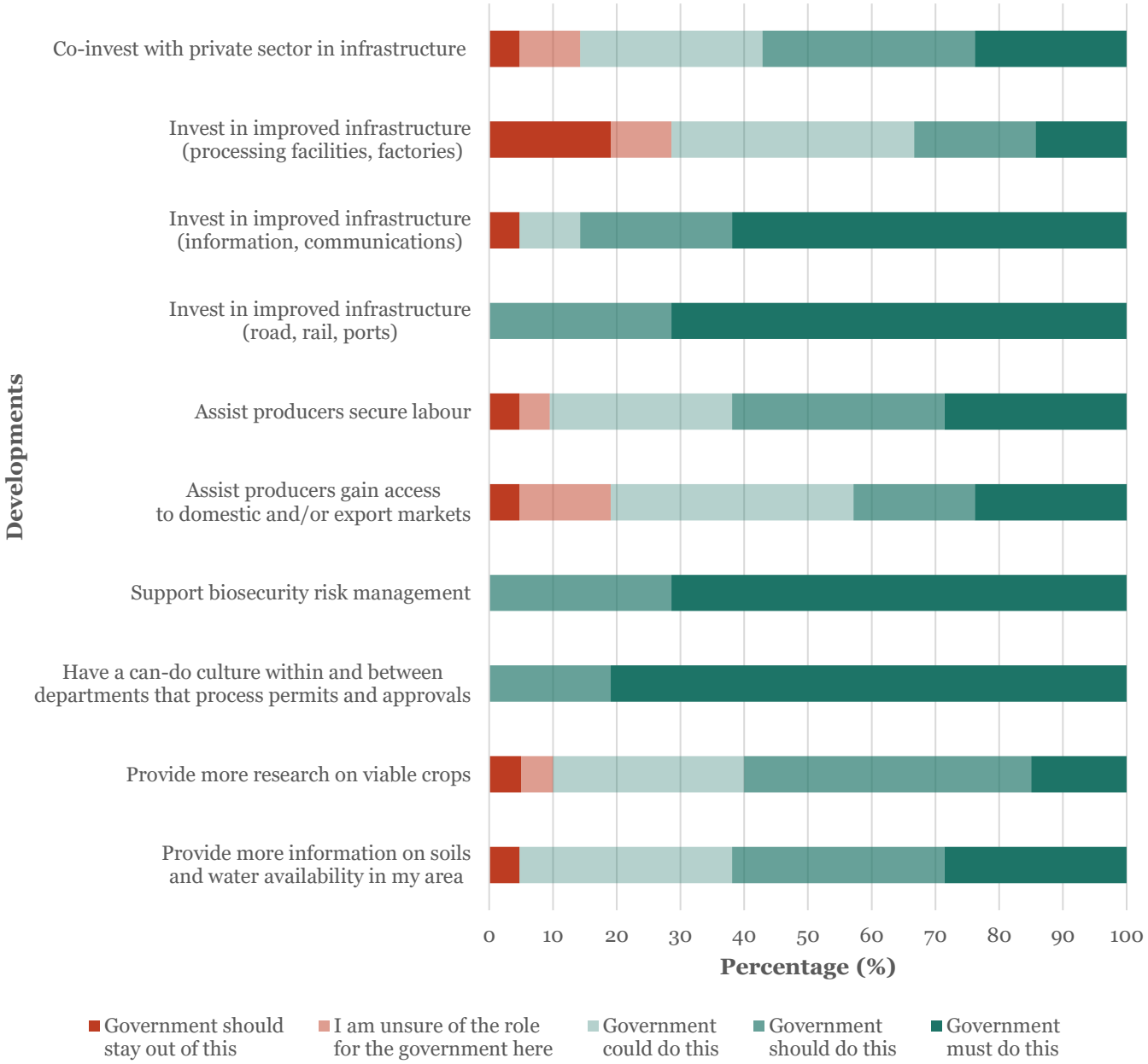


Figure 7 – Industry and non-government stakeholder perspectives on government's role in developing the NT

4.1.2 Government Employees Survey Results

There were nine responses from government employees of both the Northern Territory and Commonwealth Governments. The most significant issues identified by government employees included land tenure, Indigenous Land Use Agreements, logistics infrastructure and other (with comments suggesting that supply chain existence (rather than just logistics infrastructure) and lack of knowledge are also impediments to agricultural development.

It is also interesting to note that whilst the median response across all impediment sectors was "minor -moderated impediment", the industry/non-government respondents perceived them to generally rate as "moderate to significant". This may be due to a disconnect between what the government employees see in their particular department, and what the proponents experience across several departments or may be a reflection (captured in the comments from some participants) regarding lack of knowledge – whether that be related to research or proponent/consultancy knowledge and the associated precautionary approach taken by those involved in the processes.

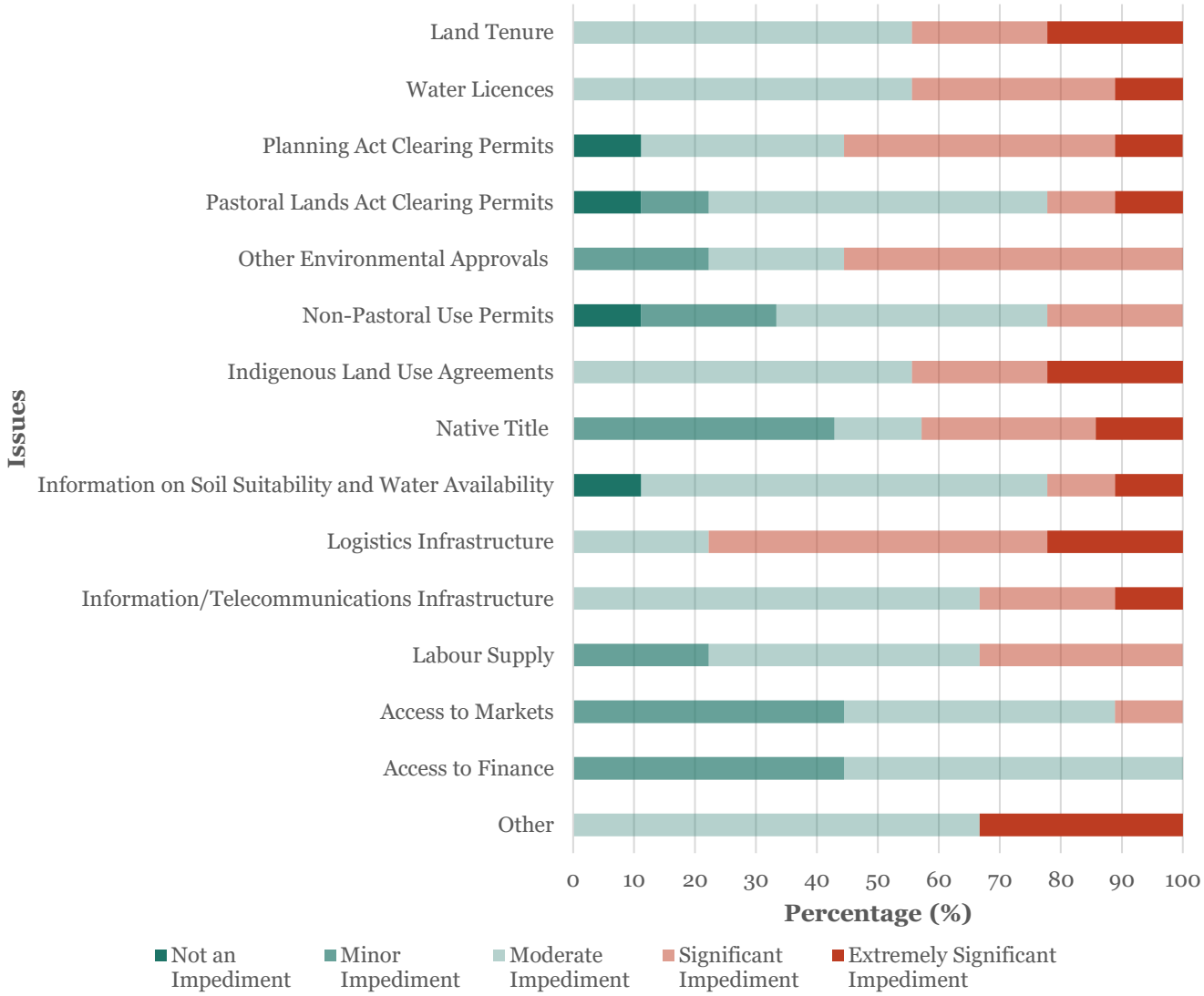


Figure 8 – Government employee-identified impediments to agricultural development in the NT

Figure 9 indicates the government employee perceptions on government's role in developing the NT. A comparison of the 'infrastructure investment' perceptions of non-government/industry (per Figure 7) and government employees (Figure 9) provides an interesting background, particularly in light of the Australian Government (2015) White Paper's identification of government's role including investing in infrastructure to lower business and household costs. From the responses received, it can be considered that the majority of government, industry and other stakeholders identify investment in information, communications and logistics infrastructure as a key expectation on government.

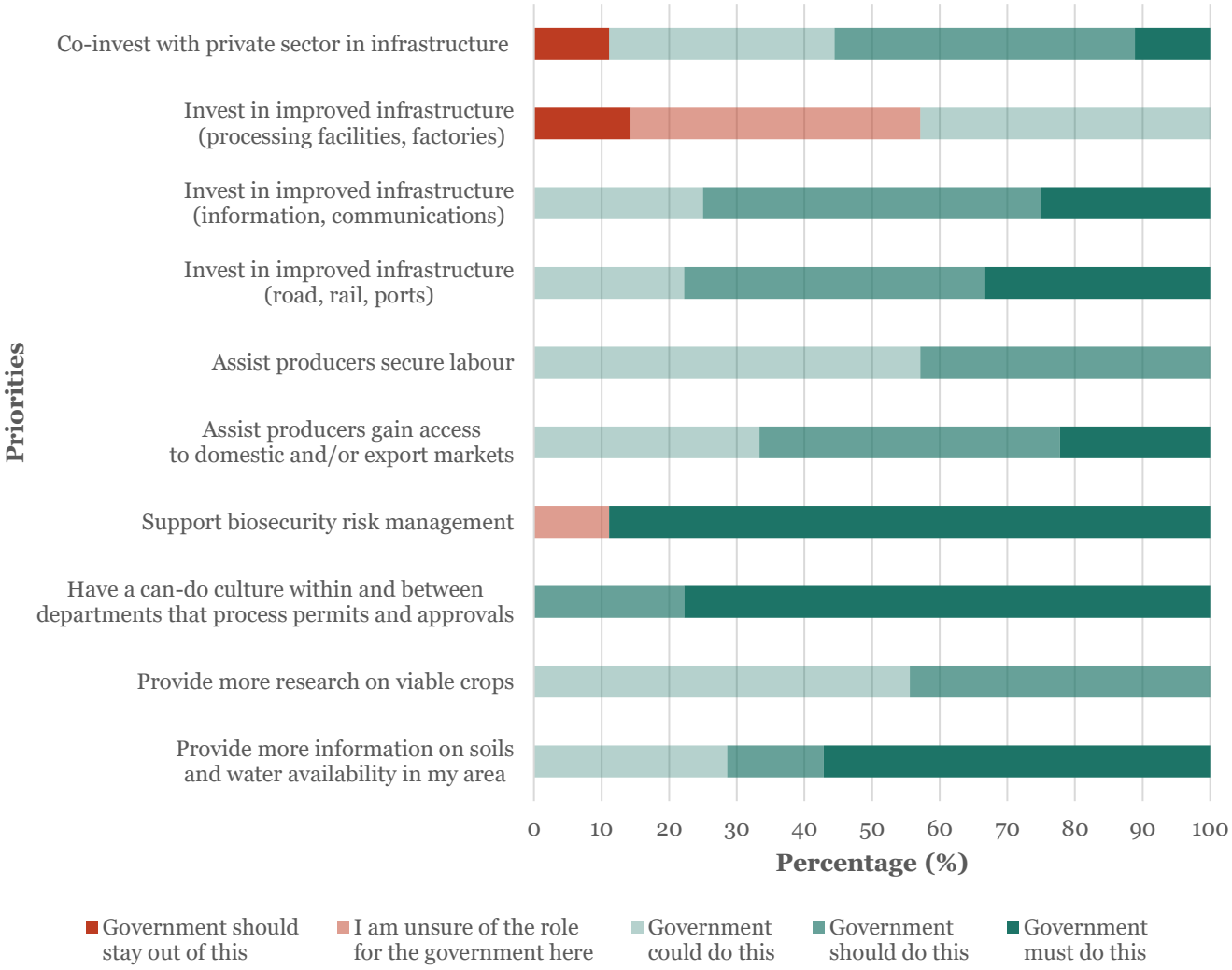


Figure 9 - Government employee-identified priorities for government involvement in agricultural development in the NT

Other varied perceptions between industry/NGO and government responses relate to the role of government in identification of and access to markets, and in securing labour. Industry respondents expressed uncertainty regarding government's role in accessing markets and labour, while government employees identified these aspects as potential or required government activities.

A detailed summary of the survey results is provided in Appendix B. Further analysis is reflected throughout the remainder of this report.

4.2 Direct Consultation

Extensive consultations were undertaken with key stakeholders throughout the project, with the views and opinions of these key individuals and government and industry representatives being used to inform the recommendations outlined in this report. A full stakeholder list and notes are included as Appendix C.

4.3 Workshops

Three workshops were held over 2-3 December 2019, along with an additional six presentations of the workshop content to industry association and government department representatives.

The workshops sought to -

- Advise and engage with relevant government departments about the CRCNA project *Prioritising, De-risking and Brokering Agricultural Development in the Northern Territory*
- Share information regarding the methodology, research to date and the stakeholder engagement plan
- Seek further research information and approaches about potential agricultural opportunities across the NT
- Receive feedback and additions to the existing stakeholder list, project master list of agricultural development opportunities based on geographic area, product/production systems, and prospectivity, evaluation criteria and scoring to identify up to three case studies to explore impediments to and options for de-risking agricultural developments.

The workshops included participants from government, industry and non-government stakeholders, as outlined in Appendix D – Workshop Reports.

Key issues raised included environmental approval processes; water availability and licencing; land availability and development readiness; shortage or precincts for small-scale developments; approval pathways; distance to markets (and cost); resilient and reliable infrastructure; skilled labour availability and support service availability.

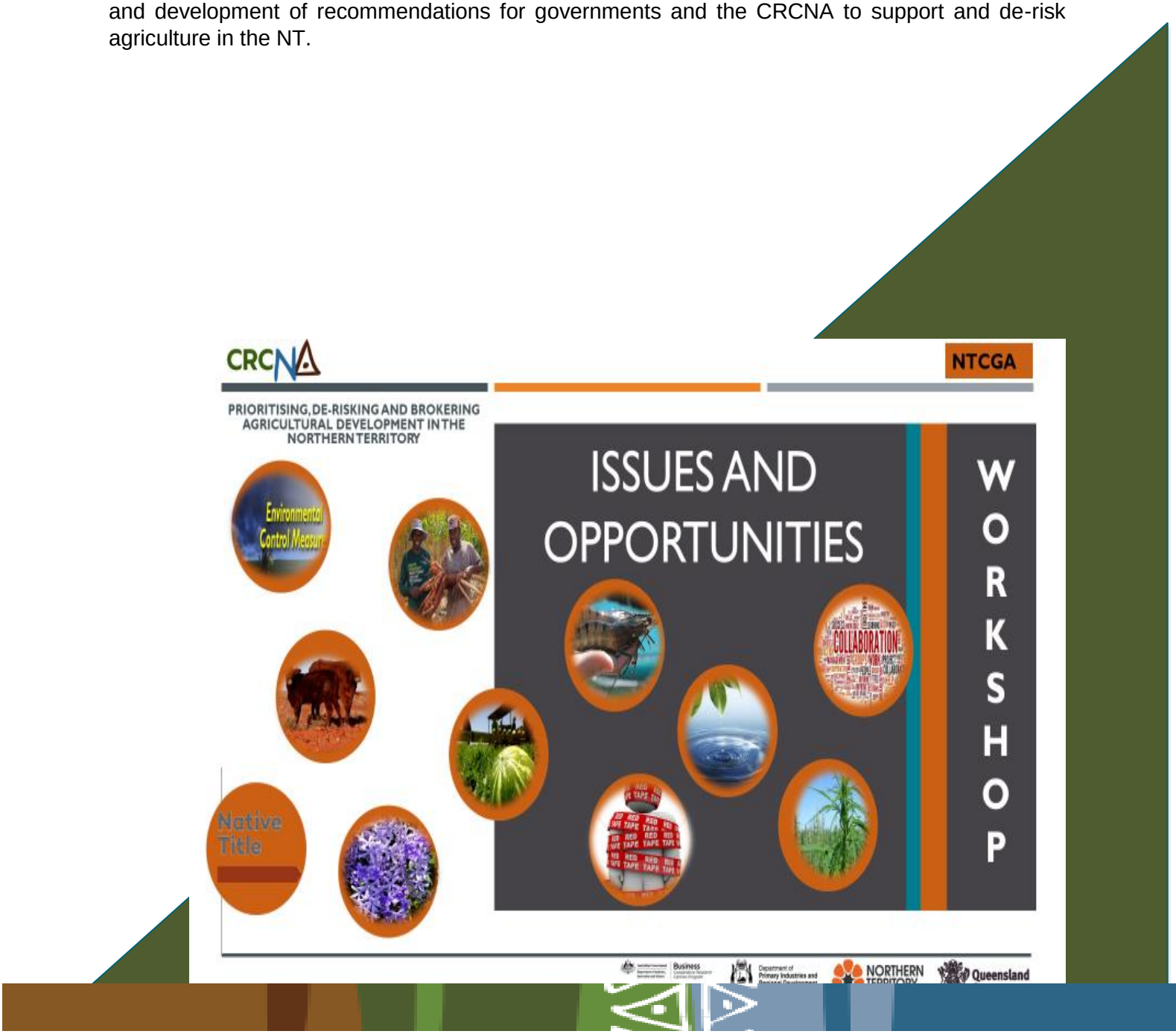
A further three workshops were held over the period 10-13 March 2020, along with eight presentations of the workshop content to industry association and government department representatives. Participant involvement was extended and included:

- NAILSMA
- NT Farmers Association
- CRCNA
- NT Austrade
- NT Cattlemen's Association
- Darwin Chamber of Commerce and Industry
- NT Buffalo Industry Council
- Humpty Doo Barramundi
- Department of Trade, Business and Innovation
- Department of Primary Industry and Resources
- Department of Trade, Business and Innovation
- Department Environment and Natural Resources
- Department of the Chief Minister
- The Cairns Institute, James Cook University.

The March 2020 workshop sought to

- Advise and engage with relevant Industry and Government Departments about the CRCNA project: Prioritising, De-risking and Brokering Agricultural Development in the Northern Territory
- Share information regarding the methodology, research and findings to date and report on stakeholder engagement conducted so far
- Workshop and receive feedback and additions to the draft findings, draft solutions and potential pathways forward.

Appendix D outlines the workshop commentary, which informed the subsequent case study analysis and development of recommendations for governments and the CRCNA to support and de-risk agriculture in the NT.



5 Case studies

In order to inform this project, case studies were conducted to provide insight into de-risking, brokering and prioritising agricultural development opportunities. The methodology for determining which case studies would be progressed and undertaken as part of this project included the development of a master list of potential agricultural development opportunities in the Northern Territory.

Thirty-one agricultural development opportunities were identified and categorised into one of the following areas:

- Ag Processing & Logistics
- Aquaculture
- Biofuels
- Broadacre cropping
- Forestry
- Horticulture
- Livestock intensification
- Niche Products

The master list was then assessed and scored using agreed evaluation criteria including scale of investment (dollars), scale of land use, employment creation (number of jobs), project economic impact/output approval readiness market readiness and project status – a combination of which was believed to assess each project's prospectivity and impact merits.

A shortlist of seven case studies were chosen for consideration, with four detailed case studies deemed suitable to be investigated in detail for this report and research project. This methodology is described in further detail in Appendix B.

The four detailed case studies subsequently investigated were:

Table 3 - Summary of case studies

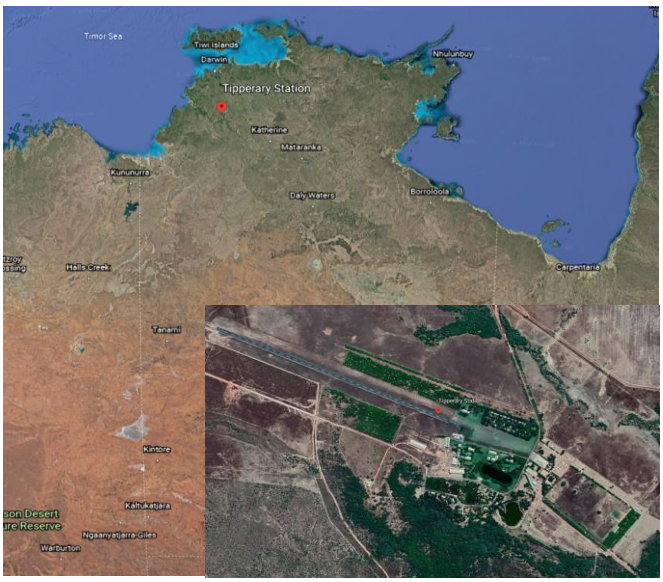
Company	Project	Category
Tipperary Group of Companies - Tipperary, Litchfield and Douglas West stations	Cattle/Livestock Cotton - dryland and irrigated Mango & Lemons	Livestock intensification Broadacre cropping Horticulture
Kupang Agricultural Management – Flying Fox Station	Cattle/Livestock Cotton - dryland and irrigated	Livestock intensification Broadacre cropping
Humpty Doo Barramundi	Expansion of Barramundi Farm	Aquaculture
Central Agri Group - Rum Jungle Meat Exports	Batchelor meatworks reopening	Agricultural processing and logistics

Detailed case studies are provided in Appendix B. A short overview of each is provided below.

5.1 Overview of case studies

5.1.1 Tipperary Group of Stations

The Group is comprised of Tipperary Station, Litchfield Station and Douglas West Station, and is focused on large-scale cattle backgrounding and breeding, cattle agistment, live export quarantine, fodder production, broadacre farming, horticulture, tourism and events and conservation.



In 2019, Tipperary Station undertook a 60-ha cotton trial, which was harvested in June 2019. With a 10 ha rain-fed area and 50 ha irrigated area planted. This was the first commercial cotton trial harvested in the Northern Territory in 15 years. There are hopes that this successful cotton trial could lead to a new industry in the NT with the region's plentiful rainfall, undeveloped land and climate attractive features.

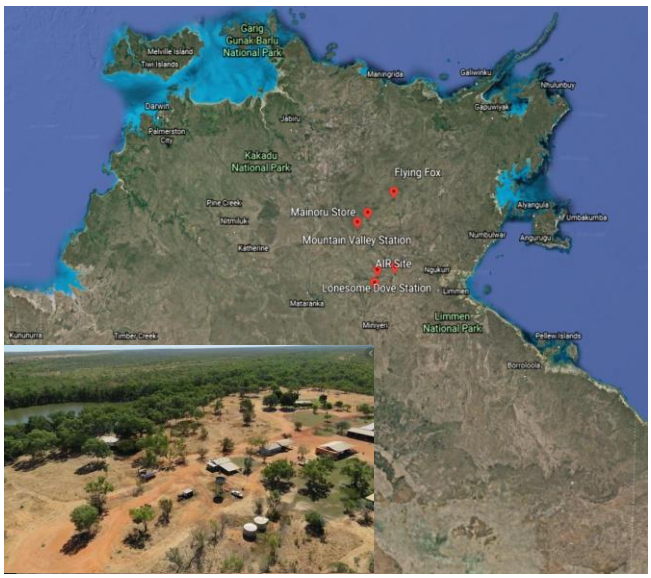
Through the case study interviews, the following issues were identified as potential impediments to agriculture development:

Issue	Impediment
Land Tenure	Significant impediment - The ability to have the right land tenure for development to occur and its ability to secure finance and investment is critical. The current land tenure pathways and approval processes are cumbersome with lengthy time approvals that don't proactively encourage investment and development.
Water Licenses	Significant Impediment - While access to water has not been an issue for Tipperary for its current operations and development as its license and location to water sources more than meet demand, Tipperary believe that, in general, the process of securing water licenses and ensuring supply to meet the requirements for development is a significant impediment to agriculture development.
Planning Act Clearing Permits	Moderate impediment. Could be improved and streamlined with a clear processes, templates and methodology implemented.
Pastoral Lands Act Clearing Permits	Moderate impediment - Tipperary's experience in obtaining a vegetation clearing permits is that they are time consuming and need streamlining.
Environmental Approvals	Significant impediment – Methodology/guidelines for approval process do not match the reality of the approval process. Inconsistencies between NTEPA to Commonwealth Government EPBC approvals, also between various NT Government Departments. For example – For example, Tipperary were requested to undertake a full EPA environmental impact study for the black footed tree rat as part of proposed development, as the NT Government believed they were located on the Tipperary Group of stations. Tipperary followed the request, template and process, which found no evidence of the black footed tree rat on site, only to have this study not accepted by the NT Government with no contrary evidence provided by Government to refute Tipperary's results.
Non-pastoral use permits	Significant impediment - Every NT Government must have sign-off on applications, which is a long winded and timely process (90 days). Tipperary have been waiting 18 months for a non-pastoral use permit. No clear and consistent guidelines seem to be in place and continuing lists of questions come from NT Government Departments. Tipperary advise that no sooner do you answer the questions than you then receive a further list of questions.

Issue	Impediment
ILUAs/Native Title	Significant impediment – Again time is a critical factor here and there needs to be a more streamlined process in place. Without improvement development on Aboriginal lands will continue to be slow, costly and potentially non-existent.
Information on soil suitability and water availability	Minor impediment – refer water licenses.
Agricultural Research	Moderate Impediment – Tipperary's experience with the NT Government's agricultural research is that it is outdated and does not assist with current trends in agricultural production. In some cases, Tipperary had more knowledge than the expert researchers. Needs to be improvements in the resourcing and collaboration with industry to enhance this research and knowledge to benefit all parties.
Logistics Infrastructure	Significant Impediment - The current road infrastructure severely impacts the supply chain to market and operations during the wet season with some roads not accessible. Needs to be an urgent assessment of the road infrastructure and a program implemented to deliver an all-weather road network. Also review of the Darwin Port fees, Tipperary believe the current fees are too high and it is their preference to truck to southern ports. To create a competitive and sustainable industry that benefits all parties Darwin Port fees need to be reasonably priced. This will bring more volume through the port and in turn the Ports revenue will increase through economies of scale.
Information / Telecommunications infrastructure	Significant Impediment – Most agricultural developments now rely on technologies and internet-based systems, which make information and telecommunications infrastructure vitally important. There is a need to prioritise telecommunication across strategic agricultural areas to enable increased productivity and profitability, which would lead to greater investment.
Labour Supply	Minor Impediment – Tipperary have generally found access to new employees relatively easy and believe there is a steady supply of quality people looking for work.
Access to markets	Moderate Impediment – Tipperary advised that they have strong relationships with their overseas and domestic markets and through experience do not have problems with accessing into new markets. However, what they see as an impediment relates to the logistics infrastructure above and getting produce to these markets on time and schedule. Without the ability to ensure the supply chain logistics then market access can be a significant impediment.
Access to finance	Minor Impediment – As mentioned in land tenure area, finance and investors are available, but they require security and hence the right land tenure is important to enabling this access to finance.

5.1.2 Kupang Agricultural Management – Flying Fox Station

Flying Fox Station is an 89,500-hectare pastoral station focussed on primarily breeding and running cattle. When sold in October 2018, Flying Fox had about 6,500 head of Brahman cattle, with cattle carrying capacity up to 8,000 head.



The Flying Fox station was purchased with a large-scale irrigation concept development plan already drawn up (potential of 30,000Ha of alluvial black soil suited to pasture improvement and irrigation development). The previous owner had put substantial work into this concept including engaging highly experienced irrigation development individuals. It is Kupang Agricultural Management's desire to also further investigate this potential.

Through the case study interviews, the following issues were identified as potential impediments to agriculture development:

Issue	Impediment
Land Tenure	Significant impediment – Flying Fox Station is a pastoral lease therefore the only legal business allowed is the grazing of cattle. This is the starting point. A form of freehold needs to be investigated taking into consideration native title rights for non-pastoral diversification development. The ability to have the right land tenure for development to occur and its ability to secure finance and investment is critical.
Water Licenses	Significant Impediment - Kupang Agricultural Development has not got this far, however, they have been advised substantial hydrology information is required before this could be considered. This would include long term baseline studies of the water systems in the proposed area. The timeframe of how long it would take to complete this work is vague.
Planning Act Clearing Permits	Moderate impediment - The regulations for clearing on pastoral land are set up for small scale pasture development for cattle production. The regulations do not consider larger scale agricultural developments. Projects need to be considered on a case by case bases and not one size fits all.
Pastoral Lands Act Clearing Permits	Moderate impediment - To apply and clear a small area of land for pasture development there is a process to follow and it's not too onerous. However, due to the information required few pastoralists have the time and ability to undertake this process themselves. Kupang Agricultural Development engaged an external consultant with expertise in pastoral land clearing applications, but this becomes a cost burden to most businesses.
Environmental Approvals	Significant impediment – Duplication of approval processes and costs through inconsistencies between NTEPA to Commonwealth Government EPBC approvals, also between various NT Government Departments as mentioned in opening comments.
Non-pastoral use permits	Significant impediment – Flying Fox Station holds a NPUP for the accommodation village. This was in place at the time of purchase. However, to allow pastoral lease holders the ability to easily develop their station a form of freehold needs to be investigated taking into account native title holders. Freehold would allow pastoralist the ability to develop the land without a NPUP into any business they deem viable. This development would still be governed by applicable regulations such as environmental and would still allow other land uses such as mining. The government would not derive a lease payment but could impose a rates system. Although an NT pastoral lease is a very secure tenure it only allows grazing and the NPUP system is more red tape. Freehold is a stronger form of tenure and would be more appealing to investors. To increase viability and improve the long-term sustainability of pastoral lease diversification in business is needed.

Issue	Impediment
ILUAs/Native Title	Significant impediment – Kupang Agricultural Development has not gone this far yet in is proposed development opportunities, however, they know it will take time and considerable cost. No timeline for completing this is ever given so it could take anywhere up to a 2-year period. There is also no indication of what royalties if any would need to be paid.
Information on soil suitability and water availability	Minor impediment – The NT Government have offered available information on soils to Kupang Agricultural Development in relation to its potential development, however the information is limited and will more than likely require further investigations, time and costs, which have an impact on development.
Agricultural Research	Moderate Impediment –Refer to above section on soil and water suitability.
Logistics Infrastructure	Significant Impediment – The location of Flying Fox Station does have all weather road access in place. However, there is still a need for improved road, rail and ports infrastructure that will assist the industry to develop and grow.
Information / Telecommunications infrastructure	Significant Impediment – Example - the NBN fibre optic cable runs passed Flying Fox Station within 10 m of buildings and 70 m of the office/ homestead; however, they are not allowed to hook into it. At its cost Flying Fox has installed mobile phone boosters to receive very basic service from a local aboriginal community.
Labour Supply	Minor Impediment – Flying Fox Station have generally found access to additional staff when needed and believe there is a steady supply of quality people looking for work.
Access to markets	Moderate Impediment – Establishing markets is generally not an issue but ensuring infrastructure and logistics to deliver into these markets is more a key issue. Without the ability to ensure the supply chain logistics then market access can be a significant impediment.
Access to finance	Minor Impediment – As mentioned in land tenure area, finance and investors are available, but they require security and hence the right land tenure is important to enabling this access to finance.

5.1.3 Humpty Doo Barramundi

Humpty Doo Barramundi is a Northern Territory owned and operated business. Over the last 27 years it has grown to rank now as Australia's largest saltwater barramundi producer. They are suppliers to Coles, Woolworths (Australia's largest supermarket / grocery chains) as well as Costco and Qantas for its Business Class passengers.

Humpty Doo Barramundi is currently investing up to $60M in expanding its operations with $28.7M assistance from the Northern Australia Infrastructure Fund (NAIF). The funding will go towards a three-stage project to expand its current facilities, introduce solar power generation, improve aquaculture practices and increase production. The project will achieve several firsts for the local aquaculture industry.

Through the case study interviews, the following issues were identified as potential impediments to agriculture development:

Issue	Impediment
Land Tenure	Not Applicable – Humpty Doo Barramundi owns its land and the current and future development is on the existing farm/with established land use in place and proven production systems.
Water Licenses	Minor Impediment – Has established services including water in place
Planning Act Clearing Permits	Moderate Impediment – Planning approvals need to be transparent, streamlined and timely. Not onerous or an obstacle to development, especially on small start-ups or well-respected established businesses with a good track record in the aquaculture industry.
Pastoral Lands Act Clearing Permits	Not applicable
Environmental Approvals	Significant Impediment – should be proportional to risk and if have a good track record then should not be so onerous, with additional costs involved. Humpty Doo Barramundi have a successful track record of responsible development, with a commitment to social outcomes as well as commercial outcomes, including protecting the environment.
Non-pastoral use permits	Not applicable
ILUAs/Native Title	Not applicable
Information on soil suitability and water availability	Not applicable
Agricultural Research	Moderate Impediment – aquaculture research requirements are different for emerging and consolidating industries. Government needs to be careful on how it undertakes or funds R&D and how this is provided. • For emerging industry, R&D and extension enable nascent industry to establish and build the critical mass required to develop markets, services • in a consolidating industry, R&D is often targeting proprietary information. • subsidising new entrants is undermining established industry (which is typically local, loyal, knowledgeable and committed) • Whilst "new entrants" usually fail and sometimes leave usable legacy, they usually set back the viable industry at public expense.

Issue	Impediment
Logistics Infrastructure	Moderate Impediment – Humpty Doo Barramundi is located on the main highway an hour from Darwin and has sealed roads that allow it to transport its produce. However, it recognises that logistics infrastructure is crucial to ensure delivery of its produce.
Information / Telecommunications infrastructure	Significant Impediment – Access to quality information and telecommunications is essential in the current global market to ensure businesses are competitive and keeping up with developments.
Labour Supply/Skills	Minor Impediment (Labour supply) – Humpty Doo Barramundi is not troubled by labour supply with easy access to local staff.
	Significant Impediment (Skills) - Recent changes to the work visa requirements by Commonwealth Government prevent access to recruit overseas specialist aquaculture staff, that are not available in Australia or NT. This impacts Humpty Doo Barramundi's ability to keep up with the latest technology and methods in aquaculture development.
Access to markets	Minor Impediment – Humpty Doo Barramundi has well established markets and supply chains in place and has commenced a new marketing development program.
Access to finance	Minor Impediment – Company was the first successful business in NT to receive loan funding through the NAIF. It also has secured funding through the ANZ Bank for its first stage of development.

5.1.4 Central Agri Group - Rum Jungle Meat Exports

A family-owned company, Central Agri Group (CAG) established in Brunswick, Melbourne in 1991, as an independent boning facility serving the local market. The company now has abattoir facilities in Victoria, Western Australia and the Northern Territory.

In 2018 CAG announced that they would be redeveloping the former Batchelor Abattoir in the NT, undertaking a number of facility upgrades. CAG completed the upgrades and officially opened for business in December 2019 under the banner of Rum Jungle Meat Exports, a subsidiary of the Central Agri Group. It is the first-time cattle have been processed at the facility for 16 years. Stock will be sourced from as far away as the Kimberley, Borroloola and Tennant Creek.

The facility will slaughter cattle, buffalo and donkey to produce meat primarily for export to markets in Asia and abattoir wastes will be rendered to produce saleable tallow and meal products. The facility will slaughter and process up to 160 to 200 head/day when operating at full capacity. The first consignments of boxed beef from the abattoir will be exported to markets such as Japan, Vietnam and Singapore.

Through these interviews, the following issues were identified as potential impediments to agriculture development:

Issue	Impediment
Land Tenure	Not Applicable – CAG currently owns the site.
Water Licenses	Minor Impediment – Has established water services/license in place
Planning Act Clearing Permits	Significant Impediment – Planning approvals need to be transparent, streamlined and timely. Less red-tape and only have one point of contact in government per project to then facilitate across all departments.
Pastoral Lands Act Clearing Permits	Not applicable
Environmental Approvals	Significant Impediment – This was a significant and major impact on CAG in the redevelopment of the Batchelor Abattoir. What should have been a quick process given this was already an existing abattoir that had previous environmental approvals in place, should have been a tick and check process. CAG stated that the NTEPA approval process delayed the reopening of the project by 6-12 months.
Non-pastoral use permits	Not Applicable
ILUAs/Native Title	Not Applicable
Information on soil suitability and water availability	Not Applicable
Agricultural Research	Minor Impediment – CAG has access to good research and development and technical knowledge that it has gained from its operations around Australia. Improved research on increasing quality of stock and numbers would assist and also research and development into best practices in abattoir operations.

Issue	Impediment
Logistics Infrastructure	Significant Impediment – The challenge of securing stock is exacerbated over the wet season, from November to April, when the majority of cattle stations in the Territory become inaccessible. While the abattoir has facilities and feedlots for up to 3,500 head of cattle, which they aim to fill prior to the wet season to ensure some continuity of supply having better transport infrastructure corridors and roads in place to guarantee supply is preferred.
Information / Telecommunications infrastructure	Significant Impediment – contacting the pastoral stations and producers to source stock can be difficult at the moment as the reliability of telecommunications is inconsistent. Again, this can cause supply chain and logistics issues. Reliable telecommunications infrastructure is essential. Currently, CAG undertake road trips around the NT and Kimberley to meet stock suppliers, which is timely and costly.
Labour Supply	Minor Impediment – CAG was fortunate enough to pick up some skilled labour from the [previously operating] AACo plant in Livingstone when it closed and have them placed in their other operations in Western Australia until the Batchelor abattoir reopened. They also looking to employ as many locals and Indigenous employees as possible as the workforce expands with full production. So far labour supply is only seen as a minor impediment.
Access to markets	Minor Impediment – CAG is targeting at least 35 countries in Asia and believe the demand for its product is there based on its other operations throughout Australia, so there is no problem with market access. It's about processing more meat and then the ability to send it straight out from Darwin, whether it goes on ship or out of the airport. CAG believe that the new cold storage facility at the Airport would need to be expanded or doubled to meet their requirements, given its already at 70% capacity.
Access to finance	Minor Impediment – CAG have been able to finance the redevelopment of the Batchelor Abattoir themselves, given their understanding of the market opportunities and demand they have reducing the risk of the investment. However, CAG did say that access to development grants from government to offset some of the capital costs for expanding into the future would not go untoward.

5.2 Key Issues and Findings from the Case Studies

Each of the case study proponents identified similar issues and impediments to agricultural development, that have emerged through the literature review and research, stakeholder surveys, workshops and interviews as part of the overall research project.

The issues and impediment raised predominantly concerned -

- Land planning, tenure and non-pastoral use permits
- Regulatory requirements
- Approvals
- ILUAs/Native Title
- Logistics Infrastructure
- Information / Telecommunications infrastructure

While all the case study proponents understood and supported regulatory requirements and processes and acknowledged that they are important on a number of fronts (especially biosecurity and protection of Australia's clean green food reputation), nearly all reported that these processes and timeframes for approvals need to be streamlined and the red/green tape and bureaucracy reduced.

The consensus view is that if the current approval processes and timeframes continue as they are, they will continue to be prohibitive to development and will not facilitate the growth required. Most would like to see the approval timeframes of 90 days shortened to 30 days and clear guidelines, processes and methodologies put in place across departments providing regulatory approvals. It was also strongly argued by the case study proponents that regulation should be proportionate to risk, and that track record performance should reduce the burden placed on existing businesses.

Case study proponents all stated there needs to be better understanding from Government that some of the existing approval processes impose an unjustified economic cost and burden on business, which ultimately impacts on the overall NT and Australian economies through lost opportunities.

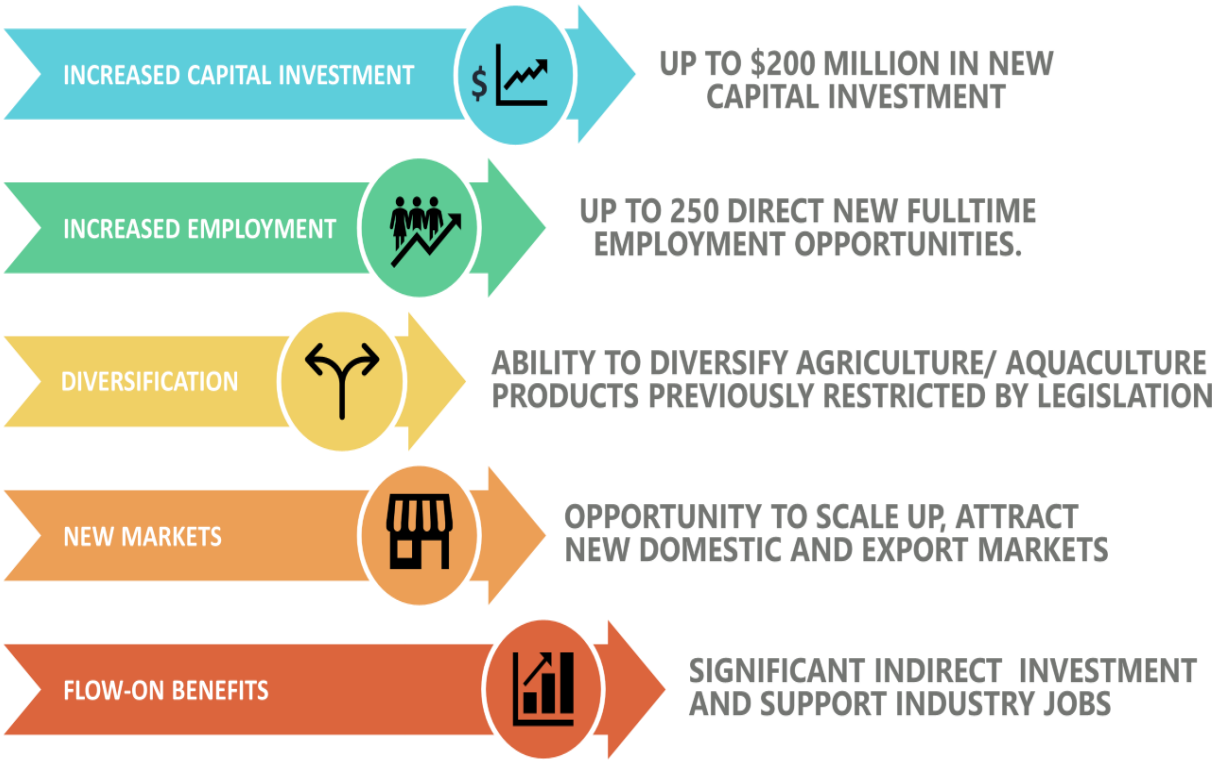
The Government also needs to embrace and support ongoing reform of the approval and regulatory requirements to ensure that businesses and the economy stay strong and competitive in the global market and economy.

Also, a similar suggestion came to the fore that there was a definite need for a culture change in regulatory agencies that support development proposals through the process. For agricultural development to thrive in the North Territory "government should or must have a can-do culture within and between departments that process permits and approvals" rather than what is perceived currently as more an adversarial, "push-back" or risk-averse role.

All case study proponents also clearly suggested that one of the key roles that the NT and Commonwealth governments can assist in de-risking and brokering agricultural development is through investment in improved infrastructure that assists the industry. This includes road, rail, ports, airports, power, telecommunications infrastructure and common user type of infrastructure such as cold storage and packaging facilities, or even industry specific infrastructure such as a cotton gin for use by all growers.

5.3 Impact Through De-risking, Brokering and Prioritising Agricultural Development Opportunities (Private Investment)

Alone the four case study proponents estimate that the potential impact of government de-risking and brokering agricultural development as suggested could deliver:



Extrapolating this data based on these four case studies being only 13 percent of the initial thirty one project developments identified, there is the potential that if each of these project developments had improved opportunities through government de-risking and brokering agricultural development as suggested, that the economic impact could be conservatively:

- Up to $1 billion in further capital investment; and
- Up to 1,500 direct new fulltime employment opportunities.

If this impact comes to fruition through the Commonwealth and NT Governments implementing the suggestions outlined by the case study proponents for de-risking, brokering and prioritising agricultural development opportunities, the potential result will be a thriving agricultural and aquaculture industry in Northern Australia - one that provides strong economic returns, with increased employment opportunities, especially for the Indigenous population, private sector investment into new and expanding businesses, and new products and markets being established.

6 Findings and Discussions

6.1 Soil and Water Resource Assessment, Allocation, Supply and Land Planning

There have been several studies into soil and water resource assessment at the regional or large catchment scale, including

- Northern Australia Land and Water Taskforce (CSIRO)
- Darwin Catchments (CSIRO)
- Big Rivers Study (DPIR)
- Managed Aquifer Recharge Study (Jacobs)
- Douglas Daly Agricultural Zone Economic Analysis (North Australian Agribusiness Management
- Aquaculture viability (CSIRO)
- Roper River (CSIRO – in progress)

Approximately 4,400 ha of land is currently under irrigation in the Darwin catchments, mostly for mangoes, melons, Asian and other vegetables and minor crops. The CSIRO study into the Darwin Catchments found that there is up to 1 million ha of potentially irrigable agricultural soils.

Of this land area, 800,000 ha are considered suitable for trickle-irrigated crops such as mangoes, whereas about 90,000 ha is considered suitable for flood-irrigated crops including rice (CSIRO, 2018). A further 420,000 ha of land was moderately suitable for aquaculture, including species such as prawns and barramundi, grown in lined ponds. For all of these uses the land is considered moderately suitable with considerable limitations and would require careful soil management.

A Jacobs study (Jacobs Group, 2017) into managed aquifer recharge found that five locations were economically justified for the horticultural crops considered (e.g. mango, Asian vegetables and melons). Of the five sites that were economically viable, two of these were found to have higher economic potential: Stray Creek, with up to 2,700 ha, and Lower King River, with the potential for 2,000 ha.

The DPIR study into the Big Rivers region (Department of Primary Industry and Resources, 2017) found that land and water availability assessments, water allocation planning and water supply security, pre-feasibility information, land resource mapping and open access to existing data are required. Government-industry partnerships investing in pre-feasibility work for untested agribusiness ideas were also identified as important for new industry development.

In line with these suggestions, in an earlier assessment of mosaic irrigation for the northern Australian beef industry, Grice et al (2013) recommended:

- Progressing water resource planning in Western Australia, the Northern Territory and Queensland
- Water resource planning that explicitly favours many, dispersed, small water licences rather than a few, large licences or many licences but geographically aggregated
- Investing in the acquisition and analysis of higher resolution, better attributed data, including the use of newer techniques such as digital soils mapping and proving groundwater resources.

The theme is clear: resource assessments need to be undertaken, and data made available and accessible for prospective agricultural developers to inform their decision-making.

The NT Government, in its report on Horticultural Growth in central Australia (Northern Territory Government, 2018) identified five plant industry precincts with suitable soil and water. The highest priority precincts for development included Alice Springs, Ti Tree and Western Davenport, with precincts for future development at Tennant Creek and Great Artesian Basin.

However, following this, the ABC reported (21 July 2019) that "12 months later, the dreams of an expanded agricultural precinct at Ti Tree seem to have turned to dust". "Companies that were willing to invest heavily in the region have been told by government there is not enough water to accommodate their irrigation plans".

The inconsistencies between what the NT and Commonwealth Governments promote, at the highest levels, as future agricultural development opportunities, and the subsequent shutting down by other government regulatory, planning and approval departments and agencies, is a major impediment to future development.

This message came through clearly in the case studies, with respondents stating that if Governments release reports promoting investment, they need to be consistent with their messaging and commitment to the developments, and not have other areas shut down the prospects.

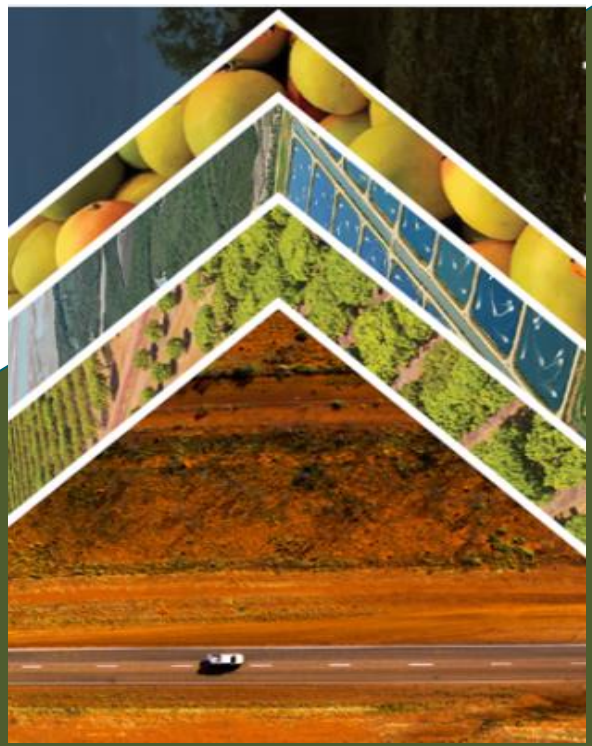
6.2 Regulations and Approvals

There was a consistent comment that there is a need to streamline the various approval processes under land tenure, planning, vegetation management, water resources, cultural heritage, and other legislation to facilitate mosaic irrigation or other diversification (e.g. Grice et al 2013).

Results from surveys conducted during the course of this project also confirmed that there is an industry perception that approval processes are an impediment to agriculture and aquaculture development in the Northern Territory.

When asked to rate different approval processes, over 50% of respondents rated the impediments as significant or extreme, with 82% of respondents citing land tenure to be significant or extreme (see Figure 5). While these results reflect responses received from industry/non-government, the government survey results are less skewed to the high extreme, indicating that there may be a disconnect between how government bodies and industry view the approval processes.

The Commonwealth Government's White Paper on Developing Northern Australia stated that "with the Northern Territory Government, the Commonwealth Government will establish a 'single point of entry' for investors in major projects to help them through all regulatory hurdles. This will provide an important mechanism for feeding back information to governments on unnecessary regulation that is hampering business."



The NT Government's (2017) report "Our Economic Future" included action to improve environmental assessment and approvals processes. Similarly, the DPIR (2017) Big Rivers report recommended improving pastoral lease administrative arrangements, cutting red tape on development assessment processes, and streamlining processes for leasing Aboriginal land.

Despite multiple assessments, reviews and initiatives the issue with approval processes remains a barrier to agricultural development.

6.3 Infrastructure (Including Transport and Telecommunications)

Improving access to productive land and water, strategically managing critical inputs, and providing key components of infrastructure is of critical importance to the agribusiness sector.

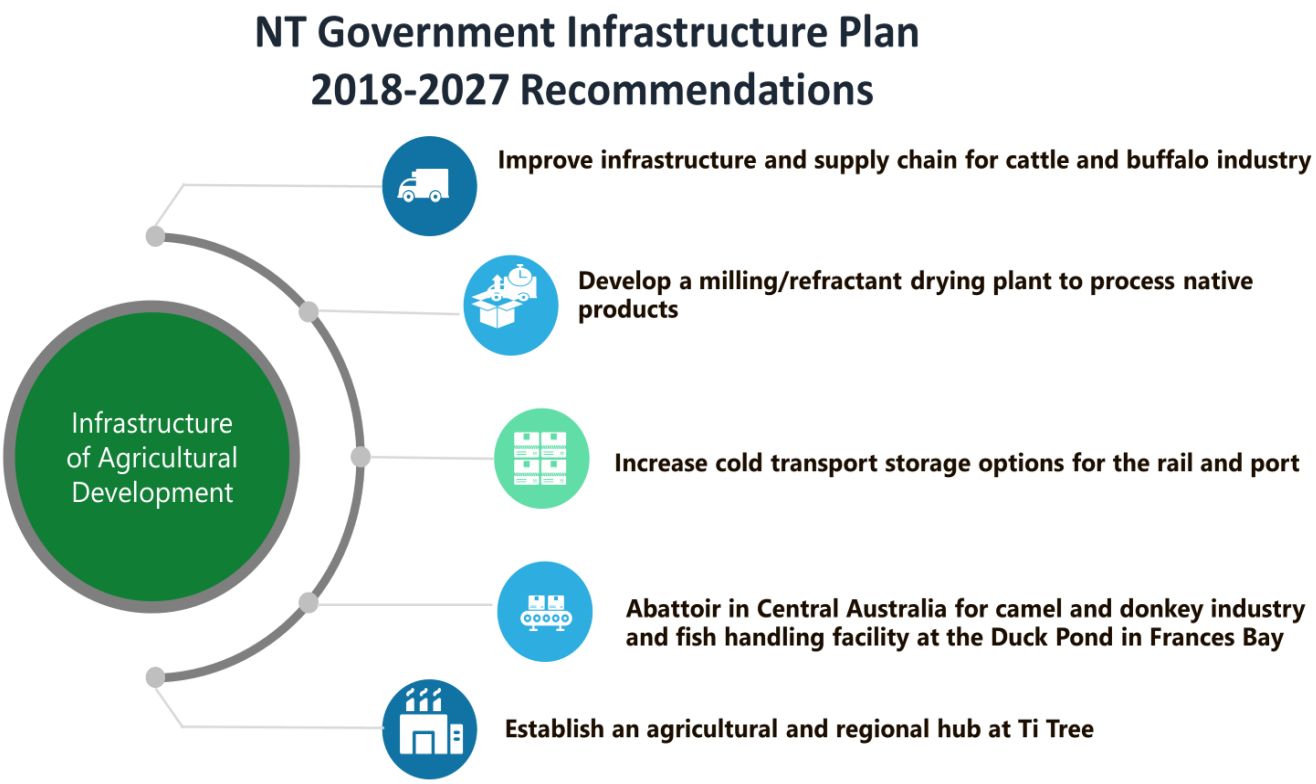
One of the key determinants in ensuring that Australian agriculture can reach its full potential are least-cost pathways to transport food and fibre from paddock to port. At present, logistics are the largest single cost item in the production of many agricultural industries, amounting to as much as 48.5% of farm-gate cost in case studies (Deloitte Access Economics, 2019).

The key to improving transport efficiencies for agriculture is to invest strategically in infrastructure, including the determination of how best that infrastructure should be funded. It also requires a strategic planning and regulatory framework to ensure infrastructure can be efficiently utilised by industry. In addition, delays in approval processes for infrastructure can lead to significant delays and missed opportunities with funding.

The NT Government's "Our Economic Future" (2017) recommended

- Investigating opportunities to develop Katherine as an agribusiness logistics hub
- Identifying priority supply chains through the Territory-wide Logistics Master Plan and co-design a 10-year planning program in the 10 Year Infrastructure Plan
- Exploring the commercial potential for bush foods and medicine as a niche regional growth sector.

As part of the Northern Territory Government Infrastructure Plan 2018-2027 Annual Review, agribusiness comments and recommendations provided similar (and more specific) recommendations surrounding infrastructure for agricultural development. These included:



In relation to infrastructure, NT Farmers (NT Farmers, undated) consider and recognise that:

- The capacity and standard of available freight and transport solutions to enable our members to deliver their production to markets in a timely manner and in top condition is vitally important to the success of Territory producers
- Without refrigerated and dry freight containers, pallets, packaging, trucks, trains and planes, and excellent supply chain quality management systems, this $200M of Territory production would not get to market and would not meet quality standards and out-turn requirements
- Freight, transport, packaging and logistics management/service providers that support Territory producers are vitally important
- In order to sustain and grow the farming sector that its supply chain partners must be an active and valued part of the industry

Despite this recognition by government and industry organisations of the importance of suitable infrastructure, the lack of modern road and rail links in the north to transfer goods to market is frequently cited as a barrier to growth and investment. Most agricultural produce is transported by road, rather than rail, and the region's ports are not optimised for handling agricultural products. Long distances increase the cost of farming inputs and reduce the quality and value of vegetables and fruit. Transport can also account for a third of the price of Australian livestock production costs (Global Access Partners, 2018).

Logistics infrastructure was also considered an impediment to development by respondents of the Industry survey, with 65% of them rating it either significant or extreme (see Figure 10).

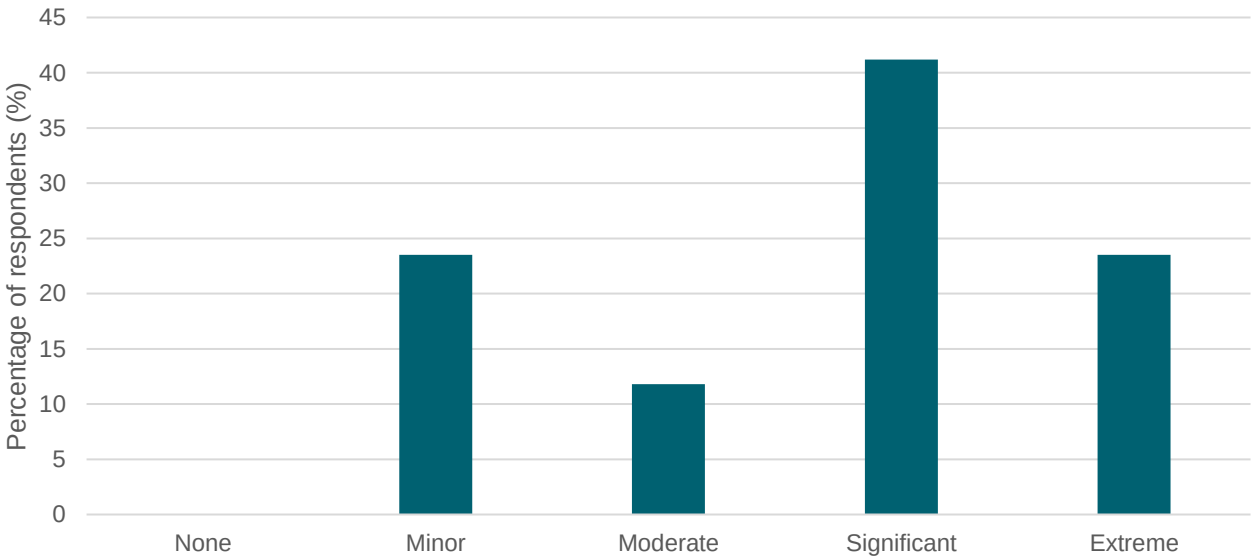


Figure 10 - Stakeholder survey - Impediment of logistics and infrastructure (roads, rail and ports)

A more fundamental rethinking of transport logistics will require a systematic analysis of the north's value chains to create structural efficiencies. A possible solution is to expand the NT Government infrastructure plans to have not just an abattoir for camel and donkey processing, but to create a meat processing hub for all livestock, including cattle and buffalo. A centralised hub, which caters for slaughtering, processing, storing and direct marketing to Australian and Asian markets would defray transportation costs and would allow scope for market-specific requirements such as limited butchering through to value added boxed or cryovaced meat. Cost-effective, accessible local port infrastructure is essential on this issue.

Telecommunication capability is another issue that can constrain agricultural development and economic viability. Poor services for mobile technology beyond the towns and off the highways are holding back existing and prospective farmers across the NT. While the NT Government's Digital Territory Strategy (Northern Territory Government, 2018b) has been developed, the major benefits occur through widespread fast mobile technologies that provide access to information on production risks and opportunities, markets, and availability of resources.

Improved infrastructure that assists industry was one of the key roles for the NT and Commonwealth governments identified by the case study proponents and survey respondents.

6.4 Research and Development

Grice et al (2013) recommended providing and supporting research, development and extension (R, D & E) that delivers farming and irrigation systems adapted to the northern Australian environment. The DPIR (2017) Big Rivers report also identified the importance of R, D & E in relation to testing new crops suited to market demand; genetic/variety improvements; and improved agronomy.

This was reaffirmed in stakeholder consultation responses with both industry and government. Whilst there appears to be generalised soil and water research and information, the amount of usable information dissipates significantly at granular, local levels. Likewise, crop viability information is often extrapolated from other regions, not from local research.

The question of who should be responsible for the provision of more research and information on water and soils was posed in the survey; with the majority of government (71%) and industry (61%) respondents answering that the government **should or must** do this. Crop viability was seen as less of a government responsibility particularly with government respondents, 55% of whom answered that government **could** provide more information and 45% of industry respondents saying that they **should**. It may be the case that in precinct developments, the de-risking would include a granular approach by government, but that it is a shared responsibility and risk outside of these areas.

There needs to be not only locally relevant research and development on appropriate crops and production systems, but an effective mechanism to foster sustained communication and collaboration between government and agricultural industry groups on the development of economically and environmentally sustainable agriculture in the NT. Information also needs to be readily accessible by all parties. This could include environmental, flora/fauna data across regions.

6.5 Markets

While the north is closer to Asian markets than agriculture in the south, this advantage is turned on its head if its produce must still be transported vast distances to southern or eastern processors and export ports. The solution is two-fold: add as much value as possible to this produce near to its source of supply and/or establish a more direct supply chain with existing and emerging markets.

The literature suggests that while the north could theoretically produce higher quantities of any number of staple or commodity goods, from annual crops and perennial fruits to rice and cotton, the consensus that specific Asian markets should be targeted with high-value products promoted as premium goods should be acted upon (Global Access Partners, 2018).

Growing animal fodder through mosaic irrigation, for example, to fatten cattle for market on the farm, then processing it locally and exporting it from local airstrips or ports may be more practical and profitable than growing soft fruit which must be transported south for packaging and export (Global Access Partner, 2018). Furthermore, establishing a centralised abattoir hub for all meat sources (see section 6.3) would allow scope for market-specific requirements such as limited butchering through to value added boxed or cryovaced meat - defraying costs and providing further market opportunities.

Having said that, the limited scale of northern agriculture beyond the beef industry today can obscure the visibility of larger market opportunities, which in turn deters on- and off-farm investment. It may well be that if these other opportunities were better researched and de-risked, promotion and growth of these may create the correct environment for profitable localised processing, storage and marketing for other products. (e.g. cotton gin)

There was uncertainty expressed by industry respondents regarding the government's role in accessing markets and labour, while government employees identified these aspects as **could** or **should** be government activities. The case study proponents considered that by government de-risking and brokering agricultural development as suggested it could deliver open new markets and agriculture products that were previously not viable.

Further safeguarding of the agricultural/ industry in the NT should also include improving trade/social relationships, particularly for the export sector, and improving on and promoting the clean, green aspect of the Northern Territories environment. The biophysical challenges facing development in the north, including the uncertainties around water, soils and agricultural potential outlined in this report, could well be overcome, but without appropriate markets and business models to supply them, such efforts would be wasted (Global Access Partners, 2018).

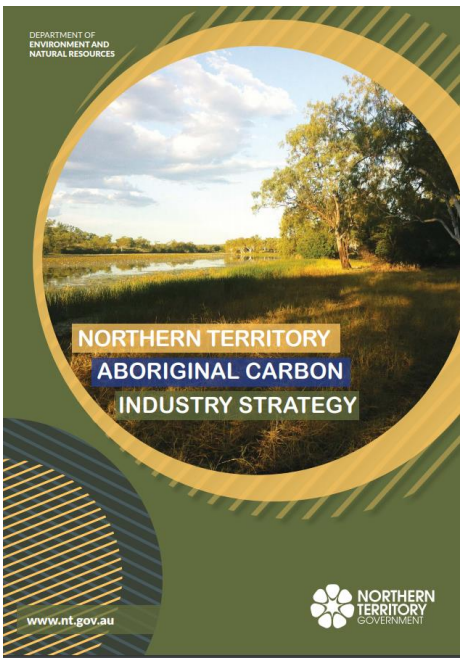
6.6 Indigenous Agricultural Development

The (2017) DPIR Big Rivers report recognises that agribusiness development on Aboriginal land is challenging given communal ownership arrangements. This results in negotiation timelines which do not always meet commercial interests. Compounding this is the lack of suitable land and water resource information in many areas, thereby limiting investment. Recommendations from the Big Rivers report included streamlining processes for leasing Aboriginal land, supporting Aboriginal businesses to identify opportunities and partnerships, securing pre-feasibility information and supporting agency investment on Aboriginal land.

The NT Government submission to the Inquiry into the Opportunities and Challenges of the Engagement of Traditional Owners in the Economic Development of Northern Australia (Northern Territory Government, 2019) concluded that despite Aboriginal land representing a significant asset for Aboriginal Territorians, economic development opportunities across much of the Aboriginal estates are limited by:

- remoteness from key markets
- high living and operational costs
- infrastructure deficiencies
- harsh and sometimes extreme climatic conditions
- lack of access to professional expertise
- the distance to major health and education and training services
- overcrowded public housing and limited alternative housing options

The *Aboriginal Carbon Industry Strategy* (DENR 2018) has been prepared to support traditional owners seeking to create sustainable enterprises through carbon abatement and sequestration. This Strategy includes addressing impediments to (carbon-related) project development on Aboriginal land and identifies a need for the streamlining access to support services for industry start-up and development.



Furthermore, the NT Government, through the Ministerial Forum on Northern Development, publicly endorsed 16 recommendations by the Indigenous Reference Group (IRG) across the following six areas of action to improve Indigenous economic participation in Northern Development (Northern Territory Government, 2019):

- creating jobs, fostering labour participation, entrepreneurship and business acumen
- knowledge management systems and research and development to support Indigenous commercial end-users
- infrastructure investment to support Indigenous economic development
- access to capital and domestic and international markets
- activating the economic value of land, water, sea and cultural resources and
- institutional arrangements that work to activate, accelerate and optimise Indigenous economic development across Northern Australia.

6.7 Investment

In a review of past agricultural developments in the north of Australia (Ash and Watson, 2018) it was found that financial plans tended to overestimate early production, returns on capital and economies of scale; leading to cash flow problems. Consequently, the areas of development achieved were usually much less than the original expectations.

The Commonwealth Government has provided $5Bn in low interest loans over five years through the Northern Australian Infrastructure Facility (NAIF) to encourage and complement private sector investment in infrastructure that drives economic and population growth in the north.

Issues of risk and uncertainty have meant that private equity has under-invested in the north; overlooked for more accessible opportunities in the south or overseas. Processed meat and allied sectors are considered to be garnering more interest as new export opportunities develop, with free trade agreements and increased opportunities in Asia. The small scale of irrigated agriculture should not detract from the larger opportunities available.

The failure of previous projects and development drives a fear of wavering government support and the logistical difficulties of undertaking remote schemes requires information that balances the risk versus reward for private investment to occur.

Global Access Partners (2016, pg. 19) recommended:

- Private investment in agricultural production must be based on quantitative assessments of risks and opportunities, as a process of trial and error is prohibitively costly and will deter involvement by new investors.
- Private investors need to show how they will meet environmental standards.
- Support for private investment through public infrastructure should come at the price of measurable social and ecological goals to be achieved by commercial entities, with meaningful penalties imposed if they are not.
- 'Investment scorecards' should be developed in consultation with industry to highlight the factors and characteristics of a particular region that prospective investors might prioritise when assessing places to expand their operations.
- The government should reassess the legislation governing superfund investments and encourage superfund investment in the north in consultation with stakeholders.

If the risk profile of agricultural investment in the north could be substantially altered, investment could flow in, given the market opportunities and resources available (Global Access Partners, 2018).

Some of the individual comments from stakeholders considered that investment in headworks and basic infrastructure as primary drivers for development.

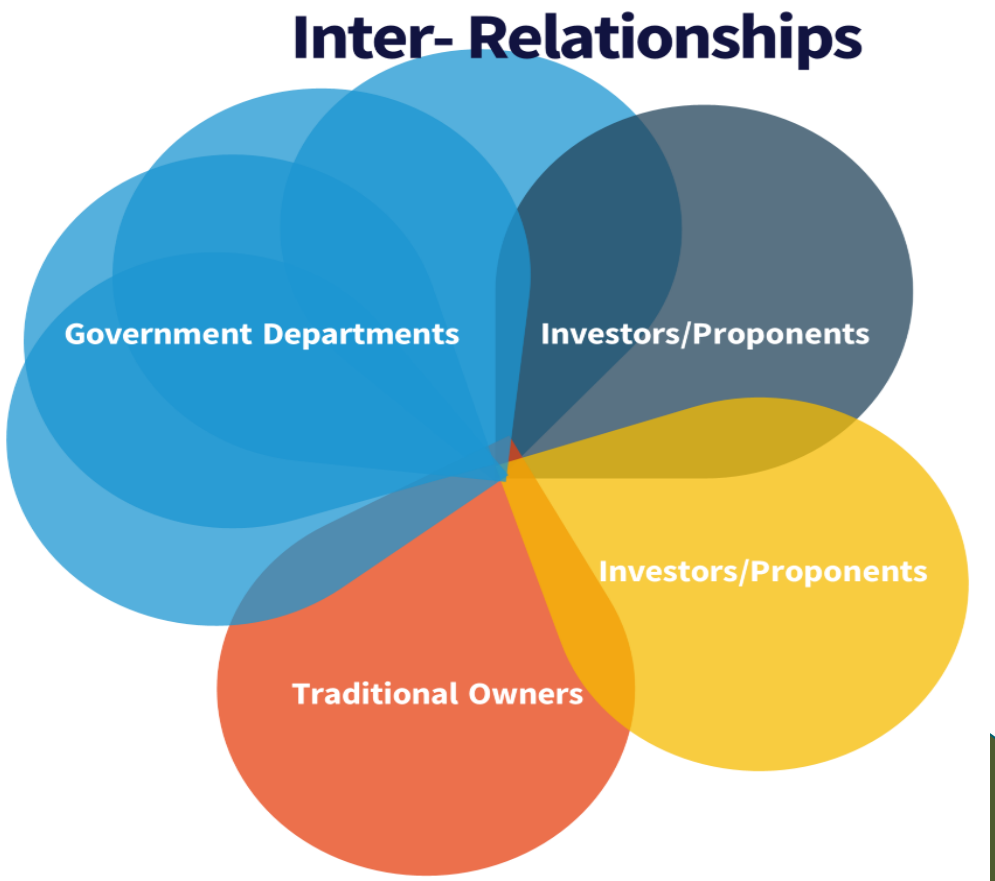
6.8 Trust Between Parties

Concerns were raised during the stakeholder engagement program regarding a lack of trust between and within government departments, investors/proponents, Land Councils and Traditional Owners. This leads to a breakdown in communication and lack of progress on development opportunities that can benefit a range of stakeholders including local communities and businesses. There is also a concern in some quarters that by "speaking out" there is a risk that proposals will not be assessed objectively.

Trust is important for the success of a wide range of public policies that depend on behavioural responses from the public (OECD, 2020a):

- Trust is necessary to increase the confidence of investors and consumers.
- Trust is essential for key economic activities, most notably finance.
- Trust in institutions is important for the success of many government policies, programmes and regulations that depend on cooperation and compliance of citizen.

Creating or enhancing opportunities to build trust between parties involved in agricultural development is therefore essential if business and land-related partnerships and agreements are to be established.



It is believed building a culture of trust will result in better decisions faster. Emerging through global research, case studies and stakeholder interviews, are four (4) hidden variables with Culture of trust at its centre.

Specifically, these hidden variables are grouped into: Culture of Trust, Knowledge and People, Policy and Reform, and Collaborative Advantage. To give effect to these variables, it is recommended the consideration of a suite of measures focused on the way in which stakeholders converge and participate in strategic setting, problem solving and decision making.

Culture of Trust	• Empower people to work autonomously, gain their commitment to accountability, and improve feedback • Engage with risk when exercising discretion and delegated authority • Commit and apply organisational values and behaviours over personal beliefs • Separation of executive -vs- public service
Knowledge & People	• Exercise reasonableness and acting in the Spirit of the Law by focusing on outcomes and a shared understanding of what development means • Working for the public interest -v- Protecting my job • Applying the precautionary principle consistently
Policy & Reform	• Streamline the regulatory maze by removing inconsistent, often overlapping statutory processes • Terminology and definitions are important – limit unnecessary legal interpretation • Reduce administrative burdens through Agency referral time-limits; multicriteria parallel assessments; performance-based approvals • Integrated policy development and application • Parallel land administration, heritage, environment, water and land use planning approvals • Interactive community engagement that converges largely on strategy and policy to reduce Appeals • Single Project Approval Legislation for aquaculture / aquaculture development
Collaborative Advantage	• Build strategic capacity through strategic networks, partnerships and alliances • Share information and pool resources in real-time in the pursuit of a common outcome • Establish a *Centre of Excellence* for the agricultural industry focused on building capability • Establish an Indigenous Enterprise Hub through which SME's can be build capacity

7 Pathways to Development

7.1 Converting Parts of Pastoral Leases

Pastoral tenure is not appropriate for broadacre or farming developments that are focused on more intensive agriculture. They typically require 1,000-2,000 ha. The opportunity is to convert portions of a pastoral lease to other forms of tenure. There are issues with sub-leases as banks and financial lenders are not considered to recognise the value of subleases.

A proposal needs to be developed for converting a portion of a pastoral lease into ten to twenty 1,000 to 2,000 ha freehold lots where there is suitable soil and water, and a willing leaseholder to test the viability of the approach.

Recommendation 1 – Unlocking land for agricultural development: *Develop and trial an approach to convert parts of a pastoral lease to freehold lots.*

Proposed Implementation: Develop an approach (particularly within agricultural precincts) to converting part of a pastoral lease to freehold in a way that meets short timeframe and appropriate native title and environmental approvals

7.2 Agricultural Precincts

NT Farmers has recommended agricultural precincts that target the family farm market of 1,000-2,000ha. Horticultural Precincts in Lambell's Lagoon and Venn (released in the mid 1990's) were very effective in expanding horticultural development (NT Farmers personal communication).

These involved the conversion of a small part of pastoral leases to a different tenure for farming with land parcels of appropriate size (80-100ha), development approvals in place and some infrastructure in roads and power.

Precincts are considered attractive because:

- Development is on land properly identified as suitable, with water resources available.
- Land size is appropriate to the development and the market for land.
- Environmental approvals can be addressed/secured prior to land release.
- Developers can focus on their expertise in farming, rather than the approval process, something in which they often have limited expertise. Small farmers in particular may not be in a position to manage approvals processes well.

There is potential in the Adelaide River catchment, as identified in the CSIRO report (Petheram et al, 2018b). It is critical that land is made available at the appropriate farm size for small-medium scale development. Precincts should provide investor certainty by de-risking Native Title and environmental approvals.

Recommendation 2 – Developing de-risked agricultural land: *Establish agricultural precincts based on agreed evaluation criteria.*

Proposed Implementation:

- Prioritise and evaluate potential agricultural precincts with industry which provide a basis for shared planning and provide certainty for proponents and regulators.
- Jointly identify and prioritise precincts, develop and monitor an action-oriented implementation plan.
- Develop a funding package for submission to the Commonwealth Government regarding priority precincts.
- Implement precinct plans by undertaking coordinated approval and land tenure/land planning processes.

- Facilitate the development of logistics, infrastructure and agribusiness hubs to facilitate new agricultural industries (such as cotton) in the NT.

7.3 Aboriginal Economic Development

Agribusiness development on Aboriginal land is challenging where there is communal ownership. Time needed for negotiation is long and the lack of information on land and water resources limits investment.

Recommendation 3 – Enabling Aboriginal agricultural development: *Partner and support Indigenous land interests to streamline processes for leasing Aboriginal land; support Aboriginal businesses to identify opportunities and partnerships; provide pre-feasibility information for targeted Aboriginal-led development; support Indigenous communities to achieve economic outcomes from allocated Indigenous water reserves and support coordinated cross-agency investment in Aboriginal-led land development.*

Proposed Implementation:

- Establish an Aboriginal Agricultural Development Steering Group involving government, key Aboriginal groups, and industry which is responsible for developing a clear, implemented and monitored agricultural opportunities plan.
- Establish a brokering model, particularly for small scale Indigenous-led developments, to continuously improve the relationship between Land Councils, Traditional Owners and the development industry.
- Develop appropriate principles and improvement strategies via an MOU and agreed action plan between all parties and Government.
- Develop governance building and small business assistance, technical support and grants.

7.4 Infrastructure

Key elements for infrastructure with respect to agriculture and aquaculture are:

- Acknowledging economic importance and potential for growth of the agribusiness sector from improving infrastructure;
- Maintaining and improving the regional road network to support industry;
- Developing multipurpose processing, cold chain infrastructure and logistics support for industry; and
- Prioritising telecommunication across strategic agricultural areas to enable increased productivity and profitability, leading to greater investment.

Significant targeted investment in transport infrastructure (roads and ports) and the recommendations for infrastructure in the 2027 Annual Review (Department of Infrastructure, Planning and Logistics, 2018) are all valid and need clear evaluation and then funding timelines to enable development to occur.

Recommendation 4 – Infrastructure to facilitate agricultural development: *Facilitate infrastructure for key agricultural development opportunities with a focus on telecommunications, road networks, energy, water and processing.*

Proposed Implementation:

- Develop a prioritised agricultural infrastructure plan for the NT that priorities jointly agreed with industry and communities. Develop a business case for Commonwealth and State/Territory Government funding as a priority for the Katherine cotton gin proposal
- Prioritise and develop critical Commonwealth investments and applications to the Northern Australia Infrastructure Facility and assign appropriate proponents to take responsibility for any loans
- Plan for and develop proposals for Commonwealth Government funding to fast track improved telecommunications for priority agricultural areas across the NT.

7.5 Supportive regulatory environment

Creating a culture in regulatory agencies that support development proposals through the process is needed (see Figure). This is not about dismissing the regulatory processes, rather providing a proactive environment to enable projects to progress through the regulatory requirements.

Indeed, both Government and Industry stakeholder engagement has confirmed that the perception is that "government should or must have a can-do culture within and between departments that process permits and approvals.", with the overwhelming score being "must".

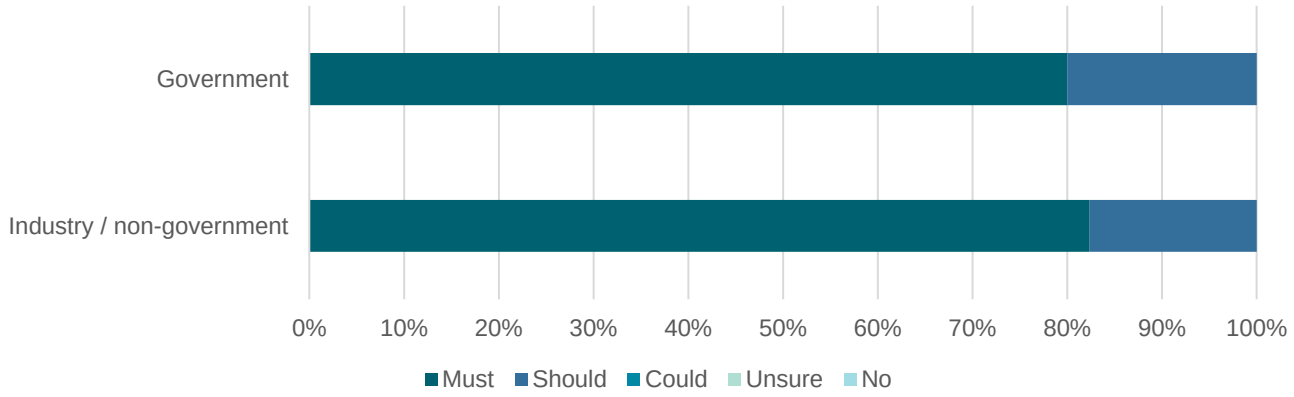


Figure 11 - Stakeholder survey: government can-do approach to approvals processes

There is Information for Prospective Investors in Agricultural Enterprises in the Northern Territory published in 2013 on the NT Government website (Northern Territory Government, 2013), but it is a passive approach to enabling development to occur. A more proactive and targeted approach needs to occur which supports development proposals and is more risk-based than risk-adverse.

While the one-stop shop is not new, there are limited examples of where it has been effective. A pro-active and engaged approach to a one-stop shop needs to be developed for small to medium scale developments. A proactive case management focus which assists business through the approval process is critical. The approach needs to not only give proponents advice on what approvals need to be sought before a project can get off the ground, but support in ensuring any applications are considered in a time efficient and coordinated manner by the relevant authorities. A fast-track approach for minor or small-scale agricultural developments needs to be part of the focus.

The OECD identified best practice principles for One-Stop Shops (OECD, 2020b) of:

1. Political commitment – one-stop shops need continual support from the top in order to flourish.

2. Leadership – managers need to be openly committed to a culture of experimentation. Mistakes will be made, but it is most important that these form the basis of improved service delivery in the future.

3. Legal framework – the early identification of legal barriers to establishing and potentially expanding one-stop shops are crucial to avoid rollout delays.

4. Cooperation and coordination – the extent to which government agencies can (and are permitted to) work together to better serve citizens and business is a critical component of one-stop shops.

5. Role clarity – establishing one-stop shops with a clear objective is central to managing both internal and external expectations.

6. Governance – the overarching arrangements are important, particularly for one-stop shops across various levels of government but should not drive the design of one-stop shops from an operational perspective.

7. Public consultation – Citizen and business clients are an important source of information about what may or may not work and may also offer solutions to identified problems.

8. Communication and technological considerations – the standard industry communication means should emulate wherever possible. Interoperability opportunities should also be identified early in the design of one-stop shops.

9. Human capital – at the heart of a well-functioning one-stop shop are its people. Like any other part of the organisation, they require investment. They also have valuable insights on the day-to-day operations.

10. Monitoring and evaluation – it is important to assess whether one-stop shops continue to meet clients' needs, as these may change over time. Gathering views from citizens and business can help establish what is working well and what can be improved and foster a culture of continuous improvement in one-stop shop staff.

The challenge with a one-stop-shop approach is to ensure all agencies are on board with the concept and work closely with the personnel engaged to work with potential investors, to reduce red tape and streamline processes. To this end, it is recommended that the one-stop-shop is formed within a lead department which has clear case management responsibilities and can resolve issues across all regulatory departments.

Recommendation 5 – Unlock regulatory barriers to agriculture development:

- *To facilitate development there needs to be:*
- *Reduced approval timelines*
- *Facilitated and easier interactions with Government*
- *Streamlined licensing regulation and approvals, visa and migration applications*
- *Licensing and approvals that create greater investment certainty*
- *A case management framework which helps proponents navigate the relevant approval processes proactively (a lead department with the authority to work across the public sector*
- *A fast-track approach for minor or small-scale agricultural developments*
- *Rangelands reform to introduce more streamlined approaches to land tenure change with respect to pastoral leases*

Proposed implementation:

- Establish, with industry and Government, a red-tape reduction initiative, including the combination of approvals into a single process for low-risk small-scale proposals.
- Reforms to pastoral lands legislation to incorporate more streamlined approaches to land tenure change.
- Provide a clear, staged regulatory process map with supporting checklists and guidance statements.
- Build capacity across Government departments, proponents and consultants
- Review and monitor post-approval conditions to ensure they are critical and essential.
- Identify a lead department with clear case management responsibilities to work with proponents in proactively developing proposals:
    - Navigating the approval processes (including a fast-track approach for minor or small-scale agricultural developments),
    - Resolving issues and/or conflict across all regulatory departments
    - Developing formal agreements with departments to set targets for improved inter-departmental referral and assessment timelines and ensuring timely information transfer across departments.
    - Developing (potentially independent of government) an evaluation and monitoring framework to measure the impacts and approval time targets as a result of these changes
    - Implement application tracking and monitoring (including identifying and escalating non-standard applications)

7.6 Strategic de-risking

Despite many projects investigating soil and water resources, there has not been significant new investment across the Douglas Daly nor the Darwin catchments.

There needs to be a new approach to the de-risking of soil and water concerns that meets the needs of proponents and investors, rather than broadscale theoretical assessments. Engaging with proponents and developers to identify the critical risks and developing joint strategies to de-risk development needs to be undertaken. Cost-sharing also needs to be assessed based on the broad benefits (social and economic) of regional agricultural development.

Industry support can also de-risk investment. An example of industry support is the WA Government Regional Economic Development Grants program which provides funding to businesses who undertake projects in regional Western Australia which contribute to economic growth in local communities (Department of Primary Industries and Regional Development, 2020).

Preference is given to projects that demonstrate:

- Building the capability of local suppliers, and the opportunity for regional businesses to supply items / services for the project
- Increased regional employment and regional business participation through subcontractors, suppliers, apprenticeships and traineeships
- Support for emerging or new industries in the region
- Benefit to the regional economy through any other identifiable means.

There is an opportunity for the NT to support emerging or new industries, such as hemp and tropical fruit, through targeted and partnered arrangements with industry, and research and development across the value chain.

Recommendation 6 – Supportive development environment: *Target de-risking to industry needs and outcomes and target research into priority industry needs.*

Proposed implementation:

- Develop a coordinated research plan with key industry and community groups so that it leads to uptake and targeted industry outcomes.
- Work with the Commonwealth to align NESP Hub outcomes to landscape scale derisking priorities.
- Target information on soils, water and crops in locally relevant and priority areas as identified by Government and industry.
- De-risk issues related to water security and vegetation management by having targeted water management allocation and management plans specific to locally relevant and priority areas as identified by Government and industry.
- Develop an agreed financial coordination plan with NT Government, Commonwealth Government, and relevant Research Development Corporations growth in local NT. Establish a grants program to provide opportunities to increase capacity and community benefit
- Develop a capacity building program for emerging businesses and for emerging technical issues

7.7 Relationships and culture

In response to the concerns raised about a lack of trust between and within government departments, investors/proponents, Land Councils and traditional owners it is acknowledged that there is a need for a more open communication between parties. It is also acknowledged that it is not one group in particular that is the problem – each have their own issues whether it be lack of knowledge/understanding, protection of intellectual property, being officious, lack of resources, environmentally/politically aligned or holding on to unrealistic expectations.

The OECD (OECD, 2017) has proposed the following behavioural components of what to expect from governments:

Reliability: the ability of governments to minimise uncertainty in the economic, social and political environment of their citizens, and to act in a consistent and predictable manner.

Responsiveness: the provision of accessible, efficient and citizen-oriented public services that effectively address the needs and expectations of the public.

Openness and inclusiveness: a systemic, comprehensive approach to institutionalising a two-way communication with stakeholders, whereby relevant, usable information is provided, and interaction is fostered as a means to improve transparency, accountability and engagement.

Integrity: the alignment of government and public institutions with broader principles and standards of conduct that contribute to safeguarding the public interest while preventing corruption.

Fairness: in a procedural sense the consistent treatment of citizens (and businesses) in the policy-making and policy-implementation processes.

Most of these components could be transferred across the other groups of the agricultural development sector.

To achieve open communication, and improve relationships between parties there needs to be:

- Regular meetings between government, industry and Land councils/traditional owners focused on improving relationships
- Identified opportunities to work on agricultural development that demonstrate a responsive, open and fair approach to processes

Recommendation 7 – Improve relationships and culture: *Establish a group representing government, industry and Traditional Owners, with a focus on developing principles on how to work together and build trust across government departments and key stakeholders. Representational group to work on agricultural pilot or case studies with the ultimate aim to extrapolate learnings across government and stakeholder dealings into the future.*

Proposed implementation:

- Establish a standing collaborative group involving NT Government (possibly third party facilitated), industry groups and native title groups (with independent facilitator) to establish principles of how to work together in agricultural developments.
- Align agency strategic and operational plans to deliver better decisions faster for agricultural developments.
- Agencies to foster an outcome focused culture with KPIs for service delivery based on time and cost associated with government support and approvals.
- Develop pilot studies into agricultural development which involve a more supporting and trusting relationship rather than a purely regulatory focused approach (co-regulation).

Table 4 - Summary of strategic recommendations for de-risking, brokering and prioritising agricultural developments in the NT

Recommended Action	Responsible entity & partners	Proposed implementation
Recommendation 1 – Unlocking land for agricultural development Develop and trial an approach to convert parts of a pastoral lease to freehold lots	NT Government	Develop an approach (particularly within agricultural precincts) to converting part of a pastoral lease to freehold in a way that meets short timeframes and appropriate native title and environmental approvals.
Recommendation 2 – Developing de-risked agricultural land Establish agricultural precincts based on agreed evaluation criteria	NT Government with support from Commonwealth Government	Prioritise and evaluate potential agricultural precincts with industry which provide a basis for shared planning and provide certainty for proponents and regulators. Jointly identify and prioritise precincts, develop and monitor an action-oriented implementation plan. Develop a funding package for submission to the Commonwealth Government regarding priority precincts. Implement precinct plans by undertaking coordinated approval and land tenure/land planning processes. Facilitate the development of logistics, infrastructure and agribusiness hubs to facilitate new agricultural industries (such as cotton) in the NT.

Recommended Action	Responsible entity & partners	Proposed implementation
Recommendation 3 – Enabling Aboriginal agricultural development • Partner and support Indigenous land interests to streamline processes for leasing Aboriginal land. • Support Aboriginal businesses to identify opportunities and partnerships • Provide pre-feasibility information for targeted Aboriginal-led development. • Support Indigenous communities to achieve economic outcomes from allocated Indigenous water reserves. Support coordinated cross-agency investment in Aboriginal-led land development.	Commonwealth and Northern Territory Government departments in partnership with Land Councils and NAILSMA	Establish an Aboriginal Agricultural Development Steering Group involving government, key Aboriginal groups, and industry which is responsible for developing a clear, implemented and monitored agricultural opportunities plan. Establish a brokering model, particularly for small scale Indigenous-led developments, to continuously improve the relationship between Land Councils, Traditional Owners and the development industry. Develop appropriate principles and improvement strategies via an MOU and agreed action plan between all parties and Government. Develop governance building and small business assistance, technical support and grants.
Recommendation 4 – Infrastructure to facilitate agricultural development Facilitate infrastructure for key agricultural development opportunities with a focus on: • Telecommunications • Road Network • Energy • Water • Processing	NT Government with support from Commonwealth Govt	Develop a prioritised agricultural infrastructure plan for the NT that priorities jointly agreed with industry and communities. Develop a business case for Commonwealth and State/Territory Government funding as a priority for the Katherine cotton gin proposal. Prioritise and develop critical Commonwealth investments and applications to the Northern Australia Infrastructure Facility and assign appropriate proponents to take responsibility for any loans Plan for and develop proposals for Commonwealth Government funding to fast track improved telecommunications for priority agricultural areas across the NT.
Recommendation 5 – Unlock regulatory barriers to agriculture/aquaculture development To facilitate development there needs to be: • Reduced approval timelines • Facilitated and easier interactions with Government • Streamlined licensing regulation and approvals, visa and migration applications • Licensing and approvals that create greater investment certainty	NT Government with support from Commonwealth Govt	Establish, with industry and Government, a red-tape reduction initiative, including the combination of approvals into a single process for low-risk small-scale proposals. Reforms to pastoral lands legislation to incorporate more streamlined approaches to land tenure change. Provide a clear, staged regulatory process map with supporting checklists and guidance statements. Build capacity across Government departments, proponents and consultants

Recommended Action	Responsible entity & partners	Proposed implementation
• A case management framework which helps proponents navigate the relevant approval processes proactively (a lead department with the authority to work across the public sector • A fast-track approach for minor or small-scale agricultural developments • Rangelands reform to introduce more streamlined approaches to land tenure change with respect to pastoral leases		Review and monitor post-approval conditions to ensure they are critical and essential. Identify a lead department with clear case management responsibilities to work with proponents in proactively developing proposals: • Navigating the approval processes (including a fast-track approach for minor or small-scale agricultural developments), • Resolving issues and/or conflict across all regulatory departments • Developing formal agreements with departments to set targets for improved inter-departmental referral and assessment timelines and ensuring timely information transfer across departments. • Developing (potentially independent of government) an evaluation and monitoring framework to measure the impacts and approval time targets as a result of these changes • Implement application tracking and monitoring (including identifying and escalating non-standard applications)
Recommendation 6 – Supportive development environment • Target de-risking to industry needs and outcomes • Target research into priority industry needs	Commonwealth and Northern Territory Government departments	Develop a coordinated research plan with key industry and community groups so that it leads to uptake and targeted industry outcomes. Work with the Commonwealth to align NESP Hub outcomes to landscape scale derisking priorities. Target information on soils, water and crops in locally relevant and priority areas as identified by Government and industry. De-risk issues related to water security and vegetation management by having targeted water management allocation and management plans specific to locally relevant and priority areas as identified by Government and industry. Develop an agreed financial coordination plan with NT Government, Commonwealth Government, and relevant Research Development Corporations Identify and support existing businesses who contribute to agricultural economic growth in local NT. Establish a grants program to provide opportunities to increase capacity and community benefit

Recommended Action	Responsible entity & partners	Proposed implementation
		Develop a capacity building program for emerging businesses and for emerging technical issues
Recommendation 7 – Improve relationships and culture Establish a group representing government, industry and Traditional Owners, with a focus on developing principles on how to work together and build trust across government departments and key stakeholders. Representational group to work on agricultural pilot or case studies with the ultimate aim to extrapolate learnings across government and stakeholder dealings into the future	NT Government, Industry Groups Native title groups	Establish a standing collaborative group involving NT Government (possibly third party facilitated), industry groups and native title groups (with independent facilitator) to establish principles of how to work together in agricultural developments. Align agency strategic and operational plans to deliver better decisions faster for agricultural developments. Agencies to foster an outcome focused culture with KPIs for service delivery based on time and cost associated with government support and approvals. Develop pilot studies into agricultural development which involve a more supporting and trusting relationship rather than a purely regulatory focused approach (co-regulation).

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Appendices

De-Risking, Brokering & Prioritising Agricultural Development in the Northern Territory

9 Appendices

9.1 Appendix A – Literature Review Summary

Title: Ti Tree Water Allocation Plan 2020 – 2030
Author: Department of Environment and Natural Resources, Northern Territory Government
Year: 2020
Key points:

- The Ti Tree Aquifer is comprised of two primary groundwater management zones (GMZ), as identified in this plan: the Southern GMZ (where demand is focused); and the Northern GMZ (less demand).
- The total estimated sustainable yield (ESY) of the Ti Tree Aquifer is 10,200 ML/yr. An allocation of 5,640 ML/yr is also reserved to support environmental and cultural values prior to the ESY.
- In the Northern GMZ, 100 ML/yr has been assigned to the ESY based on meeting minimum essential requirements for public water supply and rural stock and domestic use.
- In the Southern GMZ, 7,260 ML/yr has been assigned to the ESY based on 100% of annual average recharge of the aquifer. This is to ensure the productive base of the resource is maintained and to reduce risks to groundwater dependent ecosystems and cultural values.
- Pumping data reported demonstrates a consistent pattern of under use of licensed entitlements. However, the volume of water taken under agricultural licences increased significantly in 2018/19 financial year to reach the highest levels in 20 years but are still significantly less than the ESY.
- The volume of existing licensed and unlicensed water entitlements exceeded water allocations to the ESY in the southern zone.
- Outlines guidelines for trading of water including from a Strategic Aboriginal Water Reserve, which can enable water for new developments.

Title: Northern Territory Government submission - Joint Standing Committee of Northern Australia Inquiry in the Opportunities and Challenges of Engagement of Traditional Owners in the Economic Development of Northern Australia
Author: Chief Minister
Year: 2019
Key points:

- 30% of Northern Territory (NT) population are Aboriginal. National average is 3%. Approximately 48% of the NT's land mass and 80% of its coastline has been granted as Aboriginal Land Rights 1976 Act (ALRA) land. Aboriginal rights and interests are crucial for Northern Territory.
- There are 25 savanna burning projects which account for 92% of Australian Carbon Credit Units (ACCU). 55% of the savanna burning projects in the NT are Aboriginal operated and which create jobs and generate important economic activity on Aboriginal land.
- NT Government Land and Sea Action Plan includes 10 key focuses:
- Resolve outstanding land claims;
- Resolve Blue Mud Bay access arrangements;
- Progress the Aboriginal Land Commissioner's recommended changes of ALRA, which relates to exploration and mining on Aboriginal land;
- Develop an NT Government Native Title Policy Framework;
- Develop a strategic approach to tenure and other issues in mining towns that will eventually become Aboriginal land;
- Work to enhance the opportunities for long term leasing on Aboriginal land;
- Support the management of Aboriginal land;
- Support the economic development and employment on Aboriginal land;
- Make improvements to NT legislation and administrative processes; and
- Support improvements to Commonwealth legislative processes.
- The Ministerial Forum on Northern Development, publicly endorsed 16 recommendations by the Indigenous Reference Group (IRG) across the following six areas of action to improve Indigenous economic participation in Northern Development:
    - Creating jobs, fostering labour participation, entrepreneurship and business acumen;
    - Knowledge management systems and research and development to support Indigenous commercial end-users;
    - Infrastructure investment to support Indigenous economic development;
    - Access to capital and domestic and international markets;

- Activating the economic value of land, water, sea and cultural resources; and
- Institutional arrangements that work to activate, accelerate and optimise Indigenous economic development across Northern Australia.

Title: Business Case for the Construction of a Cotton Gin in the Northern Territory
Author: Pricewaterhouse Coopers Australia
Year: 2019
Key points:

- Assessed the long-term viability of a proposed cotton gin in Northern Territory. Expansion of the Northern Territory's cotton industry has the potential to drive the economic transformation that the Territory needs.
- Profitable expansion is dependent on local, interstate and international grower confidence to pursue land development and reach forecast production volumes, and this confidence comes from the presence of a nearby gin.
- Increased grower confidence and production leads to interest from national and international private sector investors. Private sector investment, however, is then dependent on government intervention as a strong signal of support to facilitate enabling processing infrastructure.
- The project is seeking to utilise a grant from the Local Jobs Fund, co-financed by private investment, to build this flagship cotton gin on a site that is part of the Northern Territory Government's regional and industrial development vision.

Title: Aboriginal Aquaculture
Author: Department of Primary Industry and Resources, Northern Territory Government
Year: 2019
Key points:

- Aboriginal peoples in the Northern Territory (NT) have expressed an interest in aquaculture opportunities.
- The Darwin Aquaculture Centre, in partnership with a range of supporting agencies and Traditional Owners is conducting research on tropical rock oyster aquaculture opportunities, suitable for remote communities.

Title: Evaluation of the Potential to Expand Horticultural Industries in Northern Australia
Author: S. Cao, D. Hine, R. Henry, N. Mitter
Year: 2019
Key points:

- Queensland, Northern Territory, and Western Australia have a number of ports for exporting local products to international markets.
- Australia ranks poorly in global comparisons of productivity of freight and logistics. Mangoes produced in the Northern Territory, only 0.15% are directly shipped from Darwin. The long supply chain for North Australia's horticultural products leads to increased logistics costs, but also results in more handling and increased risk of reduced fruit quality upon arrival at their international destination.
- Australia's mango, avocado and lychee industries are currently heavily focused on the Australian domestic market, with international markets accounting for 11.58%, 3.51%, and 16.99% respectively in 2016-17.
- Japan is a newly developed protocol market in Asia, which released a new protocol agreement for Hass avocado to Japan in May 2018 and stipulated that avocados must only be sourced from officially recognised areas free from Queensland fruit fly. This means that Western Australia is the only state in Northern Australia that has market access to Japan.
- The Australian lychee industry currently exports to several countries, but only have a foothold in the quarantine free countries
- 12 supply chain constraints that affect the cost, timelines, quality, efficiency and presentation either separately or in combination have been identified.

Title: Submission to the Inquiry into the Opportunities and Challenges of the Engagement of Traditional Owners in the Economic Development of Northern Australia
Author: Department of Premier and Cabinet, Government of Western Australia
Year: 2019
Key points:

- Prescribed Body Corporate (PBC) should be available to help Native Title Representative Bodies manage land and economic projects while being financially stable for future projects. A funding stream may be required.
- Almost 7 million hectares of land is currently held by the Aboriginal Lands Trust (ALT) on behalf of Aboriginal people, where the WA Government is dedicated to divesting land to Aboriginal people and drive economic projects
- Housing infrastructure along with roads, water services etc is required in Northern Australia with $121 million funded by WA Government.

- The WA Government is developing Good Pastoral Land Management Guidelines, which will assist all pastoral lessees and managers in Northern Australia, including Traditional Owners undertaking pastoral enterprises to increase the long-term viability and sustainability.
- Expansion of the national park footprint by five million hectares over five years across WA with ranger programs in partnership with Traditional Owners.
- Increase tourism opportunities for Traditional Owners.

Title: Submission to the Inquiry into the Opportunities and Challenges of the Engagement of Traditional Owners in the Economic Development of Northern Australia
Author: Northern Territory Government
Year: 2019
Key points:

- Economic development opportunities across much of the Aboriginal estate are limited by remoteness from key markets; high living and operational costs; infrastructure deficiencies; harsh climatic conditions; lack of access to professional expertise; distance to major health and education and training services and overcrowded public housing with limited private housing options.
- NT Government has committed to Local Decision Making, to transfer service delivery to Aboriginal people and organisations based on their community aspirations, such as housing; local government; education, training and jobs; health; children and families; and law and justice.
- The development of a new Aboriginal Contracting Framework (the Framework will support local Aboriginal employment and economic development through government contracting activities (procurement and grants).
- The Infrastructure Plan (the Plan) will help industry with its own planning and workforce management and inform decision-making across all levels of government. Over the longer term, the Plan sets direction for planning and delivering infrastructure in the NT.
- The Department of the Chief Minister has developed an Aboriginal Land and Sea Action Plan (the Action Plan) to ensure land and sea ownership delivers on the economic and social aspirations of Aboriginal Territorians.

Title: Submission to the Inquiry into the Opportunities and Challenges of the Engagement of Traditional Owners in the Economic Development of Northern Australia
Author: Kimberly Land Council (KLC)
Year: 2019
Key points:

- The KLC is a highly effective representative Aboriginal and Torres Strait Islanders Bodies that works closely with native title holders to fulfil members' ambitions for positive economic and social outcomes.
- Native title is not an impediment to economic development but means to engage with the largest land holding constituency in Northern Australia to deliver outcomes that are mutually beneficial to all stakeholders.
- Economic development in Northern Australia and the Kimberley must place Indigenous people at its centre rather than on the periphery. Native title holders need to be engaged early, often, and respectfully.
- Government should ensure that when awarding contracts relating to Indigenous affairs preference should be given more to Indigenous interests over joint ventures which include Indigenous entities to limit the incidence of 'black cladding'.

Title: Submission to the Inquiry into the Opportunities and Challenges of the Engagement of Traditional Owners in the Economic Development of Northern Australia
Author: Office of Northern Australia
Year: 2019
Key points:

- Reducing the complexity of economic development activities on Indigenous land to improve the capability of Traditional Owners to engage in agreements and partnerships.
- Ongoing constructive dialogue between Indigenous landowners and native title holders, governments, and relevant industry sectors is required to refine existing models and identify further models to advance economic success of Indigenous land ownership and title.

Title: Submission to the Inquiry into the Opportunities and Challenges of the Engagement of Traditional Owners in the Economic Development of Northern Australia
Author: Yamtji Marlpa Aboriginal Corporation
Year: 2019
Key points:

- Management of compensation claims are not one size fits all and should allow for flexibility.
- Prescribed Body Corporates (PBCs) receive $50,000 funding but require more to develop of culturally sensitive business plans for community development.
- The Corporations (Aboriginal and Torres Strait Islander) Act requires comprehensive review including representatives of affected Indigenous communities.

- The Native Title Representative Body (NTRB) can assist corporate support and collaborate with traditional owners with setting up mission, values, strategic plans that integrate traditional laws and customs as well as business support such as internal processes, policy, and procedures.
- Traditional Owners should gain free prior and informed consent for all economic opportunities. Working in regional and remote areas is logistically complex and expensive.
- Funding for Indigenous Ranger Programs should be increased by at least $100 million annually to allow the expansion and development of new programs.

Title: Submission to the Inquiry into the Opportunities and Challenges of the Engagement of Traditional Owners in the Economic Development of Northern Australia
Author: Indigenous Reference Group (IRG) to the Ministerial Forum on Northern Development
Year: 2019
Key points:

- The IRG recommends that the Standing Committee on Northern Australia consider all Indigenous owned and operated enterprise in Northern Australia, which are critical to the success of the Northern Australian economy.
- The IRG recommends a reform to Indigenous economic development in Northern Australia through PBCs and Indigenous businesses that are not directly linked to land, water or sea assets.
- The IRG recommends a stand-alone Northern Australian Indigenous economic development body for Indigenous business support and financing.
- The IRG recommends that Australian Governments prioritise the reform required to give meaningful effect to the United Nations Declaration on the Rights of Indigenous People's.
- The IRG recommends that the Council of Australian Governments seek to harmonise Australian legislation pertaining to Indigenous Intellectual Property based on current best practice as per its obligations under the Declaration on the Rights of Indigenous Peoples.

Title: Business On Country: Land use Diversification on the Indigenous Estate
Author: North Australian Indigenous Land and Sea Management Alliance Ltd
Year: 2019
Key points:

- This project seeks to develop a northern Australian network and engagement framework for Indigenous landowners and managers on how to progress development and a fee for services sector across the Indigenous Estate. The project facilitates Indigenous effort to generate commercial returns from their lands.
- The success of this phase of the larger project will be indexed by estimates of the number of local full time and seasonal jobs generated directly and indirectly (e.g. by direction of incomes from developments to other favoured work).
- Aboriginal landowners will be supported through Aboriginal owned and led institutions to make sound commercial decisions about uses of their land which are compatible with customary obligations.
- Improvements in local control over decision-making, including management of returns on investment will contribute to growing capacity and wellbeing.

Title: Native Title Owners' Push For More Negotiation Rights Shelved After Cattle Industry Fights Back
Author: J. Breen
Year: 2019
Key points:

- The Northern Territory Government has backed down in a fight with the Top End cattle industry, abandoning plans to give Aboriginal native title holders more of say on proposed sub-leasing of cattle properties.
- The Gunner Government will not proceed with amendments to the Pastoral Land Act, which would have required cattle stations to negotiate with native title holders before launching new non-pastoral projects on the land, such as extra cropping.
- the decision was described as "bitterly disappointing" by Central Land Council policy director Josie Douglas, who accused the Government of walking away from provisions that had been agreed to.
- "If rights co-exist and the Government is giving pastoralists the right to sub-divide native title land, it must give native title holders the right to negotiate," she said. Ms Douglas said it was wrong to suggest Aboriginal communities did not support economic development on native title land.

Title: The Impact of Freight Costs on Australian Farms: A report for AgriFutures Australia
Author: Deloitte Access Economics
Year: 2019
Key points:

- Current freight costs vary significantly with each agricultural commodity, reflecting the role of factors such as perishability, weight, volume, labour intensiveness and geographic distribution play in contributing their overall cost of delivery.
- Analysis of farm freight costs as a share of the Gross Value of Farm Production (GVAP) demonstrates the proportion of cost attributable to freight for each major commodity within the sector. In Australia, freight costs

are relatively highest for grains and fruit/vegetables, which represent 27.5% and 21% of GVAP, respectively. By comparison, poultry, which has more localised supply chains, has the lowest relative farm freight costs, totalling 1.0% of GVAP

- A key determinant in ensuring that Australian agriculture can reach its full export potential is maintaining efficient and competitive transport of food and fibre from paddock to port. At present, this cost is one of the largest single cost items in the production of many agricultural commodities, and it has the potential to impact the global competitiveness of Australian agriculture and its export performance into the future. The impact of this transport cost on the viability of producers is further accentuated with the slowing of on-farm productivity across most sectors.

Title: Pre-Budget Submission 2019-20: Agriculture – Growing Australia
Author: National Farmers' Federation
Year: 2019
Key points:

- The Australian Government should maintain existing markets and secure new international markets for Australian agricultural exports. Trade agreement with the EU which allows Australian businesses to market their products under generic and well know names.
- That the Australian Government agrees to a 10-year funding commitment for the Centre for Invasive Species Solutions (CISS) as a permanent institution as part of the strategic response to the over $13 billion/year biosecurity problem. The funding includes a major weeds portfolio ($10m/year) and a new vertebrate pests portfolio ($10m/year from 2021).
- That the Australian Government commits to establishing an animal welfare branch within the Department of Agriculture and Water Resources that is firmly based on scientific principles to set animal welfare standards in Australian agriculture.
- That the Australian Government commits to spending a higher proportion of the infrastructure budget on maintenance, ensuring that all new infrastructure projects have a lifecycle cost base and that existing infrastructure asset can be used to their full potential, enabling access for higher productivity vehicles. Using evidence-based tools that identify bottlenecks and infrastructure gaps in rural, regional and remote areas of Australia such as TraNSIT to inform infrastructure decision-making.
- That the Australian Government commits funds to develop accurate, multi-jurisdictional mapping that shows layers of all environmental legislative requirements on a specific site to a scale that is meaningful on the ground and is subject to challenge when groundtruthed.
- The implementation of formal bilateral or trilateral (where local government is in play) negotiations to resolve how to ensure that a farmer can get a single set of advice on their particular site and be protected from sanction if the advice is adhered to.
- That the Australian Government commit to the establishment of an Environmental Stewardship Fund with an initial investment of $1 billion to facilitate the development of market-based instruments to improve biodiversity that includes a focus on listed threatened species and communities.
- That the Australian Government commit to the sensible development of Northern Australia underpinned by the objective assessment of the potential environmental, economic and social outcomes delivered.
- That the Australian Government maintain financial liquidity of the Emissions Reduction Fund for the next five years. Research and reform to enable direct participation by all farmers – large and small – in carbon markets and emissions abatement activities.
- That the Australian Government review the rainfall triggers in the Carbon Farming Initiative Plantation and Farm Forestry Methodologies to remove the triggers to ensure the plantation sector can make investment decisions.
- That the Australian Government commit to trialling the agricultural visa in an area known to suffer labour challenges, such as the Sunraysia region in north-western Victoria, south-western New South Wales, and remote Northern Territory.
- That the Australian Government commit to making the small business instant asset write off permanent and retain the specific accelerated depreciation arrangements for primary producers.
- That the Australian Government commences farm succession education programs, or provide grants to fund succession education programs, to promote proactive succession planning by farmers.
- That the Australian Government makes agricultural insurance, including multi-peril crop insurance, 150 per cent tax deductible to encourage farmers to take out insurance policies and support the long-term viability of the agricultural insurance market in Australia.

Title: Development of the NT Aboriginal Land Estate
Author: Centrefarm TopEndfarm
Year: 2019
Key points:

- Aboriginal Land and Sea Economic Development Agency (ALSEDA) to provide remote area economic development. It will coordinate stakeholders and activities against a set of clearly defined development goals

akin to those outlined by the UN, World Bank and similar, in accordance with a specific set of guiding principles established and ratified by the Executive Committees of the Central and Northern Land Councils.

- The Pilot Capital Fund (PCF) is a commercial investment mechanism that partners public and private investment for a commercial return. It is designed to bring capital onto Aboriginal land for the first time, financing the development of infrastructure and so creating wealth (equity) for the landowners, and then using that equity to stimulate commercial activity. The PCF is designed to match public and private investment to stimulate this development.
- Country, Relationships, Economy (CoRE) to assist the adaptive capacity of Indigenous communities. this process is closely linked to the Community Planning and Development activities of CLC and NLC that have seen successful management of income for social and commercial outcomes, and the growth of governance capacity to handle the meeting of financial and cultural requirements.

Title: Katherine Tindall Limestone Aquifer Water Allocation Plan 2019 - 2024
Author: Department of Environment and Natural Resources, Northern Territory Government
Year: 2019
Key points:

- The Katherine Tindall Limestone Aquifer Water Allocation Plan 2019-2024 provides water management arrangements for the Tindall Limestone Aquifer within the Katherine River catchment boundary. The plan is the third water allocation plan for the region.
- Water management arrangements focus on meeting the values of all water users. A principal objective of the plan is to maintain river levels in the Katherine River by meeting water requirements of water dependent ecosystems.
- In the absence of any new information to inform an alternative estimated sustainable yield, the plan sets an estimated sustainable yield of 38,391 ML, adopted from the 2016-2019 water allocation plan.
- A comparison of the estimated sustainable yield and the total water extraction limit from the water resource shows that the system is currently over allocated. Due to the over allocation, the plan recommends that no new water (water which was not previously subject to a water extraction licence) or returned water is licensed for the plan area until such time that the estimated sustainable yield is reviewed.
- Through the annual announced allocation process, the plan protects a proportion of river flows to meet non-consumptive (environmental and cultural) water requirements. This varies between 87% and 70% of modelled natural flow, depending on the seasonal conditions.
- A Strategic Aboriginal Water Reserve is established at plan commencement. It will remain a notional (empty) reserve until water is available for allocation, in accordance with NT Government policy.

Title: Oolloo Dolostone Aquifer Water Allocation Plan 2019—2029
Author: Department of Environment and Natural Resources, Northern Territory Government
Year: 2019
Key points:

- The total estimated sustainable yield (ESY) of the Oolloo Dolostone Aquifer (ODA) is 97,300 ML/year. The ESY applies to both groundwater extraction from the ODA and surface water extractions.
- Prior to the determining the ESY, 429,100 ML/year is set aside to meet the water requirements for non-consumptive environmental and cultural values.
- At the time of the plan's release the existing licensed and unlicensed water entitlements for all groundwater management zones (GMZ) were 87,475 ML/year. This is 9,825 ML/year less than the ESY. However, the Northern GMZ is over allocated by 990 ML/year.
- The plan establishes a Strategic Aboriginal Water Reserve. The allocation to the Strategic Aboriginal Water Reserve for all GMZs is 19,314 ML/year. At the time of the plan's release, 9,825ML/year was available. The other 9,489 ML/year remains a notional allocation until such time as water becomes available.
- There is a consistent pattern of under use of licensed extraction entitlements. In 2018 31% of annual licensed entitlements were used.

Title: Western Davenport Water Allocation Plan 2018 – 2021
Author: Department of Environment and Natural Resources, Northern Territory Government
Year: 2018
Key points:

- The objectives of the Western Davenport Water Allocation Plan (WDWAP) are to meet the environmental water requirements of water dependent ecosystems, protect Aboriginal cultural values and provide access to water resources to support local Aboriginal economic development, allocate water for future public water supply and rural stock and domestic purposes, and provide equitable access to water to support ecologically sustainable regional economic development.
- The Estimated Sustainable Yield (ESY) for waterways is 224,310 ML/yr. 95% of the ESY is allocated to the beneficial uses of environment and cultural.

- The consumptive use allocation of waterways is 5% of the ESY for any surface water flow for this beneficial use. The WDWAP recommends against any licensed waterways extraction.
- The ESY for groundwater is 168,405 ML/year based upon allocation of 100% of modelled inflows and storage increases, regolith resources and saturated zone evapotranspiration. 30,000 ML/year is allocated to the beneficial uses of environment and non-consumptive cultural.
- Other beneficial uses are allocated a consumptive pool from the balance of the ESY equal to 138,405 ML/year. It is noted that an increase in groundwater extraction will inevitably cause a reduction in aquifer storage. It is recommended that accessing the consumptive pool for beneficial uses should not result in the depletion of aquifer storage by more than 3.9% over the next 100 years.

Title: Water Resource Assessments for the Darwin Catchments

Author: CSIRO

Year: 2018

Key points:

- The Darwin catchments have up to 1 million ha of potentially irrigable agricultural soils. Of this land area, 800,000 ha are suitable for trickle-irrigated crops and 90,000 ha are suitable for flood-irrigated crops such as rice. A further 420,000 ha of land is moderately suitable for aquaculture.
- Aquifers in the Darwin Rural Water Control District (DRWCD) currently provide an estimated 25 gigalitres (GL) for irrigated agriculture, horticulture, public water supplies, and local domestic use. New groundwater resources outside of the DRWCD (35 GL) could enable an additional 7800 ha of trickle-irrigated vegetable production, which could add $320 million and 345 jobs to the regional economy

Title: Case studies for the Northern Australia Water Resource Assessment: A report to the Australian Government from the CSIRO Northern Australia Water Resource Assessment, part of the National Water Infrastructure Development Fund: Water Resource Assessments.

Author: C. Petheram, J. Hughes, C. Stokes, I. Watson, et al.

Year: 2018

Key points:

- No solitary water supply solution and should rely on range of techniques.
- Risk minimisation relies on reducing possible loses.
- Aquaculture could increase profit margins with the provision of infrastructure, especially transportation and storage.
- More challenging to increase profit margins for broadacre crops, however infrastructure such as processing facilities are vital for long term economic sustainability. Processing facilities require third party investment and also large-scale growth of crop.
- High value produce is highly profitable, however cannot currently increase scale without influencing market price and therefore international markets and storage facilities should be developed.
- Extraction of ground water for irrigation increases profitability of business. However, the consistency of available ground water decreases with more water entitlement.
- Vertical farming may result in higher profit margins but requires larger capital investment. Difficult to minimise risk due to complexity and interdependency.
- Double cropping has possibility to increase profit margins but can be impacted by cost of irrigation.
- Current legislation and regulatory processes are costly and vary across the country.
- Utilising dams in stream can cause issues to downstream but dams high in the catchment cause less variation in streamflow.
- Indigenous sites may be allocated along the water systems and dams may affect their cultural heritage.

Title: Investing in the Horticultural Growth of Central Australia

Author: Northern Territory Government

Year: 2018

Key points:

- Commitment to 50% renewable energy generation by 2030. Three areas include: Increasing uptake of renewable energy technology, research and development, and promoting energy efficiency. An Industry Development Strategy is being explored based on these focus areas.
- The Northern Territory Government has committed $200 million to establish the Northern Territory Infrastructure Development Fund (NTIDF).The key objectives of the NTIDF are to attract private investment, generate commercial rates of returns for investors and support the long term economic growth and development of the Territory by investing in appropriate infrastructure projects. Projects under consideration span a range of industries, including renewable energy, resources, technology, manufacturing, transport and aviation.
- Agribusiness identified as growth area, in line with NT economic development strategy. Improve land access and land tenure to provide certainty and promote investment.

- Agribusiness, Fisheries and Aquaculture three main priorities. $30 million funding in 2019/2020 for Katherine Logistics and Agribusiness Hub to support the growth of agribusiness and logistic industries in the region. Wildman River Agricultural Precinct to assess the potential to develop good quality agricultural land close to Darwin. Gunn Point Precinct to develop a master plan to support planned aquaculture and agriculture development.
- Stakeholders of Agribusiness, Fisheries and Aquaculture want improved infrastructure and supply chain for cattle and buffalo, increase cold transport storage options for rail and port, develop a milling and refractant drying plant to process native products, construct an abattoir in Central Australia for the camel industry and donkey farming, establish an agriculture hub, land port and regional hub at Ti Tree, and construct a new fish handling facility at the Duck Pond in Frances Bay, Darwin.

Title: 10 Year Infrastructure Plan 2018–2027
Author: Northern Territory Government
Year: 2018
Key points:

- Major projects have played a significant role in the Territory economy over the past decade, with the total investment share of Gross State Product (GSP) from 32.6% in 2006/07 to 44.0% in 2016/17.
- The Northern Territory Government has committed $200 million to establish the Northern Territory Infrastructure Development Fund where the key objectives are to attract private investment, generate commercial rates of returns for investors and support the long-term economic growth and development of the Territory by investing in appropriate infrastructure projects.
- The government is committed to 50% renewable energy by 2030 for generation of electricity supplied to Territory households and businesses.
- Agribusiness focus is on expanding the facilities at Darwin Port and developing a logistics hub in Katherine to improve capacity to transport products efficiently to market. Investment is needed to develop the Katherine Logistics and Agribusiness Hub, maintain and improve the regional road network to facilitate all-weather access, and develop processing cold chain infrastructure and logistics support for key agricultural industries.
- Investment in infrastructure is crucial to support tourism by considering visitor access in transport planning, supporting the growth of sustainable cruise ship and aviation services, ensuring accommodation supports and attracts growth in visitor demand, and supporting major and regional events and festivals to increase visitors and create jobs in local and regional communities.
- The energy and mineral resources sector needs ongoing infrastructure investment to improve rail and road and port infrastructure to improve cost efficiencies and viability, improve bulk handling infrastructure and expand rail access at the East Arm Port to decrease transport costs, facilitate major minerals and energy projects and encourage downstream processing of products in the Territory, and establish a supply hub that is critical to develop an onshore gas industry.
- Investment in infrastructure for defence is vital to expand the capability of defence bases to cater for new platforms, maximise the economic benefit of defence opportunities, and create critical mass to support infrastructure for other projects and industries.
- Investment in infrastructure for education and training is needed to provide integrated child and family services at schools to support school transition and strengthen parent engagement in learning, support infrastructure for special schools and distance learning and international education, replace ageing infrastructure and upgrade existing infrastructure to Australian standards, and provide new and expanded schools to cater for population and enrolment growth in urban and remote communities.
- Recent rapid growth in the Territory has put pressure on delivering water and sewerage services efficiently and economically, with greater demand on existing water sources, storage, treatment and delivery infrastructure. Even with reduced water consumption, the Darwin region's water source and treatment infrastructure may need to be augmented within 10 years to meet projected demand.
- Extensive investment is needed for public safety and justice to provide youth-focussed infrastructure focussing on diversionary programs, explore private sector investment opportunities for infrastructure to support public and private system, keep the community safe through frontline police services and crime reduction initiatives, and provide effective and efficient emergency response to minimise the impact of disasters on the community.
- The health sector requires significant investment to upgrade or replace ageing health infrastructure to meet future needs, support new technology to increase access to state-of-the-art medical facilities, improve services to cater for our ageing population and our children, and improve health care services for Aboriginal people living in urban and remote areas.
- Significant investment in infrastructure is needed in the housing sector to reduce homelessness, provide public and affordable housing in urban and remote areas, add housing stock to the rental and first home buyer housing market, provide homes for people living in remote communities, and deliver programs to manage and maintain the public housing assets.
- The transport network must be developed to keep pace with our growing and diversifying economy to enhance linkages to key domestic and international markets and provide improved equitable access for Territorians living in remote and regional areas.

- Investment in infrastructure for art, culture, and active recreation is needed to provide national and international standard sporting infrastructure to develop the local sporting community, upgrade infrastructure and roads to our parks and reserves to increase visitor access and numbers, develop state-of-the-art and innovative arts and cultural venues and facilities, informed by industry and community needs, and develop shared multi-purpose facilities to maximise use and share costs.
- Investment in digital technology is needed to improve telecommunications access for Territorians particularly in rural and remote communities, close the gap between Aboriginal and non-Aboriginal Territorians, encourage technology innovation from the private sector, and to connect Territory businesses to local, interstate, and global markets.

Title: The Barunga Agreement: A Memorandum of Understanding to Provide for the Development of a Framework for Negotiating a Treaty with the First Nations of the Northern Territory of Australia
Author: NLC, CLC, NTG, Tiwi Land Council, Anindilyakwa Land Council
Year: 2018
Key points:

- The objective of this MOU is to agree about and to implement a consultation process to be led by an independent Treaty Commissioner, which will inform the development of an agreed framework to negotiate a Northern Territory Treaty. This framework may focus on, but not be limited to, the following areas:
  - Agreement as to what a Treaty is and its potential contents;
  - What a Northern Territory Treaty will seek to achieve;
  - Whether there should be one or multiple treaties;
  - What outcomes are possible under a Treaty for Aboriginal people that encompass recognition as First Nations, rights, obligations and opportunities; and
  - What the best process is for negotiating a Treaty.
- The key objective of any Treaty in the Northern Territory must be to achieve real change and substantive, long term, benefits for Aboriginal people. A Treaty needs to address structural barriers to the wellbeing of Aboriginal people in the Northern Territory and provide for economic, social and cultural benefits.

Title: Our Economic Future: Increasing private sector investment to grow Territory jobs. Northern Territory Economic Development Framework
Author: Deloitte, Northern Territory Government
Year: 2018
Key points:

- Investigate opportunities to develop Katherine as an agribusiness logistics hub. Feasibility study completed.
- Support investment in technology that improves productivity.
- Increase the profitability and performance of the pastoral, horticultural and aquaculture sectors through research and development into supply chains between producers and consumers.
- Identify priority supply chains through the Territory wide Logistics Master Plan and co-design a 10-year planning program in the 10-year infrastructure plan.
- Continue to lobby the Australian Government for special working and immigration visa categories to attract and retain overseas skilled, semi-skilled, and unskilled workers.
- Explore the commercial potential for bush foods and medicine as a niche regional growth sector

Title: NT Plant Industry Strategic Development Plan
Author: NT Farmers
Year: 2018
Key points:

- Market development for local and export markets both new & existing. New markets for existing and new products drive a minimum $300 million profitable revenue growth in plant industries across the NT by 2028.
- Research and Development required to optimise existing crop production, identify and optimise new crop commercialisation, and identify production areas.
- Government influence and policy to ensure labour availability to industry, water resources are optimised and available, required infrastructure available, and to optimise biosecurity.
- Goal is for NT plant industries to grow at double rate of agribusiness nationally to reach a minimum of $600 million by 2028.

Title: Developing the north: learning from the past to guide future plans and policies
Author: A. Ash, I. Watson
Year: 2018
Key points:

- The development of northern Australia has been a policy ambition for over a century and the desire to do so continues unabated.

- Climatic and environmental constraints, including pests and diseases, remain a challenge for agricultural development in these largely tropical rangelands, it is mainly factors associated with finances and investment planning, land tenure and property rights, management, skills, and supply chains, which provide the critical challenges.
- The desire to scale-up too rapidly and the associated failure to invest sufficient time and resources in management to learn how to develop appropriate farming systems that are sustainable and economically viable is a recurrent theme through the case study assessment. Scaling up in a more measured way, with a staged approach to the investment in physical capital, should better allow for the inevitable set-backs and the unexpected costs in developing tropical rangelands for agriculture.
- Development should not disadvantage Indigenous people, that Indigenous people have strong interests and rights in land and water resources and that these resources will be deployed to further Indigenous economic development.
- Assessing environmental impacts of more intensive development is more rigorous than in the past and the resources and timeframes required for these processes are often underestimated.

Title: Agricultural viability: Darwin Catchments
Author: A. Ash, M. Bristow, A. Laing, N. MacLeod, et al.
Year: 2018
Key points:

- Due to limited data, crop and forage models were used in the Adelaide river and Wildman. These locations utilised different soil types: Vertosols and Red Kandosols. Note the model represents optimal yields and actual yields are likely to be lower
- Analysis showed potential for dryland cropping relative to reliable wet season rainfall. However, environmental factors such as the delay of sowing will decrease yields.
- Irrigation can reduce yield discrepancy between years in broadacre crops. Utilising seasonal rainfall patterns such as planting during the end of wet season is imperative to conserving irrigated water consumption by using moisture deposited in the soil.
- Gross margins are around $1000-$1700/ha. Transportation can signify 40% of costs.
- Climate changes such as higher temperatures and reduced rainfall do not impact yields of broad acre crops with irrigation, assuming irrigation provisions remain constant.
- Gross margins for horticulture crops with higher between $3000-$18000/ha
- Including the complete cost of labour resulted in negative gross margins within the analysis.
- Double cropping determined increased annual returns.

Title: Rapid Assessment of Potential for Development of Large Dams and Irrigation Across Continental Areas: Application to Northern Australia
Author: C. Petheram, J. Gallant, P. Stone, P. Wilson, A. Read
Year: 2018
Key points:

- More than 2 billion potential dam sites across northern Australia (an area of ~3 million km2) were assessed in a consistent and objective manner, using the Dam Site model.
- Physical resources (soil, surface water, and topography suitable for large, in-stream dams) sufficient to support ~1.84 Mha of irrigated agriculture exist in northern Australia. This would require use of the entire yield from eight existing dams (including the Burdekin Falls and Ord River dams) and the construction of 117 new dams. A more financially attractive option could involve using water from 85 large dams (eight existing and 77 new dams) and a large number of reregulating structures (e.g. weirs) to irrigate 1.34 Mha of land suitable for irrigated agriculture.
- Approximately 50% of the potential 1.34 Mha of irrigated land in northern Australia (~670 000 ha) could be irrigated with ~20 of the more promising large dams, highlighting the declining marginal returns to dam construction and the benefits of strategic land and water resource planning.
- In reality, a range of regulatory, political and socio-economic factors will considerably constrain the upper physical limit to dam and irrigation development.
- Alternative sources of water (e.g. groundwater, wetlands, waterholes) and water storage (e.g. gully dams, ring tanks, managed aquifer recharge) are capable of supplying smaller volumes of water than large dams, although each may have important roles to play in maximising the cost-effectiveness of water supply in northern Australia.

Title: Sustainable Land Sector Development in Northern Australia: Indigenous Rights, Aspirations, and Cultural Responsibilities
Author: J. Russell-Smith, . James, H. Pedersen, K. K. Sangha
Year: 2018
Key points:

- Provides clear and authoritative recommendations for managing fire in ecological and social contexts
- Authors are all international leaders in their fields and include not only academics but also leaders of Indigenous communities

- Explains Indigenous cultural and knowledge systems to a degree that has rarely been accessible to lay and academic readers outside specialized disciplines like Anthropology
- Responds to growing need for new approaches to managing human-ecological systems that are in greater sympathy with Australia's natural environments/climate, and value the knowledge of Indigenous people
- Timely for scholarly and interest groups intervention, as the Australian government is again looking to 'develop the north'.

Title: Investment Ready Regulatory Pathways for Agricultural Projects
Author: Department of Primary Industries and Regional Development, WA
Year: 2018
Key points:
Report outlines the range of regulatory approvals and processes that may be required to obtain for an agricultural intensification project in Western Australia

Title: Agribusiness Potential for the Big Rivers Region: Supporting the Development of the Katherine Agribusiness and Logistics Hub
Author: Department of Primary Industry and Resources, Northern Territory Government
Year: 2017
Key points:

- Land and water availability assessments required. Water allocation planning required. Certainty of supply and water security needed. Harvesting of wet season flows. Water trading.
- Diversification on pastoral land (through leases). Security of tenure needed for investment.
- Agribusiness development on Aboriginal land is challenging where communal ownership. Aboriginal businesses to identify opportunities and partnerships.
- Continue land resource mapping. Provide open access to existing data through NRM Maps.
- Partnerships to invest in pre-feasibility work for untested agribusiness ideas.
- Maintain and improve regional road network. Processing, cold chain & logistics infrastructure needed

Title: Water Allocation Plan for the Tindall Limestone Aquifer, Mataranka – Daly Waters
Author: Department of Environment and Natural Resources, Northern Territory Government
Year: 2017
Key points:

- The Tindall Limestone Aquifer, Mataranka–Daly Waters (TLA M-DW) is a priority area for Water Allocation Planning and is being developed to protect the environmental values, provide certainty for water users and define rules to allow the developments that depend on access to groundwater to grow in a sustainable manner.
- In allocating at least 80% of flows to nonconsumptive beneficial uses, it has been considered that there is a level of protection for the indigenous and non-indigenous cultural values in the region.
- Currently, 25,940ML/yr is allocated to consumptive beneficial uses. Further work is required to estimate the volume of water used for stock and domestic uses within the water allocation plan area.
- There are 20 groundwater extraction licences within the TLA M-DW. Total reported and estimated licensed water extraction for the 2016/17 water accounting year was 6112ML, or 24% of licensed entitlements.

Title: Irrigated Agricultural Development in Northern Australia: Value-chain Challenges and Opportunities
Author: A. Ash, T. Gleeson, M. Hall, A. Higgins, et al.
Year: 2017
Key points:

- Northern Australia is considered feasible for development of intensive irrigated crop growth. Depending on the type of crop grown, profitability of crops in northern Australia ranged from highly positive to highly negative.
- In areas with larger transport distances, transport of goods was the highest cost.
- Low value, high production crops tended to be less profitable than niche, high value products such as sandalwood.

Title: Transforming the North: Strategic options for the Darwin to Townsville Economic Corridor
Author: Advisian
Year: 2017
Key points:

- Rail link between Tennant Creek and Mt Isa is not currently commercially viable. Need complementary investments in water and energy infrastructure to promote growth along the corridor. Also need investment in efficient multi-modal transport systems.
- Generate options to advance the Mount Isa to Tennant Creek Rail link (MITCR) and consider how it could transform northern Australia. Consider the impact on Australia's competitiveness should the MITCR not progress. Identify and evaluate opportunities to increase the benefit the MITCR could have on regional economic development.

- Enhance understanding of the existing economics of the Townsville to Darwin supply chain and transport corridor including consideration of: Potential demand volume scenarios, including impacts of changes in commodity prices and volumes
- Potential for rail operators and local businesses to benefit from second round, transformative impacts, which would include consideration of big picture benefits that may not be immediately apparent.
- Determine levels of possible interest and sources of capital (both domestic and foreign) to finance the MITCR. Generate options to attract private proponents to execute the project by utilising the Northern Australia Infrastructure Facility (NAIF)

Title: Northern Territory Irrigated Agriculture Feasibility Study
Author: Jacobs Group
Year: 2017
Key points:

- The Northern Territory Irrigated Agriculture Feasibility Study (NTIAFS) assesses the feasibility of managed aquifer recharge to increase the available water and water security for irrigated agriculture in selected sites across the Northern Territory. This project is funded by the Commonwealth Government to consider the potential for managed aquifer recharge (MAR) and conjunctive water use (CWU) to support the development of irrigated agriculture in northern Australia.
- 7 locations considered. Stray Creek and Lower King River recommended for further investigations. Three approaches have been considered: -
    - Groundwater only involves pumping groundwater for direct irrigation;
    - MAR refers to the intentional recharge of water into an aquifer where it is stored for subsequent recovery and includes Aquifer Storage and Recovery, Aquifer Storage Transfer and Recovery, infiltration basins, recharge trenches and soil aquifer treatment; and
- Conjunctive water use involves the combined use of both surface water

Title: NT Farmers Position Paper: Freight and Transport
Author: NT Farmers
Year: 2017
Key points:

- The capacity and standard of available freight and transport solutions to enable our members to deliver their production to markets in a timely manner and in top condition is vitally important to the success of Territory producers.
- Without refrigerated and dry freight containers, pallets, packaging, trucks, trains and planes, and excellent supply chain quality management systems this $200M of Territory production would not get to market and would not meet quality standards and out-turn requirements.
- NT Farmers recognises the vital importance of freight, transport, packaging and logistics management/service providers that support Territory producers. In order to sustain and grow the farming sector, NT Farmers also recognises that its supply chain partners must be an active and valued part of our industry.

Title: Roadmap For A Modern Environmental Regulatory Framework for the Northern Territory
Author: Northern Territory Environmental Protection Authority (NT EPA
Year: 2017
Key points:

- Government should adopt a framework for a single, whole-of-government environmental approval issued by the Minister for the Environment on the basis of an environmental impact assessment by the NT EPA.
- The Environmental Assessment Act should be revised and updated to allow the NT EPA to conduct strategic environmental assessments and provide strategic environmental advice.
- The Waste Management and Pollution Control Act should be revised and updated to provide for the NT EPA to issue all licences and approvals to discharge or emit wastes to land, water, sea or air environments.
- The Environmental Assessment Act and the Waste Management and Pollution Control Act should be revised and updated as described above. In addition, some other waste management and pollution control legislation should be consolidated into a new Environmental Protection Act to be administered by the NT EPA.
- The NT EPA responsibilities should continue to involve conducting environmental impact assessments for proposals that may have a significant impact on the environment, the regulation of activities that may have significant impacts or risks to the environment, and the provision of strategic advice on matters of environmental importance.
- The NT EPA should be an independent authority comprising a board of experts appointed on the basis of their experience, knowledge and ability to meet the objectives and responsibilities of the NT EPA

Title: Growing the Northern Territory: Opportunities for Plant Industries in the NT
Author: Department of Primary Industry and Resources, Northern Territory Government
Year: 2016

Key points:

- Proven agricultural systems and markets for fruit, vegetables, ornamentals and forestry products
- Stringent controls over agri-chemical use and management of biosecurity risk in our agri-food industries to assure a clean and green environment for plant production and safe food for consumers.
- Darwin is the closest Australian capital to Asia, with 4 billion people living within 8 hours flying time. The NT is well placed to capitalise on the continued increase in demand for quality food products from Asia and the Indian sub-continent.
- Fresh produce is harvested when other sources are out of season. This means fresh produce to extend produce programming in export markets and the potential to attract a premium price.
- Established supply chains servicing southern Australian and international markets. Reliable infrastructure and experienced operators are able to deliver fresh products to meet market requirements.
- The NT government agencies have access to knowledge and expertise to maximise productivity in our unique growing conditions. This includes information on land and water resources, production systems; and supply and value chains.

Title: The North Agriculture and the Environment
Author: Global Access Partners
Year: 2016
Key points:

- The Government should adopt a holistic, balanced and national approach to northern development. It must ensure the long-term sustainability of the region and secure agreement from all stakeholders on common goals and strategies. Investment decisions should be guided by the latest scientific evidence to unlock the region's value without destroying it. Northern development should benefit the entire nation, given the national investment in its growth.
- Engagement with Indigenous people in northern development should be pursued through the planning, implementation and delivery of both overall strategies and individual projects to achieve shared and mutually beneficial development goals.
- Improvements in beef yields could form a major part of any northern expansion. The adoption of planned rotational grazing would offer the most effective way to increase output, restore the landscape and soil to health and safeguard the beef industry's future.
- Proposals for extended irrigation schemes in the north should be assessed in the light of the physical characteristics of specific catchment areas as these have a crucial impact on the economic viability and ecological sustainability of such projects.
- Development plans in the north should protect water flows and soils, maintain biodiversity and limit carbon emissions as well as pursuing economic goals and increased agricultural output.
- The allocation of water to different interests must be planned and regulated in compliance with the principles of the National Water Initiative (NWI) to ensure it remains available on sustainable ecological and commercial terms.
- The characteristics of the soils in northern Australia must be researched and understood before development is undertaken to ensure productive and sustainable outcomes.
- Government should encourage private investors to drive growth in northern Australia, rather than invest public money to bear the risk of private profit seeking. 'Investment scorecards" would help entrepreneurs, businesspeople and investors assess the relative merits of areas in the north and a basis to prioritise action and proceed.
- Infrastructure improvements in the north should initially focus on improving the use of existing infrastructure to minimise costs and maximise economic benefits. The creation of costly 'white elephants' will only deter future investment if they prove under-used.
- Plans for economic development of the north should include 'the human factor' if they are to succeed in improving people's lives and investment outcomes.
- The Government should establish a permanent and independent multidisciplinary body to monitor the effects of northern development. This would facilitate the integration of new technologies and thinking into future development plans, while maintaining long-term focus on community benefit and environmental sustainability.
- A national database of consistent, comparable and accurate data covering land, water, soils, weather, natural perils and other factors should be developed, building on the National Map Open Data Initiative, to allow a rational assessment of the potential of the north compared to other areas.

Title: Douglas Daly Agricultural Zone Economic Analysis
Author: I. Baker, P. Vivian
Year: 2016
Key points:

- There are potential economically viable, irrigated multi crop/year options for existing Douglas Daly (DD) farmers with suitable existing farm infrastructure with suitable existing farm infrastructure, but not for greenfield development.
- Depending on the level of capital investment, required net cash flow per year from the cropping system to sustain economically viability ranges from $2000 - $2500 /ha/year. Existing farms still require improvements such as fencing, clearing, specialised P&E, pumps, pivot installation, & bores.
- The net cash flow requires multi crop/year system for broad acre crop development. No large scale single broad acre crop can currently meet this requirement.
- Several crops show potential for incorporation into a multi crop/year cropping system that generates net cash flow necessary to support brown fields developments in the DD.
- Multi crop/year cropping systems have not been successfully deployed in the NT and Northern Australia. There is a critical need to commercially test the proposed cropping systems in DD growing conditions in order to de-risk the investment opportunity. Crop cycle times and yields in DD conditions will be an important determinant of success. Genetic development and selection may be required to achieve this.
- A fodder base cropping system could be easier to implement, meet economic imperatives, and has no minimum scale requirement for post farm gate processing and handling. The size of the NT market for fodder may be a constraint, but there are potential market opportunities in better quality fodder and possible export feed pellets.
- There are attractive climatic conditions, suitable soils, and water in the DD for the minimum scale required to support post farm gate supply chain processing and handling requirements for these crops. There is also sufficient soil and water resources to support considerable expansion of these crops past the minimum supply chain needs.
- There are sizable domestic and international markers and reliable prices for the proposed crops.
- Land and water resource mapping, which focuses on light sandy soils over ground water, does not recognise the higher capital cost of this cropping system compared with furrow irrigation from surface water catchment on heavier soils. More focus and research should be director to cropping systems and economics of surface water capture and furrow irrigation on heavier soils

Title: Regulation of Australian Agriculture
Author: Productivity Commission
Year: 2016
Key points:

- Farm businesses are subject to a vast and complex array of regulations. Regulations are in place at every stage of the supply chain and are applied by all levels of government. The number and complexity of regulations affecting farm businesses means that the cumulative burden of regulation on farmers is substantial.
- Some regulations lack a sound policy justification and should be removed. Examples include restrictions on the use of land held under pastoral lease arrangements.
- Inconsistent regulatory requirements across and within jurisdictions make it difficult for farmers to understand their obligations and add to the cost of doing business. A more consistent approach would improve outcomes in the areas of heavy vehicle regulation and road access, and the use of chemicals. Governments could also reduce the regulatory burden on farm businesses by improving their consultation and engagement practices.
- There is scope to better support landholders to understand environmental regulations, to reduce duplicative and unnecessary information gathering regarding water management by farm businesses, doing more to coordinate their actions between agencies and between governments, and ensuring that good regulatory impact assessment processes are used as an analytical tool to support quality regulation making.

Title: Agronomic Benefits with Irrigated Peanut-Maize Production in Northern Australia
Author: Y. S. Chauhan, P. Thorburn, J. S. Biggs, G. C. Wright
Year: 2015
Key points:

- Northern Australia has high potential for crop yields as long as there continues to be a surplus of water.
- Cropping peanuts and maize in rotation in tropical NT can limit the impact of climate change on productivity if grown in the most efficient rotation.
- Growing peanuts in the wet season and maize in the dry is more efficient than the industry standard rotation of maize in the wet and peanuts in the dry season.

Title: Economic Evaluation of Irrigated Forage Production in a Beef Cattle Operation in the Semi-Arid Tropics of Northern Australia
Author: M. Monjardino, N. MacLeod, L. McKellar, D. Prestwidge
Year: 2015
Key points:

- The long-term viability of the northern beef industry relies on increasing herd productivity and enterprise profitability. Irrigation of pastures could improve cattle productivity, but the cost of installing and operating the infrastructure has significantly negative impact on returns.

Title: TRANSIT - a Model for Simulating Infrastructure and Policy Interventions in Agriculture Logistics: Application to the Northern Australia Beef Industry
Author: A. Higgins, S. McFallan, L. Laredo, D. Prestwidge, P. Stone
Year: 2015
Key points:

- Due to high transport costs, the beef industry in northern Australia is generally marginal and farm owners can suffer in a poor season.
- A model (TRANSIT) was developed to estimate benefits and challenges of potential government policy and infrastructure investment.
- TRANSIT was found to be an effective tool for analysing combinations of infrastructure upgrades and government policy to predict the most cost-efficient model.

Title: Our North, Our Future: White Paper on Developing Northern Australia
Author" Department of Prime Minister and Cabinet, Australian Government
Year: 2015
Key points:

- Native Title system has been given significant funding to: settle all claims within 10 years, engage investors with title holders, consult commercial options for native title rights, increase in township leases, and reviewed practices of management of native title development funds.
- Significant funding to water infrastructure to secure water rights as a commodity. Regions include Mitchell River, West Kimberly, and Darwin.
- Economic focus will be on securing Asia-Pacific markets, northern tourism, research centre for biodiversity and disease, Indigenous ranger groups, reduction of policy and approval channels for major projects, consult Indigenous groups to improve cultural heritage sites, and restructure fisheries policy to improve aquaculture management.
- Infrastructure improvements including road projects, freight projects, concessional loans, cattle supply chains, and air services.
- Workforce improvements through employment targets for Indigenous Australians, licence recognition from other Australian jurisdictions, flexible foreign work arrangements, and to expand seasonal and working holiday visa programmes.
- The government is dedicated to hold regular meetings with the Prime Minister and Cabinet, improve links between different government levels, and strengthen defence presence in northern Australia.

Title: Guide to the Environmental Impact Assessment Process in the Northern Territory
Author: Northern Territory Environmental Protection Authority
Year: 2014
Key points:

- Guide to explain the Environmental Impact Assessment (EIA) process in the NT, and to outline how it may affect proposed new projects

Title: Northern Australia Food and Fibre Supply Chains Study
Author: A. Ash, T. Gleeson
Year: 2014
Key points:

- Northern Australia is considered regarding its potential for irrigated crop production.
- Recommendations for overcoming three main challenges: sourcing capital investment, growing crops sustainably and cost-effectively, and establishing and expanding export markets.
- Low value, high yield crops tend not to be profitable.
- Freight costs are significant. The region will need significant investment regarding infrastructure.
- An understanding of the region is necessary for intensive agriculture to be successful.

Title: Uncertainties Around the Implementation of a Clearing Control Policy in a Unique Catchment in Northern Australia: Exploring Equity Issues and Balancing Competing Objectives
Author: V. Adams, R. L. Pressey
Year: 2014

Key points:

- Northern Australia is the site of nearly a third of global tropical savanna. It is largely untouched and is a significant area for biodiversity conservation.
- Five scenarios with different clearing control policies were compared in the Daly River catchment area.
- The clearing guidelines constrained clearing and provided some protection to flora and fauna. Unregulated clearing resulted in loss of biodiversity and vulnerability to invasive species. Directed clearing of land resulted in clearing the most suitable and sustainable land for agriculture.

Title: Northern Territory Government Response to the Green Paper on Agriculture Competitiveness
Author: Northern Territory Government
Year: 2014
Key points:

- Development of a long-term plan for critical infrastructure funding informed by the identified priority infrastructure needs of the Australian Agriculture Sector (and integrated with the agenda to develop northern Australia), with an emphasis on all-weather roads, ports and port facilities and telecommunications in the bush.
- Funding commitment for the identification, preservation and acquisition of key agricultural transport corridors
- Funding commitment to realise the connecting railway spurs to Mt Isa and the Ord
- Funding commitment in order to reach an Indigenous land use agreement, carry out water infrastructure upgrades and extensions, and for essential roadwork in relation to the Ord Stage 3.
- Funding commitment to the development of water infrastructure that will be critical to the future development of new agricultural precincts.

Title: Potential Land for Long Term Sustainable Food Production: Soil and Water Suitability Assessment
Author: A. Pascoe-Bell, C. Green, B. Lynch, J. Hill, et al.
Year: 2014
Key points:

- The inclusion of a newly discovered groundwater formation, Florina, and additional groundwater investigations across the Northern Territory have redefined some of the aquifer boundaries used in the initial report and account for the majority of differences between this and the first version of this report.
- This investigation has identified regions and local areas where further detailed land and water investigations could take place. In some regions this has already occurred. In other areas where this information is not yet available, this report will assist the targeting of further land and water assessment investment.
- New funding provided by the Northern Territory Government from 2014- 2018 is already being used to further understand the land and water resources of some of these areas, and the suitability of these resources for intensive forms of agriculture

Title: Northern Rivers and Dams: A Preliminary Assessment of Surface Water Storage Potential for Northern Australia
Author: C. Petheram, J. Gallant, P. Wilson, P. Stone, et al
Year: 2014
Key points:

- Northern Australia can currently support 1.4 million ha of irrigated agriculture, which would increase total irrigated area by 50% . However, development of 90 large stream water storages and numerous reregulating structures such as weirs would require development.
- The Ord and Burdekin catchments present immediate opportunity for irrigation development due to large scale water storage already present.
- Ground water has potential to supply irrigation to 100-150k ha in northern Australia, but costs can be high identifying viable sources.

Title: Managing Indigenous Pastoral Lands
Author: Rural Industries Research and Development Corporation
Year: 2014
Key points:

- Manual that outlines business practises to help manage indigenous pastoral lands and includes business plan, markets and marketing, land information, property management, grazing land management, heard management and production, husbandry health and welfare, human resource management, diversification and other income earning opportunities, and three case studies.

Title: Indigenous Pastoral Program Strategic Plan
Author: Northern Territory Government
Year: 2014
Key points:

- Support the development of viable, Indigenous pastoral operations and enable economic opportunity via pastoral activity on Indigenous held land.

- Contribute to sustainable management of Indigenous held land.
- Provide training to increase Indigenous employment and the viability of Indigenous pastoral operations thereby enabling career pathways in the industry.

Title: Mosaic Irrigation for the Northern Australian Beef Industry. An Assessment of Sustainability and Potential.
Author: A. C. Grice, I. Watson, P. Stone
Year: 2013
Key points:

- Northern Australian groundwater resources provide opportunity to increase beef production via irrigation.
- Mosaic irrigation to support northern Australian beef enterprises has the potential to become more commonplace over the next decade.
- A high proportion of northern Australia's pastoral properties may have enough suitable soils and water for small-scale irrigation.
- Ready availability of forage grown on property could drive positive change to beef production systems and boost productivity at the enterprise scale.
- Mosaic irrigation to enhance the beef industry is not dependent on large scale public investment in infrastructure.
- The environmental impacts of mosaic irrigation development will be small compared with those of the cattle industry itself and other land uses.
- Mosaic irrigation promises modest benefits to northern beef enterprises provided systems are carefully designed, constructed and managed.
- While they are small compared with the size of pastoral stations, mosaic irrigation units may constitute a high proportion of the capital value of the entire enterprise.
- There is renewed and new impetus for the diversification of pastoral enterprises in northern Australia.
- Constraints to the development of mosaic irrigation on beef cattle enterprises are largely institutional, social and economic, rather than biophysical.
- Lack of data can obstruct sound decision-making.
- Graziers planning mosaic irrigation must access specialist advice and carefully select where irrigation units are placed on their properties in order to maximise the chances of success.
- The likely scale and distribution of mosaic irrigation suggest major regional impacts are unlikely.
- Mosaic irrigation developments require an immediate return on investment.
- Environmental risks must be managed strategically.
- Mosaic irrigation is unlikely to transform landscapes or the northern beef industry, but it has potential to transform some businesses/enterprises.

Title: Great Artesian Basin (NT) Water Allocation Plan
Author: Department of Land Resource Management, Northern Territory Government
Year: 2013
Key points:

- The principal objectives for the Great Artesian Basin (GAB) Water Allocation Plan are to maintain public water supply, protect the environment, support Indigenous culture, and ensure sustainable development.
- There is currently no significant or licensed surface water extraction within the district. Groundwater is currently extracted for unlicensed stock and domestic use, and for a licensed public water supply to the community of Finke/Apatula.
- Licences for allocations available for surface water shall not exceed more than five per cent of flow at any time in any part of a river. Licences for allocations from the GAB aquifer are based on 70% of estimated recharge and the total licensed volume of water from the GAB District shall not exceed 9.7 GL/yr.

Title: Information for Prospective Investors in Agricultural Enterprises in the Northern Territory
Author: Northern Territory Government
Year: 2013
Key points:

- Information and Agency Contacts:
  - Aboriginal Areas Protection Authority (AAPA)
  - Department of the Attorney-General and Justice (DAGJ)
  - Department of Business (DoB)
  - Department of Lands, Planning and the Environment (DLPE)
  - Department of Land Resource Management (DLRM)
  - Department of Mines and Energy (DME)
  - Department of Primary Industry and Fisheries (DPIF)

- Northern Territory Environment Protection Authority (NT EPA)
- Norther Territory Land Councils (NTLC)
- Parks and Wildlife Commission NT (PWCNT)
- Power and Water Corporation (PWC)

- Environment Protection and Biodiversity Conservation Act 1999 (EPBCA)

Title: Rethinking the Future of Northern Australia's Regions: More than Mines, Dams and Development Dreams
Author: Regional Australia Institute
Year: 2013
Key points:

- Infrastructure and human capital greatest limitations to growth. Larger northern cities do not hold same limitations.
- Mining centres are strong economic hubs but not sustainable long term for regions. Economic diversity is essential for long term success such as Agriculture and tourism.
- Government policy dominates economic opportunity and reforms are required to reach potential. Focus areas include Indigenous Native Title Rights and their ability to capitalise on their land, water rights becoming a commodity, and public investment in area.

Title: Beyond Cattle: Potential Futures of the Pastoral Industry in the Northern Territory
Author: C. J. Puig, R. Greiner, C. Huchery, I. Perkins, et al
Year: 2011
Key points:

- The cost of producing cattle for beef is high, with much of the cost being transport.
- Profits per head are marginal and variable.
- Research should be done on methods of increasing productivity through improving pasture production, pasture and livestock management, and cattle growth rates.
- Creating a brand of "natural" NT beef would raise the value of the product in both local and international markets.
- Reform of the Pastoral Lands Act would allow the industry to diversify and subdivide pastoral properties

Title: Water in the Gulf of Carpentaria Drainage Division: A report to the Australian Government from the CSIRO Northern Australia Sustainable Yields Project and Water in the Timor Sea Drainage Division: A report to the Australian Government from the CSIRO Northern Australia Sustainable Yields Project
Author: CSIRO
Year: 2009
Key points:

- A scarcity of data exists for water resource accounting.
- Large yearly rainfall variation of 50%-150% of average. Scarce rainfall for 3-6 months of year. Restrictions for water storage. Most catchments have stable water flow.
- Few rivers are perennial, however rivers flowing annually utilise ground water. Shallow ground water provides development prospects but may impede river flow.
- The restoration of ground water is intricate and not relative to rainfall. Ground water travels slower than surface water and impact may not be present for months or years.
- Flooding essential for ecology of area.
- Future climate change models suggest rainfall will be similar to historical models.
- The Great Artisan Aquifer may be sourced for development; however, safe extraction yields are yet to be determined.

Title: Northern Australia Land and Water Science Review
Author: Northern Australia Land and Water Task Force
Year: 2009
Key points:

- The Review has provided the best available quantitative estimate of the amount and distribution of water in the northern Australian landscape. The 1 million gigalitres of rainfall received each year supports a wide range of uses including: unique aquatic and terrestrial ecosystems; recreational and commercial fisheries; tourism; a range of largely non-consumptive Indigenous uses; and consumptive use by irrigated agriculture, stock and domestic and mining.
- Surface and groundwaters are frequently highly connected where groundwater abstraction from one point may influence surface water flow and function at another. Consequently, trade-offs between different water uses must take into account impacts on and responses to both ground and surface waters.
- Conserving and accessing surface water for consumptive use is highly constrained by difficulties in impoundment.

- Groundwater provides the best prospect to support new consumptive use where there is an estimated 600 GL across northern Australia that could support 40,000 to 60,000 ha of irrigated intensive agriculture. To be NWI compliant, this water would need to be assigned according to an agreed statutory water plan that considers diverse and competing water uses.
- Water use for economic ventures varies considerably. Commercial fishing relies on water but does not consume. Intensive agriculture and beef production are limited by access to water. Mining recycles water. Indigenous culture relies on natural water resources.
- Development opportunities and their scale are dependent on water. The region's high natural values are contingent on the natural flow of water which can be disrupted by development.
- Robust design for northern Australia consists of independently managed instruments including a negotiated statutory water plan; access entitlements as secured, long term unit shares of the extractive pool; periodic allocation of water to each share and finally; a licence prescribing the obligations of water use.
- The three classes of the water plan are: Customary Management: with limited water extraction and co-management negotiated through a non-statutory water plan; Open: with a water sharing plan, some water extraction and a reserve pool and; Closed: with fully assigned environmental and extractive entitlements, no reserve pool, and opportunities to develop trading in entitlements and seasonal allocations. Entitlements assigned in this way indicate a potential role for water to promote and enable both water dependent enterprises and Indigenous autonomy.
- There are three basins that cross state jurisdictional boundaries in northern Australia. This is unlikely to be of major concern. Potential exists for a closer working partnership between the Commonwealth and water managers in the Northern Territory.

Title: Water Resources in Northern Australia
Author: R. Cresswell, C. Petheram, G. Harrington, H. Buettikofer, et al.
Year: 2009
Key points:

- Water is scarce. Water use is relatively low currently and increasing use will have consequences on the system. There are 55 smaller drainage basins, where activities in one drainage basin is predicted to have little impact on the others, however they may be connected by ground water tables which would result in a large impact of the water supply.
- The climate in Northern Australia is not favourable for the storage of surface water due to high wet season rainfall and high evaporation during dry season. Lake Argyle loses 25% of water in dry season.
- In the dry season, water would be required to be obtained from ground water, but they are rare and vary season to season in Northern Australia.
- Extensive hydrogeological examination should be conducted to prevent dry land and salinity.
- Harvesting water from smaller off-stream locations may be advantageous to extend water supplies in dry season. However, streams are predicted to reduce flow with climate change.

Title: Flow Characteristics of Rivers in Northern Australia: Implications for Development
Author: C. Petheram, T. A. McMahon, M. C. Peel
Year: 2008
Key points:

- Seasonal and interseasonal streamflow inconsistencies was relatively high and therefore storage of water to account for yearly discrepancies needs to be larger than similar Köppen zones.
- The flow of rivers is driven by wet season high rain volumes and results in little opportunity to harvest water for farm storage.
- Drought severity is high due to inconsistent yearly rainfall and drought contingency plans are essential

Title: Water Trading in the Katherine-Daly River Region: Issues and Scenarios
Author: A. Straton, S. Heckbert, A. Smajgl, J. Ward
Year: 2006
Key points:

- The contingent rule upon which allocation of groundwater to non-consumptive uses is decided states that at least 80% of annual recharge is allocated as water for non-consumptive use, and extraction for consumptive uses will not exceed the threshold equivalent to 20% of annual recharge.
- Growers expressed concern about the ability of water markets to protect environmental flows and also about the potential for uneven or unfair competition in a water market from large farms with different principles or goals to those of smaller or family-owned farms.
- Even with the current volume of water allocated to growers, extraction from the Tindall aquifer was simulated to overshoot the 20% threshold in a few dry years in the middle of the 22-year simulation. Granting all 41 pending applications results in extraction exceeding the 20% threshold in some months of every year of the simulation.
- The labour constraint impacts on profit with or without pumping restrictions. Even if as much water can be used as desired, growers still cannot find enough labour to get their crops harvested and to market.

- The downward influence of pumping restrictions on profit is offset by the revenues generated by sales in the water market.
- The amount of water traded, and the actual value of trading is quite low. The total volume purchased is less than 1% of the groundwater of the Tindall aquifer used for agriculture.
- The water market appears to impact negatively on the equity of distribution of profit amongst growers during several years early in the simulation. More growers choose to exit the industry after observing their profits with water trading as opposed to when there is no water trading.

9.2 Appendix B – Case Study Analysis

Note: The four case study proponents have not approved the content in their case study sections of this report as of 6 April 2020. Each proponent requested to review the content and approve prior to any publication of information. Once approved they also requested that any formal publication of them by the CRCNA and NT Government, only occur once they have been contacted and permission granted.

Executive Summary

This case study report provides input into the broader project report on the Northern Territory-focused research, consultation and analysis undertaken as part of a wider collaboration between the Cooperative Research Centre for Northern Australia (CRCNA) and the Northern Territory (NT) Government to support the development of new agricultural activity across northern Australia through de-risking, brokering and prioritising agricultural development opportunities.

To determine the case studies that would be progressed and undertaken as part of this project, NAJA Business Consulting Services (NAJA) undertook a research process to develop a master list of potential agricultural development opportunities in the Northern Territory. Ultimately, four detailed case studies were conducted:

Company	Project	Category
Tipperary Group of Companies - Tipperary, Litchfield and Douglas West stations	Cattle/Livestock Cotton - dryland and irrigated Mango & Lemons	Livestock intensification Broadacre cropping Horticulture
Kupang Agricultural Management – Flying Fox Station	Cattle/Livestock Cotton - dryland and irrigated	Livestock intensification Broadacre cropping
Humpty Doo Barramundi	Expansion of Barramundi Farm	Aquaculture
Central Agri Group - Rum Jungle Meat Exports	Batchelor meatworks reopening	Ag processing and logistics

Overview of case studies

Tipperary Group of Stations

The Group is comprised of Tipperary Station, Litchfield Station and Douglas West Station, and is focused on large-scale cattle backgrounding and breeding, cattle agistment, live export quarantine, fodder production, broadacre farming, horticulture, tourism and events and conservation.

In 2019 Tipperary Station undertook a 60-ha cotton trial: 10 ha rain-fed area and 50 ha irrigated area, which was harvested in June 2019. This was the first commercial cotton trial in 15 years harvested in the Northern Territory. There are hopes that this successful cotton trial could lead to a new industry in the NT with the region's plentiful rainfall, undeveloped land and climate attractive features.

Kupang Agricultural Management – Flying fox Station

Flying Fox Station is an 89,500 ha pastoral station focussed on primarily breeding and running cattle and when sold in October 2018 it had about 6,500 head of Brahman cattle, with cattle carrying capacity up to 8,000 head. The Flying Fox station was purchased with a large-scale irrigation concept development plan already drawn up (potential of 30,000 ha of alluvial black soil suited to pasture improvement and irrigation development). The previous owner had put substantial work into this concept including engaging highly experienced irrigation development individuals. It is Kupang Agricultural Management's desire to also further investigate this potential.

Humpty Doo Barramundi

Humpty Doo Barramundi is a Northern Territory owned and operated business. Over the last 27 years it has grown to rank now as Australia's largest saltwater barramundi producer. They are suppliers to Coles, Woolworths (Australia's largest supermarket / grocery chains) as well as Costco and Qantas for its Business Class passengers. Humpty Doo Barramundi is currently investing up to $60m in expanding its operations with $28.7m assistance from the Northern Australia Infrastructure Fund. The funding will go towards a three-stage project to expand its current facilities, introduce solar power generation, improve aquaculture practices and increase production. The project will achieve several firsts for the local aquaculture industry.

Central Agri Group - Rum Jungle Meat Exports

A family-owned company, Central Agri Group 's (CAG) established in Brunswick, Melbourne in 1991, as an independent boning facility serving the local market and now has abattoir facilities in Victoria, Western Australia and the Northern Territory. In 2018 CAG announced that they would be redeveloping the former Batchelor Abattoir in the NT, undertaking a number of facility upgrades. CAG completed the upgrades and officially opened for business in December 2019 under the banner of Rum Jungle Meat Exports, a subsidiary of the Central Agri Group. It is the first-time cattle have been processed at the facility for 16 years. Stock will be sourced from the Kimberley, Borroloola and Tennant Creek areas. The facility will slaughter cattle, buffalo and donkey to produce meat primarily for export to markets in Asia and abattoir wastes will be rendered to produce saleable tallow and meal products. The facility will slaughter and process up to 160 to 200 head/day when operating at full capacity. The first consignments of boxed beef from the abattoir will be exported to markets such as Japan, Vietnam and Singapore.

Key issues and findings from the case studies

Each of the case study proponents identified similar issues and impediments to agricultural development that were identified in the literature reviews and other stakeholder engagements. These issues and impediments relate mainly to the following areas:

- Land planning, tenure and non-pastoral use permits
- Regulatory requirements
- Approvals
- ILUAs/Native Title
- Logistics Infrastructure
- Information / Telecommunications infrastructure

While all the case study proponents understood, supported and acknowledged the importance of regulatory requirements and processes, especially biosecurity and the protection of Australia's clean green food reputation, nearly all reported that these processes and timeframes for approval need to be streamlined and the red/green tape and bureaucracy reduced. Most would like to see the approval timeframes of 90 days shortened to 30 days and clear guidelines, processes and methodologies put in place across departments providing regulatory approvals. It was also strongly argued by the case study proponents that regulation should be proportionate to risk and track record performance should reduce the burden placed on existing businesses.

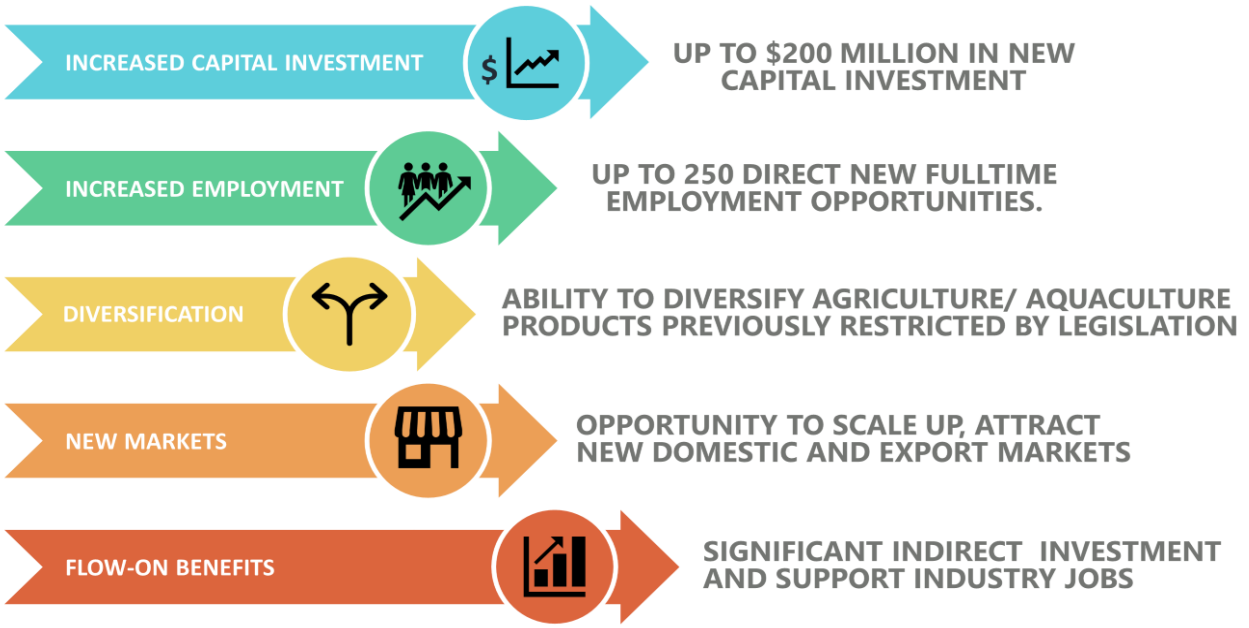
Case study proponents all stated there needs to be better understanding from Government that some of the existing approval processes impose an unjustified economic cost and burden on business, which ultimately impacts on the overall NT and Australian economies, through lost opportunities. The government also needs to embrace and support ongoing reform of the approval and regulatory requirements to ensure that businesses and the economy stay strong and competitive in the global market and economy.

Also, a suggestion came to the fore that there was a definite need for a culture change in regulatory agencies that support development proposals through the process. For agricultural development to thrive in the North Territory "government should or must have a can-do culture within and between departments that process permits and approvals" rather than what is perceived currently as more an adversarial role.

All case study proponents also clearly suggested that one of the key roles that the NT and Commonwealth governments can assist in de-risking and brokering agricultural development is through investment in improved infrastructure that assists the industry. This includes road, rail, ports, airports, power, telecommunications infrastructure and common user type of infrastructure such as cold storage and packaging facilities, or even a cotton gin for use by all growers.

Impact through de-risking, brokering and prioritising agricultural development opportunities

Alone the four case study proponents estimate that the potential impact of government de-risking and brokering agricultural development as suggested could deliver:



Extrapolating this data based on these four case studies being only 13 percent of the initial thirty one project developments identified, there is the potential that if each of these project developments had improved opportunities through government de-risking and brokering agricultural development as suggested, that the economic impact could be conservatively up to $1Bn in further capital investment and up to 1,500 direct new fulltime employment opportunities.

If this impact comes to fruition through the Commonwealth and NT Governments implementing the suggestions outlined by the case study proponents, the potential result will be a thriving agricultural and aquaculture industry in Northern Australia that provides strong economic returns, with increased employment opportunities, especially for the Indigenous population, private sector investment into new and expanding businesses, and new products and markets being established.

Case Study Selection

To determine the case studies that would be progressed and undertaken as part of the CRCNA - Prioritising, De-Risking and Brokering Agricultural Development in the Northern Territory project, NAJA Business Consulting Services (NAJA) undertook a research process to develop a master list of potential agricultural development opportunities in the Northern Territory.

As part of this process each of the projects were categorised into one of the following areas:

- Ag Processing & Logistics
- Aquaculture
- Biofuels
- Broadacre cropping
- Forestry
- Horticulture
- Livestock intensification
- Niche Products

The result was a master list containing 31 potential projects for assessment, with projects across all categories except Biofuels and Forestry.

Once the master list was formed, each project was then assessed using agreed evaluation criteria as follows:

- Scale of Investment dollars
- Scale of Land size
- Employment creation (number of jobs)
- Projected Economic impact/output
- Approval Readiness
- Market Readiness
- Project Status/Readiness
- Indigenous Engagement

Each of these criteria was weighted with points allocated so that when assessed a project would receive a prospectivity score out of 100. It was then determined that as part of this project that the three chosen case studies to progress under the project should come from different categories, regardless of whether the three highest scored projects all came from one category e.g. the chosen case studies shall be the three highest scored across three categories.

Master list of Projects for consideration located in the Northern Territory

The following Table 1 outlines the projects that were identified during the research and evaluation process as prospective opportunities for agricultural development in the Northern Territory. This list was distributed for feedback at the first workshop held in Darwin.

Table 1: Master list of Northern Territory Agricultural Development Opportunities

Company / Name	Proposal	Product/production system	Geographic Location area	Category
NT Airports	Darwin Airport cold storage and export hub	Freight and cold storage facility including vapour heat treatment (VHT) plant	Darwin	Ag processing and logistics
Australian Agricultural Company	AACo Abattoir	Abattoir / meat processing	South of Darwin	Ag processing and logistics
Central Agri Group	Batchelor meatworks	Cattle and buffalo processing	South of Darwin	Ag processing and logistics
Northern Cotton Growers Association	NT cotton gin	Cotton processing	Katherine	Ag processing and logistics
Seafarms	Project Seadragon Core Breeding Centre and Broodstock Maturation Centre	Breeding centres for the selection, development and generation of high-performing broodstock for the hatcheries	Bynoe Harbour, Darwin	Aquaculture
Seafarms	Project Seadragon Hatchery	Spawning and rearing tanks for producing disease-free post larval prawns to stock the grow-out facility	Gunn Point	Aquaculture
Seafarms	Project Seadragon Growout Facility	Land-based grow-out farms, water exchange and other infrastructure for growing and harvesting black tiger prawns	Legune Station	Aquaculture

Company / Name	Proposal	Product/production system	Geographic Location area	Category
N/A	N/A	Potential for aquaculture ponds	Darwin catchments	Aquaculture
Humpty Doo Barramundi	Barramundi	Expansion of barramundi farm	Humpty Doo	Aquaculture
NTDPIR; WADPIRD; DigsFish Services Pty Ltd; Yagbani Aboriginal Corporation; Anindilyakwa Land Council; Maxima Rock Oyster Company Pty Ltd; Athair Aquaculture Pty Ltd (Albany Shellfish Hatchery); Murujuga Aboriginal Corporation; Hexcyl Systems Pty Ltd; ZAPCO Aquaculture; SEAPA	Northern Australian Tropical Rock Oyster research and development project	The project includes three sub-projects addressing the different research needs identified. These are: Sub-Project 1 - Species Identification, Pathogen Screening and Translocation Risk assessment (NT); Sub-Project 2 - Securing commercial spat (juvenile) supply; Sub-Project 3 – Optimisation of grow-out methods and gear technology	Darwin, South Goulburn Island (Warruwi), Groote Eylandt (Alyangula)	Aquaculture
Tipperary Group of Companies	Cotton - dryland and irrigated.	Cotton and grains broadacre	Tipperary Station	Broadacre cropping
Kupang Agricultural Management	Flying Fox Station	Cotton and grains broadacre - flood irrigation	Flying Fox Station	Broadacre cropping
Clean Agriculture and International Tourism (CAIT)	Auvergne Station	Cotton and grains broadacre	Near WA Border	Broadacre cropping
Mt Keppler Station	100ha Rice at Mt Keppler Station (grown for fodder in paddies)	Irrigated cropping	SE of Adelaide River	Broadacre cropping
Kimberley Agricultural Investment	KAI - Kununurra: Goomig, Carlton Plain and other farming areas	Cotton and grains broadacre	Ord	Broadacre cropping
Cross Pacific Investments	Cropping anticipated at Manbulloo, Scott Creek and Sturt Downs stations	Cropping diversification on pastoral leases	Near Katherine	Broadacre cropping
Multiple	Current irrigation in Darwin area catchments	Mangoes, melons, Asian vegetables and other vegetables and minor crops	Finniss, Adelaide, Mary, Wildman rivers catchments	Horticulture
Tipperary Group of Companies	Citrus	3,500 Lemon trees	Tipperary Station	Horticulture

Company / Name	Proposal	Product/production system	Geographic Location area	Category
Nutrano Produce	Citrus and mangoes	344ha citrus and mangoes	Eumarella Station, Katherine	Horticulture
Cheeky Farm Mangoes	Mangoes	Mango plantation and packing shed	Lambells Lagoon	Horticulture
Pinata Farms	Mangoes	170,000 mango trees over 570ha at 3 locations in NT	Lambells Lagoon, Katherine, Mataranka	Horticulture
Manbulloo Mangoes	Mangoes	400ha / 65,000 mango trees in Katherine, plus 5 other farms in Qld	Katherine	Horticulture
Zona Sheppard - Thorny Fruit Company.	Tropical fruits / exotic fruits	Dragonfruit, durian (thorny fruit), langstats, rambutans	Grown in tropical areas; distributed in Sydney	Horticulture
	Dragonfruit	Horticultural cropping	Darwin Rural Area	Horticulture
CSIRO study	NAWRA Analysis - Darwin	Irrigated horticulture	Darwin catchments	Horticulture
PMG Agriculture	1200ha Watermelons	Irrigated horticulture	Ali Carung	Horticulture
CK Hutchinson Holdings (Hong-Kong based company) purchased from Kane Younghusband Nov 2018. Rombola Family Farms (NSW) have leased property.	1900ha Watermelons	Irrigated horticulture	Mataranka	Horticulture
NT Water	Coomalie Agriculture Project	10,000ha with 310GL storage	Adelaide River	Horticulture
Pine Creek Mangoes	Pine Creek Mangoes	100ha with 6,200 KP mangoes	Pine Creek	Horticulture
	Camels	Camel farming for milk	Darwin Rural Area	Livestock intensification
Eva Valley Meats	Pastoral station meat sold directly to consumer or retail outlets	Local meat - paddock to plate	Batchelor	Niche products

Evaluation Criteria, Weightings and Scoring for Projects

Each project that was identified in the Master list was evaluated against the eligibility criteria listed in Table 2 below.

Each Criteria was allocated a percentage weighting of points, which was then broken down to determine a score to a maximum of 100 points. Each project on the Master list was assessed against the criteria and scored to evaluate their prospectivity and impact merits against each other.

It should be noted that due to the limited details available on certain projects, the time scale to assess and select case studies, and the limited feedback received from the workshops, there remained a lot of unknowns. In these cases, if details were unknown it received a score of zero for that individual criteria. Scoring projects was purely subjective and based on information at hand.

Due to the above, many projects did not produce large scores but there were definitely enough projects within the master list to determine three projects in different categories that should progress to the case study component of this project.

Table 2: Evaluation Criteria, Weightings and Scoring

	Scale Investment $m	Scale Land size Ha	Employment Generation Number of jobs	Projected Economic Impact/Output $m	Approval Readiness	Market Readiness	Project Status/Readiness	Indigenous Engagement
Description	Small - up to $10m Medium - $10m to $100m Large - $100m plus	Small - up to 1000ha Medium – 1000ha to 10000ha Large – 10000ha plus	Small - up to 20 Medium - 20 to 100 Large - 100 plus	Small - up to $20m Medium - $20m to $100m Large - $100m plus	Finance Environmental Planning Land Biosecurity Health FIRB Employment Native Title Water	Existing New Established Supply Chain	Awaiting Finance Due to Commence In planning / approvals In Operation Potential Identified Proposed Under Construction	Employment Participation Plan ILUA
Weigh	10%	10%	20%	20%	10%	5%	10%	15%
Scoring	10 points Unknown – 0 points Small - up to $10m 1-3 points Medium - $10m to $100m 4-7 points Large - $100m plus 8-10 points	10 Points Unknown – 0 points Small - up to 1000ha 1-3 points Medium – 1000ha to 10,000ha 4-7 points Large – 10,000ha plus 8-10 points	20 Points Unknown – 0 points Small - up to 20 jobs 1-7 points Medium - 20 to 100 jobs 8-14 points Large - 100 plus jobs 15-20 points	20 Points Unknown – 0 points Small - up to $20m 1-7points Medium - $20m to $100m 8-14 points Large - $100m plus 15-20 points	10 points Unknown – 0 points Each approval area if approved receives 1 point	5 points score between 1-5 depending on status of market readiness considering the various areas listed Unknown – 0 points	10 points (Allocate points based on status groups) Unknown – 0 points Potential Identified, Proposed 1-2 points Awaiting Finance, In planning / approvals 3-6 points Under Construction 7-8 points Due to Commence 9 points In Operation 10 points	15 points (Allocate points based on level of engagement and outcomes expected for Aboriginal people from the project) Unknown – 0 points Low Engagement 0-2 points Medium Engagement 3-8 points High Engagement 9-15 points

Evaluation Assessment Results

After undertaking the evaluation assessment based on the criteria, weighting and scoring, there were three initial case studies across the categories of Ag Processing & Logistics, Aquaculture and Broadacre cropping that were recommended to progress to case study as per Table 3 below. It was also recommended that the other projects listed were kept in reserve as back-up case studies should they be required. Consideration was also given to include some of these reserve projects in the final report as mini case study summaries.

Table 3 – Evaluation Results Summary and Recommended Case Studies

Company / Name	Proposal	Geographic Location area	Category	Evaluation Score	Recommended Case Studies
NT Airports	Darwin Airport cold storage and export hub	Darwin	Ag processing and logistics	62	Reserve Back-up
Central Agri Group	**Batchelor meatworks**	**South of Darwin**	**Ag processing and logistics**	**70**	**Recommended & Agreed to participate**
Seafarms	**Project Seadragon Core Breeding Centre and Broodstock Maturation Centre**	**Bynoe Harbour, Darwin**	**Aquaculture**	**80**	**Recommended & declined to participate**
	Project Seadragon Hatchery	**Gunn Point**			
	Project Seadragon Growout Facility	**Legune Station**			
Humpty Doo Barramundi	**Barramundi**	**Humpty Doo**	**Aquaculture**	**60**	**Reserve Back-up, brought in & agreed to participate**
Tipperary Group of Companies	**Cotton - dryland and irrigated.**	**Tipperary Station**	**Broadacre cropping**	**51**	**Reserve Back-up, brought in & agreed to participate**
Kupang Agricultural Management	**Flying Fox Station**	**Flying Fox Station**	**Broadacre cropping**	**57**	**Recommended & Agreed to participate**
Manbulloo Mangoes	Mangoes	Katherine	Horticulture	28	Reserve Back-up

When each of these initial three case study proponents were contacted to seek their engagement to participate, Seafarms – Project Seadragon, declined to participate given their current status of financing and progressing their project to full commercialisation. Both the Central Agri Group and Kupang Agricultural Management agreed to participate in the case study process. A decision was then made to invite from the reserve back up projects both Humpty Doo Barramundi and the Tipperary Group of Stations. Both these companies agreed to participate, bringing the case studies to be include in this research project to four.

Tipperary Group of Stations Case Study

Background - Tipperary Group of Stations

The Group is comprised of Tipperary Station, Litchfield Station and Douglas West Station, and is focused on large-scale cattle backgrounding and breeding, cattle agistment, live export quarantine, fodder production, broadacre farming, horticulture, tourism and events and conservation.

Tipperary's owners recognise that the Group is at the forefront of the global agricultural boom occurring right now and that the underlying agricultural commodity fundamentals are undeniable.

Location

The Tipperary Group of Stations is located 200kms south west of Darwin and consists of the Tipperary, Litchfield and Douglas West stations, which are all prime agricultural holdings containing large tracts of productive and well-draining soils, vast areas of developed pastures, reliable access to water sources, extensive infrastructure and significant economies of scale.

Land areas of each station within the group are:

Tipperary East and West	209,842 ha
Litchfield	133,859 ha
Douglas West	42,300 ha
Total	386,001 ha

The group is located within close proximity of the Port of Darwin and the properties enjoy year-round access with sealed roads to farm gate (see map below). Tipperary also has a 2,200 metre sealed airstrip.

Ownership

Tipperary Group of Stations is owned and operated through a strategic partnership between the Booloomani Corporation and Branir Pty Ltd. Booloomani Corporation is comprised of a group of strategic investors with a clear appreciation for the strong potential of northern Australian agriculture. Branir Pty Ltd is owned by prominent barrister and businessman Allan Myers QC AC.

Investment and Employment

To date the Tipperary Group of operations have invested $150m into its operations and currently employ 50 people.

Current Operations

Cattle

Cattle breeding and backgrounding are the main enterprises at the Tipperary Group of Stations. The production system is centred on Brahman cattle, a tropical breed that is very well suited to north Australian conditions. With huge areas of recently developed pastures and access to the fertile Litchfield floodplain, the Group enjoys capacity to carry one of the Territory's largest cattle herds and is currently running 40,000 head Brahman Cattle for the live export trade. Current live export markets include Indonesia, Vietnam, Philippines and Malaysia. Its facilities include a live export quarantine facility (Registered premises) and a feedlot facility.

Tipperary Group of Stations is highly committed to Animal Welfare standards to ensure all animals in the Group's custody are treated humanely. All employees that work with animals are experienced in the humane handling of stock and are trained in accordance with company policies and procedures.

Farming

Fodder production is currently the major farming enterprise carried out at Tipperary Station. The Group produce premium quality Rhodes grass hay under centre-pivot irrigation, and dry-land jarrah grass hay on a large scale.

Fodder production crops

- Irrigated Hay – Oaten, Rhodes Grass
- Dry land Hay – Jarrah Grass
- Corn Silage production

The group is currently looking to develop new markets for cattle, fodder and other commodities. In particular, they have a strong interest in developing long term commercial relationships for the supply of its premium grade fodder.

Broadacre Farming

In 2019 the Tipperary Station undertook a 60 ha cotton trial, which was harvested in June 2019. With a 10 ha rain-fed area and 50 ha of irrigated area planted. This was the first commercial cotton trial in 15 years harvested in the Northern Territory.

There are hopes that this successful cotton trial could lead to a new industry in the NT with the region's plentiful rainfall, undeveloped land and climate attractive features.

The cotton variety is the same used in large-scale trials in the Ord region of Western Australia - genetically modified Bollgard three - which is resistant to the pests that partly caused the collapse of northern cotton in the 1970s.

Photo: Farm manager Bruce Connolly looks on proudly as the harvester moves through the crop. (ABC News: Kristy O'Brien)

The station said the crop relied on about 40 per cent less water than what it would have down south, despite a poor wet season. The farm had to spray the crop twice with insecticides but was largely using integrated pest management with a refuge crop of Pidgeon pea also planted to attract bugs to it, rather than the cotton. Importantly, farmers are looking at not just using the lint, but the leftover cotton seed as a high protein food for the Territory's significant cattle sector.

The trial has attracted strong interest from across the world as it is the first time it's been done in modern times. Ginning and grading were done in St George in Queensland.

The Station is also looking at Dryland Corn for broad acre farming.

Horticulture

The station is also home to 4000 thousand mango and 3000 lemon trees, and the Group is also exploring many more opportunities for cropping production.

Tourism

Tipperary also offers unique tourism experiences with Farmstays and hosting Corporate meetings.

School

Tipperary Station School is a small primary school which is part of the Top End Group School. At Tipperary Station School, students enjoy access to a comfortable classrooms and excellent sporting facilities such as a swimming pool, indoor and outdoor tennis courts, a basketball court and a large gym. The school is run by a dedicated Teaching Principal and a Teacher's Assistant. All students attending the school live on the station and at present all year levels are taught in the one classroom.

Findings

Interviews were held with both David Connolly – General Manager and Bruce Connolly – Farm and Cropping Manager (also President of the NT Cotton Growers Association) from Tipperary Group of Stations to understand the Group's operations, challenges and future for developing their business, including the recent commercial trial for cotton production.

Issues and Impediments to Development

Through these interviews, the following issues were identified as potential impediments to agriculture development:

Issue	Impediment
Land Tenure	Significant impediment - The ability to have the right land tenure for development to occur and its ability to secure finance and investment is critical. The current land tenure pathways and approval processes are cumbersome with lengthy time approvals that don't proactively encourage investment and development.
Water Licenses	Significant Impediment - While access to water has not been an issue for Tipperary for its current operations and development as its license and location to water sources more than meet demand, Tipperary believe that, in general, the process of securing water licenses and ensuring supply to meet the requirements for development is a significant impediment to agriculture development.
Planning Act Clearing Permits	Moderate impediment. Could be improved and streamlined with a clear processes, templates and methodology implemented.
Pastoral Lands Act Clearing Permits	Moderate impediment - Tipperary's experience in obtaining a vegetation clearing permits is that they are time consuming and need streamlining.
Environmental Approvals	Significant impediment – Methodology/guidelines for approval process do not match the reality of the approval process. Inconsistencies between NTEPA to Commonwealth Government EPBC approvals, also between various NT Government Departments. For example – For example, Tipperary were requested to undertake a full EPA environmental impact study for the black footed tree rat as part of proposed development, as the NT Government believed they were located on the Tipperary Group of stations. Tipperary followed the request, template and process, which found no evidence of the black footed tree rat on site, only to have this study not accepted by the NT Government with no contrary evidence provided by Government to refute Tipperary's results.
Non-pastoral use permits	Significant impediment - Every NT Government must have sign-off on applications, which is a long winded and timely process (90 days). Tipperary have been waiting 18 months for a non-pastoral use permit. No clear and consistent guidelines seem to be in place and continuing lists of questions come from NT Government Departments. Tipperary advise that no sooner do you answer the questions than you then receive a further list of questions.
ILUAs/Native Title	Significant impediment – Again time is a critical factor here and there needs to be a more streamlined process in place. Without improvement development on Aboriginal lands will continue to be slow, costly and potentially non-existent.
Information on soil suitability and water availability	Minor impediment – refer water licenses.
Agricultural Research	Moderate Impediment – Tipperary's experience with the NT Government's agricultural research is that it is outdated and does not assist with current trends in agricultural production. In some cases, Tipperary had more knowledge than the expert researchers. Needs to be improvements in the resourcing and collaboration with industry to enhance this research and knowledge to benefit all parties.
Logistics Infrastructure	Significant Impediment - The current road infrastructure severely impacts the supply chain to market and operations during the wet season with some roads not accessible. Needs to be an urgent assessment of the road infrastructure and a program implemented to deliver an all-weather road network.

Issue	Impediment
	Also review of the Darwin Port fees, Tipperary believe the current fees are too high and it is their preference to truck to southern ports. To create a competitive and sustainable industry that benefits all parties Darwin Port fees need to be reasonably priced. This will bring more volume through the port and in turn the Ports revenue will increase through economies of scale.
Information / Telecommunications infrastructure	Significant Impediment – Most agricultural developments now rely on technologies and internet-based systems, which make information and telecommunications infrastructure vitally important. There is a need to prioritise telecommunication across strategic agricultural areas to enable increased productivity and profitability, which would lead to greater investment.
Labour Supply	Minor Impediment – Tipperary have generally found access to new employees relatively easy and believe there is a steady supply of quality people looking for work.
Access to markets	Moderate Impediment – Tipperary advised that they have strong relationships with their overseas and domestic markets and through experience do not have problems with accessing into new markets. However, what they see as an impediment relates to the logistics infrastructure above and getting produce to these markets on time and schedule. Without the ability to ensure the supply chain logistics then market access can be a significant impediment.
Access to finance	Minor Impediment – As mentioned in land tenure area, finance and investors are available, but they require security and hence the right land tenure is important to enabling this access to finance.

Regulatory requirements and approvals

Points raised on the regulatory requirements and approvals for agricultural development by Tipperary during the case study interviews were:

- Tipperary's experience is that most approvals take significantly longer than 90 days especially when they are required to go through multiple government agencies (e.g. they have been waiting over 18 months for a non-pastoral use permit. Tipperary would like to see a more streamlined 30 day timeline by Government perhaps with a one-stop approach.
- Needs to be clear guidelines, processes and methodologies put in place across departments providing regulatory approvals. There seems to be inconsistent messaging and questioning from government departments. The departments need to be clear on what they require upfront and ask the right questions. Tipperary's experience is that they answer questions from departments, which they assume once answered, based on following the procedures and methodology provided, that they will then be assessed and either granted approval or not. However, they have generally just been given further lists of questions requiring significantly more time, costs and resources to answer, with no end in sight for the approval assessment. This also adds significant time to the approval processes as made in the above point.
- A culture change in regulatory agencies that support development proposals through the process is needed. Tipperary advise that they are not against regulatory processes and that they value the protections that they instil to the industry and sector, but there is a need to provide a proactive environment to enable projects to progress through the regulatory requirements. Tipperary stated there are some agencies that are very supportive and pro-active, while others are more adversarial and more about blocking development. For agricultural development to thrive in the North Territory "government should or must have a can-do culture within and between departments that process permits and approvals.".

- Another example provided by Tipperary was the ad hoc rules such as the 80:20 rule used as law when it suits bureaucrats, even though it is not a legislative rule or law, when looking at water allocations and licenses. Again, there needs to be clear guidelines and policy around water availability, allocations and licenses, which government should apply and adhere to rather than change the rules and views as it sits depending on the development.

Suggestions for improvements

When presented with a number of options that the NT or Commonwealth Government could do to better prioritise, de-risk and broker agriculture and aquaculture development in the NT, Tipperary based on learnings from its own project experiences suggested the following:

Suggestion	Response
Provide more information on soils and water availability	Government could do this.
Provide more research on viable crops	Government should do this.
Have a can-do culture within and between departments that process permits and approvals	Government must do this
Support biosecurity risk management	Government must do this
Assist producers gain access to domestic and/or export markets	Government must do this
Assist producers secure labour (e.g. through skilled migrant or local employee programs)	Government should do this
Invest in improved infrastructure - road, rail, ports	Government must do this
Invest in improved infrastructure - information and communications technology	Government must do this
Invest in improved infrastructure - processing facilities / factories	Government should do this
Co-invest (with the private sector) in infrastructure	Government should do this

Tipperary highlighted that for successful broadacre farming of cotton in the NT it is essential to establish a cotton gin. This is an area that government should look at partnering or facilitating with the private sector to provide the infrastructure so that multiple broad acre farming organisations can utilise it based on a fee. This type of investment or facilitation by government could be the key to establishing a viable cotton industry in the NT, following the success of the recent trial by Tipperary and keen interest from other pastoral stations and farmers looking at cotton as a cropping option.

Tipperary also highlighted that in most cases the pastoral station operators, growers and farmers generally are not looking for financial handouts from government. What is more important is that all relevant approvals, permits are processed and delivered in reasonable times and then for government to step back and let the industry get on with the development. It was suggested that "government pave the way then get out of the way".

Potential Impact of de-risking, brokering agricultural development by Government

Tipperary advised that if the NT and Commonwealth Governments were to implement the suggestions to prioritise, de-risking and broker agriculture development it could have the following impact for its operations:

- Current land holdings would reach their production potential, with a possible 50% productivity increase;
- Up to a further $100m in investment possible;
- Up to a further 30-40 new staff employed (including significant more indigenous employment numbers);
- Significant flow on effects in terms of investment and jobs for the local support industries, communities and economy

Key insights and lessons learnt

- Significant issues and impediments to agricultural development identified in the following areas:
  - Land Tenure
  - Water Licenses
  - Environmental approvals
  - Non-pastoral use permits
  - ILUAs/Native Title
  - Logistics Infrastructure
  - Information / Telecommunications infrastructure
- Regulatory processes and approvals are understood and supported to protect the industry, however:
  - Current approval processes and timeframes are prohibitive to development and need to be streamlined to proactively encourage development.
  - There needs to be clear policy guidelines, processes and methodologies put in place across departments providing regulatory approvals.
  - Requires a culture change in regulatory agencies that proactively support development proposals through the process rather than taking on an adversarial role.
- When presented with a number of options that the NT or Commonwealth Government could do, Tipperary suggested the following must be done:
  - Have a can-do culture within and between departments that process permits and approvals
  - Support biosecurity risk management
  - Assist producers gain access to domestic and/or export markets
  - Invest in improved infrastructure - road, rail, ports
  - Invest in improved infrastructure - information and communications technology
- In most cases industry, generally are not looking for financial handouts from government. What is more important is that all relevant approvals, permits are processed and delivered in reasonable times and then for government to step back and let the industry proceed with the development
- Potential impact of government de-risking and brokering agricultural development as suggested could deliver:
  - $100m in investment
  - 30-40 new fulltime employment opportunities
  - Significant flow-on benefits in terms of further investment and jobs in the support industries.

Kupang Agricultural Management, Flying Fox Station Case Study

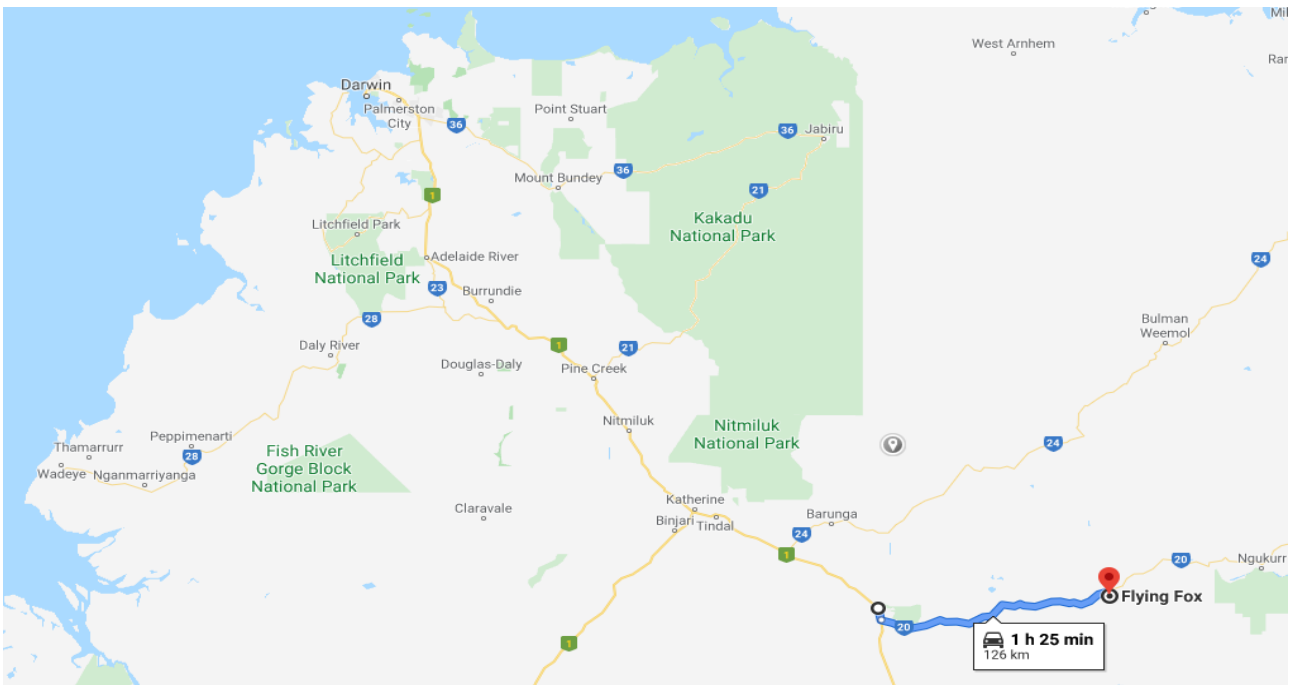
Background - Kupang Agricultural Management - Flying Fox Station

Flying Fox Station is an 89,500 ha pastoral station focussed on primarily breeding and running cattle and when sold in October 2018 it had about 6,500 head of Brahman cattle with cattle carrying capacity up to 8,000 head. The station also offers accommodation facilities with a 32 room accommodation village and powered caravan site with commercial kitchen that operates through a non-pastoral use permit registered by the Northern Territory Government.

The Flying Fox station was purchased with a large-scale irrigation concept development plan already drawn up (potential of 30,000 ha of alluvial black soil suited to pasture improvement and irrigation development). The previous owner had put substantial work into this concept including engaging highly experienced irrigation development individuals. It is Kupang Agricultural Management's desire to further investigate this potential.

Location

The 89,500 ha Flying Fox Station sits on the Roper River, 540 km south-east of Darwin, and approximately 100 km east of Mataranka. Bitumen access to the station is via the Stuart and Roper Highways allowing reliable market access during wet season. The Station has river frontage, numerous perennial systems flowing through the property and it has highly reliable average annual rainfall of approximately 970 mm, ensuring consistent grazing performance.



Ownership

Flying Fox Station was bought in October 2018 by Kupang Agricultural Management Pty Ltd. The company is a registered Australian company based in New South Wales and a subsidiary of its parent company Kupang Agricultural BV Limited.

Investment and Employment

Initial purchase of the Flying Fox Station was $8.9m in October 2018.

Current employment

- Station Manager
- 2 x station hands
- Extra staff brought in as needed
- Accommodation Manager
- 2x accommodation workers

Current Operations

Cattle

Cattle breeding and operations for live export trade is the main operation at Flying Fox Station. The production system is centred on Brahman cattle, a tropical breed that is very well suited to north Australian conditions. Kupang Agricultural Management are looking to improve the herd and lift cattle numbers to the full carrying capacity of 8000 head from the existing 6,500 when purchased.

They have initiated an infrastructure development plan constructing new fences, drilling 6 new bores and installing associated tanks and troughs. They have also submitted an application to clear and develop 190 ha for cattle pasture.

Tourism

Flying Fox Station has a non-pastoral diversification permit to operate its 32-room accommodation village and powered caravan site with commercial kitchen. This provides an alternative source of revenue for Kupang Agricultural Management and provides opportunities for further eco-based tourism developments. The accommodation is open for hire to the general public, contractors, Northern Territory Government, Shire Council and any business operating in the area.

Broad Acre Farming

While not a current operation, the Flying Fox station was purchased with a large-scale irrigation concept development plan already drawn up (potential of 30,000 ha of alluvial black soil suited to pasture improvement and irrigation development). The previous owner had put substantial work into this concept including engaging highly experienced irrigation development individuals. They had undertaken a range of development assessments on that property to trap overland water, not the rivers, just the normal flow of rivers across the land, and flood irrigate the black soil. It's Kupang Agricultural Management's desire to also further investigate this potential with the possibility of commercial cotton production.

Initially Kupang Agricultural Management is looking to sow improved pastures, fodder to allow the property to run more cattle. "At this stage [development] will be slow and steady. There are areas cleared already and there are assessments being done on the soil and what type of pasture could be grown.

Findings

Interviews were held with David Armstrong – Managing Director Terrabos Consulting, to understand the Flying Fox Station's operations, challenges and future for developing Kupang Agricultural Management's business. David is contracted to Kupang Agricultural Management to assist in the business management operations of Flying Fox Station.

Issues and Impediments to Development

Kupang Agricultural Management advised that a major issue in the table below is that all the issues listed are impediment factors and they impact on each other, however, there is no clear path through them all.

A large percentage of what was listed are controlled by completely different organisations with no link to work together across a project. There are also large costs in working through these areas with no given timeframe to complete the work requested. Companies are also required to work under both Commonwealth and Territory Acts and this can duplicate the work and the cost involved.

Further to this comment the following specific areas were also identified as impediments to agriculture development:

Issue	Impediment
Land Tenure	Significant impediment – Flying Fox Station is a pastoral lease therefore the only legal business allowed is the grazing of cattle. This is the starting point. A form of freehold needs to be investigated taking into consideration native title rights for non-pastoral diversification development. The ability to have the right land tenure for development to occur and its ability to secure finance and investment is critical.
Water Licenses	Significant Impediment - Kupang Agricultural Development has not got this far, however, they have been advised substantial hydrology information is required before this could be considered. This would include long term baseline studies of the water systems in the proposed area. The timeframe of how long it would take to complete this work is vague.
Planning Act Clearing Permits	Moderate impediment - The regulations for clearing on pastoral land are set up for small scale pasture development for cattle production. The regulations do not consider larger scale agricultural developments. Projects need to be considered on a case by case bases and not one size fits all.
Pastoral Lands Act Clearing Permits	Moderate impediment - To apply and clear a small area of land for pasture development there is a process to follow and it's not too onerous. However, due to the information required few pastoralists have the time and ability to undertake this process themselves. Kupang Agricultural Development engaged an external consultant with expertise in pastoral land clearing applications, but this becomes a cost burden to most businesses.
Environmental Approvals	Significant impediment – Duplication of approval processes and costs through inconsistencies between NTEPA to Commonwealth Government EPBC approvals, also between various NT Government Departments as mentioned in opening comments.
Non-pastoral use permits	Significant impediment – Flying Fox Station holds a NPUP for the accommodation village. This was in place at the time of purchase. However, to allow pastoral lease holders the ability to easily develop their station a form of freehold needs to be investigated taking into account native title holders. Freehold would allow pastoralist the ability to develop the land without a NPUP into any business they deem viable. This development would still be governed by applicable regulations such as environmental and would still allow other land uses such as mining. The government would not derive a lease payment but could impose a rates system. Although an NT pastoral lease is a very secure tenure it only allows grazing and the NPUP system is more red tape. Freehold is a stronger form of tenure and would be more appealing to investors. To increase viability and improve the long-term sustainability of pastoral lease diversification in business is needed.
ILUAs/Native Title	Significant impediment – Kupang Agricultural Development has not gone this far yet in is proposed development opportunities, however, they know it will take time and considerable cost. No timeline for completing this is ever given so it could take anywhere up to a 2-year period. There is also no indication of what royalties if any would need to be paid.
Information on soil suitability and water availability	Minor impediment – The NT Government have offered available information on soils to Kupang Agricultural Development in relation to its potential development, however the information is limited and will more than likely require further investigations, time and costs, which have an impact on development.
Agricultural Research	Moderate Impediment –Refer to above section on soil and water suitability.
Logistics Infrastructure	Significant Impediment – The location of Flying Fox Station does have all weather road access in place. However, there is still a need for improved road, rail and ports infrastructure that will assist the industry to develop and grow.
Information / Telecommunications infrastructure	Significant Impediment – Example - the NBN fibre optic cable runs passed Flying Fox Station within 10 m of buildings and 70 m of the office/ homestead, however, they are not allowed to hook into it. At its cost Flying Fox has installed mobile phone boosters to receive very basic service from a local aboriginal community.
Labour Supply	Minor Impediment – Flying Fox Station have generally found access to additional staff when needed and believe there is a steady supply of quality people looking for work.

Issue	Impediment
Access to markets	Moderate Impediment – Establishing markets is generally not an issue but ensuring infrastructure and logistics to deliver into these markets is more a key issue. Without the ability to ensure the supply chain logistics then market access can be a significant impediment.
Access to finance	Minor Impediment – As mentioned in land tenure area, finance and investors are available, but they require security and hence the right land tenure is important to enabling this access to finance.

Regulatory requirements and approvals

Discussions on the regulatory requirements and approvals for agricultural development was also had with Kupang Agricultural Management during the case study interviews. The key points and findings regarding their experience in these processes were:

- In relation to Government having a can-do culture within and between departments that process permits and approvals, they understand that Government departments and individuals are bound by the legislation which they work under therefore the individuals are not the problem. There are many different legislative hurdles to work through, which means many different organisations (NTG, land councils, AAPA, local shires councils etc) different departments within these organisations and therefore different people. For an investor with the financial resources to take on the risk of developing a greenfield agricultural operation, the red/green tape needs to have a clear pathway through. One individual within the NT Government should be allocated to a project to open doors and lead investors/developers through the required process.
- Large scale irrigation development has not been undertaken in the NT and it appears the NT Government does not have the capacity to deal with it and the legislation/regulation are not in place. The NT Government are dealing with legislation/regulation they have in front of them and are playing catch up. The NT is attractive due to the available land and water however major investors now look global and will not wait for government to catch up with legislation.

Suggestions for improvements

When presented with a number of options that the NT or Commonwealth Government could do to better prioritise, de-risk and broker agriculture and aquaculture development in the NT, Kupang Agricultural Management own project experiences suggested the following:

Suggestion	Response
Provide more information on soils and water availability	Government should do this.
Provide more research on viable crops	Government is doing this okay.
Have a can-do culture within and between departments that process permits and approvals	Government must do this
Support biosecurity risk management	Government must do this
Assist producers gain access to domestic and/or export markets	Government could do this
Assist producers secure labour (e.g. through skilled migrant or local employee programs)	Government could do this
Invest in improved infrastructure - road, rail, ports	Government must do this
Invest in improved infrastructure - information and communications technology	Government must do this
Invest in improved infrastructure - processing facilities / factories	Government could do this
Co-invest (with the private sector) in infrastructure	Government should do this

Further to the above suggestions, Kupang Agricultural Management highlighted the following comments:

- In relation to the provision of more information on soils and water availability, they have been offered available information on soils, however it is limited.
- Kupang Agricultural Management believe there has been appropriate research into viable crops in particular cotton. Flying Fox Station has been offered the opportunity to participate in a crop trial of 10 ha which is great. However, they believe that Government need to move the industry forward into production and not waste time on further 10 ha trial plots.
- While they believe that government must improve investment in key infrastructure such as roads, rail, ports, airports and telecommunications, it generally is not required to invest in improving infrastructure such as processing facilities/factories etc. While not discounting this type of investment, preference would be for the government to ensure streamlined approvals processes and then the private investment will follow in this area.
- Similarly, while it would be welcomed, government does not necessarily need to co-invest with the private sector in infrastructure. If it is a profit driven investment by focussing on streamlining the approvals process the private investment will come.
- However, any government investment to build an agricultural industry would be very welcomed.

Potential Impact of de-risking, brokering agricultural development by Government

Kupang Agricultural Management Tipperary advised that if the NT and Commonwealth Governments were to implement the suggestions to prioritise, de-risking and broker agriculture development it could have the following impact for its operations:

- Increased investment - tens of millions
- Increased numbers of employment have not been calculated however it would be substantial plus the flow on employment and the numbers during development.
- Currently Flying Fox Station is focused on cattle production for the live export market. This is a one-dimensional business with no viable outlet for cattle apart from the Live export trade. Agricultural development will diversify the business and will improve the viability of the station.
- Stockfeed by-products from a broad acre cropping program will increase the viability of the cattle business and could potentially open up different breeds and markets.
- Agricultural development is essential now to mitigate the threat of a shutdown of the Live export industry.

Key insights and lessons learnt

❖ Significant issues and impediments to agricultural development identified in the following areas:
  - Land Tenure
  - Water Licenses
  - Environmental approvals
  - Non-pastoral use permits
  - ILUAs/Native Title
  - Logistics Infrastructure
  - Information / Telecommunications infrastructure

- Regulatory processes and approvals are understood and supported to protect the industry, however:
    - red/green tape needs to have a clear pathway through. One individual within the NT Government should be allocated to a project to open doors and lead investors/developers through the required process.
    - Large scale irrigation development has not been undertaken in the NT and it appears the NT Government does not have the capacity to deal with it and the legislation/regulation are not in place to support it. NT Government is playing catch-up and investors will not wait and will move to other more lucrative opportunities in the global market.
- When presented with a number of options that the NT or Commonwealth Government could do to better prioritise, de-risk and broker agriculture and aquaculture development in the NT, Kupang Agricultural Management suggested the following must be done:
    - Have a can-do culture within and between departments that process permits and approvals
    - Support biosecurity risk management
    - Invest in improved infrastructure - road, rail, ports
    - Invest in improved infrastructure - information and communications technology

- In most cases industry, e.g. the pastoral station operators, growers and farmers, generally are not looking for financial handouts from government. What is more important is that all relevant approvals, permits are processed and delivered in reasonable times and then for government to step back and let the industry proceed with the development. This is highlighted by Kupang Agricultural Management's comments regarding red/green tape which needs to have a clear pathway through. As suggested one way for this is to have one individual/department within the NT Government allocated to a project to open doors and lead investors/developers through the required process.
- Potential impact of government de-risking and brokering agricultural development as suggested could deliver for Kupang Agriculture Management the following:
    - Increased investment - tens of millions
    - Increased numbers of employment have not been calculated however it would be substantial plus the flow on employment and the numbers during development.
    - Could potentially open up different cattle breeds

Humpty Doo Barramundi Case Study

Background – Humpty Doo Barramundi

Humpty Doo Barramundi is a Northern Territory owned and operated business. Over the last 27 years it has grown to rank now as Australia's largest saltwater barramundi producer. They are suppliers to Coles, Woolworths (Australia's largest supermarket / grocery chains) as well as Costco and Qantas for its Business Class passengers.

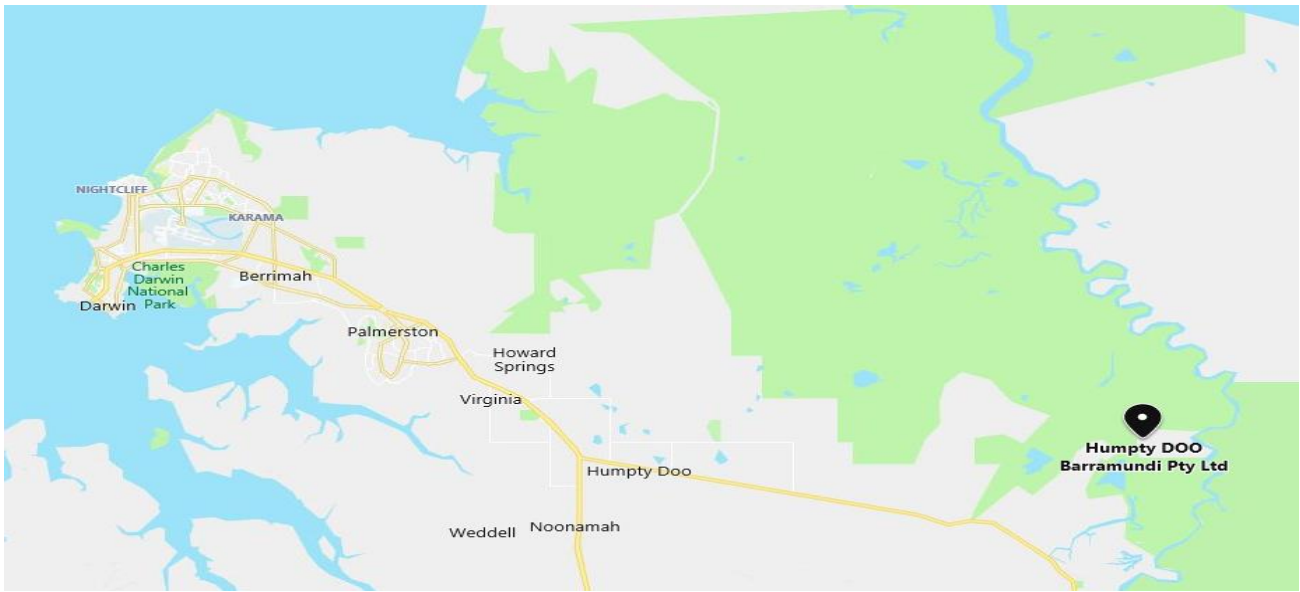
Since its inception 27 years ago Humpty Doo Barramundi has invested in itself through relentless learning and innovation as well as ongoing physical development of new ponds, new buildings and new harvesting equipment. From the earliest days starting with little money, no land , no knowledge but a strong vision of what might be, Humpty Doo Barramundi worked with recycled equipment and building materials, assisted by volunteer labourers, to develop Humpty Doo Barramundi as the professional and dynamic organisation it is today.

As a pioneer, Humpty Doo Barramundi has made significant investment into research and development and trial and error farming in untried territory. Their commitment to continuous improvement lead to innovative solutions, such as the world first "intelligent and responsive" computer-controlled barramundi feeding system through the Industry Cooperative Innovation Program. Investment into the early stages of a barramundi's lifecycle saw the development of the most technologically advanced barramundi fingerling production nursery in Australia, with higher success rates and healthier fish than ever before.

This successful aquaculture business has succeeded and grown while others have not. The owners' relentless determination, patience, flexibility, readiness to innovate and willingness to continue investing in themselves in the long term has been the foundation of their success.

Location

The location of the farm is remote, ensuring biosecurity risks are low. Based on the Adelaide River floodplain, it has reliable access to clean saltwater for its production. Humpty Doo Barramundi have a track record as good environmental managers, recycling and carefully managing wastewater discharge. The business is within an hour's drive of Darwin, providing staff with good access to supplies and services. Proximity to the Port of Darwin is an important consideration for possible future expansion and supply into Asia.



Ownership

The aquaculture farm is owned and operated by the Richards family, a 5th generation Territory family. The family is passionate about providing beautiful Australian food and jobs in the Territory and has long supported the Australian seafood and aquaculture industries locally and nationally for more than 27 years.

Investment and Employment

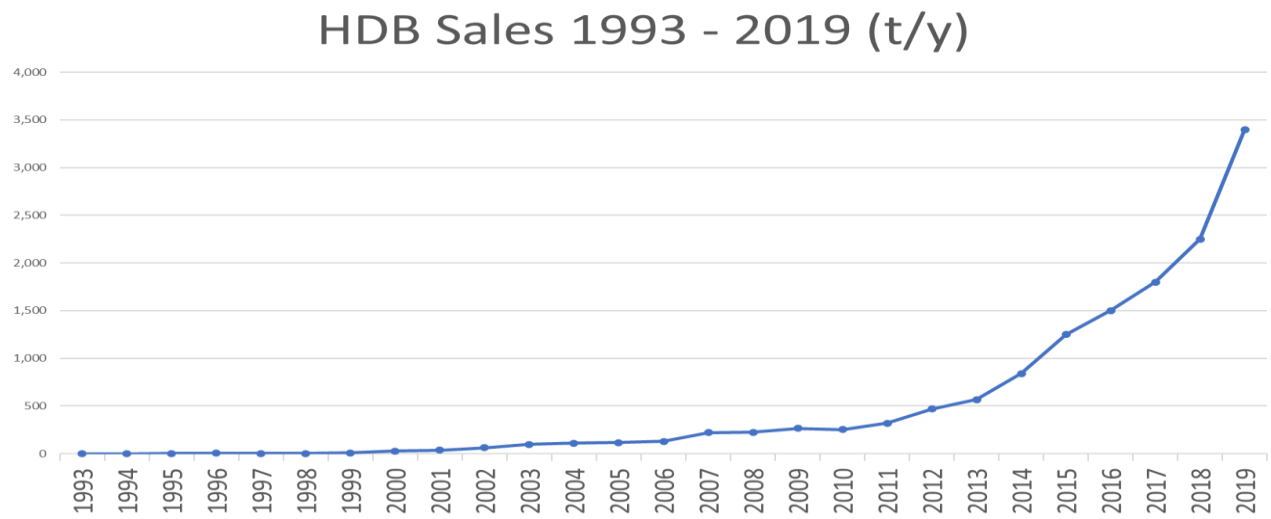
Humpty Doo Barramundi is currently investing up to $60m in expanding its operations with $28.7m assistance from the Northern Australia Infrastructure Fund.

Humpty Doo Barramundi currently employs over 50 staff to operate the farm, with a further estimated 150 people in supporting industries such as freight, trades and heavy machinery.

Current Operations

Humpty Doo Barramundi has invested heavily in developing a premium saltwater barramundi business that contributes $10 million annually to the Northern Territory economy.

Bordered by mangroves and the tidal Adelaide river, the barramundi farm has a perfect environment for growing saltwater barramundi. Humpty Doo Barramundi's distinctive silver barramundi is the result of its ideal growing environment, continuous research and work the company had done with its customers for more than 20 years. From its humble beginnings of a 300 kg annual harvest, the business has grown to become one of the largest producers of saltwater barramundi in Australia with nearly 3,500 tonnes in 2019. The company has grown consistently at a high rate of approximately 30 percent per annum over 27 years.



Hand sorting has given way to a state-of-the-art fish sorting and packing facility with custom-designed chiller room. The company's harvest techniques align with its quality assurance models to ensure premium quality fish are distributed Australia wide in the best condition.

By 2030, Humpty Doo Barramundi plans to have a farm gate value of the existing business of $200m per year in fish production, which is equivalent to one third the size of the existing salmon industry in Tasmania, producing approximately 17,000 tonnes of barramundi a year. As part of this growth the company is currently undertaking a major development and expansion program that started in 2018.

NAIF project development and expansion

On 16 May 2018, Minister for Resources and Northern Australia, the Hon Matt Canavan announced Humpty Doo Barramundi as the first Northern Territory recipient of a Northern Australia Infrastructure Fund (NAIF) loan.

The NAIF loan is for $28.7m to be provided over five years from mid-2018 to 2022, which Humpty Doo Barramundi will match with funding from external sources with their own $28.9m investment. The funding will go towards a three-stage project to expand its current facilities, introduce solar power generation, improve aquaculture practices and increase production. The project will achieve several firsts for the local aquaculture industry.

The three-stage project supported by the NAIF loan will:

- expand the Australian grown barramundi aquaculture industry, helping to make Australia self-sufficient in barramundi supply and reduce the need to import barramundi and the associated biosecurity risks into Australia – currently, around 60 per cent of 'barramundi' consumed in Australia is imported
- enable Humpty Doo Barramundi to create skills training and employment opportunities for Indigenous Australians and enterprises in line with its Indigenous Engagement Strategy
- provide the opportunity for Australian-grown barramundi to be recognised as Australia's premium white fish
- enable the Northern Territory to become the main supplier of 100 per cent Australian-grown barramundi
- improve Humpty Doo Barramundi's already impressive sustainability credentials with the move to daytime carbon neutral operations by developing a four-megawatt solar farm.

The assistance through the NAIF loan has also enabled Humpty Doo Barramundi to remain a family-owned farm, without the need for private equity or foreign investment.

The first stage of the project totalling $14.4m is co-funded between NAIF and the ANZ bank and will move the farm towards becoming carbon neutral, while enhancing Humpty Doo Barramundi's position as a leader in sustainable Australian aquaculture. This first stage of the project is currently underway and includes:

- building a solar generation facility to initially generate two megawatts of electricity to reduce reliance on natural gas generated electricity
- developing a specialised barramundi nursery to reduce bird predation and grow smaller farm-ready fish for other aquaculture farms for the first time in the Territory
- introduce the Territory's first automatic feed storage and distribution facility to protect feed from feral animals based on internationally recognised aquaculture technology.
- Ice making facility for product quality.

When completed, this development and expansion will allow the company to meet its 2030 goal of ramping production up to being a $200m a year facility in barramundi (equivalent to 17,000 tonnes a year). This proposed growth rate is seen as very achievable given the previous decades growth in production.

It has already started the 2020 and 2021 production – with barramundi in the water and the 2022/23 production having its infrastructure approximately 90 percent complete. Humpty Doo Barramundi also has a market development program underway.

Findings

Interviews were held with Bob Richards – Managing Director from Humpty Doo Barramundi to understand the operations, challenges and future for developing their business, including the current expansion for which they have received Northern Australia Investment Fund (NAIF) assistance.

Issues and Impediments to Development

Through these interviews, the following issues were identified as potential impediments to agriculture development:

Issue	Impediment
Land Tenure	Not Applicable – Humpty Doo Barramundi owns its land and the current and future development is on the existing farm/with established land use in place and proven production systems.
Water Licenses	Minor Impediment – Has established services including water in place
Planning Act Clearing Permits	Moderate Impediment – Planning approvals need to be transparent, streamlined and timely. Not onerous or an obstacle to development, especially on small start-ups or well-respected established businesses with a good track record in the aquaculture industry.
Pastoral Lands Act Clearing Permits	Not applicable
Environmental Approvals	Significant Impediment – should be proportional to risk and if have a good track record then should not be so onerous, with additional costs involved. Humpty Doo Barramundi have a successful track record of responsible development, with a commitment to social outcomes as well as commercial outcomes, including protecting the environment.

Issue	Impediment
Non-pastoral use permits	Not applicable
ILUAs/Native Title	Not applicable
Information on soil suitability and water availability	Not applicable
Agricultural Research	Moderate Impediment – aquaculture research requirements are different for emerging and consolidating industries. Government needs to be careful on how it undertakes or funds R&D and how this is provided. • For emerging industry, R&D and extension enable nascent industry to establish and build the critical mass required to develop markets, services • in a consolidating industry, R&D is often targeting proprietary information. • subsidising new entrants is undermining established industry (which is typically local, loyal, knowledgeable and committed) • Whilst "new entrants" usually fail and sometimes leave usable legacy, they usually set back the viable industry at public expense.
Logistics Infrastructure	Moderate Impediment – Humpty Doo Barramundi is located on the main highway an hour from Darwin and has sealed roads that allow it to transport its produce. However, it recognises that logistics infrastructure is crucial to ensure delivery of its produce.
Information / Telecommunications infrastructure	Significant Impediment – Access to quality information and telecommunications is essential in the current global market to ensure businesses are competitive and keeping up with developments.
Labour Supply/Skills	Minor Impediment (Labour supply) – Humpty Doo Barramundi is not troubled by labour supply with easy access to local staff. Significant Impediment (Skills) - Recent changes to the work visa requirements by Commonwealth Government prevent access to recruit overseas specialist aquaculture staff, that are not available in Australia or NT. This impacts Humpty Doo Barramundi's ability to keep up with the latest technology and methods in aquaculture development.
Access to markets	Minor Impediment – Humpty Doo Barramundi has well established markets and supply chains in place and has commenced a new marketing development program.
Access to finance	Minor Impediment – Company was the first successful business in NT to receive loan funding through the NAIF. It also has secured funding through the ANZ Bank for its first stage of development.

Regulatory requirements and approvals

Discussions on the regulatory requirements and approvals for aquaculture development was also had with Humpty Doo Barramundi during the case study interviews. The key points and findings regarding their experience in these processes were:

- Humpty Doo Barramundi advocates that regulation should be proportional to risk, specifically:
    - Government needs to minimise obstacles to small start-ups in new industries
        - Their size of operation generally limits the scale of risk they pose.
        - Track performance and adjust regulation according to risk/ impact.
    - Reward large operations that demonstrate good practice by reducing regulation.
- Ease visa requirements to enable recruitment of staff with essential and world leading specialist aquaculture skills.
    - A small proportion of specialised skills is essential in a dynamic modern aquaculture enterprise
    - Without these specialist skills, the aquaculture industry is constrained to outdated technologies and will be uncompetitive in the global market

- The education system is not currently equipped to provide the required skilled and experienced staff that the aquaculture industry need.
- Many young Australians are also not interested in working in remote areas or Northern Australia.
- Recruitment of specialist overseas staff enables rapid adoption of world best technology and transfer of skills to local enterprises and its employees.

- Humpty Doo Barramundi also has some reservations about developing "aquaculture development zones or precincts. Based on observing multiple attempts by government in stimulating agriculture in the NT by subsidising establishment of farms e.g. Humpty Doo Rice Project, Upper Adelaide River Farms, Agricultural Development and Marketing Authority Scheme, which have not been overly successful.

Suggestions for improvements

When presented with a number of options that the NT or Commonwealth Government could do to better prioritise, de-risk and broker agriculture and aquaculture development in the NT, Humpty Doo Barramundi based on learnings from its own project experiences suggested the following:

Suggestion	Response
Provide more information on soils and water availability	Government could do this
Provide more research on viable crops, aquaculture	Government could do this
Have a can-do culture within and between departments that process permits and approvals	Government should do this
Support biosecurity risk management	Government must do this
Assist producers gain access to domestic and/or export markets	Government should do this
Assist producers secure labour (e.g. through skilled migrant or local employee programs)	Government must do this
Invest in improved infrastructure - road, rail, ports	Government should do this
Invest in improved infrastructure - information and communications technology	Government should do this
Co-invest (with the private sector) in infrastructure	Government could do this

Bolster Biosecurity

Biosecurity remains one of the biggest areas of concern and threats for Humpty Doo Barramundi's operations. The current risk of contamination is high and there would be significant consequences for Northern Australia barramundi producers if the Commonwealth or NT Government do not act and bolster its biosecurity regulations for the industry. In regard to this threat, Humpty Do Barramundi would like the Commonwealth and NT governments to:

- Agree with the need to bolster biosecurity, especially in relation to importation of high risk seafood products, including bait from SE Asia and partially processed barramundi products, i.e. those likely to include bone, skin or viscera that is likely to end up in a crab pot or a berley basket. Need to ban those products from entering Australia
- Propose protections be put in place equivalent to that offered to the Tasmanian salmon industry e.g. prohibit importation of high-risk material immediately
- Need to upgrade border security stringency
- Consider independent audit of border protection with primary industry representation

Market Differentiation

Humpty Doo Barramundi would also like the governments to look at establishing market differentiation measures, similar to those in other countries e.g. France with its restrictions on the use of the word champagne. Restrictions could be put in place on the name barramundi to only Australian grown fish. This would require amendments to the foreign naming convention rules.

Government support in terms of Country of Origin labelling to apply to fish used in the food service industry should also be implemented, as well as incorporating aquaculture requirements into regional planning/development.

Address Specialist Skills Shortage

Assistance with reducing the visa requirements to allow access to world class skills and technology is another area that would assist in the development of the aquaculture industry in Australia and the Northern Territory. As mentioned previously there is an opportunity to learn from the best in the world and build from their experience if restrictions are lifted on the aquaculture industry being able to recruit and bring in overseas aquaculture specialists that are not available in Australia.

Support development of Indigenous Aquaculture business operations

Humpty Doo Barramundi believe the development of aquaculture industry through support towards indigenous aquaculture business operations is an area with the potential for providing significant commercial, economic and social benefits. However, to succeed government will need to deliver inclusive societal change programs in parallel with technical/economic development.

Potential Impact of de-risking, brokering agricultural development by Government

Humpty Doo Barramundi advised that if the NT and Commonwealth Governments were to implement the suggestions to prioritise, de-risking and broker aquaculture development it could have the following impact for its operations:

- Continue with Stage 2 and 3 of current expansion with up to a further $45m in investment possible (Stage 1 currently progressing valued at $14.4m);
- 50 new local jobs over three stages, will double current Humpty Doo Barramundi farm employees; 20 jobs approximately in stage one with a further 30-40 new staff employed in Stage 2 and 3 (including significant more indigenous employment numbers);
- When completed this development and expansion will allow the company to meet its 2030 goal of ramping production up to a $200m a year facility in barramundi (equivalent to 17,000 tonnes a year); and
- Significant further flow on effects in terms of investment and jobs for the local support industries, communities and economy.

Key insights and lessons learnt

- Significant issues and impediments to agricultural development identified in the following areas:
  - Environmental approvals
  - Information / Telecommunications infrastructure
  - Labour Supply/Skills
- Regulatory processes and approvals are understood and supported to protect the industry, however:
  - Regulation should be proportional to risk, specifically:
    - Government needs to minimise obstacles to small start-ups in new industries
    - Their size of operation generally limits the scale of risk they pose.
    - Track performance and adjust regulation according to risk/ impact.
    - Reward large operations that demonstrate good practice by reducing regulation.
  - Ease visa requirements to enable recruitment of staff with essential and world leading specialist aquaculture skills.

- A small proportion of specialised skills is essential in a dynamic modern aquaculture enterprise. Without these specialist skills, the aquaculture industry is constrained to outdated technologies and will be uncompetitive in the global market.
- The education system in the NT is not currently equipped to provide the required skilled and experienced staff that the aquaculture industry need.
- Many young Australians are also not interested in working in remote areas or Northern Australia.
- Recruitment of specialist overseas staff enables rapid adoption of world best technology and transfer of skills to local enterprises and its employees.

- Current approval processes and timeframes can be prohibitive to development and need to be streamlined to proactively encourage development.

❖ When presented with a number of options that the NT or Commonwealth Government could do to better prioritise, de-risk and broker development in the NT, Tipperary suggested the following:

- Better support biosecurity risk management
  - need to bolster biosecurity, especially in relation to importation of high risk seafood products, including bait from SE Asia and partially processed barramundi products, i.e. those likely to include bone, skin or viscera that is likely to end up in a crab pot or a berley basket. Need to ban those products from entering Australia.
  - Propose protections be put in place in the NT equivalent to that offered to the Tasmanian salmon industry e.g. prohibit importation of high-risk material immediately.
  - Need to upgrade border security stringency
  - Consider independent audit of border protection with primary industry representation
- Assist producers secure skilled labour (e.g. through skilled migrant or local employee programs).
  - Assistance with reducing the visa requirements to allow access to world class skills and technology is an area that would assist in the development of the aquaculture industry in Australia and the Northern Territory.
- Establishing market differentiation measures
  - Similar to those in other countries e.g. France with its restrictions on the use of the word champagne. Restrictions could be put in place on the name barramundi to only Australian grown fish.
  - Government support in terms of Country of Origin labelling to apply to fish used in the food service industry should also be implemented, as well as incorporating aquaculture requirements into regional planning/development.
- Support development of Indigenous Aquaculture business operations
  - Is an area with the potential for providing significant commercial, economic and social benefits to the local Indigenous population. However, to succeed government will need to deliver inclusive societal change programs in parallel with technical/economic development assistance.

❖ Potential impact of government de-risking and brokering agricultural development as suggested could deliver:

- Further $45m in investment
- 30-40 new fulltime employment opportunities
- Significant flow-on benefits in terms of further investment and jobs in the support industries.

Central Agri Group – Batchelor Meatworks Case Study

Background – Central Agri Group

A family-owned company, Central Agri Group 's (CAG) story began in Brunswick, Melbourne in 1991, as an independent boning facility serving the local market. After securing a Tier 2 Export Licence, the family business began exporting meat products worldwide. Decades later the export arm of the business continues to expand with new and ever-growing partners worldwide. Together with these dedicated partners CAG has established its brand and expanded its footprint into new countries. At the core of their business is the drive to supply Australia and the world with optimum quality produce. CAG has cemented its reputation as a leading quality meat products exporter.

Within Australia the CAG brand has also continued to expand, with sites across the nation. These sites comprise of three export abattoirs from Victoria, Western Australia and the Northern Territory.

CAG's Australian sites include:

Sites	Description
Central Meat Exports - Coolaroo, Victoria	A modern cold storage and processing facility, just 10km from Melbourne Airport. Central Meat Exports is a multi-species, Halal-accredited facility, which is also the administrative hub of CAG
Victoria Valley Meat Exports - Trafalgar, Victoria.	Nestled in the heart of Gippsland, which produces some of the world's highest-quality grass-fed beef. A Halal-accredited export beef abattoir licensed with tier-2 market access.
Esperance Meat Exports - Esperance, WA	Located in Esperance WA, Abattoir processing multi-species- lamb, beef and sheep-products for domestic and export markets.
Joanna Plains Feedlot - Cataby, WA.	Perfectly positioned on both the eastern and western sides of the Brand Highway Cataby, WA, close to the wheatbelt with access to several major cattle regions.
Rum Jungle Meat Exports - Batchelor, NT	Located in Batchelor NT, Abattoir processing cows, bulls and buffalos of all ages and sizes for lean manufacturing beef for further processing.
Gippsland Pure Foods - Brunswick VIC	Located in Melbourne VIC, value added division which produces Rum Jungle and Gippsland burgers, mince and diced beef, also is a contract processing facility to its clients.

CAG's integrated model ensures a streamlined supply chain, from processing to storage and distribution. Their systems are based on state-of-the-art meat processing and on-site cold storage facilities. Continued investment into their Australian production and distribution facilities ensures they remain at the forefront of the industry.

In 2018 CAG announced that they would be redeveloping the former Batchelor Abattoir in the NT, undertaking a number of facility upgrades. The abattoir facility was built in the 1960's and had been operated intermittently by different owners for the past 60 years, but not in operation since 2003. CAG completed the upgrades and officially opened for business in December 2019 under the banner of Rum Jungle Meat Exports, a subsidiary of the Central Agri Group. It is this operation of the Central Agri Group that this case study is focussed on.

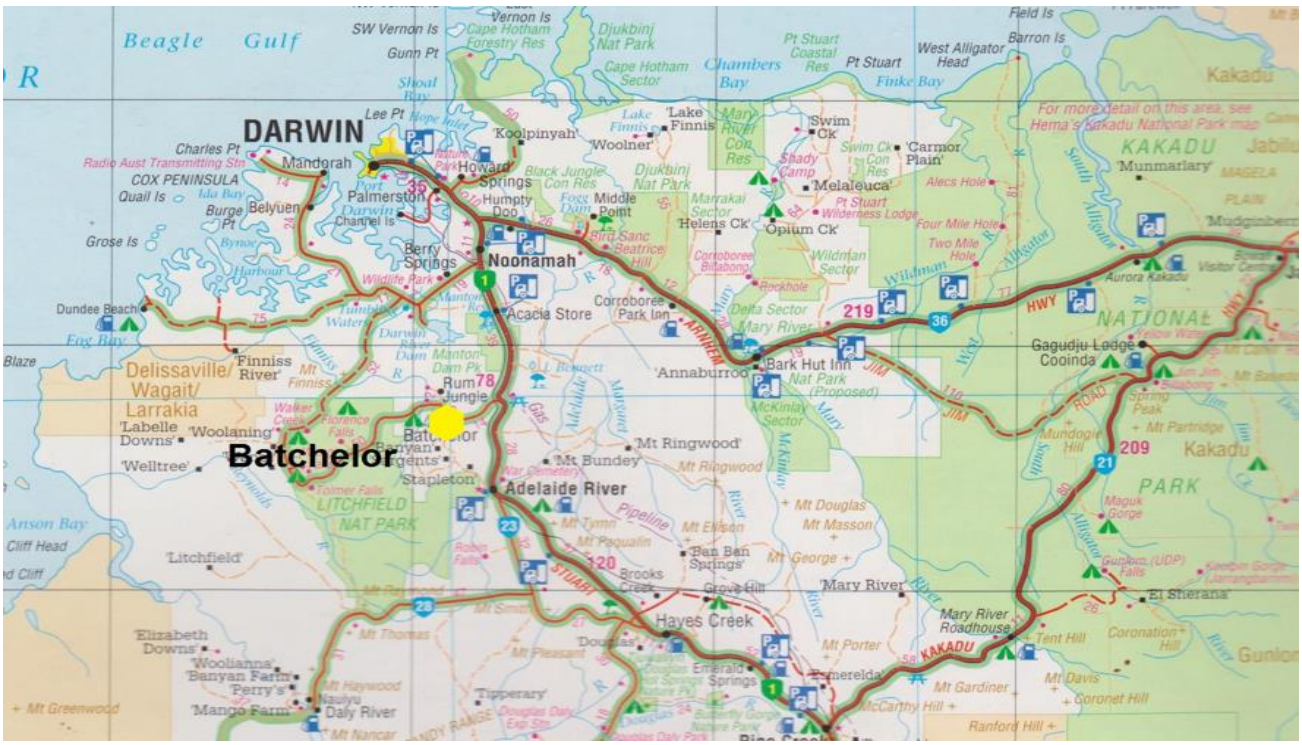
The opening of CAG's facility comes after the Australian Agricultural Co (AA Co's) in May 2019 announced plans to close its $100 million Livingstone abattoir further north near Darwin. Operations finished at Livingstone in August 2019.

CAG advised that they had learnt a lot from past failures and was confident the Batchelor abattoir would be a success as they are focused on operating as a small and niche plant made up of mainly buffalo and cattle. Also because of the company's current network of facilities, the Batchelor plant has opened with markets already established. The processing plant would not compete directly with live export but would concentrate on culling cows and bulls, and whatever was left over from export. Currently, if cattle are out of specifications or don't make it onto a ship, the only option is to truck them to meatworks at Townsville or Broome.

CAG also seized the opportunity to secure some of AA Co's experienced meatworkers when Livingstone shut in August 2019, sending those workers to one of its plants in Western Australia until the facility at Batchelor was ready to operate late in 2019.

5.1.1 Location

The CAG's Rum Jungle Meat Exports operations are located in the former old Batchelor Meatworks Abattoir in the central western part of Lot 2894 Hundred of Goyder, 165 Meneling Road, Batchelor NT 0845, which is approximately 100kms south of Darwin.



Ownership

The Batchelor Abattoir is owned by Tadmansori Holdings (Australia) Pty. Ltd. Central Agri Group, is an Australia meat processing company part owned by Tadmansori Holdings (Australia) Pty. Ltd. The Batchelor Abattoir is operated by Central Agri Group subsidiary, Rum Jungle Meat Exports Pty. Ltd.

Investment and Employment

CAG has undertaken a multi-million-dollar redevelopment of the 2003 mothballed Batchelor Abattoir Meatworks and from its opening in December 2019 it has employed 40 people but hopes to ramp this up to 100 people when it is operating at full capacity.

Current Operations

CAG started processing at the mothballed Batchelor Abattoir facility in December 2019 after an 18 months redevelopment that commenced in 2018. It is the first-time cattle had been processed at the facility for 16 years. Stock will be sourced from as far away as the Kimberley, Borroloola and Tennant Creek. The abattoir is an Export Registered Establishment under the Export Control Act 1982 (Commonwealth) and holds a Domestic Abattoir Licence under the Meat Industries Act 1996 (Northern Territory).

Hours of operation will vary depending on demand but will generally be 7am to 4 pm five days/week, between the months of March and December. During the wet season, when demand for processing is low due to poor mustering access, the facility will shut down. The abattoir will process up to approximately 30,000 head per year of predominately cattle and a smaller number of donkeys and buffaloes. Livestock will be delivered to the abattoir by road trains. On average, one truck per day will deliver up to 160 head using Stuart Highway, Batchelor Road and Meneling Road route. Animals will be off-loaded into the stockyards and transferred to the covered holding yards prior to processing. The yards have capacity to hold 320 head onsite at any given time. They also have a feedlot which holds 3,500 head and they will be looking to bring in as many cattle and buffalo as they can to hold over the wet season to allow them to process all year round.

Meat and offal products will be produced for export. Hides will be exported as is (i.e. without brining). The facility has a low temperature rendering plant that will process heads, horns, hoofs, bone, fat and blood to produce tallow and meat meal products. An average of seven truck/tankers per week will transport meat, hides, tallow and meal from the site to Darwin for export.

The remaining land area contained within the facility is used for grazing cattle and growing feed crops, with at least 50% of the property cleared for this purpose. The paddocks in central and southern parts of the property were laser levelled in 2017 and a successful sorghum feed crop was grown. A cattle export yard located 1.2 km south- east of the abattoir facility is not currently in use.

Findings

Interviews were held with both Peter Polovinka – Part Owner and Principal and Hakan Koyu – Business Operations Manager from CAG to understand the Group's operations, challenges and future for developing their business in the NT.

Issues and Impediments to Development

Through these interviews, the following issues were identified as potential impediments to agriculture development:

Issue	Impediment
Land Tenure	Not Applicable – CAG currently owns the site.
Water Licenses	Minor Impediment – Has established water services/license in place
Planning Act Clearing Permits	Significant Impediment – Planning approvals need to be transparent, streamlined and timely. Less red-tape and only have one point of contact in government per project to then facilitate across all departments.
Pastoral Lands Act Clearing Permits	Not applicable
Environmental Approvals	Significant Impediment – This was a significant and major impact on CAG in the redevelopment of the Batchelor Abattoir. What should have been a quick process given this was already an existing abattoir that had previous environmental approvals in place, should have been a tick and check process. CAG stated that the NTEPA approval process delayed the reopening of the project by 6-12 months.
Non-pastoral use permits	Not Applicable
ILUAs/Native Title	Not Applicable
Information on soil suitability and water availability	Not Applicable
Agricultural Research	Minor Impediment – CAG has access to good research and development and technical knowledge that it has gained from its operations around Australia. Improved research on increasing quality of stock and numbers would assist and also research and development into best practices in abattoir operations.
Logistics Infrastructure	Significant Impediment – The challenge of securing stock is exacerbated over the wet season, from November to April, when the majority of cattle stations in the Territory become inaccessible. While the abattoir has facilities and feedlots for up to 3,500 head of cattle, which they aim to fill prior to the wet season to ensure some continuity of supply having better transport infrastructure corridors and roads in place to guarantee supply is preferred.
Information / Telecommunications infrastructure	Significant Impediment – contacting the pastoral stations and producers to source stock can be difficult at the moment as the reliability of telecommunications is inconsistent. Again, this can cause supply chain and logistics issues. Reliable telecommunications infrastructure is essential. Currently, CAG undertake road trips around the NT and Kimberley to meet stock suppliers, which is timely and costly.

Issue	Impediment
Labour Supply	Minor Impediment – CAG was fortunate enough to pick up some skilled labour from the [previously operating] AACo plant in Livingstone when it closed and have them placed in their other operations in Western Australia until the Batchelor abattoir reopened. They also looking to employ as many locals and Indigenous employees as possible as the workforce expands with full production. So far labour supply is only seen as a minor impediment.
Access to markets	Minor Impediment – CAG is targeting at least 35 countries in Asia and believe the demand for its product is there based on its other operations throughout Australia, so there is no problem with market access. It's about processing more meat and then the ability to send it straight out from Darwin, whether it goes on ship or out of the airport. CAG believe that the new cold storage facility at the Airport would need to be expanded or doubled to meet their requirements, given its already at 70% capacity.
Access to finance	Minor Impediment – CAG have been able to finance the redevelopment of the Batchelor Abattoir themselves, given their understanding of the market opportunities and demand they have reducing the risk of the investment. However, CAG did say that access to development grants from government to offset some of the capital costs for expanding into the future would not go untoward.

Regulatory requirements and approvals

Discussions on the regulatory requirements and approvals for development was also had with CAG during the case study interviews. The key points and findings regarding their experience in these processes were:

- Government regulatory approvals was the biggest hurdle and impact that CAG raised during the discussions held with them. They stated that there needed to be streamlining of all current processes, especially the planning and environmental regulatory processes. Their experience in redeveloping the Batchelor Abattoir was that they were burdened with bureaucracy and red tape, with approvals needing to go through all government departments for clearance even if they had no significance to the project. This caused significant time delays which impacted the planned reopening of the facility due the wet season starting and impacting the CAGs ability to start at full production immediately. CAG believe this bureaucracy and red tape will delay their ability to reach full production by 6-18 months from what they originally planned
- CAG also specifically said that it believed the NTEPA regulatory approval processes need a complete review and overhaul. There also needs to be some alignment and stopping of duplication between Commonwealth EPA and the NTEPA approval processes. Given CAG was redeveloping and opening an existing abattoir, which would have already gone through environmental approvals when initially built, there should be some recognition of this and a less rigorous approval process
- There needs to be an understanding from Government that some of the existing approval processes impose an unjustified economic cost and burden on business, which ultimately impacts on the NT and Australian economies.
- The government also needs to embrace and support ongoing reform of the approval and regulatory requirements to ensure that businesses and the economy stay strong and competitive in the global market and economy

Suggestions for improvements

When presented with a number of options that the NT or Commonwealth Government could do to better prioritise, de-risk and broker agriculture development in the NT, CAG based on learnings from its own project experiences suggested the following:

Suggestion	Response
Provide more information on soils and water availability	Government could do this
Provide more research on viable crops	Government could do this
Have a can-do culture within and between departments that process permits and approvals	Government must do this
Support biosecurity risk management	Government must do this
Assist producers gain access to domestic and/or export markets	Government could do this
Assist producers secure labour (e.g. through skilled migrant or local employee programs)	Government should do this
Invest in improved infrastructure - road, rail, ports	Government must do this
Invest in improved infrastructure - information and communications technology	Government must do this
Invest in improved infrastructure - processing facilities / factories	Government should do this
Co-invest (with the private sector) in infrastructure	Government should do this

In regard to the suggestions above CAG made additional comments focussed on governments need to invest more into key infrastructure requirements (roads, ports, airports, cold storage facilities and telecommunications) if it is serious about prioritising, de-risking and brokering agricultural development in the Northern Territory. The road infrastructure outside of Darwin and the main highways within the NT is substandard and does not allow for transport and business operations during the wet season. A major upgrade of the road network is required to ensure supply chains and markets have guaranteed access 365 days a year.

Additionally, as mentioned in the above sections, while CAG commends the government investment in the new cold storage facility at the Darwin Airport, once CAG gets to full production it claims it would fill this facility on its own. Currently the facility is already at a consistent 70 percent operational capacity and expansion needs to be considered as soon as possible. CAG's products will be all boxed chilled and frozen product for export needing to be sent by air or ship.

Potential Impact of de-risking, brokering agricultural development by Government

CAG advised that if the NT and Commonwealth Governments were to implement the suggestions to prioritise, de-risking and broker agriculture development it could have the following impact for its operations:

- Already the redevelopment of the abattoir has provided a boost to the small local community, employing contractors from Darwin's rural area to do the renovations over eighteen months
- Further multi-million-dollar investment into the facility including new loading docks, cold storage and chillers
- Initial increase of staff from the current 40 employed to 100 staff when operating at full capacity based on 5 day a week 2 shifts a day model. Also has potential to increase to double shifts which would increase staff numbers up to 200 employees – providing employment for locals, including Indigenous people
- Provides a multi-species meatworks for the Northern Territory that complements the live export trade. Since the closure of the AACo abattoir, Top End cattle not suited to the live export trade had either remained in paddocks or had been trucked thousands of kilometres across to the Kimberley Meat Company's abattoir near Broome, or to abattoirs over east
- Significant further flow on effects in terms of investment and jobs.

Key insights and lessons learnt

- Significant issues and impediments to agricultural development identified in the following areas:
  - Planning Act Clearing Permits
  - Environmental approvals
  - Logistics Infrastructure
  - Information / Telecommunications infrastructure
- Regulatory processes and approvals are understood and supported to protect the industry, however:
  - Current approval processes and timeframes are prohibitive to development and need to be streamlined, with bureaucracy and red tape cut to proactively encourage development.
  - The NTEPA regulatory approval processes need a complete review and overhaul. There also needs to be some alignment and stopping of duplication between Commonwealth EPBC Act and the NTEPA approval processes.
  - There should be some recognition of previous history of operations and track record when requesting approvals rather than the one standard rigorous approval process fits all approach.
  - There needs to be an understanding from Government that some of the existing approval processes impose an unjustified economic cost and burden on business, which ultimately impacts on the NT and Australian economies.
  - The government also needs to embrace and support ongoing reform of the approval and regulatory requirements to ensure that businesses and the economy stay strong and competitive in the global market and economy
- When presented with a number of options that the NT or Commonwealth Government could do to better prioritise, de-risk and broker agriculture and aquaculture development in the NT, based on learnings from its own project experiences CAG suggested the following must be done:
  - Have a can-do culture within and between departments that process permits and approvals
  - Support biosecurity risk management
  - Invest in improved infrastructure - road, rail, ports
  - Invest in improved infrastructure - information and communications technology
- Key to prioritising, de-risking and brokering agricultural development in the Northern Territory is more government investment into key infrastructure requirements (roads, ports, airports, cold storage facilities and telecommunications).
- Potential impact of government de-risking and brokering agricultural development as suggested could deliver:
  - Further multimillion dollar capital infrastructure upgrade investment
  - Up to 160 new fulltime employment opportunities
  - Provision of a multi-species meatworks for the Northern Territory
  - Significant flow-on benefits in terms of further investment and jobs in the support industries.

Case Study Conclusions

Based on the feedback from each of the four case study proponents there is a crucial role for the Commonwealth and NT governments to better prioritise, de-risk and broker agriculture and aquaculture development in the Northern Territory.

The impact for the NT and Commonwealth Government in making changes to regulations, approvals and sinking investment into infrastructure will be a thriving agricultural industry that provides strong economic returns, with increased employment opportunities, especially for the Indigenous population, and private sector investment into new and expanding businesses.

Alone the four case study proponents estimate that the potential impact of government de-risking and brokering agricultural development as suggested could deliver:

- Up to $200m in further capital investment;
- Up to 250 direct new fulltime employment opportunities;
- Significant indirect flow-on benefits in terms of further investment and jobs in the support industries; and
- Open new markets and agriculture products that were previously not viable.

Extrapolating this data based on these four case studies being only 13 percent of the initial thirty one project developments identified, there is the potential that if each of these project developments had improved opportunities through government de-risking and brokering agricultural development as suggested, that the economic impact could be conservatively:

- Up to $1 billion in further capital investment; and
- Up to 1,500 direct new fulltime employment opportunities.

9.3 Appendix C – Stakeholder List

DATE	ORGANISATION	PERSON CONTACTED/ TITLE/DETAILS	PROJECT(S)
14/10/2019	CRCNA	Allan Dale, Project Coordinator	Project Management
17/10/2019	CRCNA and Northern Territory Government	Allan Dale, CRCNA Project Coordinator, Sally Leigo, CRCNA NT Project Manager and Linda Lee, Director DPIR NT Government	Steering Committee Meeting 1
12/10/2019 17/10/2019	Yeeda Pastoral Company	Jack Burton; Manager/Owner	Pastoralism & Livestock
18/10/2019	WA - Department of Primary Industries and Regional Development (DPIRD)	Ed Hauck Director	Project Management
21/10/2019	WA DPIRD	Niegel Grazia Deputy DG	Strategic Alignment
25/10/2019	Ord Irrigation Cooperative	David Menzel President Matt Dear, CEO	Various
31/10/2019	WA - Department of Water and Environmental Regulation (DWER)	Michael Rowe, Director General	Various
31/10/2019	NT – Department of Primary Industry and Resources (DPIR)	Alister Trier Chief Executive	Various
6/11/2019	WA DPIRD	Ed Hauck Director	Various
18/11/2019	NT Farmers Association	Paul Burke, CEO	Agriculture
19/11/2019	DPIR	Linda Lee	Project Management
28/11/2019	NT Farmers Association	Paul Burke, CEO	Agriculture
28/11/2019	Cotton Growers NT	Bruce Connolly	Agriculture
1/12/2019	NT EPA and NT Planning Commission	Paul Vogel, Chair EPA NT and Planning Commission	Environment and Planning
2/12/2019	Cotton Growers NT	Bruce Connolly	Agriculture
2/12/2019	Consultant	Paul Cottle	Agriculture
2/12/2019	NT Cattlemen's Association	NTCA Executive	Pastoralism & Livestock
2/12/2019	NT Seafood Council	Katherine Winchester, CEO	Aquaculture
3/12/2019	NT Farmers Association	NTFA Executive and CRCNA staff	Agriculture &Aquaculture
3/12/2019	Tourism NT	Lorraine Corrawa Deputy CE	Agriculture Tourism
3/12/2019	DPIR	Alister Trier, Chief Executive	Agriculture & Resources
4/12/2019	Department Environment and Natural Resources	Jo Townsend, Chief Executive	Environment and Lands
4/12/2019	NT Government Agencies	Departmental Representatives and CRCNA staff	Agriculture, Aquaculture & Livestock
18/12/2019	NT Buffalo Industry Council	Louise Bilato, Executive Officer	Pastoralism & Livestock
18/12/2019	CRCNA Executive	Allan Dale, CRCNA Project Coordinator and Sally Leigo, CRCNA NT Project Manager	Steering Committee Meeting 2
18/12/2019	Government of Western Australia	Hon Dave Kelly Minister of Water and Forestry	Project Management
10/01/2020	NT Northern Land Council	Trish Rigby, Manager Policy and Stakeholder Engagement	Indigenous Affairs
14/01/2020	Seafarms	Chris Mitchell	Project Sea Dragon
14/01/2020	Central Agri Group	Hakan Koyu	Batchelor Meat Works
14/01/2020	Kupang Agricultural Management	Ash Elsum	Flying Fox Station
20/01/2020	NT Farmers Association	Paul Burke, CEO	Agriculture
20/01/2020	NT Cattlemen's Association	Romy Carey, Executive Officer	Pastoralism and Livestock
20/01/2020	NT Cattlemen's Association	Ashley Manicaros, CEO	Pastoralism and Livestock
20/01/2020	Ex NT Farmers	Ian Baker	Agricultural development
21/01/2020	Seafarms	Chris Mitchell	Project Sea Dragon
21/01/2020	Central Agri Group	Hakan Koyu	Batchelor Meat Works
21/01/2020	Kupang Agricultural Management	Ash Elsum	Flying Fox Station
21/01/2020	CRCNA	Allan Dale, Project Coordinator	Project Management
22/01/2020	Central Agri Group	Hakan Koyu	Batchelor Meat Works
24/01/2020	Central Agri Group	Peter Polovinka	Batchelor Meat Works
28/01/20	Kupang Agricultural Management	David Armstrong	Flying Fox Station
3/2/2020	CRCNA and Northern Territory Government	Allan Dale, CRCNA Project Coordinator, Sally Leigo, CRCNA NT Project Manager and Linda Lee, Director DPIR NT Government	Steering Committee Meeting 2
3/2/2020	Manbulloo Mangoes	Marie Piccone	Manbulloo Mangoes
3/2/2020	Tipperary Group of Stations	Bruce Connolly David Connolly	Tipperary Group of Stations
3/2/2020	Humpty Doo Barramundi	Bob Richards	Humpty Doo Barramundi
4/2/2020	David Warriner	David Warriner, Consultant	Pastoralism
5/2/2020	Central Agri Group	Hakan Koyu	Batchelor Meat Works
6/2/2020	Kupang Agricultural Management	David Armstrong	Flying Fox Station

DATE	ORGANISATION	PERSON CONTACTED/ TITLE/DETAILS	PROJECT(S)
7/2/2020	NT Government; Major Projects Department Trade Business and Innovation	Fiona Park; Director Investment Attraction	Government
11/2/2020	Kupang Agricultural Management	David Armstrong	Flying Fox Station
11/2/2020	Tipperary Group of Stations	Bruce Connolly David Connolly	Tipperary Group of Stations
11/2/2020	Manbulloo Mangoes	Marie Piccone	Manbulloo Mangoes
11/2/2020	Humpty Doo Barramundi	Bob Richards	Humpty Doo Barramundi
13/2/2020	Tipperary Group of Stations	David Connolly	Tipperary Station
13/2/2020	Kupang Agricultural Management	David Armstrong	Flying Fox Station
14/2/2020	David Warriner	David Warriner	Pastoralism
18/2/2020	Centre Farms Pty Ltd	Vincent Lange, CEO	Indigenous Land Development
19/2/2020	CCI Darwin	Brian O'Gallagher, Manager Policies and Programs	Business and Commerce
20/2/2020	Department of Trade Business and Innovation	Luke Bowen, General Manager	General
21/2/2020	Austrade Northern Territory	Martin Ferreyra, State Director NT	General
24/2/2020	Department of Trade Business and Innovation	Scott Wauchope, Executive Director Priority Sectors Sammy and Chris	Trade, Business, and Innovation
6/3/2020	Tiwi Land Council	Derek Mayor, Legal and CFO	Aboriginal Economic Development
9/3/2020	Northern Land Council (NLC)	Cassandra Boyd, Personal Assistant	Aboriginal Economic Development
9/3/2020	Northern Land Council (NLC)	Bob Gosford, Manager	Aboriginal Economic Development
9/3/2020	Private Consultant	Joe Morrison, Consultant, and former CEO of NLC	Aboriginal Economic Development
9/3/2020	OIC	David Menzel	Irrigation
10/3/2020	Irrigator	Rob Boshammer	Irrigation Development
10/3/2020	NT Austrade, Department of Trade Business, and Innovation, CRCNA	Martin Ferreyra, CEO, Luke Bowen, CEO Allan Dale	Business, Trade, and Industry
11/3/2020	NT Cattlemen's Association	Ashley Manicaros, CEO	Pastoralism and Intensive Livestock
11/3/2020	Northern Australian Indigenous Land and Sea Management Alliance	Ricky Archer, CEO	Aboriginal Economic Development
11/3/2020	Darwin Chamber of Commerce and Industry	Brian O'Gallagher, Deputy CEO	Business, Trade and Industry
11/3/2020	David Warriner	David Warriner, Consultant	Pastoralism Intensive Livestock
11/3/2020	NT Government Agencies	Departmental Representatives and CRCNA staff	Agriculture, Aquaculture & Livestock
11/3/2020	NT Buffalo Industry Council	Louise Bilato, Executive Officer	Pastoralism and Livestock
11/3/2020	Darwin CCI, Business After Hours function	Darwin CCI members	Business, Trade, and Industry
12/3/2020	Humpty Doo Barramundi	Bob Richards, Managing Director	Aquaculture
12/3/2020	NT Farmers Association	Andrew Phillip, Development Officer	Agriculture/ Horticulture Broadacre and Intensive
12/3/2020	NT Government	Hon Paul Kirby, Minister Primary Industries and Resources, Alister Trier, CEO DPIR	De risking, Brokering and Prioritising Agriculture in the NT
12/3/2020	Department Environment and Natural Resources	Jo Townsend, Chief Executive, Christine Long, Exec Director Water and Alarek Fisher, Exec Director Environment	Environment and Lands
13/3/2020	Northern Australian Indigenous Land and Sea Management Alliance	Ricky Archer, CEO	Aboriginal Economic Development
16/3/2020	Indigenous Reference Group (IRG) and Northern Australian Indigenous Land and Sea Council (NAILSMA)	Peter Yu,Chair IRG and Board Member NAILSMA	Aboriginal Economic Development
25/03/2020	CRCNA	Jed Matz, CEO and Dena Lillico Project Officer	Project Management
23/04/2020	CRCNA and Northern Territory Government	Jed Matz, CEO, CRCNA and Allan Dale, CRCNA Project Coordinator	Steering Committee Meeting 3

9.4 Appendix D – Workshop Reports

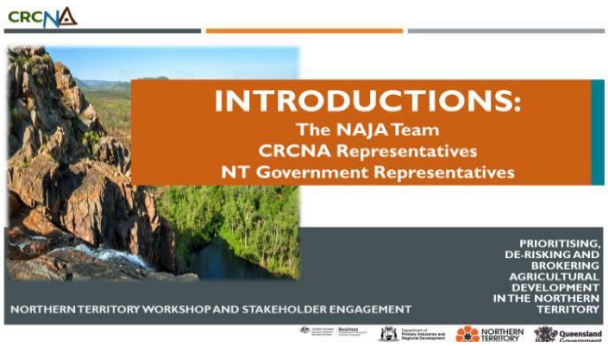
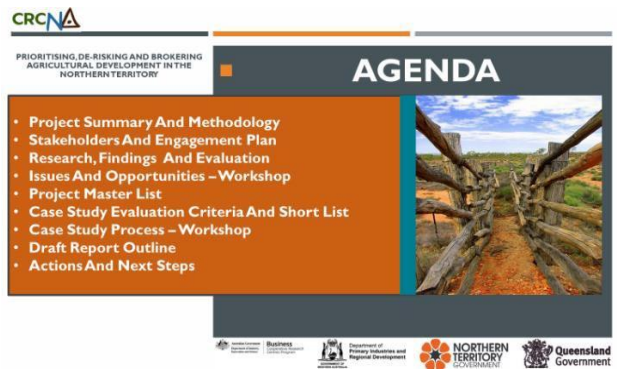
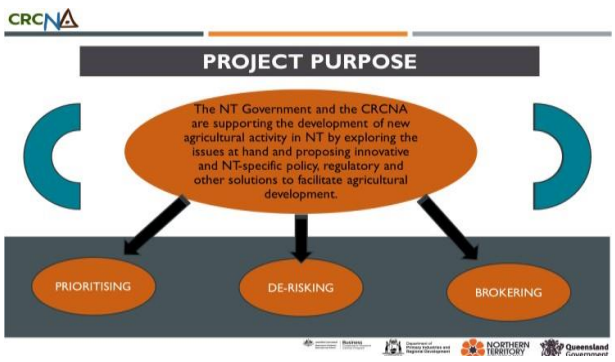
Workshops – December 2019

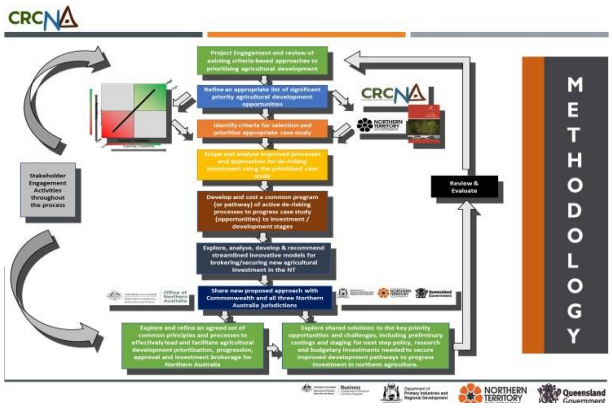
A total of three workshops were held over the 2-3 December, along with six presentations of the workshop content to industry association and government department representatives as per the table below.

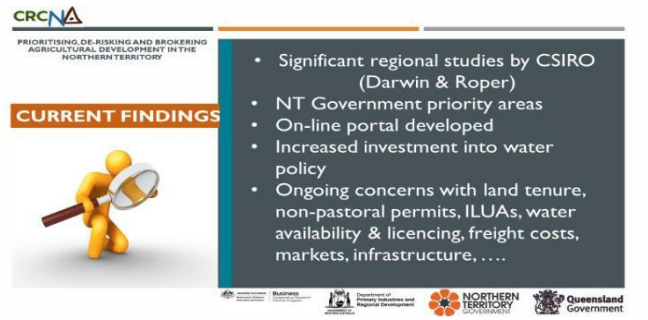
	NAME	COMPANY/DEPARTMENT
Workshop	Executive	NT Cattlemen's Association
Workshop	Executive	NT Farmers Association
Government Workshop	Paul Rosair	NAJA Business Consulting Service
	Dr John Ruprecht	Western Land & Water Consulting
	Jane Lewis	Redit Research
	Dr Allan Dale	Professor of Tropical Regional Development, The Cairns Institute, James Cook University
	Sally Leigo	NT Project Manager CNRCA
	Naz Buckley	NT Department of Trade, Business and Innovation
	Monique Elisec	NT Department of Trade, Business and Innovation
	Chris Mouat	NT Department of Trade, Business and Innovation
	Tom Ryan	NT Department Primary Industry and Resources
	Penny Renc	NT Department of Environment and Natural Resources
	Maria Wauchope	NT Department of Environment and Natural Resources
Presentation	Bruce Connolly	NT Cotton Growers Association
Presentation	Paul Cottle	Consultant
Presentation	Katherine Winchester	NT Seafood Council
Presentation	Lorraine Corrawa	Deputy CE Tourism NT
Presentation	Alister Trier	CE Department of Primary Industries and Resources
Presentation	Jo Townsend	CE Department Environment and Natural Resources
Consultation	Paul Vogel	Chairperson Environmental Protection Authority NT

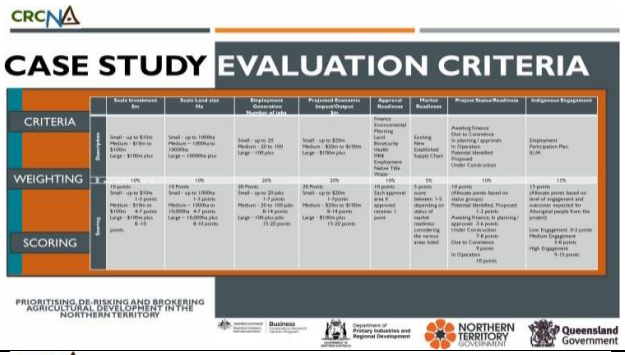
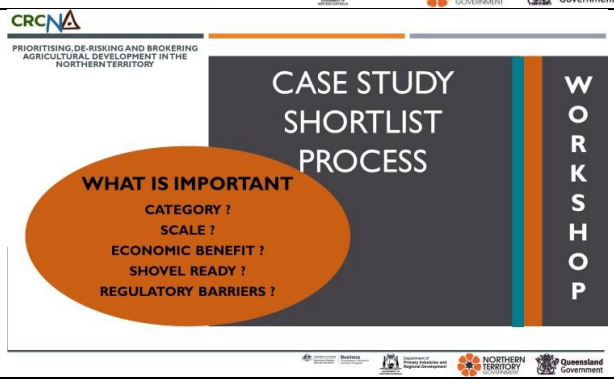
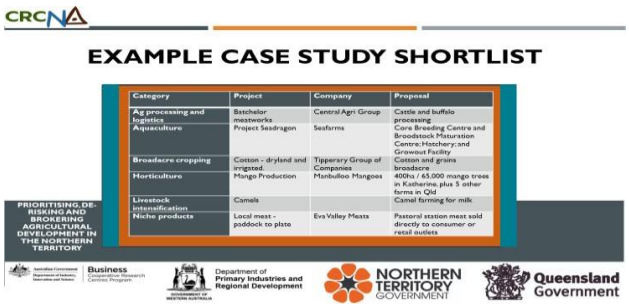
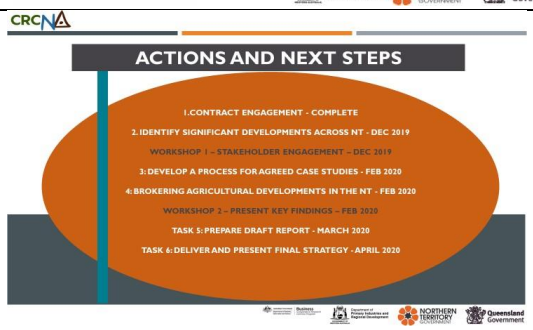
Workshop Objectives:

- To advise and engage with relevant Government Departments about the CRCNA project: Prioritising, De-risking and Brokering Agricultural Development in the Northern Territory.
- To share information regarding the methodology, research to date and the stakeholder engagement plan
- To seek further research information and approaches about potential agricultural opportunities across the NT;
- To receive feedback and additions to the current stakeholder list, project master list of agricultural development opportunities based on geographic area, product/production systems and prospectivity and evaluation criteria and scoring to identify up to three case studies to explore de-risking agricultural developments.

SLIDE	COMMENTS
	Introduction of the project
	Introductions
	Agenda
	Reiteration of project purpose

	Methodology outlined: Prospectivity/Capability matrix explained
	Current Stakeholder list was circulated. (Appendix A) Attendees offered suggested additions.
	Stakeholder engagement plan discussed
	Discussion on current Research and Evaluation.

	Feedback was received regarding the understanding of priority areas: the importance of good soil, water availability access to land, transport and other infrastructure.
	A matrix highlighting research papers and their areas of interest was circulated.
	A handout outlining identified issues and opportunities was circulated.) The addition of rail was suggested under transport.
	A Project Master List was explored. Participants were asked to provide feedback of any other projects over the next week. Shortage of options for the livestock category.

	Case Study Evaluation Criteria. Discussion around approval status and mention that not all projects require all approvals listed
	Discussions were held as to weight suitability for detailed case study review – particularly around broadacre vs higher density agricultural development.
	Case Study example shortlist discussed. Final decision on case studies to settled after consideration of stakeholder consultation.
	Draft report discussed
	Participants requested to provide feedback and further information to NAJA by Friday 13 December.

Key issues raised:

- Environmental approval process
- Water availability and licencing
- Land available and ready for development
- Lack of precincts for small-scale development
- Approval pathways
- Distance & cost to markets
- Resilient & reliable Infrastructure
- Skilled labour availability
- Support service availability

Workshops – March 2020

A total of three workshops were held over the 10-13 March, along with eight presentations of the workshop content to industry association and government department representatives as per the table below. In general terms the feedback and input gained from these workshops and meetings supported the Interim Findings paper presented.

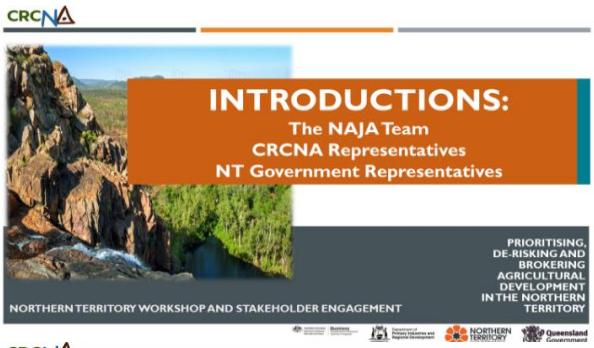
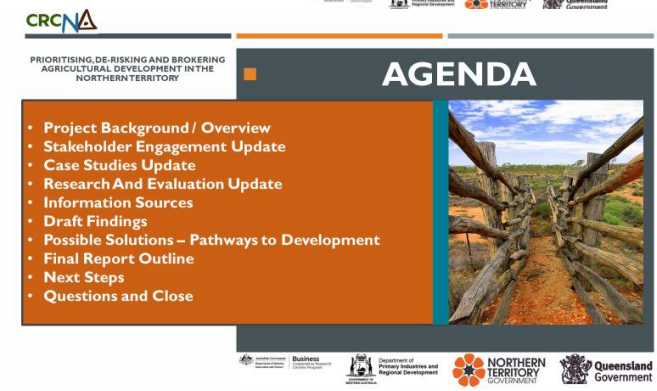
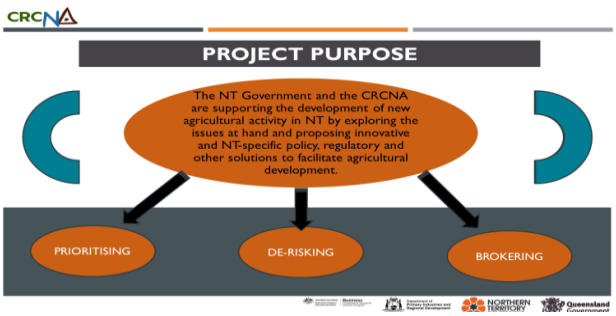
	NAME/TITLE	COMPANY/DEPARTMENT
Mini Workshop	Ricky Archer, CEO	Northern Australian Indigenous Land and Sea Management alliance
Mini Workshop	Andrew Phillip, Development Officer	NT Farmers Association
Government	Paul Rosair	NAJA Business Consulting Service
Workshop	Andrew Mann	Mann Advisory
	Jane Lewis	Redit Research
	Dr Allan Dale	Professor of Tropical Regional Development,
		The Cairns Institute, James Cook University
	Sally Leigo	NT Project Manager CNRCA
	Linda Lee	DPIRD
	Narayan Buckley	NT Department of Trade, Business and Innovation
	Chris Mouat	NT Department of Trade, Business and Innovation
	Nicole Festing	DPIRD
	Jason Hill	DENR
	Jason Robertson	NT Department of Trade, Business and Innovation
	Luke Bowen, CEO	NT Department of Trade, Business and Innovation
	Scott Wauchope	NT Department of Trade, Business and Innovation
	Luis Da Roche	DENR
	Luana Cormae	DCM
	Sammi Hosseini	NT Department of Trade, Business and Innovation
	Martin Ferreyra, CEO	NT Austrade
	Rebecca Minikan	NT Department of Trade, Business and Innovation
	Jane Wang	NT Department of Trade, Business and Innovation

	Mary Watson	NT Department of Trade, Business and Innovation
	Wendy Pritchard	NT Department of Trade, Business and Innovation
Mini Workshop	Ashley Manicaros, CEO	NT Cattlemen's Association
Meeting and discussion	Brian O'Gallagher, Deputy CEO	Darwin Chamber of Commerce and Industry
Meeting and discussion	David Warriner, Consultant	David Warriner
Meeting and discussion	Louise Bilato, EO	NT Buffalo Industry Council
Meeting and discussion	Darwin CCI members	Darwin CCI, Business After Hours function
Meeting and discussion	Bob Richards, Managing Director	Humpty Doo Barramundi
Meeting and discussion	Hon Paul Kirby, Minister Primary Industries and Resources, Alister Trier, CE Primary Industry and Resources	NT Government
Mini Workshop	Jo Townsend, Chief Executive, Christine Long, Exec Director Water and Alarek Fisher, Exec Director Environment	Department Environment and Natural Resources

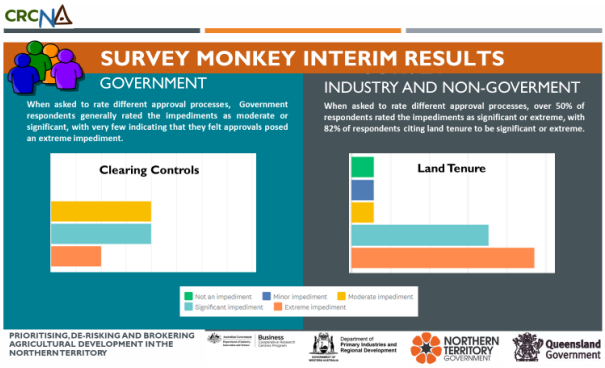
Workshop Objectives:

- To advise and engage with relevant Industry and Government Departments about the CRCNA project: Prioritising, De-risking and Brokering Agricultural Development in the Northern Territory.
- To share information regarding the methodology, research and findings to date and report on stakeholder engagement conducted so far
- To workshop and receive feedback and additions to the draft findings and draft solutions and potential pathways forward.

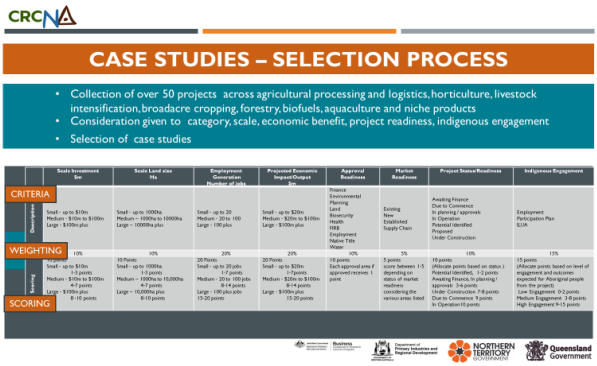
Workshop Slides

SLIDE	COMMENTS
	Introduction of the project
	Introductions
	Agenda
	Reiteration of project purpose

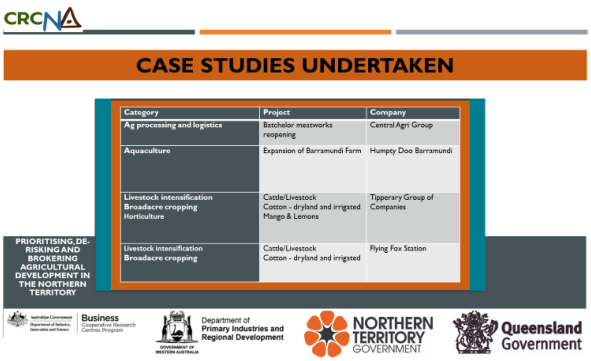
Stakeholder methodology explained



Snapshot of some early Survey Monkey results indicating that generally Industry rates approval processes as significant or extreme impediments, whereas government tends to rate more as moderate or significant

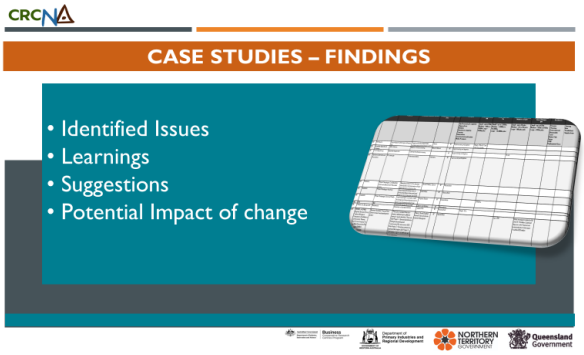


Case study selection process explained



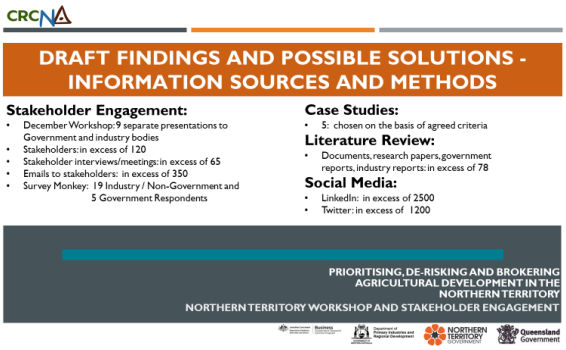
Selected case studies:

- Batchelor meatworks
- Humpty Doo Barramundi
- Tipperary Group
- Flying Fox Station



Case study findings have shown to be consistent with research, literature and other stakeholder engagement findings

In excess of 78 documents/reports have been analysed



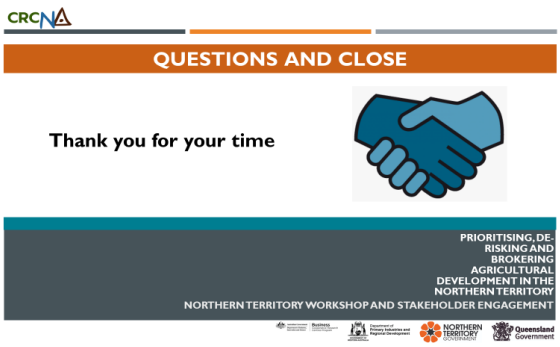
Sources of Information informing the draft findings

See Appendix 1 for Workshop Sheet, Appendix 2 for results

See Appendix 3 for Workshop Sheet and Appendix 4 for results

Final Report Outline

Overview of the project timeline



Close

De-Risking, Brokering & Prioritising Agricultural Development in the Northern Territory
Draft Findings Workshop Session Template

Finding	Explanation	Comment
Strategic Development of Northern Australia	Significant number of plans and strategies that highlight the potential. The issue relates to converting plans and strategies into actions and investment.	
Soil and Water Resource Assessment	There have been several studies into soil and water resource assessment at the regional or large catchment scale: • Northern Australia Land and Water Taskforce (CSIRO) • Darwin Catchments (CSIRO) • Big Rivers Study (DPIR) • Managed Aquifer Recharge Study (Jacobs) • Douglas Daly Agricultural Zone Economic Analysis (North Australian Agribusiness Management) • Aquaculture viability (CSIRO) • Roper River (CSIRO – in progress) Given the range of studies from managed aquifer recharge to horticultural precincts there is a lack of coordinated and targeted investment that delivers on the investigations.	
Approval Processes	There was a consistent comment that there was a need to streamline the various approval processes under land tenure, planning, vegetation management, water resources, cultural heritage, and other legislation to facilitate mosaic irrigation or other diversification. Interim results from surveys conducted during the course of this project also confirmed that there is an industry perception that approval processes are an impediment to agriculture and aquiculture development in the Northern Territory.	
Infrastructure	The lack of modern road and rail links in the north to transfer goods to market is frequently cited as a barrier to growth and investment. Most agricultural produce is transported by road, rather than rail, and the region's ports are not optimised for handling agricultural products. Long distances increase the cost of farming inputs and reduce the quality and value of vegetables and fruit. Transport can also account for a third of the price of Australian livestock production costs. Telecommunications are another issue that can constraint agricultural development and economic viability. Poor services for mobile technology beyond the towns and off the highways are holding back existing and prospective farmers across the NT. Whilst the NT Government's Digital Territory Strategy has been developed the major benefits occur through widespread fast mobile technologies that provide information on production risks and opportunities, markets, and availability of resources.	
Research and Development	In addition to locally relevant research and development on appropriate crops and production systems, there needs to be an effective mechanism to foster sustained communication and collaboration between government and agricultural industry groups on the development of economically and environmentally sustainable agriculture in the NT.	
Aboriginal Agricultural Developments	Key aspects are considered: • creating jobs, fostering labour participation, entrepreneurship and business acumen • knowledge management systems and research and development to support aboriginal commercial end-users • infrastructure investment to support aboriginal economic development • access to capital and domestic and international markets • activating the economic value of land, water, sea and cultural resources; and • institutional arrangements that work to activate, accelerate and optimise aboriginal economic development across Northern Australia.	

Finding	Explanation	Comment
Markets	The biophysical challenges facing development in the north, including the uncertainties around water, soils and agricultural potential could well be overcome, but without appropriate markets and business models to supply them, such efforts could be wasted.	
Investment	If the risk profile of agricultural investment in the north could be substantially altered, investment could flow in, given the market opportunities and resources available.	
Trust Issues	Concerns have been raised regarding a lack of trust between government, pastoralists and traditional owners. This leads to a breakdown in communication and lack of progress on sustainable development opportunities that can benefit a range of stakeholders including local communities and businesses. There is also a concern that by "speaking out" there is a risk that proposals will not be assessed objectively.	

Draft Findings Workshop Results/Comments

Finding	Comments
Strategic Development of Northern Australia	• Plans and strategies produced and marketed without reference to DENR – government should seek information from its own departments before producing glossy promotional material • Investment dollars for implementation is limited • Conversion into investment requires significant target resourcing over the long term (beyond political cycles) • Move away from having a huge list; pick a small group of the most strategic/high impact and focus on those • No reports or political desire for change
Soil and Water Resource Assessment	• The studies don't take into account land availability – should focus on areas where land is capable of being used. A more efficient process. Focus on ground water not surface water – off stream storage • Soil and water work great – land availability the issue • NT only has course mapping over much of the land, requiring investors to invest in more detailed soil evaluation • Agree – there in an insufficient policy framework for private water development certainty. Causes an inability to take the next step: land subdivisions, tenure or diversification, investment • Lack of linking studies with developments • Not enough at a project level • Inconsistency of basis for investigations • Regulatory environment does not create investment environment • Clearer linkage between studies, regulations with what investors want • The NT does not have a water storage or water infrastructure plan. The Commonwealth government cannot invoke a plan. – there is Commonwealth money available
Approval Processes	• Investment on one side and regulatory on the other but blockage in the middle • Guidelines verses legislation – grey areas are difficult to navigate • Difference between tree clearing and NPU needs work • Seems to be a lack of transparency- impacts on investor certainty • Lack of understanding by industry regarding the connectivity between approvals • 'risk-based' approach – commercially affected • Lack of good environmental/other consultants who can help navigate the process • Need for all to be able to tease out the issues at each stage and with each department • What is governments role in assisting proponents through the process? • Both legislative and administrative reform needs to be looked at • There are growing pains as a jurisdiction – in administration. Policy and enforcement • Consultant proficiency can make a difference to the ease of moving through the approval process

Finding	Comments
	• If government wants the whole NT to be a National Park – just say so • What is necessary for government to make a decision? It needs to be clear • Agree – the linkage between the legislation/ departments are poor. The legislation itself is clear – the navigation through the process is difficult. Need for internal leadership to address. Suggest "Government Investment Committee" • Approval processes can take 13 months for non-pastural use permits with constant changing requirements. New environmental legislation will make it even worse
Infrastructure	• Agree this is a problem; getting products out of Darwin, power/roads, telecommunications is a major limiting factor • Power and roads an issue • Concern regarding whether we are seeing far enough ahead to future infrastructure needs • agree this is a problem • Don't entirely agree – have the largest livestock export facility • Lack of focus from Canberra and lack of national building • Terrabyte Territory is a strategy being developed to ensure NT capitalises on private sector initiatives • All transport is roughly the same cost – rail, road. A sea container from Darwin to Brisbane costs the same as Darwin to South East Asia • Telecommunication limitations is stalling the adoption of productivity gains
Research and Development	• There has to be "a reason for it", it isn't an impediment but there is nothing to enable it to be put into practice. Collaboration and transparency would give best results. Growers are 'bemused' – why is there a research station? Need to get more 'on the ground focus' • Need working trials • NTG (DPIRD and DENR joint body of work with NT Farmers – Land Capability Framework. Need more government/industry collaboration • Agricultural university in NT to provide research and training • Need to match research opportunities found with investors • Lots of research but it needs to be communicated more clearly • More needed in practical application – turn research into a useable piece of information for investors • Research structures at a local level are not good enough. No local advisory on research for NT Gov
Aboriginal Agricultural Developments	• Need commercially focussed people that farmers can rely on • Lack of speed of development • Issues with capital raising (security) • Informed/resource decision making • Land rights mechanisms • Aligning Land Councils and land owner / traditional land owner objectives/aspirations • Complex space • Numerous soil and water studies on Aboriginal Land published over the past 6 years by NTG ALSEDA? • Capability support for individuals and businesses • Needs to reflect local decision making and wishes • Not unique to agriculture • Exposing TOs and Land Councils to international markets and investors – knowledge is power • Entrenched bureaucracy in some Land councils – fear of commercialisation • Lack of understanding by some proponents of what the TO groups consist of • Indigenous Pastoral Program – no resourcing: ideal vehicle for development. Land and Sea Council were heavily involved, but it has dropped off over the years • Access to aboriginal lands is increasingly important for their development
Markets	• There are known and unknown risks – there should be transparency on the known risks • What does the market want that we can supply competitively with other parts of Australia/ OS?

Finding	Comments
	• Access to the markets is not the issue, its targeting them and doing it well – strategy required • Need economies of scale due to hindrance of distance and lack of infrastructure • Need a detailed look at why some are successful and have stood the test of time • Individual growers have lack of expertise, it needs sophisticated players to arrange supply chains • Biosecurity needs to be addresses. • Easiest markets to access are in SE Asia
Investment	• The advantage of the NT (which could be marketed) is the large scale and expansion opportunities not found elsewhere. • What can government control? Development zones/derisked zones • Comparative advantage – what is the tipping point? • More effort on promotion • More tangible "invest now" opportunities • There has to be a "path of least resistance" when it comes to investment
Trust Issues	• Agree that there is a lack of trust between government, agriculturalists and Land Councils. Government is seen to be risk averse and trying to protect their own jobs. Some departments are better than others • Believe that this is a lack of trust at the higher political level due to change in governments • May be an issue around Land Councils? Regulatory/legislative setting may contribute to this • Agree – need to find common ground. Current system creates an adversarial situation – automatically puts everyone into conflict • Competition and intellectual property leads to a culture of non-collaboration • Tendency to "throw money" at the Land Councils rather than looking at solutions or building relationships
Other	• NAIF seems to be focussing on the bigger, overseas investors rather than the majority, smaller, local based investors

De-Risking, Brokering & Prioritising Agricultural Development in the Northern Territory

Draft Pathways Workshop Session Template

Finding	Explanation	Comments
Converting parts of pastoral leases	The opportunity is to convert portions of a pastoral lease to other forms of tenure. There are issues with sub-leases, for example: banks and financial lenders not recognising the value of subleases. A proposal needs to be developed for converting a portion of a pastoral lease into freehold lots where there is suitable soil and water, and a willing leaseholder to test the viability of the approach.	
Agricultural precincts	Precincts involve the conversion of a small part of pastoral leases or freehold land to a different tenure for farming with land parcels of appropriate size (80-100ha). Infrastructure in the form of roads and power would be in place and appropriate development approvals would be complete. Precincts are considered attractive because: • Development is on land properly identified as suitable with water resources. • Land size is appropriate to the development and the market for land. • Approvals for environment can be addressed prior to land release. • Developers can focus on their expertise in farming, rather than the approval process, something they have limited expertise, and small farmers don't do this well.	

Finding	Explanation	Comments
	There is potential in the Adelaide River catchment as identified in the CSIRO report. It is critical that land is made available at the appropriate farm size for small-medium scale development.	
Aboriginal agricultural development	Key pathways to development include: • Streamline processes for leasing Aboriginal land. • Support Aboriginal businesses to identify opportunities and partnerships. • Pre-feasibility information is needed targeted on aboriginal land for aboriginal development. • Support agencies investment on Aboriginal land	
Infrastructure	Key elements for infrastructure with respect to agriculture and aquaculture: • Need to acknowledge economic importance and potential for growth of the agribusiness sector from improving infrastructure • Need to maintain and improve the regional road network to support industry • Need to develop processing, cold chain infrastructure and logistics support for industry • Need to prioritise telecommunication across strategic agricultural areas to enable increased productivity and profitability, leading to greater investment.	
Supportive regulatory environment	Creating a culture in regulatory agencies that support development proposals through the process is needed. This is not about dismissing the regulatory process but providing a proactive environment to enable projects to progress through the regulatory requirements. A more proactive and targeted approach to supporting development proposals needs to occur that is more risk-based than risk-adverse. Whilst the one-stop shop is not new, there are limited examples of where it has been effective. A pro-active and engaged approach to a one-stop shop needs to be developed for small to medium scale developments.	
Strategic de-risking	There needs to be a new approach to de-risking of soil and water concerns that meets the needs of proponents and investors rather than broadscale theoretical assessments. Engaging with proponents and developers on what are the critical risks and developing joint strategies to de-risk development needs to be undertaken. Cost-sharing also needs to be assessed based on the broad benefits (social and economic) of regional agricultural development. Including other biophysical aspects such as biosecurity in de-risking is also critical. De-risking can also include engaging on business development, business structures, and marketing opportunities. A focused investment in business development is recommended that provides a catalyst for existing businesses to expand.	

Draft Pathways Workshop Results/Comments

Pathway	Comments
Converting parts of pastoral leases	• Use case studies to promote opportunity • Is the issue with non-pastoral use permits? Maybe it the 30 year maximum term issue? • Conversion of a portion of pastoral lease into freehold lots is possible now – subject to native title being dealt with. Could be made easier by policy e.g. under Crown Lands Act for grants of freehold (or convertible Crown leases) for agri purposes • Why should government do this? What is its role? • Have you spoken with bankers to address the validity of this?
Agricultural precincts	• Douglas Daly Stage 2, Lorimar, Wildman, Spirit Hills • A 'no-brainer" – number 1 priority • NTG wide policy on this would be desirable but need to balance why this is a good investment for govt. Zoning must reflect intended use • Agree, should be a priority • Should be 3-way partnerships – industry, government and TOs • There are already some precincts which aren't fully subscribed
Aboriginal agricultural development	• Resourcing engagement and development • CentreFarm project a great example but progress is slow. • Should not be government led- joint projects could be beneficial with private investors • ALRA (Commonwealth issue) • Capital investment is an issue – bankability • Commonwealth issue • Need to match the opportunity to the size/type of the TO group • Expose TOs to international delegations or real life investment examples to break down barriers • Aboriginal groups traditionally don't have a standard format for business – cultural then environmental then money: the balance is difficult, but where culture and traditional practice match a project it is more likely to succeed. Eg Savanah Burning Project • Future for cultural/agriculture tourism
Infrastructure	• Enabling infrastructure will assist economies of scale • Mechanism for connecting stakeholders so that interests could be aligned – possible for industry to play a stronger role in infrastructure development rather than completely relying on govt • Governments role is to enable infrastructure development e.g. water infrastructure and alignment with NWI
Supportive regulatory environment	• Pathway framework • The one-stop-shop idea needs to be more than an investment attraction role. There needs to be more capability in public service to guide re strategy for approvals • Legislation (section 19 of the Aboriginal Land Rights Act) makes is difficult even for Aboriginal agricultural development. Legislature changes could be made to tier projects according to project size and economic output • Brokering model could include NAILSMA, trusted organisation • Needs to be backed up with a developer that is determined to do the work needed to get the project moving
Strategic de-risking	• How is this different to precincts?

9.5 Appendix E – Survey Results

Industry and Non-Government Survey Results

1. What area(s) of primary production, processing, distribution and/or marketing are you involved with?

Horticulture	52.38%	11
Broadacre cropping	42.86%	9
Livestock intensification	57.14%	12
Biofuels	4.76%	1
Niche products	19.05%	4
Agricultural processing	33.33%	7
Agricultural logistics (including transport)	28.57%	6
Forestry	23.81%	5
Aquaculture	9.52%	2
Other (please specify below)	23.81%	5

Environmental Consulting - Project Approvals

3/12/2020 3:06 PM

Carbon Farming

2/25/2020 7:53 AM

Free range beef breeding

1/26/2020 6:19 AM

Also Extensive cattle production

1/24/2020 8:16 AM

Education

grazing cattle

1/18/2020 5:03 AM

2. What best describes your role in the industry?

Business owner	42.86%	9
Employee, worker, contractor	14.29%	3
Labour provider	4.76%	1
Industry supplier	0.00%	0
Industry development officer	23.81%	5
Land owner or developer	14.29%	3
Consultant	28.57%	6
Other (please see below)	19.05%	4

Northern Cotton Growers Association President

2/21/2020 3:21 PM

NFP

2/18/2020 5:32 PM

VET educator

1/20/2020 8:05 PM

Industry Association

1/15/2020 12:32 PM

General Manager

3. The following issues have been identified as potential impediments to agricultural and aquacultural development in the NT. Please rate them based on your knowledge and understanding of the industry.

	NOT AN IMPEDIMENT	MINOR IMPEDIMENT	MODERATE IMPEDIMENT	SIGNIFICANT IMPEDIMENT	EXTREME IMPEDIMENT
Land tenure	10.53% 2	5.26% 1	5.26% 1	36.84% 7	42.11% 8
Water licences	0.00% 0	11.11% 2	27.78% 5	50.00% 9	11.11% 2
Planning Act Clearing Permits	5.26% 1	5.26% 1	31.58% 6	31.58% 6	26.32% 5
Pastoral Lands Act Clearing Permits	0.00% 0	5.56% 1	38.89% 7	27.78% 5	27.78% 5
Other environmental approvals eg NTEPA, EPBC (Cwth)	10.53% 2	5.26% 1	36.84% 7	26.32% 5	21.05% 4
Non-pastoral use permits	5.26% 1	15.79% 3	15.79% 3	31.58% 6	31.58% 6
Indigenous Land Use Agreements	0.00% 0	5.26% 1	36.84% 7	31.58% 6	26.32% 5
Native Title	5.56% 1	11.11% 2	22.22% 4	27.78% 5	33.33% 6
Information on soil suitability and water availability	10.53% 2	47.37% 9	31.58% 6	5.26% 1	5.26% 1
Agricultural research (including viable crop information)	16.67% 3	38.89% 7	33.33% 6	5.56% 1	5.56% 1
Logistics infrastructure (roads, rail, ports)	0.00% 0	21.05% 4	10.53% 2	42.11% 8	26.32% 5
Agricultural research (including viable crop information)	16.67% 3	38.89% 7	33.33% 6	5.56% 1	5.56% 1
Logistics infrastructure (roads, rail, ports)	0.00% 0	21.05% 4	10.53% 2	42.11% 8	26.32% 5
Agricultural research (including viable crop information)	0.00% 0	0.00% 0	0.00% 0	0.00% 0	0.00% 0
Information / telecommunications infrastructure	0.00% 0	15.79% 3	15.79% 3	31.58% 6	36.84% 7
Labour supply	15.79% 3	21.05% 4	21.05% 4	26.32% 5	15.79% 3
Access to markets	15.79% 3	15.79% 3	26.32% 5	36.84% 7	5.26% 1
Access to finance	21.05% 4	36.84% 7	26.32% 5	10.53% 2	5.26% 1
Information on soil suitability water availability	0.00% 0	0.00% 0	0.00% 0	0.00% 0	0.00% 0
Agricultural research (including viable crops information)	0.00% 0	0.00% 0	0.00% 0	0.00% 0	0.00% 0
Other (please describe below)	33.33% 1	0.00% 0	33.33% 1	0.00% 0	33.33% 1

Comments by respondents to question 3:

Although water licenses don;t seem to be an issue, the amounts available is not freely available with a number of guidelines (such as the 80:20 rule) being used as a law when it suits bureaucrats. The other issues is the disconnect between Territory & Commonwealth work where CSIRO can conduct studies , but information is not applicable to application of licenses etc

1/10/2020 4:04 PM View respondent's answers Add tags

Good unbiased industry advice

2/25/2020 7:53 AM View respondent's answers Add tags

EPA full environmental impact study. No guidelines in non-pastoral permitting - after 90 days get another list so very confusing. Don't get to talk directly with TOs, have to deal with a 30 yr old lawyer. Darwin port fees too high - prefer trucking to southern ports.

2/21/2020 3:21 PM View respondent's answers Add tags

Raising capital is an issue

2/18/2020 5:32 PM View respondent's answers Add tags

Government red tape

1/28/2020 4:48 AM View respondent's answers Add tags

4. Have you had experience dealing with the following regulatory requirements? If so, can you rate your experience in the process? For example, time taken; provision of technical information; government agency staff support; etc.

	VERY GOOD EXPERIENCE	GOOD EXPERIENCE	NEITHER GOOD NOR BAD EXPERIENCE	POOR EXPERIENCE	VERY POOR EXPERIENCE	N/A
Land tenure	5.00% 1	10.00% 2	20.00% 4	30.00% 6	10.00% 2	25.00% 5
NT Pastoral Lands Act Clearing Permit	5.00% 1	15.00% 3	20.00% 4	10.00% 2	15.00% 3	35.00% 7
NT Water Act licence	0.00% 0	10.00% 2	20.00% 4	30.00% 6	10.00% 2	30.00% 6
Indigenous Land Use Agreement	0.00% 0	9.52% 2	14.29% 3	33.33% 7	19.05% 4	28.57% 6
NT Planning Act Clearing Permit	0.00% 0	10.00% 2	20.00% 4	20.00% 4	15.00% 3	35.00% 7
Migration and work VISAs	0.00% 0	15.79% 3	15.79% 3	31.58% 6	15.79% 3	21.05% 4
Aboriginal Areas Protection Authority (AAPA) clearance	5.00% 1	5.00% 1	35.00% 7	5.00% 1	10.00% 2	40.00% 8
NT EPA approval	4.76% 1	14.29% 3	28.57% 6	14.29% 3	4.76% 1	33.33%
Quarantine and biosecurity permits	0.00% 0	26.32% 5	42.11% 8	0.00% 0	5.26% 1	26.32% 5
Cwth EPBC Approval	0.00% 0	0.00% 0	26.32% 5	10.53% 2	5.26% 1	63.16% 12
Occupational Health and Safety approvals	0.00% 0	16.67% 3	44.44% 8	5.56% 1	0.00% 0	33.33% 6
NT non-pastoral use permit	0.00% 0	21.05% 4	15.79% 3	10.53% 2	26.32% 5	26.32% 5
Other regulatory processes (please explain below)	0.00% 0	0.00% 0	12.50% 1	12.50% 1	12.50% 1	75.00% 6

Comments by respondents to question 4:

slow and extended process, personal philosophical views expressed. objections for professional objectors

3/12/2020 3:06 PM View respondent's answers Add tags

The process was often unclear, timing of meetings and process time frames were ad hoc, resulting in poor consultations and applications.

2/25/2020 7:53 AM View respondent's answers Add tags

I dont deal directly with Govt departments. However, would like the process streamlined - cut 90 days back to 30 days. Been waiting over 18 months for a non-pastoral use permit.

2/21/2020 3:21 PM View respondent's answers Add tags

Very poor because detracted from aboriginal land rights Permit "non pastoral" use easy for pastoral companies "Timber Creek" decision as a precedent. Big end of town staying out of non pastoral permits because they are worried about future Act ramifications

2/18/2020 5:32 PM View respondent's answers Add tags

EPA is automonous; Paul Vogel is running it interdependently and is applying a reasonability test which is good. Example "Berrimah cattle yards had an EPA condition of zero emissions which is near on impossible to achieve - Paul Vogel has been reasonable in his application of this condition". Worried about the future if personel were to change.

2/18/2020 5:21 PM View respondent's answers Add tags

Government departments slow to work with

1/28/2020 4:48 AM View respondent's answers Add tags

Time and red tape.

5 What could the Government do to prioritise, de-risk and broker agriculture and aquaculture development?

	GOVERNMENT MUST DO THIS	GOVERNMENT SHOULD DO THIS	GOVERNMENT COULD DO THIS	I AM UNSURE OF THE ROLE FOR THE GOVERNMENT HERE	GOVERNMENT SHOULD STAY OUT OF THIS
Provide more information on soils and water availability in my area	28.57% 6	33.33% 7	33.33% 7	0.00% 0	4.76% 1
Provide more research on viable crops	15.00% 3	45.00% 9	30.00% 6	5.00% 1	5.00% 1
Have a can-do culture within and between departments that process permits and approvals	80.95% 17	19.05% 4	0.00% 0	0.00% 0	0.00% 0
Support biosecurity risk management eg African Swine Fever; cross-border biosecurity with other State governments	71.43% 15	28.57% 6	0.00% 0	0.00% 0	0.00% 0
Assist producers gain access to domestic and/or export markets	23.81% 5	19.05% 4	38.10% 8	14.29% 3	4.76% 1
Assist producers secure labour (eg through skilled migrant or local employee programs)	28.57% 6	33.33% 7	28.57% 6	4.76% 1	4.76% 1
Invest in improved infrastructure - road, rail, ports	71.43% 15	28.57% 6	0.00% 0	0.00% 0	0.00% 0
Invest in improved infrastructure - information and communications technology	61.90% 13	23.81% 5	9.52% 2	0.00% 0	4.76% 1
Invest in improved infrastructure - processing facilities / factories	14.29% 3	19.05% 4	38.10% 8	9.52% 2	19.05% 4
Co-invest (with the private sector) in infrastructure	23.81% 5	33.33% 7	28.57% 6	9.52% 2	4.76% 1

6.

Comments by respondents to question 5

Government meet face to face with landowners in different regions.

2/21/2020 3:21 PM View respondent's answers Ac

Lack of trust in CRCNA and Government by his organisation and Aboriginal groups in general. They want to keep their information - not share, due to trust issues

2/18/2020 5:32 PM View respondent's answers Ac

No strings attached if Gvt is to invest

2/18/2020 5:21 PM View respondent's answers Ac

The critical areas is water availability, there is lack of information flow and advice always takes the ultra conservative stance

1/10/2020 4:04 PM View respondent's answers Ac

6 If Government undertook what is suggested in question 5 what impact could it make to your business? eg Increase employment (number of jobs), Increase investment ($ amount), increase value in agricultural output (quantify if possible)

Have a possibility of a 50% productivity increase. 2x4 staff just on one station plus flow on effects for communities

2/21/2020 3:21 PM View respondent's answers Add tags

accelerate opportunities to CEDA Projects

2/18/2020 5:32 PM View respondent's answers Add tags

All of the above - difficult to quantify... 10-20% increase across the board

2/18/2020 5:21 PM View respondent's answers Add tags

If the Govt did all of the above the Agriculture / Horticulture could be a multi million $ industry in Central Australian alone. Many areas for Horticulture are being crippled by lack of foresight and Govt bureaucracy only focusing on mining and tourism and Aboriginals (as an industry) Central Australia has a huge opportunity pending land tenure and water availability with investigation which I think the Govt has the responsibility to investigate.

Increase employment, 3 jobs, investment $240k, production output by $400k

1/28/2020 4:48 AM View respondent's answers Add tags

Grow and diversify our business, increase employment and NT permanent population up to $5m

1/24/2020 8:16 AM View respondent's answers Add tags

good roads would reduce bruising by 10% and reduce wear and tear and reduce time for travel

1/18/2020 5:03 AM View respondent's answers Add tags

Consistency wet and dry, possibly increase turnover

1/16/2020 2:50 PM View respondent's answers Add tags

With the correct policy settings and infrastructure our Farm Gate revenue would double by 2030 to in excess of $600M

1/15/2020 12:32 PM View respondent's answers Add tags

The key failure has been a failure to recognise the business opportunity. This is a failure by both public and private sectors. It is really the role of the private sector to identify business opportunities. Government can assist through R&D, soils and water info etc, but developing the real business opportunity is in the hands of the private sector with government assisting this process. The failure of many business models is a key issue. There are numerous examples of successful business models e.g NT horticulture, successful Ord farmers. Everything follows from a clear understanding of the opportunity - soils, water, R&D, infrastructure. Lots of studies are putting the cart before the horse. Trying to identify soils and water without a clear understanding of the business opportunity is wasted effort. The region is large and diverse so opportunities will vary. There are clearly some opportunities emerging including more horticulture (Broome, Central Australia), broadacre cropping in many areas (cotton, aromatic rice, mung bean, irrigated and dryland), fodder production, and forestry (rain fed). The current value of cropping in the north is probably around $400 million (NT around $250M, $100M from WA and maybe $50M in the Gulf and Cape York (the difficult areas of Queensland). The biggest area of growth is probably broad acre cropping especially cotton based system. this in early days so predictions are difficult. It is conceivable this could reach $500M+ in the next 10-20 years. The Australian cotton industry is around $2000M in years when water is available

1/15/2020 9:02 AM View respondent's answers Add tags

At the moment, road access (& Power) to much of the NT limits the desire of companies to expand production capability in the NT. Significant development can't take place without this critical infrastructure

1/10/2020 4:04 PM View respondent's answers Add tags

Increase business viability through opportunity to trade 12 months of the year and improve market confidence and access to markets through securing the supply chain.

1/10/2020 3:32 PM View respondent's answers Add tags

development, investment, employment, profit.

7 Do you have any other suggestions, issues to raise or recommendations for Government to improve its services to agriculture or aquaculture?

Consideration of the merger of Dept Primary Industries and Dept Environment.

1/15/2020 12:32 PM View respondent's answers Add tags

Land tenure is the most significant issue, especially in NT and WA. Land tied up in pastoral leases and indigenous titles that make property sizes for development around 1000-2000ha difficult. The NT industry grew significantly in the mid 1990's with NT Govt releasing around 5000ha (Darwin and katherine) in 80 -100ha lot sizes. this was land taken off teh pastoral estate by NT Govt and sold at commercial rates to horticultural investors. A key feature was it was done when the opportunity was clear and there was a clear market for the land. it was not done as a push development ratter a response to demand.

1/15/2020 9:02 AM View respondent's answers Add tags

Solving the land tenure issue and promote the subdivision of Pastoral leases into Agricultural precincts. There can also be support to assist the development on the indigenous estate.

1/10/2020 4:04 PM View respondent's answers Add tags

Reduce red tape

1/28/2020 4:48 AM View respondent's answers Add tags

Not at this time

1/24/2020 8:16 AM View respondent's answers Add tags

Best they just resign

1/18/2020 5:03 AM View respondent's answers Add tags

no

1/16/2020 2:50 PM View respondent's answers Add tags

Govt can be proactive in regard to working with Native title Holders to obtain the outcomes for all.

3/12/2020 3:06 PM View respondent's answers Add tags

Grow balls and take on the indigenous land councils

2/24/2020 5:48 PM View respondent's answers Add tags

focus on those points, be proactive and have a yes attitude instead of finding excuses NOT to do it

2/18/2020 5:21 PM View respondent's answers Add tags

Yes, the Territory Govt owns 2 water drilling Rigs that could be instrumental in investigating more Horticulture areas. The easier facilitation in organising land use at present is almost impossible to negotiate this needs to change.

Government Survey Results

1. Please indicate your area of involvement with agriculture or aquaculture in the NT.

Legislation, Policy and/or Planning	44.44%
Industry Development and Assistance	44.44%
Statutory approvals	11.11%
Other - please describe below	33.33%

FDI Attraction

3/13/2020 2:25 PM View respondent's answers Add tags

Trade and Investment

3/13/2020 9:48 AM View respondent's answers Add tags

Identification and quantification of natural resources that support and encourage development opportunities in the NT

1/14/2020 9:26 AM View respondent's answers Add tags

2. Please indicate what layer of government you work within

Commonwealth	11.11%	1
Northern Territory	88.89%	8
Local Government	0.00%	0
Other - please describe below	0.00%	0

3. Please describe your main role

Infrastructure planning and policy

3/16/2020 7:59 AM View respondent's answers Add tags

Facilitate engagement between NT and Austrade's onshore/offshore network. facilitate exports from and FDI into the Territory

3/13/2020 2:25 PM View respondent's answers Add tags

strategic development, policy and planning

3/13/2020 12:49 PM View respondent's answers Add tags

Trade development

3/13/2020 9:48 AM View respondent's answers Add tags

Facilitating major agribusiness developments in the NT and growing NT agricultural exports.

2/21/2020 3:07 PM View respondent's answers Add tags

Facilitating major agribusiness developments in the NT and growing NT agricultural exports.

2/21/2020 3:02 PM View respondent's answers Add tags

Senior Project Officer - Northern Australia Development

2/10/2020 2:25 PM View respondent's answers Add tags

Project Director - Mapping the Future

1/14/2020 9:26 AM View respondent's answers Add tags

Director General

1/9/2020 8:41 PM View respondent's answers Add tags

4. The following issues have been identified as potential impediments to agricultural and aquacultural development in the NT. Please rate them based on your knowledge and understanding of the industry.

	NOT AN IMPEDIMENT	MINOR IMPEDIMENT	MODERATE IMPEDIMENT	SIGNIFICANT IMPEDIMENT	EXTREMELY SIGNIFICANT IMPEDIMENT	TOTAL
Land tenure	0.00% 0	0.00% 0	55.56% 5	22.22% 2	22.22% 2	9
Water licences	0.00% 0	0.00% 0	55.56% 5	33.33% 3	11.11% 1	9
Planning Act Clearing Permits	11.11% 1	0.00% 0	33.33% 3	44.44% 4	11.11% 1	9
Pastoral Land Act Clearing Permits	11.11% 1	11.11% 1	55.56% 5	11.11% 1	11.11% 1	9
Other environmental approvals eg NTEPA, EPBC (Cwth)	0.00% 0	22.22% 2	22.22% 2	55.56% 5	0.00% 0	9
Non-pastoral use permits	11.11% 1	22.22% 2	44.44% 4	22.22% 2	0.00% 0	9
Indigenous Land Use Agreements	0.00% 0	0.00% 0	55.56% 5	22.22% 2	22.22% 2	9
Native Title	0.00% 0	42.86% 3	14.29% 1	28.57% 2	14.29% 1	7
Information on soil suitability and water availability	11.11% 1	0.00% 0	66.67% 6	11.11% 1	11.11% 1	9
Logistics infrastructure (roads, rail, ports)	0.00% 0	0.00% 0	22.22% 2	55.56% 5	22.22% 2	9
Information / telecommunications infrastructure	0.00% 0	0.00% 0	66.67% 6	22.22% 2	11.11% 1	9
Labour supply	0.00% 0	22.22% 2	44.44% 4	33.33% 3	0.00% 0	9
Access to markets	0.00% 0	44.44% 4	44.44% 4	11.11% 1	0.00% 0	9
Access to finance	0.00% 0	44.44% 4	55.56% 5	0.00% 0	0.00% 0	9
Other (please describe below)	0.00% 0	0.00% 0	66.67% 2	0.00% 0	33.33% 1	3

Comments to Question 4:

While regulatory requirements may be perceived as an impediment to development in reality a lack of investment in investigations and assessment of land and water availability and biodiversity dependence results in a precautionary approach to regulatory decision making. Knowledge gaps cause delays in regulatory decisions and may require a developer to demonstrate resource availability or likely impact of a development on a poorly understood resource.

1. We struggled to rate some of these issues because an accurate response depends on the location in the NT you're asking about. For example the extent to which Water licenses are an impediment varies significantly depending on whether the location in question already has a Water Allocation Plan in place. Similarly, the levels of Information on soil suitability and water availability vary from place to place, as does access to Logistics infrastructure (roads, rail, ports). 2. We didn't give a rating on the extent to which Native title is an impediment – we think that a more specific question might have been more useful on this topic. 3. We thought that an additional impediment that is important for the NT is the Existence/ Availability of supply chains – the service providers and transport etc., not just the physical infrastructure.

5. What could the Government do to prioritise, de-risk and broker agricultural development?

	GOVERNMENT MUST DO THIS	GOVERNMENT SHOULD DO THIS	GOVERNMENT COULD DO THIS	I AM UNSURE OF THE ROLE FOR THE GOVERNMENT HERE	GOVERNMENT SHOULD STAY OUT OF THIS
Provide more information on soils and water availability in my area	57.14% 4	14.29% 1	28.57% 2	0.00% 0	0.00% 0
Provide more research on viable crops	0.00% 0	44.44% 4	55.56% 5	0.00% 0	0.00% 0
Have a can-do culture within and between departments that process permits and approvals	77.78% 7	22.22% 2	0.00% 0	0.00% 0	0.00% 0
Support biosecurity risk management eg African Swine Fever; cross-border biosecurity with other State governments	88.89% 8	0.00% 0	0.00% 0	11.11% 1	0.00% 0
Invest in improved infrastructure - road, rail, ports	33.33% 3	44.44% 4	22.22% 2	0.00% 0	0.00% 0
Invest in improved infrastructure - information and communications technology	25.00% 2	50.00% 4	25.00% 2	0.00% 0	0.00% 0
Invest in improved infrastructure - processing facilities / factories	0.00% 0	0.00% 0	42.86% 3	42.86% 3	14.29% 1
Co-invest (with the private sector) in infrastructure	11.11% 1	44.44% 4	33.33% 3	0.00% 0	11.11% 1

Assist producers gain access to domestic and/or export markets	22.22% 2	44.44% 4	33.33% 3	0.00% 0		0.00% 0
Assist producers secure labour (eg through skilled migrant or local employee programs)	0.00% 0	42.86% 3	57.14% 4	0.00% 0		0.00% 0

Comments to Question 5:

Large scale development in Northern Australia effectively requires a public-private partnership and these principles are helpful in this exercise. The broader question is what risks is government better placed to manage and mitigate than the private sector? Nothing in the above about mitigating land tenure risks. This is an area where government has significantly more expertise, resourcing, capability and time than the private sector.

3/16/2020 7:59 AM View respondent's answers Add t

1. When it comes to Providing more information on soils and water availability in my area, we feel that government has significant work already underway in this space, including collaboratively through the Commonwealth's Exploring for the Future program. 2. A number of items in this table were difficult to rate because while government can play a role, it couldn't do these things effectively, without collaboration with private sector proponents and other stakeholders. This is the case for example with Provide more research on viable crops, which would require government to work with proponents to prove up certain crops, or Invest in improved infrastructure (road rail ports/ ICT) where government would usually seek to involve the private sector in such projects. When it comes to Invest in improved infrastructure – processing facilities and Co-invest (with the private sector) in infrastructure, there are circumstances (e.g. market failure, multi-user facilities) where government might get involved, but that would be on a case by case basis depending on the project. 3. We debated how to rate Assist producers to secure labour (e.g. through skilled migrant or local employee programs), because we agreed that government can play a facilitation role if skills shortages exist, but weren't clear on why government would get involved if the question referred to actually hiring/finding the workers. 4. Our answer for the question Assist producers to gain access to domestic and/or export markets was 'Government MUST do this', but government's role is focussed on things like negotiating international protocols.

While there lots of areas that Govt could or should undertake in support of development, Govt agencies need to be resourced to do so. Opportunities for co-investment with the private sector should be encouraged wherever possible but there is also a role for industry to support investment in research, administration etc. Fee for service is currently not implemented in many areas of Govt denying agencies with a revenue source to improve resource knowledge and reduce administrative delays.

1/14/2020 9:26 AM View respondent's answers Add t

6. Do you have any other suggestions, issues to raise or recommendations on how Government can improve its services to agriculture or aquaculture industries?

• More support to help proponents understand what they need to do to achieve environmental approvals or get export permits – NT and Commonwealth • More coordination between government agencies – within NT Government and with the Commonwealth • New/improved tools and systems could provide better information for proponents and exporters. E.g. we're already aware that we could improve the information NT Government provides for budding exporters. Another example is that DPIR has some amazing resources and studies that could benefit proponents and people considering investing here, but perhaps we could make it more user friendly to access/easier to find relevant resources • Listen more to feedback from clients – we think that the case management approach that Investment Territory is employing is something that could be rolled out across other agencies • Research into innovative technologies, including understanding the agri customers of the future • Generally encouraging more agribusiness understanding among elected representatives • Encouraging more participation by Aboriginal people in agribusiness • Encouraging young people to consider a career in agribusiness

Government has finite dollars and there are a multitude of agricultural concepts and ideas that are being pursued by the private sector. Ultimately, if government is to provide support in one or more of the areas listed above, it is effectively picking winners. There needs to be a clear basis on which it makes these decisions and how support is provided to facilitate investment.

3/16/2020 7:59 AM View respondent's answers Add tags

no

3/13/2020 12:49 PM View respondent's answers Add tags

Invest in addressing key knowledge gaps that reduce the risk for investors and make it easier and quicker to make appropriate and transparent decisions that comply with contemporary legislation.

1/14/2020 9:26 AM View respondent's answers Add tags

No