



Marine  
and Coastal

National Environmental Science Program



# **CREATING A PIPELINE FOR SUSTAINABLE AND INCLUSIVE DEVELOPMENT**

**A research synthesis for developing new  
pathways for the northern Australia**

Allan Dale, The Cairns Institute, James Cook University

## Preferred citation

Dale, A.P. (2024). Creating a pipeline for sustainable and inclusive development: A research synthesis for developing new pathways for the northern Australia. A joint report for the Cooperative Research Centre for Northern Australia (CRCNA), Townsville and Reef and Rainforest Research Centre (RRRC), Cairns.

## Copyright

This report is licenced under a Creative Commons Attribution 4.0 Australia licence. You are free to copy, communicate and adapt this work if you attribute James Cook University and the authors.



ISBN 978-1-922640-17-8

## Acknowledgement

This report is a synthesis of research programs separately funded by CRCNA and the Australian Government under the National Environmental Science Program.

Many thanks also for the direct contribution of Hurriyet Babacan, Jim Turnour, Tanzil Rahman, Jennifer McHugh, Rob Coco, John Tanzer, Keith Noble, Jack Archer, Brook Orr, Sheriden Morris, Anthony Curro and the CRCNA's many research participants over years of research in northern Australia on supply chains, sector development and derisking development investment.

## Disclaimer

The views and opinions expressed in this publication are those of the author and do not necessarily reflect those of the Cairns Institute or James Cook University, the RRRC or CRCNA. For disclosure purposes, the lead author Allan Dale is the Chair of the annual Developing Northern Australia Conference, recently appointed Chair of the RRRC, and Chief Scientist for the CRCNA.

## Cover images

Front: Aerial view of the Wyndham port in North West WA.

Back: Aerial view of Cairns City and Trinity Inlet. Credit Suzanne Long.

This report is available for download on the NESP Marine and Coastal Hub website:

[www.nespmarinecoastal.edu.au](http://www.nespmarinecoastal.edu.au)

# Contents

|  |           |
|--|-----------|
| <b>Acknowledgement</b> .....   | <b>1</b>  |
| <b>Executive summary</b> .....   | <b>2</b>  |
| <b>1 Background and context</b> .....  | <b>8</b>  |
| 1.1 Towards fit for purpose development models .....                         | 11        |
| <b>2 The northern development opportunity</b> .....                          | <b>13</b> |
| 2.1 A wealth of in situ analysis and reform since the white paper .....      | 13        |
| 2.2 Towards an investment pipeline approach .....                            | 17        |
| <b>3 Key features of the original investment pipeline</b> .....              | <b>20</b> |
| 3.1 Research and development.....  | 20        |
| 3.2 Lifting human and institution capacity.....                              | 20        |
| 3.3 Building strong Aboriginal and Torres Strait Islander institutions ..... | 21        |
| 3.4 Place-based partnerships for development .....                           | 22        |
| 3.5 Regional to precinct-based land use and infrastructure planning.....     | 23        |
| 3.6 Project feasibility and impact assessment.....                           | 23        |
| 3.7 Finance brokerage and finance .....                                      | 24        |
| 3.8 Public sector investment in enabling infrastructure .....                | 24        |
| 3.9 International and trade relations .....                                  | 25        |
| 3.10 Overarching DNA governance arrangements and institutions .....          | 26        |
| <b>4 Analysis of key parts of the investment pipeline</b> .....              | <b>27</b> |
| 4.1 Research and development.....  | 27        |
| 4.2 Lifting human and institutional capacity.....                            | 27        |
| 4.3 Building strong Indigenous institutions .....                            | 28        |
| 4.4 Place-based partnerships for development .....                           | 30        |
| 4.5 Regional and precinct-based land use and infrastructure planning.....    | 30        |
| 4.6 Project feasibility and impact assessment.....                           | 31        |
| 4.7 Finance brokerage and finance .....                                      | 32        |
| 4.8 Public sector investment in enabling infrastructure .....                | 34        |
| 4.9 International and trade relations .....                                  | 37        |
| 4.10 Overarching DNA governance arrangements and institutions .....          | 38        |
| 4.11 In summary .....  | 39        |
| <b>5 Pathways forward for the Northern Australian Refresh</b> .....          | <b>40</b> |
| 5.1 Research, development, and extension .....                               | 40        |
| 5.2 Lifting human and institutional capacity.....                            | 40        |
| 5.3 Building strong Aboriginal and Torres Strait Islander institutions ..... | 41        |
| 5.4 Place-based partnerships for development .....                           | 41        |
| 5.5 Regional and precinct-based land use and infrastructure planning.....    | 41        |
| 5.6 Project feasibility and impact assessment.....                           | 41        |

|          |  |           |
|----------|--|-----------|
| 5.7      | Finance brokerage and finance .....                            | 42        |
| 5.8      | Public sector investment in enabling infrastructure .....      | 42        |
| 5.9      | International relations and trade .....                        | 43        |
| 5.10     | Overarching DNA governance arrangements and institutions ..... | 43        |
| <b>6</b> | <b>Next steps and conclusions .....</b>                        | <b>44</b> |
| <b>7</b> | <b>References .....</b>  | <b>45</b> |

## List of figures

**Figure 1:** Northern Australia as defined by the Commonwealth’s Office of Northern Australia. .... 8

**Figure 2:** An analytical framework to assess the Northern Australia Investment Pipeline. .... 18

## Acknowledgement

We acknowledge the Traditional Owners of Country throughout Australia and recognise their continuing connection to land, waters and culture. We pay our respects to their Elders past and present.



## Executive summary

New optimism and confidence in the future of northern Australia was sparked through the Commonwealth's launch of the Developing Northern Australia White Paper in 2015. The White Paper in effect, was seeking to build the governance, policy and delivery systems necessary to secure the nationally important development opportunities that northern Australia provides. This foundational policy architecture comprised some 51 implementation actions covering research and development, workforce development, feasibility assessment, concessional loans, major infrastructure programs, trade development and the overarching governance of the agenda.

Building on a synthesis of some seven years of strategic research across the Cooperative Research Centre for Developing Northern Australia (CRCNA) and targeted northern Australian investment from the National Environmental Science Program (NESP), this paper seeks to explore both the successes and challenges facing the White Paper in its first 7 years of operation. It also draws on the directions emerging from past Northern Australian Joint Select and Standing Committee inquiries and Ministerial Forum priorities and discussions, other Commonwealth, State and Territory reforms processes, the annual priorities emerging from the Developing Northern Australia Conference (DNAC) and various other research activities concerning the development of the north.

Methodologically, in line with global and national understandings of **development**, this paper considers that outcomes from White Paper policies need to be **sustainable** and **inclusive** while building community and regional **resilience**. The development and infrastructure investment approaches taken in the north also need to be able to meet well defined national, state and territory **investment principles**. In this context, development needs to cater for supporting large, medium and small business sectors; ensuring that policies can build a **diverse economic future**. With this in mind, this paper analyses progress and lessons learned across all steps of the **investment pipeline** needed to secure quality investments for economic, social and environmental progress across various project proponents from the not-for-profit, private and government sectors. Finally, development also needs to adjust to the challenges that a rapidly changing climate presents; a factor that will have significant and increasing implications for the investment pipeline. This applies to adaptation to the impacts as well as management of local, regional and national emissions amelioration.

These investment pipeline steps progress across the following layers: (i) research, development and extension (RD&E); (ii) human and institutional capacity building; (iii) strengthening First Nations institutions (iii) place-based partnership building; (iv) land use planning and infrastructure planning; (v) feasibility and development assessment; (vi) finance brokerage and closure (from all sectors); and (vii) public sector investment in major enabling infrastructure. I consider that this investment pipeline also relies on the health of the wider trade environment in which this investment occurs, as well as the overall system of governance of the northern Australian agenda.

Given the current refresh of the White Paper Action Plan, this analytical framework has enabled me to look at the operation of original White Paper initiatives (and subsequent refinements) in each step of the pipeline, explore where the strengths and weaknesses were in each step in the system, and finally to recommend actions that could be considered to

strengthen the northern Australia agenda over the next five years. Broad finding across this analysis suggests that:

- There have been some outstanding successes in establishing a stronger northern Australian development investment pipeline, including at least foundational investments in RD&E (e.g. through the CRCNA), the establishment of targeted concessional loans (e.g. through the Northern Australian Infrastructure Facility (NAIF)) and major enabling infrastructure packages (such as the Beef and Strategic Roads Packages);
- While there were significant successes, some steps in the pipeline were less well developed, or serviced by short term or one-off investments or actions versus the development of more systemic responses. There were, for example, key gaps and weaknesses in human and institutional capacity building, place-based partnership building, land use/infrastructure planning and tenure resolution, and development project feasibility assessment;
- While there were some 10 White Paper actions focused on Indigenous led development, there was limited partnership built with the North's Aboriginal and Torres Strait Islander people in their design. While this issue was partly resolved through the creation of the Indigenous Reference Group (IRG) and Accord, there was no cohesive implementation of IRG Accord outcomes; and
- The original White Paper actions primarily focused on externally sourced, large corporate sector investment, with less focus on building small to medium business economies in situ. This suggests weaknesses in any economic theory applied within the original Whitepaper.

With these systemic strengths and weaknesses in the northern investment pipeline in mind, this analysis leads to some 27 targeted recommendations that might be considered for inclusion in the refresh of the Developing Northern Australia White Paper Action Plan. These are outlined as follows.

### Research, development, and extension

**Recommendation 1:** Through the Commonwealth Department of Industry, commence the processes to enable a continuing CRC-style investment into foundational research, development, extension and innovation on issues required to underpin a long term private and public sector investment pipeline for at least another ten-year period beyond June 2027. These should continue to include agriculture, aquaculture, Traditional Owner led development and health services, while extending into tourism, decarbonisation, and the wider social determinants of disadvantage in the north.

**Recommendation 2:** Focus the next generation of NESP investment from the Department of Climate Change, Energy, the Environment and Water (DCCEEW) into providing a northern Australian-led, Indigenous and farming-sector engaged approach to developing the foundations for improved bio-regional planning, innovation in development assessment and nature positive market development across northern Australia's marine and terrestrial environments.

## Lifting human and institutional capacity

**Recommendation 3:** Building on strong evidence-based initiatives focused on improving Indigenous pathways to technical and further education in the north, the Australian Government could negotiate an effective pilot program to expand the approach across Northern Australian Universities, including strategic efforts to improve both Indigenous and non-Indigenous pathways and retention.

**Recommendation 4:** Coordinated through the Office of Northern Australia (ONA), the Australian Government could mobilise a stronger partnership with the Northern Australian Universities Alliance (NAUA) and other workforce bodies to build a more durable, goal-focused workforce development ecosystem in high priority sectors, regions and vulnerable places within northern Australia.

## Building strong Aboriginal and Torres Strait Islander institutions

**Recommendation 5:** Continue to rigorously review the IRG Accord within the context of the current refresh of the White Paper Action Plan, in full partnership with the IRG, the new Northern Australian Land Council Alliance, the Northern Australian Indigenous Land and Sea Management Alliance (NAILSMA), the Indigenous Land and Sea Corporation (ILSC) and Indigenous Business Australia (IBA).

**Recommendation 6:** Commence early partnership building and design for the development and resourcing of a long term and cohesive program of efforts aimed at lifting the capacity of Traditional Owner institutions (particularly PBCs, Land Trusts and Indigenous Councils), while also integrating and stabilising combined Federal, State and Territory investment in these institutions.

**Recommendation 7:** Ensure the review of the IRG Accord and the White Paper refresh are closely aligned with the current processes for development of the Indigenous Engagement Standards (under review of the *Environment Protection and Biodiversity Conservation Act*), the outcomes from the *Murru Waaruu* economic developing seminar series, and the renewed National Water Initiative negotiations in relation to Indigenous engagement in water allocation planning.

## Place-based partnerships for development

**Recommendation 8:** Establish a robust, flexible and long-term program that can be accessed by northern Australian communities, regions and sectors to develop the strategic partnerships needed to build genuinely sustainable development opportunities or to resolve complex economic and social problems contributing to poor local development outcomes, supply chains and livability. Such a program would best be developed and delivered in partnership with a non-government institution genuinely skilled in being able to strategically frame and foster such partnership development.

**Recommendation 9:** Develop an increasingly important and more defined role for the ONA moving forward to enable it to play a more explicit “whole of government” role in facilitating cross-agency participation in, and contribution to, place-based initiatives across the north.



## Regional and precinct-based land use and infrastructure planning

**Recommendation 10:** As part of the implementation of the emerging Nature Positive Reforms, DCCEEW (working with ONA) should invest in at least three priority regional planning pilots in northern Australia (around \$15 million over three years), particularly building on the principles and places being explored and established through progression of the current NESP/CRCNA investment.

## Project feasibility and impact assessment

**Recommendation 11:** Ensure that, with the relevant infrastructure agencies, appropriate resources are allocated and actively administered to fund collaborative approaches to major infrastructure feasibility and development assessment for water, transport, housing, communications, aviation and marine infrastructure above \$50 million. ONA could be empowered to coordinate State, Territory and regional community access to these funds. Funds should only be invested where all previous steps in the investment pipeline have been adequately developed and matured.

**Recommendation 12:** Establish a five-year equivalent of the Northern Australian Development Program or NADP (around \$5 million per annum for feasibility grants and business advisory support), to support small to medium business, best administered by an appropriate place-based institution in partnership with Regional Development Australia (RDA) Boards. Careful mechanisms for the assessment of proponent credentials and the measurement of project outcomes and impacts should be established from the start of the program.

**Recommendation 13:** In alignment with current *Environment Protection and Biodiversity Act* (EPBC) bilaterals between the Commonwealth, State and Territory governments, further support State and Territory approaches to major project development coordination across the north to address issues related to policy alignment across cabinets and jurisdictions and to ensure legislative consistency.

## Finance brokerage and finance

**Recommendation 14:** Continue to encourage innovation and flexibility in the operation of the NAIF to improve jurisdictional cooperation, increased capacity to finance small to medium proposals, and increased capacity to broker across Commonwealth, State and Territory concession loan facilities.

**Recommendation 15:** Commit to at least multi-decadal permanency for the NAIF, perhaps bolstered and enhanced by handing appropriation of NAIF loan interest earnings back to the NAIF, but also enabling strategic investment in other key steps in the investment pipeline.

## Public sector investment in enabling infrastructure

**Recommendation 16:** Within the outcomes of the Action Plan refresh, commit to CRCNA, Infrastructure Australia (IA), ONA, IRG and the WA, NT and Queensland jurisdictional leads working closely together to develop a *No Regrets Enabling Infrastructure Package* by

December 2024. As per Ministerial Forum discussions, priorities would focus on increasing climate resilience in transport networks, strengthening Indo-Pacific and ASEAN supply chain, and relieving social and economic disadvantage in remote and Indigenous communities.

**Recommendation 17:** In association with this process, by December 2024, develop the partnership arrangements and longer-term supply chain modelling required to develop a transformational *Northern Australian Major Enabling Infrastructure Program* by December 2026 that meets Commonwealth, WA, NT and Queensland infrastructure investment priorities and principles;

**Recommendation 18:** Extend and expand the Northern Australian Digital Infrastructure Package, including place-based partnership building components, until at least 2026.

### International relations and trade

**Recommendation 19:** Explore ways to revitalise the explicit and active inclusion of the northern Australian agenda and priority strategic issues within Australia's ongoing processes of economic cooperation in ASEAN and wider trade negotiations.

**Recommendation 20:** Building on the current Australia Awards Program collaboration, within the Refresh Action Plan, embed an action that supports the Department of Foreign Affairs and Trade (DFAT), CRCNA and the NAUA working together to establish a strategy to grow regional economic cooperation between northern Australia, Indonesia, East Timor, PNG and the wider Indo-Pacific.

**Recommendation 21:** Empower Austrade, in partnership with ONA, CRCNA and NAIF, to re-explore mechanisms for coordinated investment attraction with the northern Australian jurisdictions and industry within a clearer strategic investment framework.

### Overarching DNA governance arrangements and institutions

**Recommendation 22:** Maintain Joint Select Committee arrangements as a mechanism for retaining strong commitment to and involvement in northern Australian policy across the political spectrum.

**Recommendation 23:** In situations where the Northern Australian Ministerial Forum wishes to progress high priority northern policy and budgetary initiatives of genuinely national significance, establish a mechanism to progress such agenda into the National Cabinet agenda as required.

**Recommendation 24:** To ensure a stronger profile and influence within the Australian Government, there may be value in lifting the ONA leadership role to Deputy Secretary level.

**Recommendation 25:** With the view to building a stronger foundation for Ministerial Forum policy and budget initiatives, continue to build a stronger cooperative partnership between ONA, the jurisdictions, CRCNA, NAIF, the Office of Major Projects, Austrade and the RDA Northern Alliance.

**Recommendation 26:** As a key initiative in the Refresh Action Plan, commit to CRCNA working together with ONA, NAIF, the jurisdictions, RDAs, Local government, the IRG and

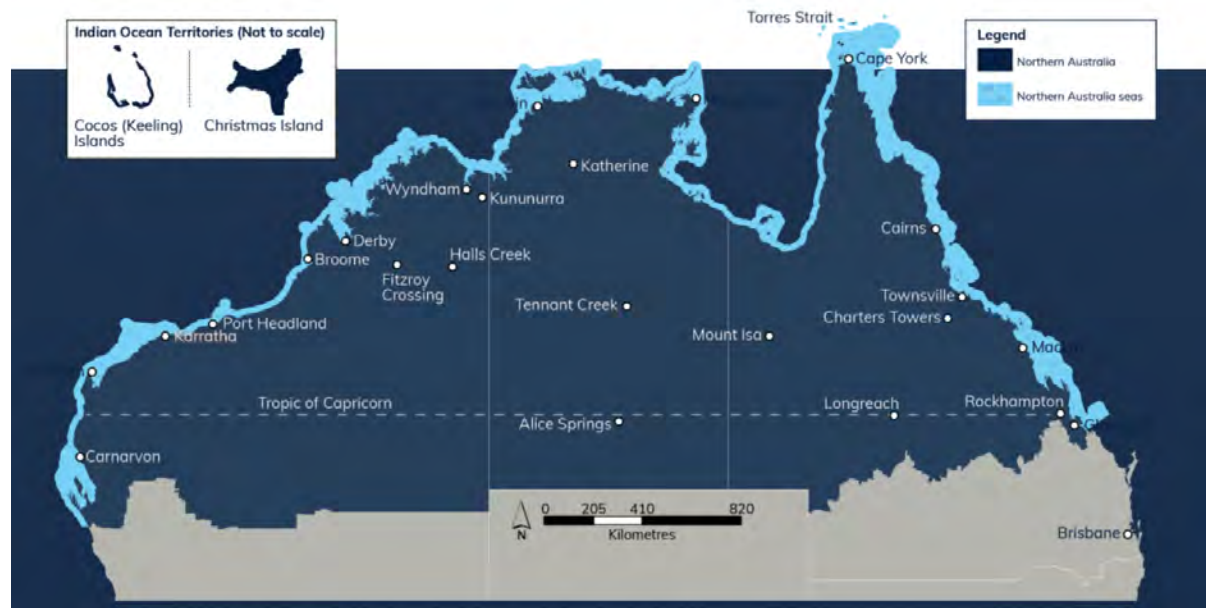
industry in designing, developing and establishing a long-term place-based backbone institution that can enable collective impact approaches to problem solving within the investment pipeline. It should be recognised and invested in as a key part of the long term northern Australian investment pipeline architecture and as an additional strategy to achieve the high-level objectives of the *NAIF Act*.

**Recommendation 27:** Ensure durable investment in key non-government institutions of importance to the overall northern investment pipeline (particularly the NAIF and a new place-based backbone institution) by transferring appropriation responsibility for NAIF interest income back to the pipeline.

# 1 Background and context

There are many reasons why all Australians should be both optimistic *and* concerned that northern Australia be given the best chance possible for a positive future (see Dale 2013). In the national policy context, northern Australia is defined as all of the Northern Territory (NT) and some parts of Queensland and Western Australia (WA) to the south of the Tropic of Capricorn. It also includes the Indian Ocean Territories of Christmas, Cocos and Keeling Islands (see Figure 1; ONA n.d.).

In the first decade or so of this century, there was palpable optimism about the resources available for development, the economic opportunities, and the proximity of the region to growing ASEAN economies (see Noble et al., 2019). At the same time, however, other commentators were deeply concerned about the north remaining a landscape beset by long term economic marginalisation (Dillon and Westbury 2007). Others articulated the risk of the multi-generational impact emerging from remote disadvantage (Laurie 2008). There were multiple concerns regarding the failure of Australia's fiscal architecture to deliver lasting outcomes in remote areas (Committee for the Review of Commonwealth-State Funding 2002). Others focused concern on the north's State and Territory governments, suggesting that poor governance approaches were widening economic disadvantage (Rothwell, 2009). Alongside these economic concerns, others were articulating deep concerns about the steady erosion of the north's unique environmental and cultural values (Garnett et al. 2008).



**Figure 1:** Northern Australia as defined by the Commonwealth's Office of Northern Australia.

<https://www.infrastructure.gov.au/territories-regions-cities/regional-australia/office-northern-australia>

It was a mix of these optimistic and deeper economic concerns that underpinned the original logic of Australia progressing to develop a cohesive northern Australia policy development agenda.

It is also worth noting at this point that there always has been a clear tension between the northern development agenda being about facilitating major development for national benefit (with the assumption the northern region will also benefit) and more directly facilitating development of the region and improvements in the well-being of its communities. In general, the original white paper pursued the former whilst the latter has always been the objective of the people in the north. While the driving policy purpose has likely been both, this tension has not explicitly been discussed or agreed. This tension in objectives and lack of clarity in overall policy aim is a significant problem in the policy debate, as it could lead to a fundamental misalignment between government and local objectives. The lack of conversation about the point also undermines development of stronger solutions with clearer policy aims and better measurability of success (Jack Archer pers. com., 2024).

It is for these dualistic reasons that some of the driving but diverse logics for the northern Australian policy agenda's emergence, through various publications, at least included:

- The extent and potential of northern Australian lands and water (e.g. CSIRO 2009);
- The strategic importance of growing northern Australia's population relative to other large population centres in the nearby Indo-Pacific (Reynolds 2003);
- The very significant export value of the north relative to the south, particularly in the context of the resources and energy sectors (BITRE 2009);
- The geostrategic, supply chain and defence importance of northern Australia;
- The vulnerability of the north to climate and biodiversity risks (Garnett et al. 2008);
- The boom-and-bust nature of the northern Australia economy (Rothwell 2009);
- The economic opportunity of tropical knowledge (Babacan 2012); and
- The human rights and reconciliation imperative (e.g. Stoeckle et al. 2013; Pearson 2013).

Dale et al. (2013) had previously argued that there had always been, and continued to be, grand narratives regarding the future prospects for the north. In exploring more recent history over the past 50 years, however, Dale (2014) considered that three big narratives had tended to reappear predictably. One has been based on the perception that northern Australia is a place of endless economic bounty and limitless opportunity. The second derives from those who would like to see extensive conservation within the northern Australian landscape. Both these narratives were based on important realities. There are significant resource development opportunities in the north, while at the same time, the region is a largely intact bio-cultural landscape of immense international value. Both narratives, however, tended to marginalise the interests and rights of the north's Aboriginal and Torres Strait Islander nations. Both narratives also discounted major physical, climatic, economic and social barriers the genuine progress within the region.



Synthesising many of these debates, and a key step in the emergence of the White Paper, was the release of the 'Pivot North' report of the Joint Select Committee on Northern Australia (JSCNA 2014). The Committee held extensive hearings across the north and received many submissions. The Committee's inquiry was conducted in tandem with the Government's commitment to produce the White Paper on Northern Australia. The Northern Australia Taskforce, comprising cross-agency public servants, and placed within the Prime Minister and Cabinet portfolio, was tasked with producing the White Paper (JSCNA 2014).

Building on the work of both previous Australian Governments, it was the economic opportunity *and* deficit-based economic concerns about the north that eventually and formally led to the national development of the original and first **White Paper on Developing Northern Australia** (Commonwealth of Australia 2015). The original White Paper sought to examine ways to invest in economic development of the north. It broadly concerned parts of Australia north of the Tropic of Capricorn, from Western Australia, right through the Northern Territory and into Queensland.

The core logic of the White Paper at the time of its development particularly included the importance of trade opportunities with the close-proximity booming economies of southeast Asia and southern China. It was also considered that the wider tropics accounted for some 40% of the world's population, rising to 50% by 2050. The region was also considered to be integrating fast through recently concluded Free Trade Agreements (FTA) with Japan, South Korea and China and ongoing negotiations with India, Indonesia and on regional FTAs such as the Trans-Pacific Partnership (TPP), the Regional Comprehensive Economic Partnership (RCEP) and the Pacific Agreement for Closer Economic Relations (PACER) (Commonwealth of Australia 2015).

To facilitate these opportunities, it was considered that the role of governments was to create successful business environments, not successful businesses, and that this would hence require "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" (Commonwealth of Australia 2015). As such, key themes developed within the White Paper included:

- Making it easier to use natural assets;
- Providing a more welcoming investment environment;
- Investing in infrastructure to lower business and household costs;
- Reducing barriers to employing people; and
- Improving governance.

With a strong focus on more extraction-oriented economic opportunities based on existing economic models, the White Paper however, potentially started from behind the eight ball. It generally was silent on the need for the Free Prior and Informed consent (FPIC) of the north's Traditional Owners. It also ignored global and national sentiment about the importance of the north's iconic environmental, tourism and cultural values. Finally, it was unaware of emerging climate vulnerabilities, major changes in geo-politics and massive post-COVID supply chain shifts.

## 1.1 Towards fit for purpose development models

Increasingly across the globe and nationally, modern development narratives strongly, and unambiguously espouse the need for development to: (i) operate within known ecological limits; (ii) genuinely be economically inclusive of more marginalised groups and cohorts within society; and (iii) progress with the FPIC of Indigenous peoples. Indeed, in the Australian context, our nation is already party to several global conventions and agreements that bind us to this way of more globalised policy thinking. These include global agreements related to climate change, sustainable development, human rights and the recognition of Indigenous rights and interests.

Together, these policy foundations may be considered to collectively represent the building blocks of the notion of **sustainable development**. Sustainable development decision-making seeks to balance the short and long-term impacts of development on the environment, the economy and society (Dale et al. 2022). Ongoing economic, social and environmental challenges facing northern Australia, and limits within the current White Paper policy framework, have led to calls for greater consideration of sustainable development thinking. Doing so would mean integrating thinking about global sustainable development goals (SDGs), with legislated national, state and territory concepts of Ecologically Sustainable Development (ESD), all together with more local and corporate Environmental, Social and Governance (ESG) concepts at the project development scale. Australia's emerging Nature Positive policies agenda is also relevant here.

Given the increasingly strong societal recognition of the need for sustainable development over the past decade of White Paper implementation, even a brief contemporary analysis of the original policy agenda would suggest that it may no longer be “fit for purpose” relative to these strong global and national policy foundations. More specifically, it has generally been acknowledged that the original Whitepaper struggled with four cornerstone foundations of sustainable development:

1. Ecologically sustainable development;
2. Inclusive development;
3. Long term resilience building; and
4. Free Prior and Informed Consent (FPIC).

This friction has always meant that the key features of the White Paper would be subject to considerable controversy within Australian society, leading to conflict over development, and generally making the progress of development projects from concept to financial closure fraught with difficulty, making the White Paper slow to deliver on its intended economic consequences. Several reports have also shown the concerns of major investors in navigating the investment pipeline in northern Australia (PWC 2018), particularly as global ESG obligations continue to grow.

Hence, while generally, implementation of the White Paper initiatives might have been a step in the right direction, far more needs to be done to ensure the review of the Whitepaper establishes “fit for purpose” policy settings. This synthesis paper combines the efforts of some seven years of research at the CRCNA, together with significant new work on regional planning and development assessment in northern Australia funded through the NESP Marine and Coastal (MaC) Hub. Collectively, we draw on this and other contemporary work to explore where the White Paper has been able to strongly deliver on its vision for the future of the north. We do this by looking at key areas of success and other areas where the current White Paper program would benefit from improvements in the White Paper’s design and delivery model.

## 2 The northern development opportunity

As a dynamic and emerging economy, there is so much to celebrate, protect and promote in the future of northern Australia. It has an acclaimed lifestyle, a dynamic multi-culturalism, and a culturally and biologically rich land and seascape of global importance. It is a place where new ideas with national and international outreach can emerge and thrive. As northern Australians, we all believe in the future of this wonderful place, and we guard its foundations with passion. There are a range of old, new and emerging economic sectors of national significance. We are that part of the country that could effectively drought-proof Australia in the face of national climate risk.

The highly contested nature of northern Australia, however, combined with significant economic challenges, means that new solutions are needed if we are to achieve genuinely sustainable development in many of our diverse regions. It is indeed important to remember that northern Australia is a dynamic and loose federation of vibrant and unique but often inter-connected regions. Each region has its own opportunity; its own culture, natural environment, climate and identity. The Territory's Indigenous-led Arnhem Land, for example, is a very different region to Queensland's sugar and tourism driven Wet Tropics. The resource-rich and booming Pilbara is another world compared to Cape York Peninsula (Dale 2013). For this reason, several commentators have called for northern development policy to have a stronger devolved regionalism and more policy and support-focused on place-based solutions. Independent NT Legislative Assembly representative, Gerry Wood, for example, once called for "dividing the Territory into regions where people relate to each other, whether it's along geographical, economical or cultural lines" (Hall, 2008). Walker, Porter and Marsh (2012), discuss the strengthening of WA's increasingly effective Regional Development Commissions as a way of boosting regional growth. Dale (2014) explores the importance of dynamic regions working together for northern Queensland's future. Collectively, these voices suggest that the wider policy frameworks underpinning northern development need to be consistent, but also flexible enough to be sensitive to the challenges and opportunities facing individual regions.

### 2.1 A wealth of in situ analysis and reform since the white paper

Across the CRCNA, the NESP and other key institutions over the past 7 years, there has been an increasingly focused body of works looking at both the opportunity for continued development of the north and its regions and significant challenges to development. More specifically, some of these works have provided a focus on analysing the way that the north is governed to deliver sustainable development outcomes. These works have included, but are not limited to:

- A range of sectoral development studies about future industry opportunities (e.g. see NAILSMA 2020; Cobcroft et al. 2020; Chilcott et al. 2020; Chapman et al. 2020; Cao 2020);
- A selected investment in studies across the various infrastructure and service needs of the north (e.g. see Marshall et al. 2020; Edelman 2020);

- A wide range of supply chain development studies across the north and specific regions (e.g. Babacan et al. 2020; KPMG et al. 2019; KPMG and Advance Cairns 2020); and
- Linked studies exploring the need to better de-risk northern landscapes for sustainable development investment (NAJA 2020a; 2020b; Dale and Marshall 2020; Dale et. al 2022).

Since the release of the White Paper, another important range of analyses and reform process (from northern Australian wide to sectoral, regional and project scale analyses) have been emerging via Federal, State and Territory policy considerations. Collectively, these have equally been suggesting new directions in northern policy. At the Federal scale, some of the most relevant include:

- Northern Australian Joint Standing and Select Committee inquiries into issues as diverse as Indigenous economic development, aquaculture, insurance and workforce development;
- Closing the Gap policies, the Voice Referendum and Indigenous remote servicing reforms;
- The development of the Indigenous Reference Group (IRG) and IRG Accord;
- Nature Positive policy and law reforms;
- Defence strategic reviews;
- Commonwealth infrastructure prioritisation and investment reforms;
- Regional service mandate reforms;
- The Department of Social Security's place-based reform agenda;
- The establishment of the Commonwealth's Net Zero Authority; and
- Disaster policy reforms and the formation of the Future Drought Fund.

In Queensland, some of the most relevant reviews and reforms include:

- The Jobs and Energy Plan to support decarbonisation targets;
- The pilot Communities and Transition program and the State's Climate Action Plan;
- Regional engagement framework reforms; and
- The Bradfield Assessment Panel review of contemporary Bradfield proposals.

In the Northern Territory (NT), they include:

- The Pepper Inquiry into fracking in the Northern Territory; and
- The Territory Economic Reconstruction Commission report and Agribusiness Strategy.



In Western Australia (WA), they include:

- Highly contested processes associated with cultural heritage reforms;
- Major investments in agricultural development research;
- Ongoing rangelands reforms processes; and
- Important decisions related to the future of the Fitzroy Basin and the Kimberley.

Also of importance has been the recent output's from the *Murru Waaru* (On Track) economic development seminar series led by the First Nation's Portfolio at the Australian National University (ANU). The outcomes report (FNP, 2024) synthesises the results of a series of important national seminars related to First Nations empowerment. This work has major implications for northern Australia. Key areas of recommended reform include the need for:

- A legislative framework for optimal reform;
- Land rights reform;
- Freshwater reform;
- Sea country reform;
- Cultural and intellectual property rights reform;
- Reform to rights in financial assets; and
- A framework for treaties and other constructive agreements.

Finally, each year, the annual DNAC has also developed targeted recommendations to support the refinement of the northern agenda and to reflect the need for continuous improvements. With the coming Action Plan Refresh in mind, important themes emerging from the 2023 conference included the need for:

- Joined up strategies on lifting Indigenous equity in development and supply chain integration;
- The need to move towards joined up, enabling infrastructure packages for east west connectivity, remote access and Indo-Pacific Supply Chains;
- The need for future focused investment in development planning as the key to resolving landscape tensions, reducing sovereign risk for investors and climate risk;
- The need to build local workforce capacities with a focus on ambitious migration reform;
- Greater coordinated sub-national and strategic relationships into the Indo-Pacific; and
- The need to secure improved pathways for investment that consider research, partnership building, planning, feasibility investment and more brokered finance.

To help mobilise the northern Australian agenda, the three Universities with a major footprint in the north (James Cook University, Central Queensland University and Charles Darwin University) have also recently developed a strong Northern Australian Universities Alliance (NAUA; see Bowman et al. 2024). With increasing linkages into WA Universities, NAUA's emerging priorities include:

- Improving pathways for disadvantaged northern Australians into training and education;
- Building a cohesive workforce development ecosystem in the north;
- Decarbonisation and regional development; and
- Developing policy-oriented data for northern development.

Finally new Northern Australian Ministerial Forum (NAMF) priorities have emerged in late 2022, which include human capital, enabling infrastructure and economic development and diversification (NAMF 2022). Human capital priorities of the Ministerial Forum include:

- Engagement with First Nations people;
- Justice reinvestment;
- Housing availability;
- Migration and mobility;
- Workforce skills and training development; and
- Delivering amenity.

Enabling infrastructure priorities include:

- Digital connectivity;
- Enabling roads, rail and ports;
- Common user infrastructure; and
- Water.

Economic development and diversification priorities include:

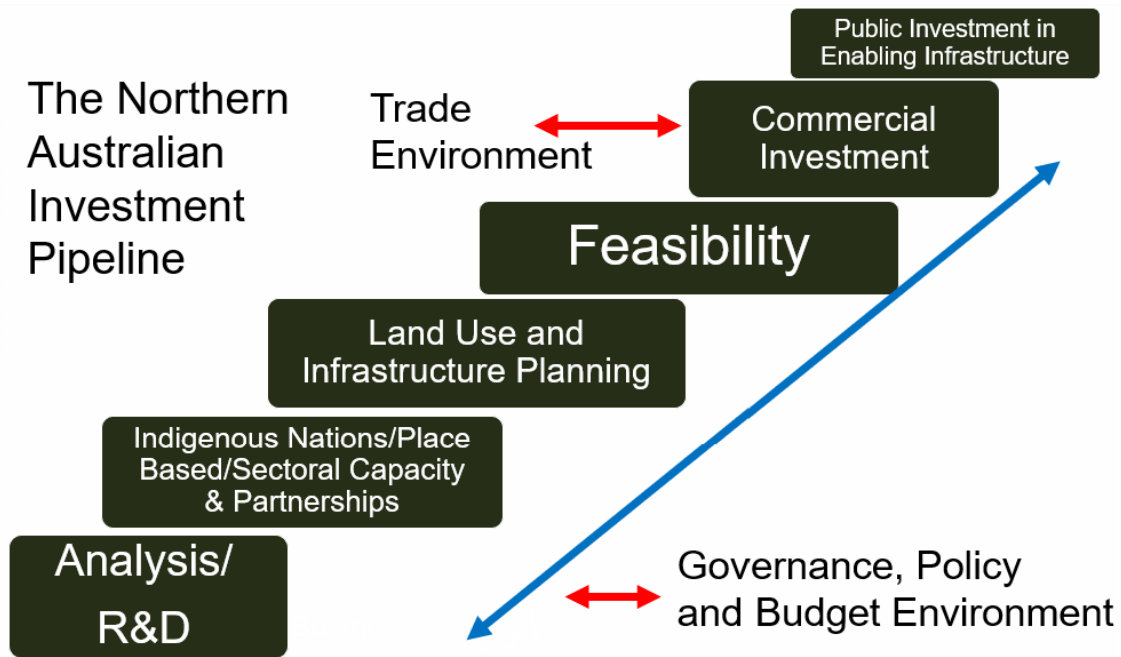
- Progressing transformational and complex projects;
- Diversification that responds to climate change (adaptation and mitigation);
- Agriculture and biosecurity; and
- Data to support decision making and investment.

The formal refresh of the Northern Australia agenda has now commenced to explicitly bring together wider analysis plus deep stakeholder engagement on these and other issues that could be built into a refreshed Action Plan for the agenda over the coming five years. As a consequence, this synthesis and analysis report has been developed as part of the CRCNA's and NESP MaC Hub's mandate to inform the current refresh and longer-term sustainable development of the north.

## 2.2 Towards an investment pipeline approach

The northern Australian development agenda has fundamentally been about attracting the investment (private and public; Australian and global) needed to maintain and grow the north's dynamism. With this in mind, it is important to draw lessons from the detailed synthesis and reform work outlined above to determine a clear framework through which we can consider those aspects of the Developing Northern Australia White Paper that have worked well, as much as those that need improved effort and reform. Our more detailed analysis from across the range of existing CRCNA and NESP-funded derisking efforts, other relevant studies, Government reviews and annual DNAC outcomes, suggest that a particular **hierarchy of inter-linked efforts** are needed to build an effective pipeline for progressing investment proposals for sustainable development. A break in the pipeline or chain from concept inception right through to financial closure, simply means that the northern development agenda will be under-performing relative to its potential.

As shown in Figure 2, this effort hierarchy or investment pipeline starts with investment in foundational research, then progresses to human and institutional capacity development, the building of Indigenous Nations institutional capacity, the development of place-based partnerships (particularly those related to supply chain development), regional and precinct-based land use and infrastructure planning, project feasibility assessment, finance brokerage and the actual provision of suitable finance to support private and not-for-profit sector investment, and finally, on to the provision of significant (and predominantly) public-sector funding for transformational and major enabling infrastructure projects that cannot be secured through private financing models. All of this, of course, also needs to emerge and develop in a favourable trade environment, as well as within a healthy overarching governance system that enables positive policies and programs to emerge.



**Figure 2:** An analytical framework to assess the Northern Australia Investment Pipeline.

The following provides some descriptive context around each key effort-based step within this hierarchy of investment support needs.

1. *Research and development* – The targeted research, development and extension needed to explore opportunities and constraints facing investment in northern Australia;
2. *Lifting human and institutional capacity* – Strategic and foundational investment in human and institutional capacity and workforces to enable investment projects to function;
3. *Building strong Indigenous institutions* – The strong governance of Traditional Owner institutions to lead self-determined future building and to enable FPIC processes;
4. *Place-based partnerships for development* – Strategic and long-term partnerships between Traditional Owner communities, industries, investors, markets, researchers and local, state and federal governments from local, regional, pan-northern and sectoral scales;
5. *Regional and precinct-based land use and infrastructure planning* – The fundamental land use and infrastructure planning required to guide project development and investment;
6. *Project feasibility and impact assessment* – Support for progressing possible projects through business case development and impact assessment processes;

7. *Finance brokerage and finance* – Brokered support for finance from multiple private, philanthropic and government sources to progress development;
8. *Public sector investment in enabling infrastructure* – Shared Federal, State and Territory investment in genuinely enabling infrastructure;
9. *International relations and trade* – Strong and strategically focused global relationships and a healthy trade environment; and
10. *Overarching governance arrangements and institutions* – Strong national to local governance arrangements to ensure effective northern Australian policy making, budget influence and delivery of strategic programs and projects.

Applying this “effort hierarchy” or pipeline model sets the scene for targeted analysis of the original White Paper initiatives. A similar approach could also be applied to resolving complex issues such as overcoming national housing stress and overcoming the significant challenge of derisking investment in the emerging challenge of decarbonising the Australian economy. Globally, real implications from having problematic investment pipelines can also be drawn from the very important lessons emerging from the development and application of the *Inflation Reduction Act* in the US, and to the importance of this wider decarbonisation agenda in Indo-Pacific. Northern Australia will need to play a significant role in achieving national aspirations associated with decarbonisation, so improving steps for reform under the current refresh of the Developing Northern Australian White Paper will be of equal, if not more, importance in securing decarbonisation and housing investment in the North.



### 3 Key features of the original investment pipeline

The original White Paper hosted around 51 implementation actions, most of which, to some extent, contributed to the implementation of this important policy agenda. This section outlines the key features of the original White Paper Action Plan relative to each step in the investment pipeline.

#### 3.1 Research and development

The Collaborative Research Centre for Developing Northern Australia (CRCNA) was established as a flagship initiative of the DNA White Paper, with \$75 million in funding provided to support science-based research and development in the north over 10 years (from 2017 to 2027). The vision of the CRCNA was “to invest in industry-based research that de-risks development in Northern Australia to realise a resilient and sustainable economic future”. Three broad programs of work were established, focussed on agricultural development, Indigenous-led development and research into health service delivery. Through collaborative investment and project co-design, the CRCNA has since turned \$75 million in Commonwealth investment into \$154 million of industry-led research through 118 projects with 517 partners. The research program is now fully committed, and the CRCNA is currently focused on determining its impact and synthesising its research implications.

Through the wider White Paper program, some \$2 million of Commonwealth investment was also focussed on building improved links between world class institutions researching tropical health.

#### 3.2 Lifting human and institution capacity

Human and institutional capacity limitations have always been seen to be a critical barrier facing the development of the north. As a result, the White Paper Action plan included a number of key measures of importance, though these were generally focussed on skills and migration related solutions. Key initiatives under the White Paper have included:

- Making it easier for businesses seeking to expand into northern Australia to receive advice and grants that upgrade their skills under the Industry Skills Fund;
- Employment targets for Indigenous Australians, reflecting local Indigenous working age populations for road projects and other relevant expenditure funded via the White Paper;
- Support for the NT Government to allow workers licensed from other Australian jurisdictions to have their licences more easily recognised in the Territory;
- Reforms to the then Remote Jobs and Communities Programme to allow participants to work in local businesses;
- The pursuit of more flexible foreign worker arrangements in high demand areas by finalising the NT Designated Area Migration Agreement (DAMA);

- Continuing to work on a DAMA for the Pilbara and inviting Queensland to propose a DAMA;
- Expanding and streamlining the Seasonal Worker Programme by reducing costs to business, increasing worker numbers and allowing more countries and industries to participate;
- Expanding the Working Holiday Maker Visa Programme to allow participants to work for longer in high demand areas in northern Australia, with a small number allowed a second year on their visa if they worked in northern tourism and agriculture; and
- Piloting a two-year visa for up to 250 citizens of the Pacific microstates (Nauru, Tuvalu and Kiribati) for work in the north.

There were also reforms proposed to visitor visas from China and India, including further roll out of e-lodgement for those countries. There was also trial of a fast-track service and a 10-year longer validity visa for Chinese visitors and a trial of Chinese language lodgement of visitor visa applications.

In terms of institutional support to business, some \$13.6 million was allocated to extend management advice and other business support services to businesses in the northern tourism industry (under the Entrepreneurs' Programme). Similar services to around 500 small businesses in the north were also extended by lowering the minimum turnover or operating expenditure threshold to \$750,000. Finally, as a broad approach to lifting liveability and human/business capacity, a Northern Australia Insurance Premiums Taskforce was established to investigate actions that would lower the cost of insurance in the north.

### 3.3 Building strong Aboriginal and Torres Strait Islander institutions

The original White Paper was relatively silent in regard to recognising northern Australia as a predominantly Indigenous domain. Traditional Owners have interests across 100% of the northern Australian land and seascape and specific property rights across 78% of the landscape (NAILSMA 2020). Sea claims are also increasingly progressing across the north's sea country environments as well. Together with the relatively high Indigenous population across the north, and the moral obligation for Australia to close the gap between economic and social outcomes for Indigenous people, there can be no doubt about the need to lift the capacity of Indigenous institutions to lead their own development, as well as being able to equitably respond to development proposals.

There were, however, several fragmented initiatives within the White Paper. These included:

- Some \$12.4 million to boost biosecurity activities for Indigenous Ranger groups in northern Australia;
- Some \$10.6 million to support pilot reforms that broaden economic activity on land and demonstrate the benefits of reform to investors, Indigenous Australians and others;
- Support for the native title system (around \$110 million a year over the four years) with the aspiration of finalising all existing native title claims within a decade;

- The development of more efficient native title processes to create more certainty for investors and opportunities for native title claimants and holders (through the Council of Australian Governments or COAG Indigenous Land Review);
- Some \$20.4 million to better support native title holders to engage with potential investors;
- Consultation on options to use exclusive native title rights for commercial purposes (through the COAG Indigenous land review);
- Some \$17 million to support freehold properties or 99-year leases for willing Indigenous communities, including rolling out more township leases in the NT and finalising cadastral surveys and area mapping across the north;
- Consultation on new models to manage native title funds for development;
- More business-friendly information on the different land tenure arrangements to increase the appeal of investing in the north; and
- The pursuit of a set of principles and actions to improve the security, bankability and efficiency of pastoral land.

### 3.4 Place-based partnerships for development

One of the most significant and yet under-recognised parts of the investment pipeline has been the need for place-based partnership building as a foundation for deciding and mobilising the strategic action to progress development into investable project concepts. Indeed, the White Paper itself did not consider this key important step and made little strategic investment in this approach. Often no one party within communities, regions or sectors takes on or funds such partnership development approaches as they are both complex and require dedicated and professional effort. While such partnership building need not be that expensive, often Commonwealth, State and Territory governments are best placed to invest early in such partnerships, which can often be based in local governments, regional economic or social development institutions, or industry bodies.

In the absence of this key step, the CRCNA made a number of strategic investments in supporting the place-based partnership building needed to firm up public and private sector investment concepts. Examples have included:

- Local scale partnerships such as those being developed between WA's DPRID and coastal Aboriginal communities in WA;
- Regional specific investments in supporting strategic supply chain development such as Townsville Enterprise Limited's Supply Chain Development study and partnership;
- Catchment specific investments to scope effective water development opportunities for the limited water available, such as Rockhampton's Making Water Work Program; and
- Sector specific plans and partnership projects such as those in the aquaculture, forestry and health services sectors.

The significant lack of focus and investment in place-based partnerships at regional scale led to the ONA's development of the "Regions of Growth" concept from around 2020 to 2022. Difficulties in progressing this more place-based approach suggest that governments may not be best placed to be the relatively independent facilitator of such complex multi-party partnership building initiatives, even though they need to be deeply engaged within them.

### 3.5 Regional to precinct-based land use and infrastructure planning

An absolute key to underpinning small, medium and major projects in northern Australia is the need to have cohesive regional and more precinct-based land use and infrastructure planning in place. In a highly contested landscape like northern Australia, such planning takes the pressure off the private sector or infrastructure agencies to solve complex economic, social and environmental problems that can only be resolved through combined Commonwealth, State, Territory and Local Government agreement; all translated into stable and statutory planning frameworks. Dale et al. (2020) significantly reviewed regional planning in northern Australia and found the lack of effective planning across the north to be a significant sovereign risk in attracting desirable investment.

Despite this problem, there were very few cohesive investments under the original White Paper to address this significant gap in the investment pipeline in the north. Key initiatives that contributed in part to improved regional and precinct-based planning in the north included:

- Some \$15 million to determine available water and best locations for water infrastructure in the Mitchell River catchment (Queensland), the Fitzroy River catchment in west Kimberley (Western Australia) and catchments in the Darwin region (Northern Territory);
- A Productivity Commission Inquiry to identify duplicative or poorly implemented regulations that are harming investment in Australia's fisheries and aquaculture industries;
- Some \$2 million to set up a 'single point of entry' office in Darwin with the Northern Territory Government to cut red tape and facilitate major project approvals; and
- Consultation with key Indigenous groups on options to improve protections and to cut red tape around Indigenous cultural heritage through amendments to the *Aboriginal and Torres Strait Islander Heritage Protection Act 1984* (Cth).

### 3.6 Project feasibility and impact assessment

There were a few specific initiatives built into the original White Paper that contributed to progressing these steps in the investment pipeline. The primary part, however, is related to water. Specifically, the White Paper committed to 'investigating the establishment of a Water Project Development Fund to support the advancement of meritorious proposals for water infrastructure across northern Australia, including dams and groundwater projects'. In June 2015, the Australian Government announced the establishment of the \$500 million National Water Infrastructure Development Fund (NWIDF) with \$200 million set aside for northern Australian specific efforts. The fund was set up to start the detailed planning and to build or augment existing water infrastructure, including dams, pipelines or managed aquifer recharge. The fund had two components:

- A feasibility component of \$30 million for early scoping and feasibility assessments of infrastructure proposals; and
- A capital component of \$170 million for projects in northern Australia to contribute towards the construction costs of infrastructure projects (with a maximum contribution of 50 per cent of such costs).

Up to \$5 million each for detailed examinations of the economic feasibility of Nullinga Dam (Queensland) and Ord Stage 3 development (WA/ NT) was also set aside.

Beyond water infrastructure, however, there were limited investments in project feasibility and impact assessment related to major, particularly publicly funded, infrastructure. One noted exception in the White Paper was the \$5 million set aside for analyses of possible freight rail projects in northern Australia, with an initial focus on a pre-feasibility study, including a high-level cost benefit analysis, of the proposed Mount Isa to Tennant Creek railway.

### 3.7 Finance brokerage and finance

A key feature of the White Paper was the establishment of the Northern Australian Infrastructure Facility (the NAIF); a \$5 billion concessional loans facility. Since its inception, NAIF has facilitated financial close for a total of 23 projects, with 13 of them now in operation, including projects that both enhance infrastructure and also create tangible benefits for northern Australian communities. In total, NAIF has committed loans totalling up to \$3.8 billion across 36 investment decisions. NAIF estimates that these investments are expected to generate a substantial public benefit of \$30.5 billion for the northern Australia region, while concurrently creating some 15,300 jobs (NAIF 2023).

The underpinning *NAIF Act* was first amended by the *Northern Australia Infrastructure Facility Amendment (Extension and Other Measures) Act 2021*, which was passed in May 2021, extending the NAIF for a further five years to 30 June 2026. It was then improved through the *Northern Australia Infrastructure Facility Amendment (Miscellaneous Measures) Bill 2023*, which was passed by the Federal Government in June 2023. The amendment provided NAIF with an additional \$2 billion allocation, taking the total financing available for infrastructure projects to \$7 billion. In the context of the north's decarbonisation challenge, the NAIF's New Investment Mandate also calls out specific priority areas of focus including critical minerals and rare earths.

### 3.8 Public sector investment in enabling infrastructure

While the focus of the White Paper has always been to foster private sector investment in northern Australia, low population levels, remoteness, tenure complexity, climate, and investment risk will, for a long time to come, mean that the public sector will continue to need to play the dominant role in many strategic large-scale infrastructure agenda. This is particularly the case with respect to transport, marine, water, human services and digital infrastructure. This does not mean that public-private partnerships do not have a key role to play, but a strong bilateral investment is required between the Australian Government and the WA, NT and Queensland governments. This was indeed, recognised by the original



White Paper, and consequently, there were several such major initiatives. These included:

- Some \$600 million for priority road projects in northern Australia including consideration of the Great Northern Highway, Arnhem Highway, Flinders Highway, Barkly Highway, Hann Highway, the Outback Way and the Tanami Road (the Strategic Roads Package);
- Some \$100 million to improve cattle supply chains through a northern Australia beef roads fund, using CSIRO modelling and livestock transport and beef industry experts to identify investment and deregulation priorities (the Beef Roads Package);
- Some \$3.7 million to develop an infrastructure pipeline with the jurisdictions to provide investors information on infrastructure needs so more could be built sooner and cheaper;
- Infrastructure Australia's northern Australia infrastructure audit; and
- Some \$39.6 million to upgrade airstrips and subsidise air services in remote Australia.

While not linked directly to the White Paper, these investments were preceded in Queensland through similar major Commonwealth-State funding packages investing into the Bruce Highway and Peninsular Development Road. Together with the success of the Strategic Roads Initiative and the Beef Roads Package, this eventually contributed to the Commonwealth establishment of the Roads of Strategic Importance Initiative. In 2023, the first digital infrastructure-focused Connecting Northern Australia Package (\$69.6 million) was also announced by the Australian Government.

### 3.9 International and trade relations

The original White Paper had a strong focus on trade development, particularly through the leadership of Senator Andrew Robb. This mobilised strong Austrade commitment to guide foreign investment into Northern Australia. Key actions in the White Paper included:

- Two major investment forums (Darwin in late 2015 and Cairns in 2017) to attract investors and to expose them to opportunities, supported by a publication that showcased investor ready projects in the north;
- Stronger economic connections with the booming Asia-Pacific region by linking the north with Association of Southeast Asian Nations (ASEAN) and Asia-Pacific Economic Cooperation (APEC) connectivity agendas; and
- Some \$2.5 million to foster business to business links with Indonesia, Papua New Guinea and Timor-Leste.

### 3.10 Overarching DNA governance arrangements and institutions

An often under-valued and under-discussed part of the White Paper was the overarching governance arrangements. These could be broadly discussed as including five key components.

It was rarely recognised, but one of the most significant policy initiatives in the White Paper could be viewed as the formalisation of the Northern Australian Strategic Partnership arrangements; a COAG-based and well-structured arrangement for the regular meetings of the Prime Minister, Deputy Prime Minister and the First Ministers of the northern jurisdictions, progressed through the Northern Australia Strategic Partnership. The Strategic Partnership was the place where nationally significant pan-northern issues could be identified and agreed, and where serious cross-northern engagement with key sectors and cohesive evidence building might drive effective policy building.

Below the Strategic Partnership was the more regularised Northern Australian Ministerial Forum, hosted by the Commonwealth Minister for Northern Development, and including the relevant jurisdictional ministers with this portfolio. Collectively agreed policy and budgetary initiatives could be developed through this mechanism. The mechanism was supported by the formation of a Northern Australian Senior Offices Network Group. To service these mechanisms and to coordinate the delivery of White Paper actions, the Commonwealth also established the ONA. The ONA was to work closely with the jurisdictions, but it was intended to also work closely with the Regional Development Australia-based Northern Alliance, the CRCNA and the NAIF.

To review progress and to mobilise policy thinking on significant issues, the Joint Standing Committee on Northern Australia was made an enduring feature of future Parliaments, and an annual statement to Parliament was mandated to be made to report on progress towards White Paper initiatives and new Commonwealth Government initiatives affecting the north. After the dissolution of the Standing Committee in 2022, a new Joint Select Committee on Northern Australia was appointed by resolution of the Senate and resolution of the House of Representatives. The committee was established to inquire into and report on matters relating to the development of Northern Australia, as may be referred to it by either the House of the Parliament or a Minister.

Some additional governance capacity building strategies of note included:

- A public sector secondment programme to improve links between different levels of government and support implementation of the White Paper;
- A northern Australia themed regulation repeal day in March 2016; and
- A strong focus on increasing the defence presence in northern Australia, with details to be announced in the 2015 Defence White Paper.

## 4 Analysis of key parts of the investment pipeline

Building on the knowledge foundations introduced earlier in this report, this next section analyses the strengths and weakness of the key White Paper actions across each step along the investment pipeline for the development of northern Australia.

### 4.1 Research and development

The 10-year investment in CRCNA provided an excellent basis for research and development (R&D) into foundational issues affecting the agriculture, Traditional Owner led development and health services sectors. While there was a strong focus on agricultural research, research into Traditional Owner led development was more embryonic. The level of investment into health-related issues was indeed limited, and for this reason, it needed to be focused on health service delivery issues. As outlined above, there has been substantial impact emerging from investment in all three sectors.

With northern development being a generational or at least a 50-year challenge however, this foundational CRCNA investment will need to continue for some substantial time to come, if not also extended to other sectors, particularly, but not limited to:

- Development in the tourism sector;
- Decarbonisation and ecosystem service markets; and
- Other social determinants of community livability (e.g. housing, youth crime, etc.).

The White Paper Action Plan program did not bolster investment in the baseline environmental research needed to help build the investment pipeline in the north. This, however, was in part offset through ongoing investment in the NESP. While in 2020, the loss of the original NESP Northern Hub potentially weakened investment in northern issues, this was to some extent offset by a specific northern Australian focus being embedded in the new Marine and Coastal Hub and within the Resilient Landscapes Hub from 2021 onwards. The new National Indigenous Environmental Research Network (NEIRN), supported by NESP, also presents some opportunities for substantively improving Indigenous led research in these fields, and more could be done to link these emerging opportunities with the Developing Northern Australia agenda.

### 4.2 Lifting human and institutional capacity

There was reasonable success across the range of skills, migration and business capacity programs established under the White Paper. These initiatives, however, were generally short term (e.g. the tourism business advice services) or enabling of step changes in parts of the capacity building system. This wider lack of systemic change was recognised by the three Universities with a footprint in northern Australia coming together to consider more innovative place-based approaches to lifting human capacity across the north in a more systematic way (NAUA 2023).

After an extensive process of internal analysis and engagement on these issues, the NAUA has identified at least two key issues that need more long term and strategic approaches to resolve, in the context of the current refresh process. These are:

- The development of more stable and effective pathways for the most disadvantaged people within northern Australia to transition from school into trades and University; and
- Progression of some of the key policy thinking being espoused by the Regional Australia Institute (RAI) regarding the development of cohesive sectoral and place-based ecosystems for analysing workforce needs and developing the place-based and sectoral partnerships required to resolve these, both through skills development and migration-based approaches. Such approaches need to be industry partnered, but integrate efforts from early childhood, the schooling system, the vocational education and training system and Universities.

With respect to migration measures specifically, renewed attention has recently been given to the need for solutions for regional and remote Australia above and beyond DAMA arrangements, in both the *Review of the Migration System* and subsequent Commonwealth *Migration Strategy* released in December 2023. Recognition of the importance of immediate permanent migration and creating pathways to permanency for temporary visa holders are a common feature. It follows that supporting mechanisms to improve rates of permanent migration to North Australia may be safe, with ABS reporting that the NT only received 0.82% of Australia's permanent migrants since 2021.

Indeed, overall, there has been little discussion about the need for a population and associated migration strategy for the development of the north. Such strategic work would need to understand population growth being as much about policy that supports livability and policy that promotes population retention and improved internal and external migration to the north. Any northern Australian population strategy needs to better define what we mean by regional and what is deemed as being acceptable population development and growth solutions and outcomes.

One such promising innovative and place-based approach for lifting human capital in the regions may be greater use of complementary migration pathways to both stimulate population growth and increase skilled workforce capacity. The Australian Federal Government has made undertakings domestically and internationally in recent years to support labour mobility initiatives, with pilot work previously underway in the Northern Territory specifically. Such initiatives may be scalable with time and attendant settlement and integration investment, to improve migrant retention in regions.

### 4.3 Building strong Indigenous institutions

From the outset, Traditional Owners and Indigenous communities politely, but actively raised concerns about the lack of partnership between them and governments in the development of the White Paper. These calls were particularly made through keynote addresses at each DNAC. The calls did not reject the need for economic development in the north, but they instead called for Traditional Owners to be equity partners in the development process. These calls helped contribute to the Commonwealth eventually establishing the Indigenous

Reference Group or IRG (hosted through the National Indigenous Australian's Agency or NIAA). The IRG, supported through NIAA, worked with the Commonwealth and the three jurisdictions to develop and agree upon the IRG Accord document; and well-informed strategic overview of the needs of Indigenous people on progressing Indigenous led development and associated actions.

The Accord process and document provided a framework for the Parties to work together and individually to advance Indigenous economic development in northern Australia (Australian Government 2019). The Implementation Plan for the Accord-based recommendations of the IRG was intended to guide the actions that the Commonwealth and the States and the Territory were intended to take to achieve this. Key implementation plan actions in the Accord included:

- Expanded fee-for service opportunities for Indigenous ranger groups across the north;
- Development of a Northern Australia Indigenous Enterprise and Employment Hub System;
- Exploring the options for funding for feasibility studies;
- Progressing land use planning and water reforms for Indigenous benefit;
- Focusing effort to realise the intersecting benefits of the IRG's recommendations; and
- Developing a Northern Australian Indigenous Commercial Research Roadmap and Plan.

While completed in 2019, implementation of the Accord faltered with a change of northern Australia Minister. The new Commonwealth Labor government, however, has recently committed to a formal review of the Accord in association with the current White Paper refresh processes.

In the absence of a cohesive Accord implementation effort, the CRCNA re-focused significant effort on investing in research underpinning Indigenous-led development consistent with the Accord, while the NAIF also enhanced Indigenous engagement and equity in its project development processes. It is also important to acknowledge and recognise the significant (but more national work) undertaken by the ANU's First Nations Portfolio through the *Murru Waaruu* seminar series (FNP, 2024). Much of the thinking in this work is consistent with and leads on from the original Accord process.

In the meantime, in analysing the original White Paper actions, it is worth noting that while generally useful, most programs were relatively modest, and not established within a cohesive or clear policy framework with strong Indigenous over-sight. Three particular gaps of real concern emerge:

- While there has been significant resolution of native title claims across the north, more resources and escalated effort are needed in progressing and finalising claims across, particularly in regard to sea country. This is needed to ensure Traditional Owners have their rights and interests well in advance of coming development efforts across the north;

- More consistency is required in relation to determining water rights for Traditional Owners across the north within water allocation processes; and
- A groundbreaking, cohesive, and significant effort is needed to strengthen the governing and decision-making capacities of emerging Traditional Owner institutions.

#### 4.4 Place-based partnerships for development

As mentioned above, this area of investment pipeline effort was perhaps the most under-developed and most poorly conceptualised in the Developing Northern Australia White Paper. This is despite increasing international and national awareness emerging about the importance of place-based partnership building being an essential foundation for more effective policy achievement. To this end, there have been substantive new policy development approaches emerging across multiple parts of the Australian Government, including social security, Indigenous affairs, regional development, innovation and natural resource management.

The main implication of poor investment in strategic partnership building initiatives is that, given the limited capacities of northern Australia communities, regions and sectors, the strategic thinking needed to conceptualise, frame and mobilise investment simply does not happen.

#### 4.5 Regional and precinct-based land use and infrastructure planning

Regional and precinct-based land use and infrastructure planning is a logical flow on from the need for strong place-based partnership building, and it indeed was equally under-represented in the policy and investment foundations set for the White Paper. Within those investments that were made, there were actually some key problems encountered that are of note:

- Commonwealth investments in determining available water and the best locations for water infrastructure in the Mitchell River, west Kimberley and the Darwin region (the original White Paper Northern Australian Water Resource Assessment or NAWRA) were not well prioritised in terms of the location for study and they were also not well integrated into each jurisdiction's formalised and National Water Initiative (NWI) compliant water allocation and development planning processes. This diminished their usefulness in progressing cohesive efforts towards strategic development. Follow up investment through Stage 2 of the NAWRA in other northern catchments have been facing similar concerns;
- Limited progress has been made in the implementation of the Productivity Commission Inquiry seeking to identify duplicative or poorly implemented aquaculture regulations;
- While there were consultations with key Indigenous groups on options to improve protections and to cut red tape around Indigenous cultural heritage through amendments to the *Aboriginal and Torres Strait Islander Heritage Protection Act 1984* (Cwlth), major conflict over cultural heritage management and development has emerged since the release of the White Paper. More substantial effort to resolve these issues at the Commonwealth level are now progressing through the *Environment Protection and*

*Biodiversity Conservation* reform process, including development of appropriate First Nations engagement standards.

Importantly, the establishment of the 'single point of entry' Major Projects office in Darwin with the Northern Territory Government to cut red tape and to facilitate major project approvals has been a welcome and important part of the process of facilitating major development approvals.

Partly as a result of the targeted derisking investment made by the CRCNA to profile this very significant problem in the northern Australian development investment pipeline, the Samuel review into the reform of the *EPBC Act* in 2020 profiled the need to return to significant regional planning approaches to facilitate development and environmental protection (Samuel 2020). As stressed by Dale et al. (2020), nowhere is this more important than in the highly contested northern Australian landscape. As a result of the Samuel's Review, there is now significant national effort to trial new approaches to regional planning, with none of the most advanced trials currently centred on northern Australian issues. As part of the resulting Nature Positive reforms currently being developed by the DCCEEW, the emerging Regional Planning Standards are also being developed. In anticipation of this important work, the NESP Marine and Coastal Hub has invested in the development of a northern Australian Regional Planning Community of Practice, as well as preliminary governance systems analyses to explore the potential for improved regional and precinct planning in priority development region's such as Queensland's Gilbert River, the NT's Douglas Daly, and WA's resources-rich Pilbara region.

#### 4.6 Project feasibility and impact assessment

In relation to the White Paper itself, apart from resources set aside to support water infrastructure development through the NAWIDF, there was limited resources allocated for supporting the feasibility of, and development assessment for, large and complex projects. More importantly, however, where money was set aside, weaknesses in earlier steps in the investment pipeline led to the allocation of major feasibility assessments based on weak local level partnerships between industry, communities, local, State, Territory and Australian Governments. This contributed to feasibility investments from the Australian Government with low levels of State support or commitment. Additionally, several major feasibility assessments were highly inconsistent with existing regional planning framework such as National Water Initiative compliant water resource plans.

A clear example of such a problem arose with respect to the Nullinga Dam feasibility assessment, which had previously been deemed to be unviable by State agencies, leading to luke-warm State support for and commitment to the project concept. As expected by many at the start of the project, the \$5 million assessment ultimately deemed the project to be unviable. In another case, the \$24 million Hells Gate Dam feasibility assessment ultimately faltered on the known reality that the aspirational yield of water from the proposed dam was many times greater than the available water reserves remaining for consumptive water use in the upper Burdekin River. These issues suggest that a significant procedural problem existed in the progression of major water proposals to feasibility. In fact, a Productivity Commission Audit of the NAWIDF found that:



The advice provided to Government by Agriculture and PM&C informing the selection of the four Fund projects for announcement in the *Developing Northern Australia* White Paper was not underpinned by consistent assessment processes demonstrating that the most meritorious projects were recommended (Auditor General 2018).

Another more explicit gap in the White Paper was the lack of feasibility and development assessment investment for smaller to medium enterprise project proposals across the north, skewing attention to very large projects with more capacity to pay, with less support for the small to medium business sector. This problem was recognised in 2020, when the Australian Government announced the establishment of the NADP, administered by the ONA. The \$111.9 million Business Development Grant Opportunity was established as part of the NADP, which focused on economic diversification and job creation through support for scaling up and growing businesses (including Indigenous businesses) in northern Australian communities. The program had two elements:

- Business Development Grants and [Industry Transformation Grants](#); and
- Business Advisory services to give advice and services to build and strengthen businesses.

Very significant over-subscription of the NADP funds in the first round led to its early exhaustion, but also clearly demonstrated the high demand for such support within the investment pipeline. There has, however, also been limited review of the effectiveness and impact of the program to date.

#### 4.7 Finance brokerage and finance

In the first few years of NAIF investment, there was considerable public and political criticism of delays in the NAIF progression to project closure and expenditure. These criticisms largely ignored the amount of time needed to proceduralise investment in the north from concept to closure. Additionally, these criticisms tended to focus on NAIF itself instead of the immaturity of the overall investment pipeline from R&D right through to NAIF-based investment closure. Now some seven years into its lifecycle, at this point in its developmental history, the NAIF portfolio of investments is now robust and diversified, representing a wide array of sectors, including critical minerals, agriculture, transport, and housing. The current pre-investment decision pipeline within the NAIF has a potential new loan value of almost \$4 billion for projects across all jurisdictions, suggesting the investment appetite in the north is indeed strong.

In the last few years, the NAIF has progressively gone through a range of mandate refinements and has itself adopted a series of new operational innovations that have widened its scope and well as enabled investment in a much more diverse range of opportunities, ranging from smaller to medium and large investments. These have included (NAIF n.d.):



- An expanded definition of infrastructure and a focus on financing development rather than just construction;
- Expanded geography to include the Shire of Ngaanyatjaraku in WA and to support economic development in the Indian Ocean Territories communities of Christmas Island and the Cocos (Keeling) Islands;
- A broader definition of public benefit;
- NAIF being provided with expanded debt tools, including the ability to provide letters of credit, guarantees and lend in foreign currency;
- A capacity to provide finance for smaller loans, through working with financing partnerships;
- A capacity to provide equity finance, subject to a cap of \$50m per investment and being non-controlling stakes (in cases where there are limited finance alternatives); and
- A capacity for the NAIF to provide financing directly to proponents rather than via the States or the NT under certain circumstances.

Some of these reforms have improved the early-phase design limitations of the NAIF, including it being restricted by having a lower original investment limit of \$50 million. Importantly, the NAIF has also increasingly been operating as an active broker in cocktailing finance and investment across multiple Commonwealth concession loan facilities. This approach improves northern Australia's access to a much wider range of Commonwealth-based finance options. One remaining limitation, however, is that appropriation of interest emerging from NAIF loans is not returned to improve or expand either the operation of the NAIF, or the functionality of the overall northern Australian investment pipeline. This is the case despite problems with the pipeline and the multi-decadal nature of the effort required to resolve the northern development dilemma and opportunity. The NAIF also has a limited and short term for its ongoing operation, providing limited long term investment certainty.

It is also worth noting that, from the outset, mandatory criteria associated with NAIF required that any proponent that receives NAIF funding must have an Indigenous Engagement Strategy (IES) in place. This was a first for Commonwealth loan facilities and it has been yielding significant and positive results. To date, there have been over 1,000 Indigenous jobs created and a direct procurement spend of over \$50m (as of end Dec 23). This will continue to grow rapidly as the NAIF has more funding being dispersed to projects with a strong IES (NAIF pers. com).

Overall, the NAIF has proven to be an essential part of the northern Australian investment pipeline, being capable of negotiating the progression of complex and transformational projects within a very complex northern Australian landscape. This has included its increasing capacity for inter-jurisdictional collaboration, its knowledge of northern Australian complexities, and its ability to integrate Indigenous interests and equity within the project development process.

#### 4.8 Public sector investment in enabling infrastructure

One of the standout features of success within the original White Paper Package has been the collaborative approaches taken by the Commonwealth, the States and NT Governments to the design and delivery of the major publicly-funded enabling infrastructure packages (both within and beyond the White Paper). The programs were collaboratively designed between the jurisdictions, and in at least Queensland's case, they had a strong Regional Development Australia (RDA) network and Local government involvement. In the Beef Roads context, there was a strong evidence base emerging from CSIRO's TRANSIT model. In other northern Australian-related investments, new innovations in collaborative government approaches to the delivery of such projects also proved successful, specifically in the case of the Cape York Infrastructure Package (see Dale 2017).

There have been some detailed case studies and socio-economic impact analyses of the Cape York Region Package (CYRP). Some of these were detailed in Dale (2017). This work was used globally to promote the importance of resolving the deficit in reliable strategic infrastructure to provide connectivity between communities and social and economic development in tropical regions. Stage 1 of the CYRP was a shared \$260.5 million investment by the Australian federal and Queensland state governments on an 80:20 basis, and show-cased the benefits of new engagement approaches in an economically marginalised tropical region (QDTMR 2016). Stage 1 of the Package consisted of:

- A \$200 million program of works over five years to seal some priority gravel sections of the backbone freight route (the Peninsula Developmental Road or PDR);
- Some \$10 million over four years for sealing works on the Endeavour Valley Road (EVR) through to the Hope Vale Aboriginal community; and
- Some \$50.5 million for other priority community infrastructure identified by the Cape Indigenous Mayors Alliance (CIMA – now Torres and Cape Indigenous Councils Alliance).

The real innovation in the CYRP was the high level of inter-governmental collaboration at all levels that resulted in combined State and Commonwealth commitments to significant regional community engagement in the design and delivery of the infrastructure spend. Both Governments joined together with key regional institutions in the establishment of a CYRP Sub-working Group and Taskforce. Together with the Queensland Department of Transport and Main Roads (QDTMR), the then Australian Department of Infrastructure and Regional Development (DIRD) and the Department of Prime Minister and Cabinet (DPM&C), the Queensland Department of Aboriginal and Torres Strait Islander Partnerships (DATSIP), the Department of State Development (DSD), and the Department of Infrastructure, Local Government and Planning (DILGP) all worked collectively. This group also involved Cook Shire Council, the Cape York Indigenous Mayors Alliance (CIMA) and key regional development agencies (RDA Far North Queensland & Torres Strait Inc and Cape York Sustainable Futures). All of these parties supported the responsible government agencies to engage effectively with the wider Cape York community through regular CYRP Taskforce meetings.

The overarching engagement framework enabled the regional community to: (i) influence the design and prioritisation of the infrastructure program; and (ii) provide feedback on the proposed infrastructure procurement arrangements to help maximise regional, local and Indigenous business and employment outcomes from procurement. This helped lift regional capacity during the infrastructure build. From the outset, community feedback ensured a priority focus on the development of the central Peninsula Developmental Road (PDR), and a secondary focus on supporting priority transport and other local infrastructure needs within the eight Indigenous local government areas and communities represented by CIMA.

A second layer of engagement within this framework involved detailed project-level negotiation following the registration of the Native Title Cape York United Number 1 Claim (QUD673/2014) registered over Cape York Peninsula, which included the PDR. The key principle of the Claim was that “Traditional Owners for each area continue to speak for their traditional lands and waters according to their traditional laws and customs” (CYLC 2015). Cape York Land Council (CYLC) remains the solicitor on the record for the Claim and has the authority to act on behalf of the named Native Title applicants. Consequently, negotiations took place between TMR and CYLC regarding an Indigenous Land Use Agreement (ILUA) (QDTMR 2016) and a Cultural Heritage Management Agreement which consented to certain acts being undertaken so the PDR could proceed validly (Dale 2017).

Successes within this innovative new approach have included a high level of community input and feedback on the process, high levels of local Indigenous contracting, and particularly high levels of Indigenous and local employment. Key lessons learned from the program have included that:

- Remote communities in the north can benefit from effective engagement with central agencies from the design to delivery phases;
- Structured engagement with Indigenous landholders can greatly reduce risks in project approval and delivery and equally benefit landholders;
- An active focus on securing Indigenous and local benefit from procurement processes can both increase support for infrastructure and boost regional development; and
- Quality processes for cultural heritage assessment and ongoing engagement with Traditional Owners can reduce the impacts on cultural heritage from major infrastructure development.

In recognition of the importance of these large enabling infrastructure programs associated with the White Paper, and based on a number of key supply chain and digital infrastructure research assessments, CRCNA and IA collaborated with the ONA and the jurisdictions since 2021 in working toward the development of a new *Major Enabling Infrastructure Package* which could be kicked off through the current refresh of the White Paper Action Plan. A significant forum of Commonwealth, WA, NT and Queensland Government agencies was held in May 2022. The forum agreed that there would be great value in collaboratively progressing towards a major enabling infrastructure package to facilitate transformational economic and social change across the north. Through further discussion at with the Northern Australia RDA Alliance and a major stakeholder workshop at the DNA Conference in Darwin 2023, a broad conceptual idea was presented and considered at the Northern

Australian Ministerial Forum in October 2023. The proposed pathways forward to achieving this aim to work through and take advantage of the newly established Northern Australian Ministerial Forum arrangements as a mechanism for well-facilitated and evidence-based package planning and development. It also encourages deep collaboration across Commonwealth agencies, the jurisdictions, the RDA Northern Australian Alliance, Local government, the Australian Logistics Council and other key northern Australian stakeholders with a significant role in regional development and trade.

Key elements of the proposal include a process that builds on the experience of past major enabling infrastructure packages within Northern Australia. Three key steps in progressing the package would include: (i) the development of a no-regrets interim enabling infrastructure package by December 2024 (in preparation for the 2025/26 budget cycle); (ii) a strong collaborative planning phase between January 2025 to December 2026 (in preparation for the 2026/27 budget cycle (informed by scenario-thinking and economic modelling developed via collaborative forums); and finally (iii) progression of a significant Federation Funding Initiative to underpin the north's transformational enabling infrastructure. The package focus would prioritise overcoming significant and emerging supply chain fragilities in the north, re-orientation of our relationships into the wider Indo-Pacific and ASEAN region, and overcoming social and economic disadvantage in remote and Indigenous communities.

To meet Ministerial forum priorities for developing transformational and complex projects with a strong Indigenous communities focus, and to meet the above three priorities, key emerging design principles of the proposed no regrets *Major Enabling Infrastructure Package* could include:

- Development of an emerging east-west integrated transport infrastructure pack with: (i) communications cover; (ii) EV charging cover; (iii) targeted access improvement to remote Indigenous/rural communities; (iv) multi-user line of sight to Indo Pacific supply chains that include enhancing port and aviation access; (v) defence and (vi) disaster resilience;
- Major program delivery models that build on the CYRP regional experience;
- CRCNA (as facilitator), IA, RDA Northern Alliance and the IRG working in partnership with ONA and the jurisdictional northern Australia leads to develop the package by December 2024;
- An aim for 80/20 Commonwealth/State shared budgetary influence recognising the extremely remote nature of northern Australia;
- Building an aligned proposal for developing the longer-term foundations for development of integrated supply chain modelling for the North; and
- Wider stakeholder engagement with Development Commissions, REDOs, Local Government, and Indigenous communities, industry, logistics groups and other key stakeholders.

The traditional focus on improving north-south connectivity into Northern Australia should indeed continue, but this new *Major Enabling Infrastructure Package* approach should seek to increase the east-west focus for the first time in northern Australia's history.

#### 4.9 International and trade relations

Establishing strong international and trade relations of importance to Northern Australia is an important precursor to helping drive the demand and markets needed to sure up the viability of expanding industry sectors and projects. Because of the involvement of Trade Minister Andrew Robb at the time, trade foundations were given a high profile in the White Paper. Such thinking also particularly needs to consider the tropical services and expertise capacities of the north, rather than just focusing on foreign investment in development opportunities and raw commodity exports.

Austrade's significant involvement in the White Paper was very strong in the first years of implementation. The first major investment forum in Darwin in late 2015 and a second one in Cairns a few years later attracted significant cross-governmental and investor interest. However, a major realisation arising from this was that indeed, the investment pipeline was poorly developed, making the transaction costs for investors progressing quite high. Austrade operatives following up on investment leads frequently experienced the same problems associated with limited information, a lack of a clear overall northern Australian development plan, and complex approval processes. These concerns were articulated in PWC (2018); an important project collaboration between Austrade and CRCNA. Key findings of that work concluded with recommendations closely aligned to our approach in this report to building a long-term investment pipeline. These included:

- Establishing an overarching strategic framework that presents a consolidated vision for the prioritisation, promotion and staging of investment in northern Australia. PWC recommended that this framework should be endorsed and supported by three levels of government and clearly articulate the targeted investor opportunities;
- Develop a continuously improving knowledge management system to support investment;
- Investigate the potential for priority development areas for planning and associated programs of de-risking for investment to ensure private and public investment is focussed';
- Government supported partnerships to investigate key supply and value chain infrastructure barriers for investment in northern Australia, including feasibility assessment and infrastructure to increase the viability and sustainability of investment;
- Within this strategic framework, drive a process to identify landholders and agricultural producers who have the potential to expand, partner with new investors or divest;
- Governments to develop a co-funding model for supporting landholder readiness for investment attraction; and
- Establishing coordinated investment brokerage and case managed development.

However, during the early years of the White Paper's implementation, it is important to note that there was indeed an energetic integration of northern Australian interests in major trade deals that were unfolding at that time. This energy and profile of northern Australian issues in trade negotiations do appear to have declined since, and they deserve an energetic revamp.

Finally, while investments such as the \$2.5 million to foster business to business links with Indonesia, Papua New Guinea and Timor-Leste were welcome, it is well understood that diplomacy, economic cooperation and trade development are a long term and relational agenda. A more cohesive, strategic and longer-term approach is required, and particularly in the Indo Pacific region.

#### 4.10 Overarching DNA governance arrangements and institutions

The Joint Select Committee arrangements have generally been useful in keeping the northern Australian agenda within the sights of the wider Australian parliament, as well as progressing solutions to nationally significant problems of northern Australian importance (e.g. insurance). In the COAG context, however, the highest-level governance mechanism (the Strategic Partnership), was largely under-used as a mechanism for building fresh bilateral policy and strategy effort across governments. This was perhaps a result of the ONA leadership not being pegged at the Deputy Secretary level, and leaving the ONA buried a little too deeply within the Commonwealth for genuine influence. Both the Strategic Partnership and Ministerial Forum arrangements, in the early years, remained more administratively focused on implementing key initiatives committed to in the original White Paper Action Plan. It could have, however, become a more effective vehicle for overseeing continuous improvement and adaptive management of policy and budgetary reforms.

Run more strategically, these two governance innovations could have raised the possibility of north Australians identifying, leading and progressing major policy initiatives into governments. Such an approach could have replied on for (Dale 2018):

- Grass roots identification and advocacy of the most significant strategic policy issues;
- Strong debate and discussion about these issues within and among key sectors (e.g. the Indigenous sector, the pastoral sector, etc.);
- The coming together of more facilitated and collaborative cross-sectoral dialogue to identify common northern Australian problems and potentially shared solutions;
- The injection of structured input and evidence building support into policy debates from across the north's research and development sectors (including the CRCNA, CSIRO and the key universities with a footprint within or major exposure to the North);
- Providing some effective point or locus of integration across these policy building efforts, including explicit partnership building between the North's major stakeholders, the WA, NT and Queensland governments with the Commonwealth;
- Brokerage of these emerging policy agenda (and associated investment or budget packages), either through portfolio specific Ministerial Forums (e.g. via Health Ministers on significant health related issues), and/or through the ONA and its associated inter- and intra-governmental administrative linkages; and

- The development of cohesive policy and budgetary responses via typical COAG-style framing, leading to joined up governance and shared budget influence.

The lack of more strategic use of these higher-level governance mechanisms made both the Northern Australia Strategic Partnership and Ministerial Forum vulnerable to dissolution through the Commonwealth's COAG reform process in the early 2020s. Indeed, both mechanisms were disbanded after a change in Northern Australian Minister in early 2020. The IRG's Accord was also largely shelved at that time and a new IRG membership later appointed.

At the more operational level, the ONA in itself was an effective mechanism for the coordination of Australian Government efforts in the implementation of the northern Australian White Paper Action Plan. In the early years of operation, this included the ONA regularly using growing mechanisms for strategic thinking and collaboration between key institutional agencies like CRCNA, NAIF and Austrade. Increasingly in these arrangements, CRCNA was able to take on the role of an organisation that was able to increasingly build the place and sector-based partnership required to inform investment and policy reform initiatives that could grow the depth of the northern Australia agenda.

These more cross-institutional collaborative mechanisms weakened following the cessation of the Strategic Partnership and Ministerial Forum arrangements. Combined, these weaker arrangements also led to a less clear strategic focus for the northern Australian agenda. To resolve this, one of the first actions taken by the new Federal Labor government in 2022 was the re-establishment of the Ministerial Forum and revitalisation of the Indigenous Reference Group and Accord.

#### 4.11 In summary

Overall implications for the northern Australia White Paper and Action plan refresh include:

- The original White Paper was generally represented by a smattering of efforts across some layers of the investment pipeline, but with little cohesion in the design of the pipeline;
- A general skew of action that enabled the growth of large corporate investment that wouldn't result in region and community building through small to medium business;
- In the first iteration of the White Paper, major parts of the investment pipeline were particularly weak or missing, including the strengthening of Indigenous institutions, human capacity building, place-based partnership building, regional and precinct-based planning, investment in feasibility and impact assessment, the brokerage of finance, and the provision of finance for the small to medium business sectors; and
- A lack of long-term thinking about the Action Plan and governance architecture.

The following section seeks to progress from this wider analysis to recommended pathways to build on the strengths identified as operating in the original White Paper Action Plan. At the same time, it seeks to resolve broader and more specific problems identified in that investment pipeline.

## 5 Pathways forward for the Northern Australian Refresh

Given the optimism and opportunities *alongside* the highly contested nature of development in northern Australia; new innovations and solutions are needed for the White Paper Action Plan. Based on the above analysis, the following articulates the specific recommendations that could be effectively built within the revised Action Plan being developed as part of the Whitepaper Refresh. They seek to ensure the development of a more effective investment pipeline, whilst also achieving genuinely sustainable development that is both genuinely inclusive and more clearly meets Commonwealth process standards for infrastructure investment. The recommendations provided have been developed for consideration of their potential incorporation into the revised Action Plan. As per the overview and analysis above, they have been structured in a way that could enable strategic interventions across all steps along northern Australia's investment pipeline.

### 5.1 Research, development, and extension

**Recommendation 1:** Through the Commonwealth Department of Industry, commence the processes to enable a continuing CRC-style investment into foundational research, development, extension and innovation on issues required to underpin a long term private and public sector investment pipeline for at least another ten-year period beyond June 2027. These should continue to include agriculture, aquaculture, Traditional Owner led development and health services, while extending into tourism, decarbonisation, and the wider social determinants of disadvantage in the north.

**Recommendation 2:** Focus the next generation of NESP investment from the Department of Climate Change, Energy and Water (DCCEEW) into providing a northern Australian-led, Indigenous and farming-sector engaged approach to developing the foundations for improved bio-regional planning, innovation in development assessment and nature positive market development across northern Australia's marine and terrestrial environments.

### 5.2 Lifting human and institutional capacity

**Recommendation 3:** Building on strong evidence-based initiatives focused on improving Indigenous pathways to technical and further education in the north, the Australian Government could negotiate an effective pilot program to expand the approach across Northern Australian Universities, including strategic efforts to improve both Indigenous and non-Indigenous pathways and retention.

**Recommendation 4:** Coordinated through the ONA, the Australian Government could mobilise a stronger partnership with the Northern Australian Universities Alliance (NAUA) and other workforce bodies to build a more durable, goal-focused workforce development ecosystem in high priority sectors, regions and vulnerable places within northern Australia.



### 5.3 Building strong Aboriginal and Torres Strait Islander institutions

**Recommendation 5:** Continue to rigorously review the IRG Accord within the context of the current refresh of the White Paper Action Plan, in full partnership with the IRG, the new Northern Australian Land Council Alliance, NAILSMA, the ILSC, and IBA.

**Recommendation 6:** Commence early partnership building and design for the development and resourcing of a long term and cohesive program of efforts aimed at lifting the capacity of Traditional Owner institutions (particularly PBCs, Land Trusts and Indigenous Councils), while also integrating and stabilising combined Federal, State and Territory investment in these institutions.

**Recommendation 7:** Ensure the review of the IRG Accord and the White Paper refresh are closely aligned with the current processes for the development of the Indigenous Engagement Standards (under review of the *Environment Protection and Biodiversity Conservation Act*), the outcomes from the *Murru Waaruu* economic developing seminar series, and the renewed National Water Initiative negotiations in relation to Indigenous engagement in water allocation planning.

### 5.4 Place-based partnerships for development

**Recommendation 8:** Establish a robust, flexible and long-term program that can be accessed by northern Australian communities, regions and sectors to develop the strategic partnerships needed to build genuinely sustainable development opportunities or to resolve complex economic and social problems contributing to poor local development outcomes, supply chains and livability. Such a program would best be developed and delivered in partnership with a non-government institution genuinely skilled in being able to strategically frame and foster such partnership development.

**Recommendation 9:** Develop an increasingly important and more defined role for the ONA moving forward to enable it to play a more explicit “whole of government” role in facilitating cross-agency participation in, and contribution to, place-based initiatives across the north.

### 5.5 Regional and precinct-based land use and infrastructure planning

**Recommendation 10:** As part of the implementation of the emerging Nature Positive Reforms, DCCEEW (working with ONA) should invest in at least three priority regional planning pilots in northern Australia (around \$15 million over three years), particularly building on the principles and places being explored and established through progression of the current NESP/CRCNA investment.

### 5.6 Project feasibility and impact assessment

**Recommendation 11:** Ensure that, with the relevant infrastructure agencies, appropriate resources are allocated and actively administered to fund collaborative approaches to major infrastructure feasibility and development assessment for water, transport, communications, housing, aviation and marine infrastructure above \$50 million. ONA could be empowered to coordinate State, Territory and regional community access to these funds. Funds should

only be invested where all previous steps in the investment pipeline have been adequately developed and matured.

**Recommendation 12:** Establish a five-year equivalent of the NADP (around \$5 million per annum for feasibility grants and business advisory support), to support small to medium business, best administered by an appropriate place-based institution in partnership with Regional Development Australia (RDA) Boards. Careful mechanisms for the assessment of proponent credentials and the measurement of project outcomes and impacts should be established from the start of the program.

**Recommendation 13:** In alignment with current *EPBC Act* bilaterals between the Commonwealth, State and Territory governments, further support State and Territory approaches to major project development coordination across the north to address issues related to policy alignment across cabinets and jurisdictions and to ensure legislative consistency.

## 5.7 Finance brokerage and finance

**Recommendation 14:** Continue to encourage innovation and flexibility in the operation of the NAIF to improve jurisdictional cooperation, increased capacity to finance small to medium proposals, and increased capacity to broker across Commonwealth, State and Territory concession loan facilities.

**Recommendation 15:** Commit to at least multi-decadal permanency for the NAIF, perhaps bolstered and enhanced by handing appropriation of NAIF loan interest earnings back to the NAIF, but also enabling strategic investment in other key steps in the investment pipeline.

## 5.8 Public sector investment in enabling infrastructure

**Recommendation 16:** Within the outcomes of the Action Plan refresh, commit to CRCNA, IA, ONA, IRG and the WA, NT and Queensland jurisdictional leads working closely together to develop a *No Regrets Enabling Infrastructure Package* by December 2024. As per Ministerial Forum discussions, priorities would focus on increasing climate resilience in transport networks, strengthening Indo-Pacific and ASEAN supply chain, and relieving social and economic disadvantage in remote and Indigenous communities.

**Recommendation 17:** In association with this process, by December 2024, develop the partnership arrangements and longer-term supply chain modelling required to develop a transformational *Northern Australian Major Enabling Infrastructure Program* by December 2026 that meets Commonwealth, WA, NT and Queensland infrastructure investment priorities and principles;

**Recommendation 18:** Extend and expand the Northern Australian Digital Infrastructure Package, including place-based partnership building components, until at least 2026.

## 5.9 International relations and trade

**Recommendation 19:** Explore ways to revitalise the explicit and active inclusion of the northern Australian agenda and priority strategic issues within Australia's ongoing processes of economic cooperation in ASEAN and wider trade negotiations.

**Recommendation 20:** Building on the current Australia Awards Program collaboration, within the Refresh Action Plan, embed an action that supports the Department of Foreign Affairs and Trade (DFAT), CRCNA and the NAUA working together to establish a strategy to grow regional economic cooperation between northern Australia, Indonesia, East Timor, PNG and the wider Indo-Pacific.

**Recommendation 21:** Empower Austrade, in partnership with ONA, CRCNA and NAIF, to re-explore mechanisms for coordinated investment attraction with the northern Australian jurisdictions and industry within a clearer strategic investment framework.

## 5.10 Overarching DNA governance arrangements and institutions

**Recommendation 22:** Maintain Joint Select Committee arrangements as a mechanism for retaining a strong commitment to and involvement in northern Australian policy across the political spectrum.

**Recommendation 23:** In situations where the Northern Australian Ministerial Forum wishes to progress high priority northern policy and budgetary initiatives of genuinely national significance, establish a mechanism to progress such agenda into the National Cabinet agenda as required.

**Recommendation 24:** To ensure a stronger profile and influence within the Australian Government, there may be value in lifting the ONA leadership role to Deputy Secretary level.

**Recommendation 25:** With the view to building a stronger foundation for Ministerial Forum policy and budget initiatives, continue to build a stronger cooperative partnership between ONA, the jurisdictions, CRCNA, NAIF, the Office of Major Projects, Austrade and the RDA Northern Alliance.

**Recommendation 26:** As a key initiative in the Refresh Action Plan, commit to CRCNA working together with ONA, NAIF, the jurisdictions, RDAs, Local government, the IRG and industry in designing, developing and establishing a long-term place-based backbone institution that can enable collective impact approaches to problem solving within the investment pipeline. It should be recognised and invested in as a key part of the long term northern Australian investment pipeline architecture and as an additional strategy to achieve the high-level objectives of the *NAIF Act*.

**Recommendation 27:** Ensure durable investment in key non-government institutions of importance to the overall northern investment pipeline (particularly the NAIF and a new place-based backbone institution) by transferring appropriation responsibility for NAIF interest income back to the pipeline.

## 6 Next steps and conclusions

This paper synthesises considerable R&D and various Commonwealth, State and NT policy reform agenda carried out since 2015, enabling an analysis of the overall performance of the White Paper on Developing Northern Australia. The approach taken explores the progress made, and barriers experienced, at every key step in the investment pipeline required to secure economic, social and environmental progress in the north. The work integrates a synthesis of the findings of NESP MaC Hub work on approaches to securing both sustainable and inclusive development across the north.

The timing of this work was explicitly intended to align with the current refresh of the White Paper Action Plan, hence, through targeted stakeholder dialogue, this draft was reworked and refined based on feedback from the parties most involved in the review process. Its aim is to provide the most valuable analysis possible and constructive recommendations to support that refresh process.

## 7 References

- Auditor General (2018). *Design and governance of the National Water Infrastructure Development Fund*. Auditor General, Canberra. Accessed at: <https://www.anao.gov.au/work/performance-audit/design-and-governance-the-national-water-infrastructure-development-fund>
- Australian Government (2019). *Northern Australia Indigenous Development Accord*. NIAA, Canberra.
- Babacan, H., Dale, A., Andrews, P., Beazley, L., Horstman, M., Campbell, A., et al. (2012). *Science engagement and tropical Australia: Building a prosperous and sustainable future for the north*. Inspiring Australia, Canberra.
- Babacan, H., Tremblay, P. and McHugh, J. (2020). *Reframing smart supply chains in Northern Australia: Final report*. CRCNA, Townsville.
- Bowman, S., Klomp, N. and Biggs, S. (2024). Universities Accord can promote inclusive development in northern Australia. *Australian Strategic Policy Institute – The Strategist*. 2<sup>nd</sup>. May 2024. <https://www.aspistrategist.org.au/universities-accord-can-promote-inclusive-development-in-northern-australia/>
- Bradfield Regional Assessment and Development Panel (BRA&DP) (2022). *BRA&DP Report*. Department of Regional Development, Manufacturing and Water, Brisbane.
- Bureau of Infrastructure Transport and Regional Economics. (2011). *North Australian statistical compendium 2011 update*. BITRE, Canberra. Accessed at: [http://www.bitre.gov.au/publications/2011/files/stats\\_014.pdf](http://www.bitre.gov.au/publications/2011/files/stats_014.pdf)
- Cao, S., Hine, D., Henry, R. and Mitter, N. (2020). *Evaluation of the potential to expand horticultural industries in Northern Australia final report*. CRCNA, Townsville.
- Cape York Land Council (CYLC). (2015). *Cape York and the single native title claim*. CYLC, Cairns.
- Chapman, B., Henry, R., Wurm, P., Bellairs, S., Crayn, D., Smyth, H., Furtado, A., Ford, R., Sivapalan, S., and Mason, G. (2020). *A situational analysis for developing a rice industry in Northern Australia: Final report*. CRCNA, Townsville.
- Chilcott, C., Ash, A., Lehnert, S., Stokes, C., Charmley, E., Collins, K, Pavey, C., Macintosh, A., Simpson, A., Berglas, R., White, E., Amity, M (2020). *Northern Australia beef situation analysis. A report for the Cooperative Research Centre for Developing Northern Australia*. CRCNA, Townsville.

- Cobcroft, J., Bell, R., Fitzgerald, J., Diedric, A., Jerry, D. (2020). *Northern Australia aquaculture industry situational analysis*. CRCNA, Townsville.
- Commonwealth of Australia. (2015). *Our North, Our Future: White Paper on Developing Northern Australia*. Australian Government, Canberra.
- CSIRO (2009). *Water in northern Australia: Summary of reports to the Australian government from the CSIRO northern Australia sustainable yields project*. Accessed at: <http://www.csiro.au/resources/NASY-Summary-report>
- Dale, A. (2013). *Governance challenges for northern Australia*. James Cook University, Cairns.
- Dale, A. (2018). Governing north Australian landscapes for a better future. In Russell-Smith, J., James, G., Pedersen, H. and Sangha, K. (Eds.). *Sustainable land sector development in northern Australia: Indigenous rights, aspirations, and cultural responsibilities*. CRC Press, Boca Raton, Florida.
- Dale, A.P., Vella, K., and Potts, R. (2013a). Governance Systems Analysis (GSA): A Framework for Reforming Governance Systems. *Journal of Public Administration and Governance* 3(3).
- Dale, A.P. (2014). *Beyond the north-south culture wars: Reconciling northern Australia's past with its future*. Springer, Berlin.
- Dale (2017). Cape York Regional Package. In State of the Tropics (2017). *Sustainable Infrastructure for the Tropics*. James Cook University, Townsville, Australia.
- Dale, A.P. and Marshall, A. (2020). *Facilitating quality agricultural development in Northern Queensland: New policy directions*. CRC for Developing Northern Australia, Townsville.
- Dale, A.P., Sheppard, M., Burrows, D. and Williams, Y. (2022). *Supporting regional planning in northern Australia: A scoping study*. Report to the RRRC, Cairns, Queensland.
- Department of Climate Change, Environment, Energy and Water (DCCEEW). (2022). *Nature Positive Plan: Better for the environment, better for business*. DCCEEW, Canberra.
- Dillon, M. and Westbury, N. (2007). *Beyond humbug: Transforming government engagement with indigenous Australia*. Seaview Press, West Lakes.
- Edelman, A., Grundy, J., Moodley, N., Larkins, S., Topp, S., Atkinson, D., Patel, B., Strivens, E. and Whittaker, M. (2020). *Northern Australia health service delivery situational analysis*. CRCNA, Townsville.

- First Nations Portfolio (FNP). *Murru Waaruu (On Track): Economic development seminar series outcomes report*. FNP, Australian National University, Canberra.
- Garnett, S., Woinarski, J., Gerritsen, R. and Duff, G. (2008). *Future options for north Australia*. Charles Darwin University Press, Darwin.
- Hall, L. (2008). Territory politicians counter failed state claim, *The Australian*, Oct. 26, 2008: p. 4.
- Joint Select Committee on Northern Australia (JSCNA). (2014). *Pivot North: Inquiry in the development of northern Australia*. Commonwealth of Australia, Canberra. Accessed at: [https://www.aph.gov.au/Parliamentary\\_Business/Committees/Joint/Former\\_Committees/Northern\\_Australia\\_44P/Inquiry\\_into\\_the\\_Development\\_of\\_Northern\\_Australia/Tabled\\_Reports](https://www.aph.gov.au/Parliamentary_Business/Committees/Joint/Former_Committees/Northern_Australia_44P/Inquiry_into_the_Development_of_Northern_Australia/Tabled_Reports)
- KPMG, Advance Cairns (2020). *Export 2030: Delivering fresh food fast: The opportunity to double high value food exports from Far North Queensland*. CRCNA, Townsville.
- KPMG Australia, Townsville Enterprise, Premise, AEC (2019) North Queensland market and agricultural supply chain study. CRCNA, Townsville.
- Lyons, P. and Barber, M. (2018). *Indigenous water values, rights, interests and development objectives in the Mitchell catchment*. A technical report to the Australian Government from the CSIRO Northern Australia Water Resource Assessment. Part of the National Water Infrastructure Development Fund: Water Resource Assessments. CSIRO, Canberra.
- Marshall, A., Dezuanni, M., Wockner, K., Babacan, H., Burgess, J., Crawford, J., Foth, M., Gregory, R., Mitchell, P., Neale, T., Rogers, S. and Wallace, R. (2020). *Northern Australia communications analysis*. CRCNA, Townsville.
- NAJA Business Consulting Services (2020). *De-risking, brokering and prioritising agricultural development in northern Western Australia*. CRCNA, Townsville.
- Noble, K., Dennis, T. and Larkins, S. (2019). *Agriculture and resilience in northern Australia: A lived experience*. Springer, New York.
- North Australian Indigenous Land and Sea Management Alliance Limited (2020). *State of the Indigenous Estate: background information for identifying and evaluating opportunities for economic development on Indigenous lands*. Interim report. CRCNA, Townsville.
- Northern Australian Infrastructure Facility (NAIF). (2023a). *NAIF Impact: December 2023*. NAIF, Cairns.



- Northern Australian Infrastructure Facility (NAIF). (2023b). *NAIF reforms*. Accessed at [https://www.naif.gov.au/our-investments/how-and-where-we-invest/reforms/#:~:text=The%20Northern%20Australia%20Infrastructure%20Facility%20Amendment%20\(Miscellaneous%20Measures\)%20Bill%202023,infr astructure%20projects%20to%20%247%20billion](https://www.naif.gov.au/our-investments/how-and-where-we-invest/reforms/#:~:text=The%20Northern%20Australia%20Infrastructure%20Facility%20Amendment%20(Miscellaneous%20Measures)%20Bill%202023,infr astructure%20projects%20to%20%247%20billion).
- Northern Australian Ministerial Forum (2022). *Joint Communique: 31 October 2022*. Accessed at: <https://www.infrastructure.gov.au/sites/default/files/documents/communique-namf-31-october-2022.pdf>
- Northern Australian Universities Alliance (2023). *Northern Australian Universities Alliance: A ministerial discussion starter*. NAUA, Darwin.
- Office of Northern Australia (ONA). (n.d.) *ONA website*. Accessed at: <https://www.infrastructure.gov.au/territories-regions-cities/regional-australia/office-northern-australia>
- Pearson, N. (2013). Failures can't be pinned on Aborigines. *The Weekend Australian*, June 15-16: p. 19.
- Price Waterhouse Coopers (PWC). (2018). *Northern Australian agriculture investor identification*. CRCNA, Townsville.
- Reynolds, H. (2003). *North of the Capricorn: The untold story of the people of Australia's north*. Allen and Unwin, Crows Nest, NSW.
- Rothwell, N. (2009). The failed state. *The Australian*, October 24, 2009: p. 1.
- Samuel, G. (2020). *Independent review of the EPBC Act: Final Report*. Australian Government, Canberra.
- Stoeckl, N., Esparon, M., Farr, M., Delisle, A. and Stanley, O. (2013). The great asymmetric divide: An empirical investigation of the link between indigenous and non-indigenous economic systems in northern Australia. *Papers in Regional Science*.
- Walker, B., Porter, D. and Marsh, I. (2012). *Fixing the hole in Australia's heartland: How government needs to work in remote Australia*. Accessed at: <http://www.desertknowledge.com.au/Files/Fixing-the-hole-in-Australia-s-Heartland.aspx>



**CONTACT**

Allan dale  
allan.dale@jcu.edu.au

**nespmarinecoastal.edu.au**



**Marine  
and Coastal**

**National Environmental Science Program**



**THE CAIRNS INSTITUTE**  
Research in tropical societies



This project is supported with funding from the Australian Government under the National Environmental Science Program.