

LEGISLATIVE ASSEMBLY OF THE NORTHERN TERRITORY

WRITTEN QUESTION

Mr Higgins to the Minister for Primary Industry and Resources:

Appropriation Bill – Primary Industry and Resources

Please provide copies of:

- All questions, which you have received from the public in relation to the Estimates process and consideration of the Appropriation Bill for the 2017/18 financial year; and
- the answers to those questions that were presented to the Estimates Committee.

Please provide the information requested below for Agencies and Government authorities for which have responsibility, as at 31 March 2017.

DEPARTMENT OF PRIMARY INDUSTRY AND RESOURCES

Please accept apologies if questions are not under the correct Output. Where this is the case, it would be appreciated if you could indicate the appropriate Output in your response. Thank You.

OUTPUT GROUP: PRIMARY INDUSTRY DEVELOPMENT

OUTPUT: MARKET AND ENTERPRISE DEVELOPMENT

1. The budget papers indicate that there are “13 enterprise and market development projects for the Territory agricultural sectors”. Please provide a list of these with a brief explanation of the purpose and cost of each.
2. Why did the number of projects decline from 13 to 12?
3. The budget papers state there are only two “aboriginal economic development and producer support programs” compared with 4 in the PEFO. Why were the two programs stopped?
4. Please provide a list of the two current programs, with a brief explanation of the purpose and cost of each, as well as the two programs which have stopped.

5. The budget papers state the government is “facilitating critical infrastructure investment planning to support project development and improve access to regional areas”. Please provide some examples from the past year of the department facilitating critical infrastructure planning.
6. The budget papers also state the government is “Supporting local skills development and employment among industry”? Please provide some examples of that from the past year.

Overseas Trade Delegation to China

1. It is understood that four officials from the Department of Primary Industry and Resources travelled to China in late 2016.
2. What were the outcomes of this trip?
3. Were there any agreements signed as a result of the trip?
4. Was any new investment brought to the Territory as a result of this trip?
5. What was the cost of the trip?

OUTPUT: PLANT INDUSTRIES DEVELOPMENT

1. A strategic issue for the agency is “collaborating with industry stakeholders to expand markets and new investment”. Please give some examples of expanding markets over the past year in this output.
2. The budget papers state that the government is “protecting Territory primary industries from exotic pests and diseases”. What exotic pests and diseases have been issues over the past year and what is the current status of these pests?
3. The budget papers state that there are 19 programs that develop plant industries. Please provide a list of these programs, including the purpose and cost of each?
4. \$1.9 million is being spent over four years including \$1.4 million of Commonwealth and industry funding to develop best management guidelines for nitrogen in mangoes that maximises production and minimises greenhouse gas emissions. How much money is provided by industry for this program?
5. What are the results so far?
6. If this program is successful, what will the benefits be to the industry?

7. Please provide more information about the evaluation of banana clones for their resistance to panama disease?
8. Where is the evaluation taking place?
9. Who is doing the study?
10. \$1.8 million is being spent over 3 years (including \$1.2 million from Horticulture Innovation Australia) to develop management options for cucurbit growers to mitigate cucumber green mottle mosaic virus (CGMMV). How is the study going?
11. What is the annual cost to NT industry of CGMMV? What is meant by mitigation in respect to this program? What are the criteria for success with this program?

OUTPUT: LIVESTOCK INDUSTRIES DEVELOPMENT

1. The budget papers state that there are 9 “programs to support the development of the Territory livestock industry and its major markets.” Please provide a list with each program, its cost and its purpose.
2. How does this output differ from the previous Market & Enterprise Development output?
3. Is the \$100 000 Indigenous Pastoral Project within this output?
4. Where was the funding for the project from?
5. Why did it end?
6. What were the results of the program? Who undertook the evaluation?

OUTPUT: MAJOR ECONOMIC PROJECTS

1. According to the budget papers there is just one regional agriculture precinct development project. What is this project, what is the estimated cost and the purpose of the project?
2. Is this the only activity in this output?
3. Please define “agricultural precinct”.
4. What specifically does creating an agricultural precinct look like?

5. When will the project end, and what will be different about Katherine once it is complete?
6. Are other agricultural precincts planned?
7. Is this related to Katherine becoming an “inland port”?
8. Please define “inland port”.

BIOSECURITY AND ANIMAL WELFARE

1. The budget papers state that there are 13 “biosecurity projects and programs that support preparedness, monitoring and responses to pest and disease incursions, animal welfare and chemical use.” Please provide a list of those programs, their cost and their purpose.
2. \$500 000 is listed in the Budget Papers to protect Territory waters from aquatic pests and diseases. Please break down this expenditure and expand on which pests and diseases are targeted.
3. There is a grant for \$214 000 in the budget for the banana freckle eradication program plus further Commonwealth appropriations under the National Partnership Agreement. What are these funds for at this stage of the program?
4. Does banana freckle funding make up the bulk of the \$5.5 million drop in Commonwealth funding in this area?
5. Why have biosecurity fees expected to half for 2017-18 (from \$298 000 to \$147 000)?
6. What animal welfare is the department responsible for?
7. Is the department responsible for animal welfare for all types of animals?
8. If the department isn’t responsible for some types of animals, who is responsible?
9. Some councils have rules surrounding dogs and maybe cats, but what about other types of animals?
10. Who is nominally responsible for those issues?
11. Should this be clarified?
12. Please provide details about the “wild dog bite prevalence project”?

13. Where was the funding for this program from?
14. What are the stated outcomes of this program?
15. On 27 January it was announced that \$10 000 was granted to Ark Aid to perform free cat desexing for 120 concession card holders in Palmerston and Litchfield.
16. How many cats for concession card holders have since been desexed for free for this \$10 000?

OUTPUT: FISHERIES

1. The budget papers state there are 8 “projects that facilitate Aboriginal economic development opportunities”. Please list these 8 programs, the cost of each, and the goal or purpose of each.
2. The budget papers state that 82% of fish stocks are assessed as sustainable. Please explain where the stocks are unsustainable and what steps are being taken to improve this situation?
3. There is \$1.3 million to develop Aboriginal commercial fishing and aquaculture capacity, and to operate an Aboriginal marine training program in Nhulunbuy. Please break down that spending further.
4. AFANT was provided with \$185 000 of Industry Development funding. How was this amount set? How is this grant assessed and acquitted?
5. How much is spent on aquaculture?
6. What will be the end result of this component if the program is successful?
7. The Darwin Aquaculture Centre is listed as raising \$271 000 in financial year 2017/18 under “Sales of goods and services”. What kind of goods or services does the Centre provide and how much do these services cost?
8. Fisheries License fees are also listed as raising \$177 000. How are fishery license fees calculated?
9. How many fisheries pay these license fees?
10. \$50 million was promised for recreational fishing in this term of government. How much of the \$50 million is provided for in the budget papers for financial year 2017/18?
11. How will it be decided what the rest of the \$50 million will be spent on?

12. Who is currently on the Recreational Fishing Advisory Council?
13. Please explain the current status of Project Sea Dragon from a Northern Territory Government perspective.
14. What timelines has the proponent provided to the Northern Territory Government?
15. How much money has been allocated to breeding programs and what fish are currently being bred for release in our waterways to increase fish stock?
16. How much money has been allocated to continue the Neighbourhood Fishing Program of breeding Barramundi fingerlings and releasing them into lakes such as Manton Dam, Sanctuary Lakes and Durack Lakes? Is this program being expanded into new waterways such as the Zuccoli lakes, Durack Heights Lakes and Marlow Lagoon?
17. How will the continuation of the Neighbourhood Fishing Program incorporate a strong educational component so that young Territorians are educated in aquaculture, flora and fauna, catch and release fishing, sustainability, water safety, biodiversity, tropical waterways and other related topics?

OUTPUT GROUP: RESOURCE INDUSTRY DEVELOPMENT

OUTPUT: INDUSTRY REPORTING

1. The budget papers state there have been 2800 statutory industry reports and sample submissions processed. Please break down that number.
2. How many statutory industry reports were processed and how many sample submissions?
3. Please provide examples of a statutory industry report? Please provide an example of the processing of a sample submission?
4. There are historic opportunities with four new federal Free Trade Agreements (China, South Korea, Japan and India). Is it time to lift our exports from 5% of GSP and capitalise on these historic FTAS?

OUTPUT: GEOSCIENCE AND INDUSTRY DEVELOPMENT SERVICES

1. The budget papers state that the decrease from 125 “Geoscience products developed and updated” at PEFO to 80 in this budget is due to the “incorporation of geoscience products, previously distributed as raw data, into large-scale interpretive value-added reports”. Please provide some examples of these “large-scale interpretive value-added reports”?
2. Why is a target rating for the Fraser Institute Annual Survey a key performance indicator? Should the performance indicator be the actual rating (in 2016 the Northern Territory came 20th) rather than the one the department aspires to? (in 2016, the target rating is 10th).
3. What is the government’s plan to achieve this target of the 10th most attractive jurisdiction in the world for exploration and mining investment? Please provide a copy.
4. Please provide a list of the “investment attraction and promotional events” measured in the budget papers and the cost to the Northern Territory Government for each?
5. How many people are employed in the mining industry in the NT? How many are resident NT workers? How many are fly in / fly out?

OUTPUT GROUP: MINING SERVICES

OUTPUT: MINERAL TITLES MANAGEMENT

1. The budget papers explain the drop in mineral exploration licences granted as being partially due to the streamlining of licencing requirements. What licencing requirements were streamlined and how did this reduce the number of licences granted?

OUTPUT: MINING OPERATIONS MANAGEMENT

1. There is an increase in the “Mine planning documents assessed”. The budget paper notes that “the increase is due to the publication of mine plans (including revised mine plans) as part of transparency improvements.” Why does the publication of mine plans mean that more mine plans have to be reviewed? Are revised mine plans being resubmitted?
2. The number of mine planning documents assessed bounces from 465 in the 2016/17 Budget, to 310 at PEFO, to 480 for the 2017/18 Budget. Please explain the drop at the PEFO in the key performance indicator table?

3. The number of general inspections conducted bounces from 300 in the 2016/17 Budget, to 188 at PEFO, to 315 for the 2017/18 Budget. Please explain the drop at the PEFO in the key performance indicator table.
4. Please explain departmental policy on security bonds? Are they confidential? Are they confidential even if the Environmental Defenders Office (EDO) makes an application for them to be made public? Does the EDO determine departmental policy on which security bonds are public and which are confidential?
5. From a Northern Territory Government perspective, what is the current status of the plans to rehabilitate Jabiru? Is DPIR the lead agency for this rehabilitation? What are current timelines?
6. Will the machinery of government and consolidation of environmental regulation in DENR changes affect environmental monitoring and regulation?

OUTPUT: LEGACY MINES

1. Please list 6 legacy mine projects and the funding allocated to each?
2. On 1 February 2017, it was announced that the “government will also ensure 40 per cent Indigenous employment for contracts associated with legacy mines programs issued in the Tennant Creek Region”. Has that target been met? If not, why not?
3. How many Indigenous people are employed on these contracts?
4. How many people are employed under these contracts?
5. What proportion of the employment for legacy mines contracts in the Tennant Creek program have been Indigenous?
6. Did this employment include any training, skills or apprenticeships?

OUTPUT GROUP: ENERGY SERVICES

OUTPUT: ENERGY MANAGEMENT

1. What tasks are within this output area?
2. According to the budget paper the number of energy applications assessed has dropped from 300 in the 2016/17 Budget to 100 in the 2017/18 Budget. It is presumed that this is due to the moratorium and scientific inquiry. In the meantime, what activity is still occurring for these energy applications?

3. Are public servants from this area working on the scientific inquiry? If so, what tasks are they performing?

OUTPUT GROUP: CORPORATE AND GOVERNANCE

OUTPUT: CORPORATE AND GOVERNANCE

Staffing

1. How many Full Time Equivalents are currently employed within this Agency, broken down by Output and Business Unit?
 2. How many Full Time Equivalents have resigned, retired, taken a redundancy package or have been made redundant, or terminated? Please break down these numbers by Output and Business Unit?
 3. What has happened to these positions? Has the work been reallocated to existing staff?
 4. Are there any plans to fill these positions in the near future?
 5. It is noted the Department has 193 corporate credit cards. Is that many necessary?
 6. The department spent \$14 291.15 with Mitchell Consultancy Services of South Australia with no tender or EoI for “Managing Workplace Change for Success, The People Matter Survey Response Workshop, Doing the Right Thing (Code of Conduct) Workshop”. Please elaborate on what this training was about. Are there no companies which provide this training in the NT?
 7. The department spent \$2 700 for a “desktop assessment of HR services” with 4 interviews with no tender or EoI? Please provide a copy of this report?
 8. The department spent \$23 131 to “provide a proposal on the CXO Advisory Program to enable strategic decision making” with Tech Research Asia from New South Wales with no tender or EoI. Please provide more details about this consultancy. How did the department become aware of Tech Research Asia’s services?
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ANSWERS

All questions received from the public in relation to the Estimates process and consideration of the Appropriation Bill for the 2017/18 financial year; and the answers to those questions that were presented to the Estimates Committee can be found in **Appendix A – Extract of Estimates Committee 20 June 2017**.

OUTPUT GROUP: PRIMARY INDUSTRY DEVELOPMENT

OUTPUT: MARKET AND ENTERPRISE DEVELOPMENT

1. Projects include:

1 RIRDC wallaby project	BUDGET \$34,500
2 Magpie geese project	In-kind contribution re: extension & chairmanship of the advisory panel.
3 Farm business training, collaboration and support	BUDGET \$10,000
4 Economics of reproduction	BUDGET \$20,000
5 Producer demonstration site	BUDGET \$10,000
6 Profitability scenario modelling	BUDGET \$20,000
7 Participation in Northern Australia Agricultural Ministers Senior Officers Working Group	Participation in meetings to progress the NAAM workplan Travel costs only
8 Active participation in the Technical Market Access and Trade Development Task Group	Participate in Trade and Market Access meetings and contribute to the Food and Agribusiness Working Group under the National Trade Development Working Group. Austrade lead this group under their Trade and Investment Ministerial stream.
9 Facilitate inward and outward bound government and industry delegations to build relationships and develop and maintain overseas markets for NT produce.	Participate in and organise, in and out bound delegations to the following markets: Vietnam, Cambodia, China and Indonesia. Costs covered in internal budget and will depend on which countries are targeted.

10 Carry out analysis of market opportunities	Ongoing – first draft of commodity fact sheets due by 30 June 2017.
11 Farm Enhancement	\$200,000 carried over to continue in 2017/18.
12 Food futures collaboration	In-kind contribution re: involvement on the organising committee.
13 US Mangoes Project	2017-18 is the final phase of this four year project. Funding for travel is to be provided from external sources.

2. The Magpie Geese project finished.
3. Drought Concession Loan Scheme – Australian Government funded Scheme, replaced by Farm Business Concessional Loans Scheme in 2016-17.

Current scheme is due to close 30 June 2017, working with Australian Government to extend until 30 June 2018.

Australian Government Farm Insurance program did not commence as Australian Government made decision to deliver without support from States/Territories.

4. Drought Concession Loan Scheme – Provides low interest loans to producers experiencing financial hardship as a result of drought conditions. This program was available in 2015-16 and replaced by Farm Business Concessional Loans Scheme in 2016-17, currently working with Australian Government to continue until 30 June 2018. Australian Government funded - therefore no financial contribution by NTG.

Rural Financial Counselling Service – assists primary producers, fishers and rural businesses with free independent and confidential support and business analysis. Service provided by Rural Business Support in SA with majority of funding provided by Australian Government. NT commitment is \$20,000 per annum for 3 years from 2016.

Indigenous Pastoral Program – This Program is a multi-agency cooperative approach to increase Indigenous participation in the NT pastoral industry and to assist in bringing Aboriginal land into pastoral production. There is no longer a joint funding agreement between NIPE (a wholly-owned subsidiary of the ILC) and DPIR for the Departmental IPP Officers as funding through the National Indigenous Pastoral Enterprises has ceased.

Farm Insurance – This program never commenced.

5. The Department has been integrally involved in the development of the Territory's 10 year infrastructure plan which accompanies the infrastructure strategy and Economic Development Framework.

The Department works with regional agribusinesses to facilitate investment into either their own or Government infrastructure. Recent example would be working with NTLEA to upgrade the Berrimah Live Cattle Export Yards and with Humpty Doo Barramundi to double their production capacity. The Department is now working with Department of Infrastructure and Planning on the Katherine Agribusiness and Logistics Hub.

6. DPIR's Bush foods Project, working with partners in Central Australia and across the NT to stimulate, support and grow the bush foods industry with a focus on wild harvest and sustainability including undertaking workshops in communities.

DPIR supported the mango industry's US market development efforts through supporting the crop monitor training, providing technical advice to mango growers exporting to the US and providing feedback and information to mango growers on arrival and retail condition of mango in the US.

Overseas Trade Delegation to China

1. Five officials from the Department of Primary Industry and Resources travelled to China in late 2016;

Alistair Trier, Chief Executive Officer
Lorraine Corowa, Director Major Agribusiness Projects
Ian Scrimgeour, Executive Director NT Geological Survey
Fiona Park, Director Investment Attraction, Minerals and Energy
Jane Wang, Senior China Business Manager

2. **Outcome 1 – achieved**

Play an active role in the delivery of the agribusiness and minerals streams at the Forum

The Forum was made up of various elements, including a formal government to government meeting, business banquets, site visits, a morning plenary session, and an afternoon in which Chinese delegates attended breakout sessions focussed on different NT economic sectors. DPIR delivered separate breakout sessions focussed on agribusiness, and minerals & energy.

The minerals and energy breakout session took the form of a business roundtable, with approximately 25 Chinese attendees from 13 organisations.

The organisations included prominent industry players Shandong Iron and Steel, Rizhao Iron & Steel, and a subsidiary of the Shandong Provincial Bureau of Geology and Mineral Resources (SDGM). The Chinese delegation at the session was led by Mr Yue, a senior official from China's Ministry of Commerce, which plays an influential role in the approval of Chinese outbound investments. DPIR Chief Executive Officer Alister Trier exchanged opening remarks with Mr Yue on behalf of the NT delegates present.

Ian Scrimgeour, Executive Director of the NT Geological Survey, gave a well-received overview presentation about the NT's minerals and energy sector. Other NT delegation presentations included Rum Jungle Resources (owner of the Ammaroo phosphate and Karinga Lakes potash projects), SRA Information Technology (provider of environmental management software) and the Minerals Council of Australia – NT Division.

The agriculture session was the largest breakout group, with 30 Chinese attendees from a range of companies including cold chain logistics, farming machinery, food importers and processors, donkey farming and processing, aquaculture, biofuels and Landbridge subsidiaries. DPIR Chief Executive Alister Trier co-chaired the session with Ms Shen Shuqing who is a high profile Executive Deputy District Mayor of the Lanshan District, including Rizhao City.

Lorraine Corowa, Director Major Agribusiness Projects provided a well-received overview of the trade and investment opportunities in agriculture and aquaculture in the NT including reference to the two industry participants who were present at the forum, Mark Sullivan from Flying Fox Station and James Paspaley from the Paspaley Group. Both industry participants received significant interest from forum attendees.

Northern Territory Cattlemen's Association Chief Executive Officer Tracey Hayes provided a presentation on the pastoral industry and also donated a stock whip as a business card draw prize. This was well received and won by Mr Zheng Qiang, General Manager of Rizhao Tianze Cold Chain Logistics Co. who had travelled to Darwin in the May 2016 delegation and may be considering investment in the new Landbridge industrial park at East Arm.

Outcome 2 – achieved:

Communicate the NT's ongoing willingness to be a trusted, long-term and stable supplier of minerals and agricultural commodities to China

At both the formal government-to-government meeting and the plenary session, NT Chief Minister Hon. Michael Gunner MLA reaffirmed the NT's commitment to a solid trade and investment relationship with China. The scale of the NT delegation visiting Rizhao – numbering more than 80 – reinforced the importance of the relationship to the NT.

During the Forum's site visits, the NT delegation witnessed the development of new facilities designed to accommodate the expected increase in exports of NT agricultural and mineral commodities over coming years, arising from the lease of the Port of Darwin to China's Landbridge Group. One of this site visits was to Landbridge's own port in Rizhao, capable of high-volume handling of bulk commodities. Another site visit was to the new Australia-China Industrial Park in Rizhao, which will include extensive refrigerated storage facilities for food imports.

In Beijing Chief Executive Alister Trier, Lorraine Corowa and James Paspaley were invited to inspect the processing facility of Sino-Australia Top Beef. The Department has been working with the owner Mr Zhang for the past 2 years to facilitate trade and investment in the Northern Territory. This company has successfully imported a box of frozen Humpty Doo Barramundi on a trial basis and is confident of future trade. Sino-Australia Top Beef owns cattle properties and feedlots in Victoria and New South Wales and is expanding its processing facilities in China.

Also in Beijing meetings were arranged with the Australian Government Department of Agriculture and Austrade to discuss progress in live cattle, donkey protocols and potential for melon imports.

Outcome 3 – achieved:

Provide a platform in which NT agribusiness and minerals organisations can identify and directly access potential investing and trading partners

There were numerous opportunities for NT companies in the delegation to meet and build relationship with potential new Chinese business partners. The NT delegation was well represented by organisations from the agribusiness and minerals & energy sectors, including:

- NT Cattlemen's Association
- The Paspaley Group
- Mark Sullivan from Flying Fox Station
- Various groups interested in donkey farming and processing
- Rum Jungle Resources
- SRA Information Technology
- Minerals Council of Australia – NT Division
- Atrile Solutions

DPIR will track any investment and new trading relationships that arise from the introductions and networking which took place at the Forum.

3. None known.

4. The establishment of trusted relationships with potential investors in China can take years to cultivate before the actual investment transaction occurs. There are a number of promising discussions which may yield investment outcomes into the future.
5. This trip not only included the Rizhao Forum, it also included a number of stakeholder and potential investor meetings.

Total cost of flights and accommodation - \$21,205.66

OUTPUT: PLANT INDUSTRIES DEVELOPMENT

1. DPIR has worked melon industry stakeholders to expand exports to Singapore, including direct exports from Darwin. This has supported continued new investment and expansion of the NT melon industry.

DPIR has worked with mango industry stakeholders to expand exports to the United States and Singapore, including direct exports of NT mangoes to Singapore. This work has supported continued new investment and expansion of the NT mango industry.

2. Plant Biosecurity is essential to safeguarding future profitability and sustainability of the Northern Territory's plant industries from pests and diseases. Over the past 12 months there have been 65 suspect plant pathogens investigated from a variety of hosts including commercial crops (mango, pineapple, melons, avocado, snake bean, mung bean), native and weed species. The majority of the tests determined target emergency plant pests were absent from these samples. Of the 73 tests, 4 were confirmed positive for Cucumber Green Mottle Mosaic Virus which (although no longer considered an emergency plant pest) is being studied to better understand the pathogen in cropping situations and its host range in other plant species. There were 9 detections of pathogens that require further consultation with the relevant industries that may be potentially affected and are subject to the confidentiality processes that are implemented in national decision making processes.

In addition to the plant pathogens, 140 enquiries were received from growers, householders and pest control operators in relation to insect pests (58 of which required submission of a specimen). Of these, no target emergency plant pests were identified. Furthermore there was a total of 5,995 ants identified, 118 of which were confirmed as browsing ants (*Lepisiota frauenfeldi*) and were detected as part of the operational implementation of the National Browsing Ant Eradication Program.

Ant surveillance activities also detected a species that was not previously recorded from Australia (*Monomorium dichroum*) which was assessed as not being a significant risk to primary industries, infrastructure, human health or social amenity.

Other insect pests of significance included 4 larval samples tested and found negative for screw worm fly and 31 samples of fruit fly that were negative for exotic fruit fly species however did result in detection of Queensland Fruit Fly (QFF) in the table grape production areas of Ti Tree and Rocky Hill. QFF is native to northern Australia and considered a major horticultural pest, but can be managed through a systems approach to production.

The commercial horticulture production areas of Ti Tree and Rocky Hill are declared as being free of QFF (*Bactrocera tryoni* complex), and are referred to as Fruit Fly Exclusion Zones. Regular trapping and monitoring of QFF is conducted in these areas to ensure this status is maintained. This activity provides evidence for proof of freedom claims for this pest and supports interstate market access requirements for local produce. Area freedom accreditations for Ti Tree and Rocky Hill were suspended until national Code of Practice requirements were met, and both Rocky Hill and Ti Tree have been reinstated for the 2017 production season. Other insect pests surveyed and sampled for include the Tomato Potato Psyllid (which has been the subject of an emergency response in Western Australia earlier this year), with no detections made. Surveillance of mangoes detected lesser mango leafhopper (*Idioscopus clypealis*) which was noted as an expansion of its known geographic range (as it is established in Queensland) and occurs in conjunction with mango leafhopper (*Idioscopus nitidulus*) which is able to be managed via production measures in cropping situations.

In regard to animal biosecurity investigations have occurred for Tuberculous, Avian Influenza, Newcastle disease, Foot and Mouth disease, exotic bees diseases and pests, Screw worm fly, Transmissible Spongiform Encephalopathy, Bluetongue, Brucella Suis and Classical swine Fever. We also continue to test for Australian Bat Lyssavirus (ABLV) and Hendra virus with 4 positive ABLV in flying foxes. European Foul Brood was detected twice in Darwin and Katherine bees and actively managed. Botulism, melioidosis, lead poisoning in cattle and dogs, arsenic investigations and plant toxicities from Cooktown ironwood, Crotonaria were confirmed.

3. A breakdown of the programs can be found at Appendix B.
4. The total NTG led project '*Optimising nutrient management for improved productivity and fruit quality in mangoes*' is valued at \$1.9 M, with funding (cash and in-kind) from:
 - (i) Commonwealth Department of Agriculture and Water (through the Rural R&D for Profit Scheme) (\$780,000),
 - (ii) Horticulture Innovation Australia and the Australian Mango Industry Association (\$570,000),
 - (iii) Queensland University of Technology (\$350,000) and
 - (iv) NTG Department of Primary Industry and Resources (\$200,000).

Horticulture Innovation Australia funds for the project are industry levies matched with Commonwealth funds and AMIA funds are in-kind from HIA, collectively these organisations contribute 30% of the total project value.

5. It's a 4 year project that has just started. Thus far:
- (i) The project team has been recruited and the project launch and communicated to NT mango growers at the national Mango Conference and through online industry news.
 - (ii) Soil sampling through the Darwin and Katherine mango growing regions, meeting growers and introducing the new project team to the producers, regions, soils, orchards and production questions. Soil characterisation is underway for the 50+ soils collected during the soil survey and will be finished by mid-July. Select soils will be used by our partner labs (QUT, Brisbane) being used in experiments to test the performance of new fertiliser products on NT mango soils. A PhD student has been recruited to work on these experiments.
 - (iii) Developed a whole tree biomass harvests method. Experimentally grown mango trees have been harvested to measure the above and below-ground biomass, quantify the amount of nitrogen derived from fertiliser and soil. This is the first of 3 years of whole tree harvesting that will allow researchers to develop a nitrogen use efficiency for mango. Samples are with our partner labs.
 - (iv) The team has collaborated with other research projects to provide map mango orchards and investigating the use of remote sensing technologies to measure variability in production. DPIR generated mapped data was provided to:
 - a. The CDU-led management of magpie geese project to assist NT mango farmers and researchers to understand this native pest
 - b. A University of New England (UNE), Horticulture Innovation Australia (HIA) and Queensland Department of Science, Innovation and IT project to generate the draft Australian mango map <http://qgsp.maps.arcgis.com/apps/MapJournal/index.html?appid=a700c24d8f1f44f7a64e84cdd0b46999>), which is open for comment and has been presented to NT mango growers in workshops and online.
 - (v) Additionally, the DPIR team partnered again with UNE and HIA (RnD4Profit-14-01-008) to test remote sensing technologies for their capacity to provide a non-destructive measure of canopy nitrogen status, tree vigour, and production variability as has been used in agriculture. The first year of data has been shared with the growers involved, and preparations are being made to collect the second year of data to test these technologies.

Outcomes from this research will ultimately support improved nitrogen use efficiency through improved practice and the potential adoption of emerging agricultural technologies.

6. Nitrogen is an essential tree crop nutrient and nitrogen fertiliser inputs constitute a major proportion of farm production costs and greatly influence mango fruit production and quality. This project will focus on nitrogen as a platform for understand *all* mango nutrition, under the basis of getting more profit from nitrogen for NT mango growers. Almost no data is available for Northern Territory mango growing regions both on the relative importance of the soil nitrogen processes and total nitrogen losses from current management. Through labelled nitrogen (N^{15}) experiments we will be better able to determine the fate of applied nitrogen fertilisers, and will determine the most effective form of nitrogen to achieve maximum uptake, fruit quality, quantity, production and profitable use of these fertilisers.

This provides improved nutrient use efficiency understanding as well as help us determine the most suitable application time for how and when trees use nitrogen. Working with industry, DPIR will develop recommendations about the most suitable nitrogenous fertiliser forms for mango production on our NT soils and climates.

Improving our understanding of the impact of management on nitrogen use efficiency is an essential pre-requisite in giving producers the confidence that they can reduce the nitrogen application rates, forms and timing to maintain or even improve current yields.

7. 27 banana varieties are currently being evaluated at Coastal Plains Research Station for their tolerance and/or resistance to Panama wilt disease. The tolerant/resistant varieties identified will undergo additional testing within a current HIA project to identify potential varieties to replace the Cavendish variety, if needed. Mutated lines of these resistant/tolerant Panama Wilt banana varieties will be evaluated to determine agronomic traits and suitability to the consumer palate. Thus far, there is 4-5 varieties that have initial findings as potentially suitable for further work. The variety trial was a part of the HIA Banana Plant Protection Program that was paused due to the Banana Freckle eradication program. Banana variety field trials is long term and ongoing work that can only be conducted in the NT, due to existence and endemic status of Panama Wilt in the NT. This has been recognised by the Australian Banana Industry and HIA.
8. Coastal Plains Research Station
9. NT DPIR subcontracted by QDAF on Horticulture Innovation Australia project. The project currently funds 3.5 FTEs.

10. The \$1.2M CGMMV HIA project is in its second year. NT Treasury approved an advance in July 2015 for NT DPIR to conduct research to identify the current status of CGMMV in NT soils (\$426,234) and bee hives (\$42,676). Thus far, CGMMV research equates to \$468,910 (NTG) and \$1.2M from HIA totaling \$1,668,910. The remaining is for in-kind costs from the department.

The project has 5 key research areas and progress on each are summarised below.

(i) Identification of alternative hosts and non-hosts of CGMMV

- a. Weeds have been identified as alternative host of CGMMV, additional alternatives including native grasses are currently being investigated.

In the case where growers have CGMMV infested soils, options of plant crops that could be grown as an alternative was discussed with NT Farmers Association and evaluated in the project.

(ii) Understanding CGMMV biology in contaminated soil

- a. Research has shown that CGMMV is still live and infectivity after at least 12 months in NT soils with no host plants (quarantine period).
- b. An immunocapture soil assay developed at the Israeli Volcani Research Centre is being validated within the HIA project. It involves purifying virus particles from contaminated soil and then follow up experiments to test whether the virus is live and still infective. This is ongoing.

(iii) Improving CGMMV diagnostics for plant and seed material

- a. Current CGMMV and new diagnostic technologies available in the market is currently being investigated by QDAF. This is ongoing and no data is available yet to report. The improvement of seed testing is a part of a CRC plant biosecurity program and feeds into the CGMMV HIA project. Results so far have indicated a need to shift seed testing, on a national level, towards molecular testing, which is more sensitive and accurate, compared to the current international accepted seed testing protocol using ELISA.

(iv) Understanding the role of bees and the persistence of CGMMV in bee hives

- a. Testing of bees and bee products across a range of apiaries in the NT over time have shown that CGMMV is found in almost all bee products but only live and infective CGMMV is found in bees, pollen and honey. Field trials have shown that cucurbit flowers can be infected by pollinators including bees but the mode of infection and the survival of CGMMV in bee hives over time is still unknown.

(v) *Extension and capacity building*

- a. NT DPIR works closely with NT Farmers Association to provide the extension and capacity building to our growers. This includes on-farm biosecurity procedures to ensure farms are kept CGMMV free and manage CGMMV on infested properties. Since the project commenced, there have been mock training sessions with NTG Biosecurity group with NTFA on the on-farm biosecurity procedures and the regulatory component of the national CGMMV management program that allowed market access for NT cucurbit growers to interstate markets. Research findings have been distributed to growers through two grower meetings in Darwin and Katherine, industry newsletters, industry conferences, department fact sheets and project milestone reporting.

11. The current effect of CGMMV on the NT industry is minimal but a value (\$) is unknown, since quarantine was lifted in February 2016, growers have been able to return to production and sell their product interstate. To date, feedback from NT growers is that they have not seen any infected fruit on farm and no infected fruit has been reported as intercepted at interstate markets. Any signs of symptoms in the field have been rogued out as part of their management strategies. No grower samples have been submitted to the laboratory to test for CGMMV since the lifting of quarantine.

Mitigation to reduce/limit CGMMV.

The project supports and promotes on-farm biosecurity to ensure growers remain CGMMV free via our extension program– this includes planting clean seeds that have been tested at the higher rate of 9400 seeds per shipment, maintain weed control around their production areas (a list of weed species as alternative hosts has been supplied to growers), clean farm machinery and equipment (on-farm biosecurity) and have the motto – “Come clean, leave clean”. The project has identified several plant species that allows growers to still produce in CGMMV infested soils, non-host plantings will reduce the virus load in the soil as cucurbits are not grown.

Criteria for success of the NT CGMMV program thus far has seen NT growers return to production, the project undergoes a mid-project review in September by an independent reviewer who will report their findings to HIA and industry. Success will be measured by identifying the effect of CGMMV on the cucurbit industry nationally, steps taken by growers to minimise the effect of CGMMV on their properties and/or keeping their properties CGMMV free, thus far the uptake of the on-farm biosecurity procedures have covered over 98% of industry. The evaluation of current in-field technologies may improve and decrease the time to diagnose the disease. As more detections of CGMMV are reported interstate, the research findings would be critical for the long term management of this disease that is affecting the national cucurbit industry.

OUTPUT: LIVESTOCK INDUSTRIES DEVELOPMENT

1. The Livestock Industries Development research, development and extension program consists of a large number of individual projects managed within a strategic framework of nine operational programs. The timing and funding of individual projects varies. Many are externally funded and many are joint projects with other agencies and jurisdictions.

	Program	Cost	Purpose
1	Managing the feedbase for optimal production	\$997,000	Projects related to grazing management, safe carrying capacity and the efficient and sustainable use of pasture. Large program, mostly externally funded.
2	Improving reproductive productivity through the application of genetic principles and technology	\$305,000	Projects on genetic selection for fertility in the Brahman breed, cross-breeding to maximise productivity and reduce market risk, and using DNA technology to accelerate the rate of genetic gain.
3	Optimising productivity through nutritional management	\$370,000	Nutritional standards for young cattle, phosphorus nutrition of heifers; value-adding to cull cows for the abattoir; and use of novel feeds
4	Animal husbandry and management	\$358,000	Projects related to the extensive nature of the NT's production system - use of technology to remotely manage cattle; economics and effects of vaccination; reducing foetal and calf loss; management of wild dog predation on calves
5	Accessing premium markets through improved meat quality	\$52,000	New program investigating ways for producers to reliably meet MSA standards (focussed initially on Central Australia as they have easier access to markets offering differential pricing)
6	Buffalo and other livestock species	\$168,000	Riverine buffalo for meat and milk. Live export development for buffalo. Pilot project on donkey farming
7	Technical Services for overseas markets	\$526,000	Supporting relationships with live export clients through technical assistance (Indonesia, Vietnam and Timor Leste). Externally funded.

	Program	Cost	Purpose
8	Economics and development of pastoral industry	\$56,000	Economic modelling to improve the profitability of the NT cattle industry and plan its sustainable growth
9	Extension Services to Industry	\$ 185,00	Coordinating training courses, demonstrations and public events aimed at improving the skills of producers and their uptake of research results

2. Market and Enterprise Development focusses on marketing, business development and business promotion. Livestock industries is a technical division focused on improving production and providing technical support.
3. No, the Indigenous Pastoral Program is managed under the Market and Enterprise Development program, as it is considered that much of the activity of the program is focused on business development rather than technical support.
4. From about 2003 until the end of 2016, 50% of the Indigenous Pastoral Program's personnel costs were funded by the Federal Government's Indigenous Land Corporation (ILC) and the other 50% funded by the NT Government. The ILC also paid most of the program's operational costs, and contributed to the infrastructure built on the indigenous stations. Since the end of 2016, ILC funding has stopped so the NT government has had to pay all the costs of the two department staff involved in the program.
5. The Indigenous Land Corporation's (ILC) partnership in the program has transferred to the National Indigenous Pastoral Enterprises (NIPE). While the ILC is purely a Federal Government agency, NIPE is a private holding company set up to put the ILC's pastoral investments onto a commercial footing. In 2016-17 the NIPE had to reassess its financial position and has suspended most of its commitments. The partnership (NIPE, NT Government, Central and Northern Land Councils, and the NT Cattlemen's Association) continues to guide the program but the financial support has ceased.
6. The Indigenous Land Corporation ran regular internal reviews of the Indigenous Pastoral program and were always very complementary of its achievements and governance, especially the role of the NT Government staff. The program also brought out an achievement report each year, which was made publically available.

OUTPUT: MAJOR ECONOMIC PROJECTS

1. The budget papers refer to the facilitation of agricultural precinct development generally. This is part of the broader Major Economic Projects function which has a budget allocation of \$865,000 for the 2017-18 financial year.

Agricultural developments which could result in an identifiable precinct are being considered in a number of locations across the Territory. Although the details of these developments remain commercial in confidence, agribusinesses at the preliminary feasibility and proof of concept stage include aquaculture ventures, donkey farming, broadacre cropping and horticulture.

2. The Major Economic Projects function has a number of outputs outside of agricultural precinct development including:
 - Expansion of the Ord River Irrigation Area
 - Investment attraction and facilitation of agribusiness developments
 - Administration of the Biological Resources Act
 - Economic Services
3. An agricultural precinct is a defined geographic area that contains compatible land uses. The precinct concept is intended to encourage investment in agricultural industry development at scale and provide economic and/or environmental benefits from clustering similar land uses.
4. The development of an agricultural precinct is specific to the land area and agricultural land uses under consideration. For example a horticultural agricultural precinct may look just like a farmed landscape, supported by a fruit packing or storage facility. A broadacre cropping precinct may look just like a cropped landscape supported by a seed processing or storage facility.

By way of example, fruit and vegetable production at Fox Road, Katherine would be considered a horticultural precinct.

The role of the Northern Territory Government and the private sector will be different in the development of each precinct depending on the business or partnership model.

5. There will be ongoing agriculture precinct work in response to the development opportunities pursued by investors.

In reference to the Katherine Agribusiness and Logistics Hub at the end of the project there will be a detailed plan for an industrial sub-division focused on agribusiness in the business district of Katherine.

6. Agricultural precincts may be developed throughout the NT, including on Pastoral Leases and Aboriginal land. The Department will work with willing landholders to facilitate investment and development.
7. The Agribusiness and Logistics Hub planned to support the Katherine region could be considered as a light industrial precinct.
8. The term 'inland port' was coined to represent the concept of a centre for the storage, consolidation and transport of products and the associated logistical services. This term has been replaced with the use of 'Agribusiness and Logistics Hub'.

BIOSECURITY AND ANIMAL WELFARE

1. Breakdown of projects included in the below table.

Projects/Programs	Cost	Purpose
1 Animal Surveillance	2,100,000	Management of the Animal Biosecurity Program, including Surveillance and diagnostics, Cattle Tick Control, Meat Industries compliance, veterinary Surgeons board, Traceability and identification.
2 Local Market Support		
3 Cattle Tick Program		
4 Meat Industries Compliance		
5 Veterinary Surgeons Board		
6 Preparedness and Response		
7 PBB Surveillance	1,253,800	Management of the Plant Biosecurity Program, including Surveillance and diagnostics, Interstate Certification, Preparedness and response.
8 PBB Licensing, Compliance and Audit		
9 PBB Policy and Legal		
10 AWB Management	1,153,800	Management and compliance with the Animal Welfare Act
11 AWB Compliance		
12 BAW Management	634,000	Management of the Biosecurity and Animal Welfare Program including Ministerial business, National committee representation, financial support, policy and legislation
13 CSB Policy and Compliance	306,400	Management and Coordination of Government policies and objectives for the safe and sustainable use of agricultural and veterinary chemicals for the benefit of primary industry without harm to human health, the environment or animal welfare, including administering the Agriculture and Veterinary Chemicals Act and associated Permits and Licencing.

2. Breakdown below:

- \$100,000 – Inspection and treatment program for high biosecurity risk vessels that entry Darwin Marinas – to prevent the establishment of any recognisable marine pest (and disease carried by these pests) in the marinas and then potential spread to other areas in the NT. Focus is mainly on the bivalves – Black-striped Mussel, Asian Green Mussel, Brown Mussel and Asian Bag Mussel.
 - \$25,000 – Early warning surveillance of high risk areas around the NT coast for the detections of marine pests which will assist in eradication and or control measures.
 - \$15,000 – community awareness programs, development and implementation of national aquatic biosecurity programs – marine and freshwater tropical pest species.
 - \$15,000 – fish kill investigations including emergency response and staff development training
 - \$345,000 – salaries Veterinary Histopathologist - laboratory investigation of disease events in wild and farmed animal. Disease certification of aquatic animals prior to translocation into or within the NT.
3. The grant of \$214,000 in the budget for the banana freckle eradication represents the amount expected to be received from other states as their contribution to the 2016-17 National Banana Freckle Eradication Program expenses incurred to date by the NTG.
 4. Yes. The banana freckle funding does make up the bulk of the \$5.5 million drop in Commonwealth funding in this area
 5. Fees and charges were high in 16-17 due to a number of one off recoveries (eg Croc Tags), the move to 5 year permits for 1080 and high cattle movements in 2016-17 and therefore it is not expected to be at equivalent levels in 2017-18, however if cattle movements are high this figure can be adjusted.
 6. The department is responsible for animal welfare through the Animal Welfare Branch which administers the *Animal Welfare Act*. The objectives of the Act are to ensure that animals are treated humanely, to prevent cruelty to animals and to promote community awareness about the welfare of animals. The Chief Executive of the department Mr Alister Trier is the Animal Welfare Authority. The Department is also responsible for Animal Welfare Standards and Guidelines which are administered under the Livestock Act

7. The department is responsible for any animal that is a live member of a vertebrate species including an amphibian, bird, mammal (other than a human being) and reptile, a live fish in captivity or dependent on a person for food, or a live crustacean if it is in or on premises where food is prepared for retail sale, or offered by retail sale, for human consumption.
8. Invertebrates that may come under the control of the Parks and Wildlife Commission through the *Parks and Wildlife Conservation Act* particularly if those animals are within declared Parks and Reserves.
9. Under section 195 of the Local Government Act 'Animals and activities involving animals' gives the council regulatory power to take specific action to remove or mitigate the hazard or nuisance that may involve an animal. Some Councils have specific regulations about the type of animal and numbers of animals allowed but generally most council by-laws regulate the control and keeping of dogs and cats only.
10. Local Councils and under the *Summary Offences Act* the Police can take action regarding dangerous dogs. Under the *Animal Welfare Act* (the Act) the Animal Welfare Branch can take action regarding all animals (as defined under the Act) within Council jurisdiction if a welfare matter is reported.
11. The management of animals within local jurisdictions are clarified through the local by-laws and on their respective websites. The councils, Police and the department's Animal Welfare Branch are aware of each other's responsibility regarding animal management. The respective legislation of each stakeholder gives appropriate powers for each body to undertake their responsibility. All stakeholders are active in communicating their responsibilities through education and engagement with the citizens of the NT.
12. The project is to assess the impacts of wild dogs on beef cattle and to review current management strategies across the Northern Territory through quantifying the prevalence of non-fatal attacks from wild dogs on young cattle in the Northern Territory (NT) and to make available information that could be considered by industry in the future development of best practice guidelines.

The project is asking NT station owners to monitor the impacts of wild dogs on calves and weaners within breeding herds of the Northern Territory.

Data will be analysed to derive overall regional and property estimates for the frequency mauled young cattle appear at muster. The variation in prevalence of young cattle with signs of non-fatal attacks will be described, and associations between risk factors (cow age class, baiting attributes, location, proximity to a national park, etc.) investigated.

Additionally assessment of the predictability of reproductive failure rates using indicators of wild dog activity, and gauging the effectiveness of practices to regulate the control of wild dogs will be assessed.

13. Funding is from the Commonwealth through the Department of Environment and Natural Resources.
14. The overall objective of this study is to quantify the prevalence of non-fatal attacks from wild dogs on young cattle in the Northern Territory (NT) and to make available information that could be considered by industry in the future development of best practice guidelines.
15. The animal Welfare Grant given to the Ark Aid to perform free cat de-sexing covered the Darwin and rural areas. The Ark Aid worked with the Cat Association NT and cat rescue groups to promote this program. It was aimed at people with concession cards who might otherwise not be able to afford such surgery.
16. In total 120 cats were de-sexed.

OUTPUT: FISHERIES

1. The eight projects facilitating Aboriginal economic development and their purpose are:
 1. *Aboriginal Coastal Licences - \$55,000*

The Aboriginal coastal licence provides an opportunity for economic development and sustainable commercial activities in coastal Aboriginal communities and is seen as a way of introducing Aboriginal community members to the seafood industry at a low start-up cost.
 2. *East Arnhem Aboriginal Fishing Network - \$321,000*

Support the development of a Yolngu owned seafood cooperative to increase the supply of locally produced seafood from Yolngu fishing businesses in the East Arnhem region.
 3. *Aboriginal Economic Development - \$150,000*

Provide mentoring and skills to support the development of Aboriginal owned and operated seafood businesses in remote communities across the Northern Territory
 4. *Oyster Aquaculture Research - \$375,000*

Undertake industry enabling research and development in partnership with remote Aboriginal communities to develop a Northern Territory Tropical Oyster industry.

5. *Trepang Aquaculture Research - \$155,000*

Undertake targeted research and development in partnership with remote Aboriginal communities and industry. Support Aboriginal community participation in the trepang aquaculture industry.

6. *Aboriginal Community Marine Ranger Program - \$1.7 million*

The NT Government allocates funding, through the Fisheries Division, to several coastal Indigenous ranger groups across the NT under its Aboriginal Community Marine Ranger Program.

The primary objective of this funding is to recognise and support Traditional Owners to be actively involved in the protection and management of their sea country.

Fisheries also provides on-ground coordination and support to the ranger groups to assist them patrol their sea country and to help them establish linkages with other government agencies, training providers, environment groups, the fishing industry and the Water Police.

Fisheries works closely with the Land Councils to help ensure the ranger program is efficient and effective.

7. *Marine Ranger Science Mentor - \$38,000*

Mentor and support Aboriginal Rangers to participate in Fisheries research programs.

8. *Aboriginal Marine Training Program - \$245,000*

The Fisheries Division coordinates the delivery of the following nationally recognised training:

- Certificate II Measuring and Analysis
- Certificate II Fisheries Compliance
- Certificate II Fishing Operations
- Certificate III Fisheries Compliance

2. The status of fishery resources in the Northern Territory is determined using a nationally adopted methodology developed under the Status of Australian Fish Stocks program that is applied to 294 individual stocks across Australia.

The Northern Territory enjoys, in most part, very healthy fishery resources. Under the Status of Australian Fish Stocks program any given stock can be classified as sustainable, transitional (depleting or recovering), overfished or undefined.

The statement that 82% of our stocks are assessed as sustainable (i.e. 18% are classified differently) relates to:

- The well-documented fact that black jewfish and golden snapper (two popular inshore reef species) are currently classified as overfished.
- Recent concerns relating to the Gulf of Carpentaria mud crab stock which has been classified as transitional (depleting).
- The fact that under the classification scheme three stocks (red emperor and silverlip pearl oysters across the Northern Territory, and blacktip sharks in the Gulf of Carpentaria) lack sufficient scientific data to make a determination and are therefore classified as 'undefined'.

A package of management arrangements have been implemented to support recovery of black jewfish and golden snapper. Those changes apply to all sectors and scientific monitoring is underway to evaluate the success of those changes.

A new Mud Crab Fishery Management Plan that includes a contemporary harvest strategy has been developed and is currently being implemented to address the status of mud crab stocks in the Gulf of Carpentaria.

Under the national methodology, a classification is not changed until such time as scientific evidence supports doing so. Therefore the overfished classification for black jewfish and golden snapper and the transitional classification for mud crabs in the Gulf of Carpentaria will stay in place until evidence is available that populations are increasing.

Classifying a resource as undefined does not imply it is under pressure. The classification merely acknowledges the lack of knowledge to make a formal assessment of the status of the stock.

NT Fisheries applies a weight of evidence risk assessment process to all fisheries, including a data-driven method developed by the CSIRO to determine the level of risk in a fishery.

Red emperor and blacktip sharks were recently assessed as low risk and are currently the subject of new harvest strategy development projects for the Demersal, Timor Reef and Offshore Net and Line Fisheries.

Silverlip pearl oysters are a scarcely used resource under careful management in collaboration with the pearl oyster fishery that is driven largely by in situ culturing of spat.

3. Breakdown in table below:

Commercial fishing development	\$526,000
Aquaculture development	\$530,000
Marine training program	\$245,000

4. AFANT is funded under the long-standing Industry Development Support Program (IDSP). Funding is project based and there are formal application, accounting, governance and acquittal processes.

The 2016-17 funding package included:

Provision of professional advice to NT Government on issues affecting recreational fishing	\$88 000
Support DPIR's program of fisher education and awareness by the introduction of a NT Recreational Fishing Code of Conduct	\$7 000
Provision of assistance to DPIR's fish tagging program	\$66 000
Fishing clubs small grants program	\$17 000
Delivery of Recreational Fishing Awards Program	\$7 000

5. The 2016/17 Aquaculture Budget was \$1,046,000 for salaries and operational costs.

\$530,000 was spent on supporting Aquaculture development in Aboriginal Communities, this including the oyster and trepang research programs.

\$109,000 was allocated to fish production, including the neighbourhood fish stocking program.

The operational costs for the Darwin Aquaculture Centre were \$407,000.

6. These program to support aquaculture development in remote communities are designed to help these communities to develop appropriate skill sets and progress the establishment of aquaculture operations on their sea country. An example of this is the partnership between Yagbani Aboriginal Corporation and Tasmanian Seafoods on the ranching and joint harvest of trepang in the waters around South Goulburn Island.

The Aquaculture Program, through the Darwin Aquaculture Centre (DAC), supports the establishment of new aquaculture businesses, by subletting space and providing technical expertise and advice. The Centre also supports existing businesses (for example technical advice and sale of juvenile fish to Humpty Doo Barramundi, and the leasing of space at the DAC to Paspaley and Tasmanian Seafoods).

Support is being provided to Project SeaDragon, with the department assisting with environmental approvals, licensing and technical advice.

If these new projects are successful and existing industry continues to expand, the Territory could have an aquaculture industry worth several hundred million dollars within the next five to ten years (up from the current value of approximately \$25 million).

7. The Darwin Aquaculture Centre (DAC) leases space within the centre to commercial operators under licence agreements. The fees and charges for leases are guided by independent property valuations, with the most recent valuation conducted in early 2017.

DAC also generates revenue through the sale of animals (juvenile fish, clams and potentially oysters) in support of developing and existing ventures. The costs for these are set to cover their cost of production and to not out-compete existing industry suppliers.

8. Fisheries licence fees are re-calculated annually in accord with a long-standing agreement with industry to apply the Consumer Price Index (CPI) to the previous year's fees.

The Department of Treasury and Finance uses the average CPI for Darwin for the Calendar year (referred to as year on year growth) as published by the Australian Bureau of Statistics.

9. There are twenty four (24) licence categories for a total of 296 licensees.

10. This Government has honoured its election commitment and has committed \$50 million over five years to improve recreational fishing experiences in the Northern Territory.

This funding provides a significant opportunity to improve fishing access and infrastructure, enhance fish stocks and improve the quality of the recreational fishing experience for locals and tourists alike.

\$6 million was provided for this program in 2016-17 and a further \$5 million has been provided in the budget papers for 2017-18.

11. The Department of Primary Industry and Resources is working with other Government agencies and recreational fishing stakeholders to develop a prioritised list of recommended infrastructure and other development projects that can be delivered over the term of this Government.

The Recreational Fishing Advisory Committee (RFAC) met on 22 February 2017 and recommended a list of projects the Committee believes will deliver the most benefit to the Territory and improve the recreational fishing experience.

Projects to be delivered by 30 June 2018, include:

- Sealing of a 4.5-kilometre section of the Corroboree Billabong Road;
- Sealing of the car park at the Middle Arm boat ramp;
- Installing security cameras at the Dinah Beach boat ramp;
- Installing an ablutions block at the Dinah Beach boat ramp;
- Undertaking consultancies for the design of artificial reefs and fish aggregating devices;
- Completing the upgrade of the Shady Camp boat ramp;
- Undertaking a scoping study to determine design options and costs for the installation of additional of land-based fishing platforms in the Darwin region;
- Sealing the car park at the Channel Island boat ramp;
- Investigating the feasibility of dredging a deeper navigation channel at the Nightcliff boat ramp; and
- Upgrading the parking space at the Dundee Beach boat ramp.

RFAC will be meeting again on 11 July 2017 to provide further advice on priority projects that can be delivered in 2017-18 and the committee will play an ongoing role in considering and providing independent advice to government on projects to be delivered out of the \$50 million commitment.

Once projects have been considered by RFAC and the government, additional community consultation and stakeholder advisory processes will be integral to the success of this flagship program.

The investment of \$50 million offers an unprecedented opportunity for this government to provide a legacy that will significantly improve the recreational fishing experience while at the same time increase the sustainability of fishery resources – a key outcome to ensure future generations can enjoy the fishing experiences we take for granted.

12. The current membership of the Recreational Fishing Advisory Committee is:

Mr Richard Stevens	Independent Chair
Mr Warren de With	AFANT
Mr Dennis Sten	NT Guided Fishing Industry Association
Mr Alex Julius	
Mr Mark Spain	
Mr Ronald Voukolos	
Mr Scott Hallett	
Ms Kristen Noble	
Ms Roxsean Edwards	
Mr Steve Thomas	
Mr Dick Perry	
Mr David Ciaravolo	AFANT observer
Mr Graeme Williams	NTGFIA observer
Mr Glenn Schipp	DPIR Ex-Officio

13. Seafarms Group's Project Sea Dragon is a \$2.1 billion integrated, staged tiger prawn aquaculture development that spans the NT and Western Australian borders.

The Project reached a significant milestone when the NT Environmental Protection Authority issued environmental assessment reports for Stage 1 of the grow-out facility on the Legune Pastoral Lease and for the Core Breeding Centre and Broodstock Maturation Centre in Bynoe Harbour.

Seafarms advised that its final investment decision for Stage 1 of the is subject to resolution of tenure arrangements on various sites, execution of a project development agreement with the NT Government, and securing key approvals for the project.

Construction is now planned to commence in 2018.

Under Stage 1 in the NT the project will have an estimated 200 operational jobs and at full development an estimated 1000 operational jobs.

Key infrastructure for the Legune Grow-Out Facility, co-funded by the Commonwealth and NT Governments, is the upgrade of the Keep River Plains Road to improve access.

Both governments are working towards finalisation of funding arrangements for the road upgrade.

The Project has been granted Major Project Status by the NT Government and the equivalent by the Commonwealth and Western Australian Governments.

The NT Government is working with the:

- WA Government on a range of matters including cross-border regulatory issues and training, and
- Commonwealth Government regarding project approvals and finance for infrastructure.

14. Construction is now planned to commence in 2018.

15. In 2016-17 \$109,000 was allocated to fish production, including the neighborhood fish stocking program.

16. As the agency responsible for the management of lakes within the Palmerston boundaries, Palmerston City Council (PCC) has requested the focus of fish stocking to concentrate on Durack lakes 5, 6 and 10.

PCC is also considering requests to stock other lakes and has indicated that stocking Marlow's Lagoon is preferred, providing issues of water quality (need for top up water) during the Dry Season can be addressed.

17. To assist fishing access PCC is installing 5 x 5 m concrete fishing platforms, seating, educational signage and bins at these lakes during the current dry season. Information on fishing sustainably, safe fish handling practices is also being promoted by the Department of Primary Industry and Resources through a range of media (newspaper articles, FaceBook, mobile app (NTFishingMate), attendance at boat show etc).

OUTPUT GROUP: RESOURCE INDUSTRY DEVELOPMENT

OUTPUT: INDUSTRY REPORTING

1. Breakdown includes:

	2016 -2017
Minerals Annual Technical Reports	689
Minerals Annual Expenditure Reports	1533
Mining Annual Production Reports (Titles)	601
Petroleum Well Reports	12
Petroleum Geophysical Survey Reports	2
Petroleum Annual Reports	19
Geological Sample submissions (Minerals)	22
Geological samples evaluated, but declined (Minerals)	21
Geological Sample submissions (Petroleum)	7
TOTAL	2906

Actual figures for 1617 are now available and more reports were processed than estimated in the budget papers.

2. See above table.
3. NT Geological Survey (NTGS) manage various statutory industry reports. All reports submitted to the department are checked for compliance with reporting guidelines before they are considered formally accepted. When the reports are accepted, they are fully catalogued and stored. Technical reports have a period of confidentiality dependent on the Act in question and the type of report, and are then released to the public via an online system, GEMIS (www.geoscience.nt.gov.au/gemis).

Minerals reports

Under the *Minerals Titles Act*, licence holders submit:

Annual and final technical reports detailing the exploration work undertaken on the title and include all associated data collected eg. drilling logs, geophysical survey data, geochemical assay data.

An example is:

Fourth group annual report from 16 March 2015 to 28 January 2016 and final group annual report from 16 April 2012 to 28 January 2016 for EL 23926, EL 23927, EL 29367 and EL 29368 GR253 Bonita Project by ABM Resources

<http://www.geoscience.nt.gov.au/gemis/ntgsjspui/handle/1/82848>

Annual expenditure reports give the breakdown of amount spent on exploration. The amounts claimed have to be supported by evidence and data provided with the annual technical reports above. A copy of the reporting form is on NT.GOV.AU -

https://nt.gov.au/_data/assets/pdf_file/0012/203214/af17-mineral-titles-expenditure-report.pdf

Mining annual production reports. Estimates of annual mine production, quantity sold and sales value are submitted by all title holders with an authorisation under the Mining Management Act to mine. Individual reports are confidential but the figures are collated and released in an annual summaries available at:

<https://dpir.nt.gov.au/mining-and-energy/mines-and-energy-publications-information-and-statistics/mineral-production-statistics>

More information and copies of the forms are on NT.GOV.AU -

<https://nt.gov.au/industry/mining-and-petroleum/mineral-titles/report-on-mineral-titles/report-mineral-production>

Petroleum reports

Under the *Petroleum Act*, title holders submit the following reports:

Well completion reports - containing the details of the well drilling and the geological data collected eg Basic Well Completion Report, NT EP167, Tarlee S3, available at:

<http://www.geoscience.nt.gov.au/gemis/ntgsjspui/handle/1/83524>

Geophysical survey reports containing the details of seismic surveys, or gravity surveys or any other type of geophysical survey undertaken by petroleum permit holders. Seismic surveys usually have an acquisition report and the raw file data, a processing report explaining how the depth calculations and algorithms and the processed data and an interpretation report and data, explaining how the processed data has been converted to geological models.

Examples are the MCSAN13 2D SS 2013 (McArthur Seismic Survey) - Acquisition & Processing Reports for a survey conducted by Santos in 2013

<http://www.geoscience.nt.gov.au/gemis/ntgsjspui/handle/1/84380>

Geological survey reports containing details of geological surveys, interpretations and sometimes regional correlations.

An example is the 1985 report by Amoco Australia Petroleum and Kennecott Exploration:

Post drilling appraisal of the Broadmere no. 1 exploratory well and technical re-evaluation of permits OP-191;198, McArthur River, Australia

<http://www.geoscience.nt.gov.au/gemis/ntgsjspui/handle/1/79296>

Annual reports containing summaries of exploration activities on the permit including the expenditure and work program plans for the following year.

Geological Samples

Geological samples from industry drilling are kept by NTGS in the Core Facilities in Winnellie and Alice Springs. Samples may be submitted to the Core Facilities when they are still confidential, but this is uncommon. In general the samples are available to the public.

Under the *Mineral Titles Act*, Exploration Licence holders are obliged to offer their drill core samples to NTGS and obtain approval for disposal of the samples. When NTGS receives an offer, a geologist in NTGS assesses the offered samples for inclusion in the collection. A letter is then sent to the title holder requesting submission of any samples to be added to the NTGS collection and/or approving the disposal of the remaining samples.

Under the *Petroleum Act* all core drilled by title holders is submitted.

All title holders submitting samples must fill in the appropriate submission form, follow the submission procedures and arrange delivery of the samples to the appropriate Core Facility. More details, including the forms, are found on NT.GOV.AU -

<https://nt.gov.au/industry/mining-and-petroleum/mineral-titles/report-on-mineral-titles/offer-and-submission-of-drill-cores>

The title holder delivers the samples (core) to the Core Facility in specially designed trays on pallets on trucks. The Core Facility staff check the core trays are correctly labelled and that all of the expected core is present. The core is catalogued and the trays or pallets are shelved. The process is similar to managing a collection of library books, but with rocks instead of books. The catalogue of core held in the NTGS Core Facilities is made available online at:

<http://geoscience.nt.gov.au/core.html>

The public can arrange to view and sample core in the collection.

4. This is a policy question and not able to be answered by the Department.

OUTPUT: GEOSCIENCE AND INDUSTRY DEVELOPMENT SERVICES

1. The Geological Survey is moving in to the fourth and final year of the 2014-2018 Creating Opportunities for Resource Exploration (CORE) initiative. In the first two years of the initiative the focus was on collecting large amounts of new data in the key focus areas, with numerous releases of raw data products to industry. In the latter part of the initiative the focus is shifting to incorporating this large amount of data into interpretive products that provide a synthesis of the geology and resource potential of these focus areas.

Examples of some of these 'large-scale interpretive value-added reports' include

- New geological maps and accompanying explanatory notes for areas in central Australia and eastern Arnhem Land
 - summary reports on the stratigraphy and resource potential of key packages in the McArthur Basin (eg Munson 2016, [NTGS Record 2016-003 - http://www.geoscience.nt.gov.au/gemis/ntgsjspui/handle/1/83806](http://www.ntgs.gov.au/ntgsjspui/handle/1/83806))
 - a revised 3D geological model of the McArthur Basin incorporating large amounts of new data
 - the first complete mineral resource inventory of the Northern Territory
 - entirely revised summary chapters on the relevant provinces for the digital version of the *Geology and Mineral Resources of the Northern Territory*
2. The measure that is used for the KPI 'Target rating for geological database FIAS' is the actual rating for the 'Geological Database' criteria in the Fraser Institute Annual Survey of Mining Companies (it is acknowledged that the term 'target rating' needs to be changed in future to more accurately reflect this). In 2016 the Northern Territory came 10th in the world for the Geological Database criteria (which reflects the quality and accessibility of the Government's geological data, and is therefore a relevant measure of the success of the Geological Survey). The NTGS aims to maintain a top ten position in the world for the quality and accessibility of its geological data.
 3. The Government's plan to increase the Territory's attractiveness for exploration and mining investment, and maintain its place it's the top ten position in the world for the quality and accessibility of its geological data, is through implementation of the four-year (2014-2018), \$23.8 million Creating Opportunities for Resource Exploration (CORE) initiative. The CORE initiative is designed to maximise opportunities for the exploration, discovery and development of new mineral and petroleum resources to support the Territory's economic development.

The initiative is designed to provide substantial new geoscience datasets to the exploration industry and to support and reward innovation by industry in greenfields areas, assist industry to attract investment and provide Government with better informed advice to plan for the future of the industry.

Key components of the initiative include:

- \$3.25 million for regional geoscientific studies to assess mineral and petroleum potential in key areas of the NT and assist in de-risking exploration investment;
- \$0.75 million per year on collaborative grants for industry drilling programs and geophysical surveys in greenfields areas;
- \$0.3 million for promotion of the Territory's potential and assisting explorers in the NT to attract investment from international markets; and
- \$1.65 million for enhanced management and delivery of geoscience and exploration data to industry.
- Programs undertaken in the first three years of the initiative include:
 - geological mapping has been undertaken in the Gove region to provide new information on the poorly understood geology and resource potential of the area;
 - around 300 000 km², or 22% of the Territory has been covered with new gravity geophysics, which is used by industry to model subsurface geology - industry has contributed over \$500 000 to increase the density of data in these publicly available geophysical surveys;
 - 70 000 km² in the Barkly and Victoria River District (VRD) has been covered with airborne magnetic and radiometric surveys;
 - a 3D geological model of the McArthur Basin has been published to highlight the subsurface resource potential;
 - the first ever seismic survey across the Tennant Creek mineral field has been completed in collaboration with industry;
 - an extensive dataset and report on the resource potential of the shale units in the Beetaloo Sub-basin has been released;
 - major new field-based programs have been undertaken to understand the copper potential of Central Australia;
 - 17 industry drilling programs and 8 industry geophysical surveys in under-explored areas of the Territory have been co-funded under the Geophysics and Drilling Collaborations grants program;
 - the geological potential and exploration and mining investment opportunities in the Territory have been proactively promoted at more than 30 events both domestically and internationally
 - petroleum well completion reports from key basins and all mineral exploration reports since 1901 have been made digitally available for download.

As part of the CORE initiative, NTGS has agreements with organisations such as Geoscience Australia (GA) and the CSIRO, to leverage maximum investment into the NT:

- a major new collaborative agreement has now been signed with CSIRO Minerals Resources Division resulting in two CSIRO post-doctoral researchers embedded in NTGS to accelerate outcomes from the CORE initiative;
- NTGS has negotiated a major campaign of collaborative programs with GA to leverage funding from the Commonwealth's \$100 million Exploring the Future initiative. The collaborative programs with GA are focused in the Barkly region, and programs in 2017 include seismic, geochemical and geophysical surveys over the area between Tennant Creek and Mount Isa and north to the Gulf country.

4. Events include:

NTGS Product Name	Actuals 2016/17	Cost of the exhibition/booth to government
Executive & Promotions		
NT Resources Week, Darwin	1	\$18,000
Australia Minerals Investment Seminar, Tokyo	1	\$24,088
Australia Minerals Investment Forum, Beijing	1	
China Mining 2016, Tianjin	1	
ASEG-PESA 2016, Adelaide	1	\$6,793
Mining 2016, Brisbane	1	\$1,208
Australia Minerals Investment Forum - Kolkata, India	1	\$4,197
NAPE Summit 2017, Houston	1	\$2,664
PDAC 2017	1	\$17,306
AGES 2017, Alice Springs	1	\$11,668
Katherine Regional Mining & Exploration Forum - presentation	1	\$0
APPEA 2017, Perth	1	\$19,500
Total actuals 2016/17	12	

Notes: Costs include venue hire, booth registration and build costs. Revenue from registrations has been deducted from the cost of AGES 2017. Costs exclude travel and delegate registrations additional to those included in booth costs

5. The department does not collect employment data for the mining industry. The department and government rely on external sources of data.

There are various sources which seem to have different parameters for data classification and collection but the NT Government regularly refers to the Australian Bureau of Statistics (ABS) data.

The ABS Labour Force Data for November 2016, identifies 6,528 people employed in the NT mining industry (4.8% of the NT workforce). This data excludes FIFO workers who are resident in other states.

Information derived from the NT Budget Paper – Summary and Outlook for the NT Economy – May 2017, indicates that 6,181 people are employed in the NT mining industry (4.7% of the NT workforce).

There are no accurate figures available for FIFO workers in the NT. The NT Budget Paper – Summary and Outlook for the NT Economy – May 2017, estimates that the number of FIFO workers in the Territory in 2015-16 was between 6,000 and 7,000.

OUTPUT GROUP: MINING SERVICES

OUTPUT: MINERAL TITLES MANAGEMENT

1. The reference to ‘streamlining of licencing requirements’ does not relate to any streamlining of legislative requirements. It is a reflection of industry reassessing their overall tenure packages and rationalising the number of titles held, as a direct result of a moderation in exploration activity.

The number of granted exploration licences began to decline from mid-2012 as the effects of a slowing economy was felt by industry. This trend continued until 2016 when a levelling out occurred that resulted in the number of granted exploration licences remaining relatively stable since that time.

OUTPUT: MINING OPERATIONS MANAGEMENT

1. Amended mine plans are submitted and then checked before being published which has resulted in more documents having to be assessed.
2. It had been anticipated that the downturn in the mining industry would continue and the numbers of documents submitted would decrease. However, there has been less of a downturn than anticipated and a number of documents related to EIS submissions which have seen the overall total increase beyond the estimate.
3. The downturn in the mining industry had been estimated to require fewer field inspections. However, the level of activity in exploration, mining project development and extractive mining related activities in the Greater Darwin area required more inspections than previously anticipated.

4. At present all security bond amounts are confidential information and not released. The EDO has made an application to obtain details of one bond. NTCAT made its decision on 30 June 2017. This decision is however deferred until 14 July 2017 to enable any party to make a submission to NTCAT.
5. The current plans for the future of Jabiru are presently under discussion. The lead agency in these matters is the Department of the Chief Minister. The time lines for the mining operation are that processing shall cease in January 2021 and remediation of the mine completed in January 2026.
6. The final decision on the nature of the changes to environmental regulation has yet to be made. However, it is not anticipated that that the changes would have any adverse effect on environmental monitoring or regulation.

OUTPUT: LEGACY MINES

1. Legacy mine projects include:
 - Tennant Creek Weed Survey - \$19,700 (completed)
 - Hatches Creek Safety Works - \$170,175.68 (completed)
 - Tennant Creek Safety Works Phase 1 - \$151,065.60 (completed)
 - Redbank Fish Survey – \$205,270.40 (in progress)
 - Redbank Stock Exclusion Fence - \$118,533.80 (completed)
 - Peko Dust Survey - \$183,995.00 (in progress)
2. Since February 2017 there have been no new tenders awarded in the Tennant Creek region. However, the legacy program were already achieving well above this target for the contracts awarded prior to February 2017 with approximately 77% of the employees Aboriginal.
3. On Tennant Creek projects, 27 Aboriginal people have been employed on these contracts.
4. A total of 35 people have been employed on the contracts issued in the Tennant Creek region.
5. The proportion of Aboriginal employees on contracts issued in the Tennant Creek region is approximately 77%.

6. The majority of the contracts in the Tennant Creek region have included training, such as:
 - A one day training session facilitated by Weeds Branch of DENR on the identification and control of weeds and subsequent on-the-job training in horticulture, landscaping, weed management and administration.
 - On-the-job training associated with the construction of fencing, including use of basic hand tool, hand tool health and safety, measuring and cutting materials to length, concreting, read and interpret plans, excavation works and fencing skills.
 - On-the-job training for members of the Barkley Workers Camp.
 - An Aboriginal apprentice provided welding services for the safety work.
 - Local rangers have been provided training on the monthly maintenance of dust monitoring equipment.

OUTPUT GROUP: ENERGY SERVICES

OUTPUT: ENERGY MANAGEMENT

1. The Energy Division regulates petroleum, energy pipelines and geothermal energy activities in the Northern Territory (NT) including title management, exploration, production operations and decommissioning onshore and in NT coastal waters up to the 3 nautical mile limit.
2. The figure is an estimate of the number of applications that may be received within a year, based on proposed current work programs. Since the announcement of the moratorium, DPIR has received 57 project, operational and tenure applications.

In most cases companies have deferred work programs in the 2017/18 year, through submission of suspension and extension applications. Some seismic activity may be undertaken prior to the wet season if relevant environmental approvals are obtained.

3. DPIR provides information to the Inquiry as requested. No energy staff are working with the HFI.

OUTPUT GROUP: CORPORATE AND GOVERNANCE

OUTPUT: CORPORATE AND GOVERNANCE

Staffing

1. As at 31 March 2017, the full time equivalent total for Department of Primary Industry and Resources was 485.

Group	FTE
	31 March 2017
CE Executive	6
Corporate Services	32
Primary Industry Economic Development	124
Strategic Services and Policy	52
Fisheries and Product Integrity	118
NT Geological Survey	55
Mines and Energy	98
TOTAL	485

Note: staffing statistics are extracted from the BOXI reporting database as at 31 March 2017

2. The following Full Time Equivalent employees separated for the period of 1 September 2016 to 31 March 2017.

Break down by Output groups.

Group	Resigned	Retired	Terminated
CE Executive			1
Corporate Services	2		
Primary Industry Economic Development	7		
Strategic Services and Policy	4		
Fisheries and Product Integrity	8		
NT Geological Survey	2	1	
Mines and Energy	6		
TOTAL	29	1	1

- No employee has taken a redundancy package or been made redundant for the period of 1 September 2016 to 31 March 2017
- Note: statistics are extracted from the BOXI reporting database for the period of 1 September 2016 to 31 March 2017

3. Out of the 31 positions reported above:
 - 10 have been recruited to;
 - 4 positions are currently filled as development opportunities;
 - 5 positions in Fisheries and Product Integrity no longer are required due to the closure of emergency response –Banana Freckle program;
 - 2 positions are vacant to be utilised for early careers programs;
 - 1 position within Strategic Services Policy has been abolished;
 - 8 positions are yet to be recruited to; and
 - 1 termination was as a result of Machinery of Government as the position no longer required.
4. All vacancies are constantly being reviewed against agency’s requirements.
5. In March 2006 Cabinet approved the mandated use of Corporate Credit Cards for expenses less than \$500 and all travel and accommodation expenses. The exceptions to the mandate are:-
 - businesses without credit card facilities,
 - payments to employees,
 - payments of grants to organisations, and
 - reimbursements to individuals.

The Agency has a robust process when staff apply for corporate credit cards including justification through a written business case and the NTG has strict governance, policies and procedures around the use of corporate credit cards.

6. Mitchell Consultancy Services – the procurement was done under [Panel Contract D13-0005](#) “*All centres – Provision of non-accredited training and development services for a period of 36 months*” (hence why no Tender or EOI).
The People Matter Survey Response ‘Shaping Our Future’ Workshops were arranged to provide staff representatives with the opportunity to develop practical strategies to address challenges and opportunities identified in the survey.

“Managing Workplace Change for Success” workshops were sought to assist staff with understanding the stages of change and how to manage them for positive results.

“Doing the Right Thing (Code of Conduct) Workshop” was sought to assist staff to develop a greater understanding about the NTPS Code of Conduct and responsibilities of employees and managers in building and maintaining a positive workplace culture.

Mitchell Consultancy was selected from the Panel of Providers based on cost, past performance, prior feedback from participants to his workshops that he has an engaging facilitation style that encourages participation.

7. The amount was under \$15,000 Tier 1, so no Tender or EOI required. A copy of the report is at Appendix C.
8. There are no companies offering services such as those provided by Tech Research Asia specifically developed for the Department. The engagement has been extremely productive and feedback from stakeholders and attendees at the series of workshops organised by Tech Research Asia has been extremely positive.

The research is specific to the Northern Territory and DPIR and is based on topics raised by the department. These quarterly workshops have covered pastoral, aquaculture, fisheries and horticulture. Industry and government experts have also been invited to speak with Departmental staff and present on their topics of expertise to add further detail to the research. This has resulted in not only discovering what others are doing in the technology and agricultural industries but to be able to learn from those actually doing it with the view to avoiding some of the traps and pitfalls.

Other research services, although far more generic in nature, offered by Gartner are approximately twice the annual cost than the service offered by Tech Research Asia.

All required approvals were received through the normal procurement processes.

The services offered by Tech Research Asia came to the attention of the department's Chief Information Officer some years ago during a conference held in Sydney.

MINISTER VOWLES' PORTFOLIOS**PRIMARY INDUSTRY AND RESOURCES**

Ms NELSON: I have several questions. This is from NT Lock the Gate, Ms Naomi Hogan. Has the Northern Territory government costed the subsidies that would be supplied to on-shore gas companies to build gas fields on greenfield sites.

Mr VOWLES: As Naomi and Lock the Gate campaign would be fully aware, the Northern Territory Labor Party made a promise to Territorians that if we were elected we would have a moratorium on hydraulic fracturing of unconventional gas reservoirs in the Northern Territory. We have done that. We also promised that we would have a scientific inquiry into hydraulic fracturing of unconventional gas, which we are doing now, we are in that process.

This is important for the Territory. There no preconceived outcomes from this inquiry to government. We are serious about this. We need to get this right; that is why we have an expert panel to do that. I thank Naomi for the question and for any further information I will hand over to Alister Trier.

Mr TRIER: Thank you minister. Alister Trier, Chief Executive of the Department of Primary Industry and Resources. There has been no work yet undertaken in relation to shale gas resources, quite simply because the outcomes of the scientific inquiry into hydraulic fracturing of unconventional reservoirs in the Northern Territory and governments decisions in regards to that are yet unknown.

Ms NELSON: Thank you; I have an additional question from Ms Hogan. Has there been a formal quantity of analysis on the price impacts to Northern Territory domestic and industrial gas users of plugging in to the East Coast gas market through the Jemena northern gas pipeline?

Mr VOWLES: Thank you member for Katherine and once again, thank you to Naomi for submitting the question. I have been informed that this question was answered by the Treasurer yesterday as energy falls within her portfolio and ministerial responsibilities.

Ms NELSON: Thank you, my next question is also from the public, from Miss Pauline Cass. There are two questions: What subsidies have been provided to onshore gas companies and their associates?

Mr VOWLES: Thank you member for Katherine and thank you Pauline for the time to send in that question. I will hand it to the CEO.

Mr TRIER: Thank you member for Katherine. Alister Trier, Chief Executive of the Department of Primary Industry and Resources. The simple answer is that there have been no subsidies provided to onshore gas companies and their associates.

Ms NELSON: Thank you, the second question is: has compensation fund been created to compensate landholders for loss of production, income or damages caused by the onshore gas industry?

Mr VOWLES: Thank you, Member for Katherine, and thank you, Pauline, for your question. Has compensation fund been created to compensate landholders for loss of production, income or damages caused by—What did you say? The onshore gas industry?

In short, no, we have not created any compensation funds whatsoever around this. As Pauline would know, and most of the Territory knows, we have a moratorium in place. In regard to this question, I would say to the member for Katherine and Pauline as well, that it is quite hypothetical considering it was in regards to unconventional gas. In short, we have not created a compensation fund, but once again I will hand over to the CEO.

Mr TRIER: The minister is quite correct. There is no compensation fund that has been created specifically for loss of production income or damages caused by the onshore gas industry. However, the Northern Territory government is bound by the *Petroleum Act* in regard to compensation where the holder of a petroleum interest must pay to the owner of land who is

comprised in any petroleum interest and any occupier of land comprised in petroleum interest who has registered an interest in the land. In respect of the owners and occupiers respective interest in the land, compensation for deprivation of use or enjoyment of the land, including improvements on the land and damage caused by the permittee or licensee to the land or improvements on the land.

Ms NELSON: My next questions are from Climate Action Darwin. There are several questions from this organisation. How much will the NT government spend in fiscal year 2017-18 to promote the oil and gas industries including advertising, networking events, provision of baseline data incentives and administration of exploration and extraction licences?

Mr VOWLES: Member for Katherine, these are great questions and I thank the Climate Action Darwin, did you say?

Ms NELSON: Yes.

Mr VOWLES: ... who submitted those. Exploration and extraction licences and activities are administered by the Energy Division, a part of the department. Just to make sure I give an up-to-date answer, I will pass it on to the CEO.

Mr TRIER: Thank you, minister. Exploration and extraction licences and activities are administered by the Energy Division which coordinates energy policy and regulates all energy pipelines in the Northern Territory in addition to the regulation of all petroleum activities and permits within the Northern Territory.

The total estimated cost of administration of petroleum activities only is estimated to be \$2.3m.

Ms NELSON: My next question is also from Climate Action Darwin. In fiscal year 2017-18, what amount of royalties does the NT government expect to earn from the Northern Gas Pipeline development as a result of increased gas export?

Mr VOWLES: I thank Climate Action Darwin for another question. I will put that straight to the CEO.

Mr TRIER: Thank you, minister. Basically, I am not privy to that information which is held within Treasury and not made available to this department.

Ms NELSON: My third question is also from Climate Action Darwin. In fiscal year 2017-18, what resources has the NT government committed to support the development of the Northern Gas Pipeline?

Mr VOWLES: Thank you, member for Katherine and Climate Action Darwin. Before I pass to the CEO I want to talk about the Northern Gas Pipeline. We are talking about a project that has had major project status since September 2014 that we supported coming into government, simply around the potential jobs for Territorians – in the vicinity of 900 during construction. There will be 622 km of pipeline and 90 terajoules a day potentially going through it.

You would have seen that we have approved 344 km of the 457 km in the Northern Territory section, and the Philip Creek compressor station. There are a number of different processes to go through and all the NT EPA and federal government's *Environmental Protection and Biodiversity Conservation Act* has also been approved.

We are very excited about this project. But for further information I will hand over to the CEO.

Mr TRIER: Thanks, minister. The overall Energy Division's budget, as quoted in the budget papers is \$3.385m. That covers a range of activities described before. It covers administration of tenure, regulation of pipelines and a range of operational and exploration activities. There is no specific budget line item to the Northern Gas Pipeline. It covers a range of those areas, so just a portion of the energy budget goes to the regulation of gas pipelines.

Mr VOWLES: I add there, member for Katherine, it is about Tennant Creek. This government had a clear commitment coming into government that we want to make Tennant Creek the mining services hub of the Northern Territory. I have mentioned jobs on the Jemena Gas Pipeline potential for local. We are seeing already local contracts being awarded to locals. That is what

this is about. We encourage creating and facilitating investment opportunities in these regions. It means people are coming to Tennant Creek and the Northern Territory for work. Once they are here they realise what a great place it is.

Ms NELSON: My next one is still from Climate Action Darwin. In fiscal year 2017–18 how much security is Jemena expected to pay to protect the pipeline from environmental and social damage generated by the Northern Gas Pipeline?

Mr VOWLES: Thank you for the question. I will give it to the CEO.

Mr TRIER: The company is required to take out \$100m in insurance and sign an indemnity.

Ms NELSON: Have they done that?

Mr TRIER: To my knowledge, yes.

Ms NELSON: Next question is from Jimmy Cocking. What is the NT Government's position on the coal deal made just before the CLP left office?

Mr VOWLES: It is an important question I will pass to the CEO.

Mr TRIER: The government of the day made a decision to support a proposal put forward by Tristar. The proposal was to exchange their existing granted tenure from mineral authorities over the same footprint. Tristar sought to pursue this course of action as a means to further the longevity of their Desert Hills Coal Project.

This proposal is permitted under the minerals title act and the decision demonstrates the Northern Territory is supportive of ventures that may bring a level of prosperity, economic development and employment to rural and remote areas. The coal project has the potential to be one of those ventures. I might ask the Deputy Chief Executive if he has anything to add.

Mr APPELEGATE: The application by Tristar was straightforward. They had 23 expiration leases coming to the end of their first six year period. They sought to convert those into mineral authorities of which they would be converted back to around 20. This is effectively to give them more assurance in terms of longevity with their expiration program. After the first six years with an expiration licence they can only seek renewals for up to two years. They were seeking to have a longer period to do their expiration and bring their project to fruition.

By applying for mineral authorities it resets the clock and mineral authorities are issued for periods of six years then they can seek renewals for a further six years. The process is going through the Native Title Tribunal so we do not know the outcome. As far as the *Mineral Titles Act* is concerned if these mineral authorities are granted they will be so under the same conditions they currently enjoy with their existing expiration leases. They will continue to pay the same amount of rent as they currently do.

Ms NELSON: You can certainly understand that question, licences that were issued when the CLP went into caretaker mode. Next question: what conversations have been had between the NT and federal Government about the proposed Chandler Salt Mine and permanent toxic and hazardous waste storage facility?

That question is also from Jimmy Cocking, the next couple will be from him.

Mr McCARTHY: Thanks Jimmy for taking the time to put questions in. It is an important question. Chandler Salt Mine Tellus Holdings have major project status. They are going through environmental approvals. We are talking about the potential of a \$670m investment over the construction period of three and a half years.

This mine has the potential for 750 000 tonnes of salt per year. I know the Member for Namatjira is excited about this project, because it is about Titjikala salt. With the approval process, we have the potential of having Titjikala salt not only across Australia but potentially across the world.

This government has a focus on creating jobs for Territorians first and then bringing others to our wonderful Territory. This project has the potential for between 270 to 540 jobs during construction

and 150 to 180 full time jobs in the operational phase, so this is a significant project. I will hand over to the CEO for more information.

Mr TRIER: The minister is correct; the Chandler salt project is currently being assessed for potential environmental impacts under both Northern Territory and Australian government legislation.

The issue of permanent storage of hazardous waste was identified in the early stages of the environmental assessment process, and has been specifically addressed in the terms of reference for the Chandler project.

The development proposal triggered formal assessment by the Northern Territory under the *Environmental Assessment Act* and by the Federal government under the *Environmental Protection and Biodiversity Conservation Act*. The terms of reference for the Environmental Impact Statement were prepared in consultation with the Northern Territory and Federal governments, and finalised after a public review process.

The present terms of reference for the environmental impact assessment do not cover the issue of a nuclear waste repository, so that is outside the scope of the present situation. Any such proposal would require a new, separate and specific assessment process to identify and address issues of concern.

Just as importantly, from the initial development proposal, Tellus has specifically stated that nuclear waste will not be accepted at this facility for storage, and they have been crystal clear about that from the beginning.

Tellus have stated they will not accept nuclear or uranium mining waste; infectious materials; materials that can react with salt; and materials not safely containerised or sampled.

The permanent storage of hazardous waste will be comprehensively assessed during the assessment of information contained in both the draft Environmental Impact Statement and the Supplement to the draft Environmental Impact Statement, which addresses all issues raised by both governments and the public during the public review process.

Until this process is completed, it is unknown whether further discussions on the storage issue are required.

Ms NELSON: Thank you.

Mr PAECH: So can I just interrupt to clarify if I may? The discussion around storage is for the future, it is not involved in the initial proposal put forward by Tellus Holdings for the security? Essentially I am just confirming is any talk around that is supplementary to the original application, which did not specify that and had no objective or purpose at the time of doing so?

Mr VOWLES: We will take that on notice and will hopefully bring the answer in by the end of this session.

Madam CHAIR: As it is a question on notice, Member for Namatjira, please re-state the question for the record.

Mr VOWLES: We may be able to answer the question. The Chandler program consists of an underground salt mine, as you know, with the resulting voids to be used for securer storage and recovery of equipment and permanent isolation of difficult to manage waste. This is to store 30 000 tonnes of waste per year, with potential to increase to up to 400 000 tonnes per year.

My understanding is it will not be hazardous. From the initial development proposal, they have specified that nuclear waste will not be accepted at this facility for storage, or uranium mining waste, infectious materials, materials that can react with salt, and materials not safely materialised or sampled.

Ms NELSON: You have just answered the next question, but because these are questions from the public I will ask them so they are on the record.

Is the Chief Minister—which I know is not you—concerned about the possibility the Tellus facility will become a Trojan horse for a nuclear waste repository?

I will move on to the next question, from Jimmy Cocking. Has the NT Government minister considered the potential cost of security for the Chandler facility after its initial proposed 29-year life?

Mr VOWLES: I will pass that to the CEO, Alister Trier.

Mr TRIER: Provisions in existing legislation consider the potential cost of the security for the Chandler facility. The calculation of the remediation security will be assessed under the authorisation process in the *Mining Management Act*. As part of the approvals process, the proponent will be required to submit a mining management plan for assessment under the *Mining Management Act*, and this will be used in the assessment and calculation of the appropriate remediation security at the time.

The government has a policy of obtaining 100% security bond for the project during the life cycle of the project, and government approvals processes require environmental security to be lodged before approval is issued. This is reviewed on an annual basis for the life of the project.

Ms NELSON: I will go through all the questions, as opposed to addressing you each time.

These questions are from Justin Tuddy. Over 30 years of operation at the Ranger project in Kakadu, mining has now ceased and rehabilitation has commenced. Although the mine plans to continue processing stockpiles for a few more years, there is a hard deadline to be packed up by 2026. Has the NT Government budgeted for a dedicated cross-portfolio working group to address issues related to the Ranger rehabilitation?

Mr VOWLES: I went to the Ranger a few times when I was shadow minister for Mines and Energy, and as the minister for resources. It is important to meet the people who work there and meet the community.

There is a Ranger Uranium Mine remediation process, which is scrutinised by the Minesite Technical Committee, which includes my department; the Northern Land Council; Gundjeihmi Aboriginal Corporation; ERA; and members of the Australian Government Department of Industry, Innovation and Science, who are purely there as an observer.

All remediation plans are discussed by this committee, and the approval and authorisation by the appropriate NT and federal ministers will come from that process. If there is any further information I will pass that on to Alister.

Mr TRIER: As the minister has just described, there is a process in place, which is funded and operational. It has been in place for a long time. In regard to working to address issues related to Ranger rehabilitation, this is part of the consideration, so the minister is absolutely correct.

Ms NELSON: Minister, at a recent meeting of the Alligator River Region Advisory Committee a member of the Department of Primary Industries and Resources was asked about the Department's responsibilities for day-to-day monitoring and regulation of the Ranger Uranium Mine in Kakadu. As the project rapidly moves from production to rehabilitation the project risks and commensurate departmental responsibilities are rapidly changing.

The Department of Primary Industries and Resources were asked as to their capacity to take up new monitoring of the Magela sands. The departmental officer responded that they could only do so by suspending one of the deep monitoring bores, noting that their current capacity stretched to meet their existing program. The question from Justin Tutty is: What additional budget allocation is required to satisfy the minister as to the department's capacity to meet their growing responsibilities for day-to-day monitoring and regulation of the unprecedented project that is the Ranger Uranium rehabilitation?

Mr VOWLES: Thank you, Member for Katherine, and Justin; I will pass that straight to the CEO.

Mr TRIER: I think the key point here is that Energy Resources Australia are undertaking improved environmental monitoring program and in addition the Australian Government is supervising the scientist branch which undertakes a regular independent program of surface water monitoring and the role of the Northern Territory government is trying to take check monitoring at the Ranger Mine site. All monitoring programs are reviewed regularly to maintain relevance to the changing situation at the site as remediation progresses so I think what that is saying is that there is some flexibility in where the monitoring takes place on a prioritised basis.

Ms NELSON: What is the timing of that monitoring?

Mr VOWLES: I will hand that to...

Mr APPEGATE: Ranger has probably been the most monitored and heavily regulated mine in the Northern Territory's history and that monitoring has been happening since day one and will continue right up until the closure, right after closure and some periods after closure. There is an extensive monitoring program that has been approved by both the Commonwealth and the Northern Territory government in place at the moment and whilst it will change as the mine moved from operational to closure, the rigour of that monitoring program will continue.

Ms NELSON: At the same level?

Mr APPEGATE: At the same level.

Ms NELSON: Minister, we have seen departments that are being shuffled at both the federal level with the supervising scientist branch which is moving from the science division to the wildlife heritage and marine division of environment and energy and at the Territory level as we see a regulatory agenda appear poised to move regulatory responsibilities from resources to environment.

The question from Justin Tutty is: Will these arrangements affect the NT government's appropriate monitoring and regulation in any way?

Mr VOWLES: Thank you, Member for Katherine, and Justin for your question. I cannot see—and we are not expecting any effects to the NT government's monitoring and regulation. We of course as a department and a government take this very seriously and know that it is important for Territorians and to Justin for taking the time to ask this question.

We have to maintain the work we do in this monitoring regulation and we will work with the federal government when we need to around this; it is obviously an important issue out at Ranger but any further information I will get from Alister.

Mr TRIER: The minister is absolutely correct; machinery of government changes are a natural part of life and affect all levels of government and it is all about aligning the administrative arm of government to the priorities of the government of the day and I think that is an essential and necessary process. However, the independent regulatory functions and statutory responsibilities remain whether they get shifted, those statutory responsibilities still have to be delivered by government, and that remains the case here. I think the question is, will the rearrangements affect the Northern Territory appropriate monitoring and regulation in any way. The short answer is no.

Ms NELSON: I think that is the reassurance that Mr Tutty was looking for. The final question from Mr Tutty: noting the pressing schedule for the cessation of major rehabilitation works, can you please table the most recent mine closure plan for public review?

Mr VOWLES: I will hand that to my CEO.

Mr TRIER: Energy Resources of Australia the operators of the Ranger Uranium mine has recently submitted an updated draft of the mine closure plan to members of the mine site technical committee for comment. The membership includes the department, the Northern Land Council, Gudunjami Aboriginal Corporation as well as the Australian government and these organisations are currently assessing the draft plan and we will be providing comments to the RA shortly.

Once ERA has received and assessed all these comments it is understood a copy of the final draft of the mines closure plan will then be published by ERA.

Ms NELSON: This question comes from Donna Mahoney. I must reiterate what I said recently. These questions are from the public and as such I will be asking them so they are on public record.

This is in regards to the Dundee Beach boat ramp. How many tries are you going to make to get it right?

Mr VOWLES: Thank you very much for taking the time to ask that question and it is an important question. I came in to government and was fortunate enough to be given portfolios of Primary Industry and Resources which includes fisheries and the Dundee boat ramp facility was commissioned by the previous government and had some issues. It was two years late. Coming in as the minister I said we need to finalise this and finish this project. We did that. It is opened and I am the first to admit as I did that there has been some issues in regards to Dundee Beach boat ramp but we immediately tried to rectify those and I am absolutely committed as I have said in the media a few times I want to sort those issues out in regards to its usage and also its parking issues.

One of the issues there is around the migrating sand. It is accumulating on the boat ramp. We have looked at that we have had a design consultant look at it. We have engaged a local contractor to undertake the maintenance of the sand removal from that ramp. I was recently as recent as April, at the annual general meeting of the Amateur Fisherman's Association Northern Territory where this was discussed—me being the minister attending that.

Also I was able to announce that we were going to spend as a government \$1.5m in upgrading the car parking space which is a continuing issue. This is one of our most popular boat ramps in the Northern Territory. I did not go there over Easter because I knew it would be so busy and it was. It reinforces that with this Labor government we have committed the biggest rec fishing infrastructure spent in our history in Australia of \$50m. This is an important part of it Dundee boat ramp. So we must get it right

We come into government talking about completing projects we had Shady Camp the tender was awarded last year. Coming into government we have had to throw in \$970 000 into that project so it gets going and they are starting work right now.

It is all about access for Territorians. You want to go and fish and do it safely when they launch their boats and take their boats out. I do thank Donna for her question. It was a short question but it was a good question because it is important. It is a great spot to launch a boat and fish and that is what we want to enjoy in the Territory.

Ms NELSON: My last question is from Mr Chris Walsh. There are several parts to this question. I will ask each one individually and then ask you to respond to that.

Could you please provide the total expenditure and itemise details of travel, including but not limited to travel-related cost such as itinerary, accommodation, travel allowance, entertainment, hospitality, car rental, meals and incidentals for all Chief Executives in each agency from 1 July 2016 to 31 March 2017 for international, intrastate and interstate travel?

Mr VOWLES: Thank you, member for Katherine. Who was that from?

Ms NELSON: That was from Mr Chris Walsh.

Mr VOWLES: From the *NT News*.

Ms NELSON: Yes, sir.

Mr VOWLES: Thank you very much, Chris, for asking the question. That has been asked of every minister, so I am prepared for this one. Before I hand it over to the CEO, I will state that travelling is part of building trade relationships that will foster industry growth and investment in the Northern Territory. It is part of our core business, especially in my Department of Primary Industry and Resources, where we have trade partners such as the Philippines, as I said earlier in my opening statement, Vietnam and Indonesia. We have done our first trip to India with regard to resources. Travelling is part of our core business to create investment and foster those relationships.

Also, importantly, we are competing in a global market for investment. We have to be proactive in promoting the Northern Territory as an attractive place to invest. Especially for my department, it is important that we travel and get out there. Also, not a very well-known issue—well, not an issue, a good news story—is we also have a lot of federal, external funding that will allow our department people to assist people in Indonesia and the Philippines to create their economic opportunities around cattle.

Having said that, I will pass over to my CEO.

Mr TRIER: In addition to the minister's comments, I add that being a primary industry and resources focused agency, our work is in the regions and by nature we have to travel. Our geologists need to get out and understand the geology of the Northern Territory. Our biosecurity officer and stock inspectors need to get out and work in their role of protecting and underpinning the biosecurity of our produce. Our researchers need to get out and understand and participate with research on ground. As the minister said in his opening remarks, there is the ability to increase the on-farm impact of research so we have to travel and get out there to do it. Much of that is intrastate as well.

In relation to the six questions, I will table the documents. In doing so, I acknowledge that question number six we have not answered in this and we will take it on notice, given that it will take us a fair bit of effort to pull that information together.

The other thing I will acknowledge is in relation to one of the questions which asked for trip reports for all international travel and if a trip report has not been provided, why not? We have identified that one trip report is missing from departmental travel. That travel occurred prior to August 2016 under the former Department of Mines and Energy. The person travelling was travelling on external funds and through an externally-related project. However, it is in our own process and we will rectify that.

Ms NELSON: Just to confirm, you are tabling a report that provides responses to all of these six ...

Mr VOWLES: Five.

Ms NELSON: Great, thank you.

Question on Notice No 6.1

Madam CHAIR: We will take question six on notice. I believe we have the previous wording?

Ms NELSON: Yes, you do.

Madam CHAIR: We will allocate that number 6.1.

Ms NELSON: Madam Chair, that ends my questions from the public.

Mr VOWLES: I want to thank the public. There was Naomi Hogan, Jimmy Cocking, Justin Toddy, Donna Mahoney and—were there any more?

Ms NELSON: Climate Action Darwin.

Mr VOWLES: Climate Action Darwin. I thank them for their time in submitting questions. I respect the fact that it is important.

Tabled Paper 6.1

https://parliament.nt.gov.au/_data/assets/pdf_file/0014/433121/TP-6-1-Travel-Reports-Department-of-Primary-Industry-and-Resources.pdf

Tabled Paper 6.2

https://parliament.nt.gov.au/_data/assets/pdf_file/0013/433120/TP-6.2-Travel-Expenditure-Department-of-Primary-Industry-and-Resources.pdf

Research & Development Projects as at 30 September, 2016

External Projects

Group	Project Title	Project aim (lay terms)	Funding body or NTG	Total project Estimate \$	Time frame (start)	Due completion date	Comments/Current status	Location
PID	Papaya Mealy bug.	Biological control of papaya pest in East Timor and NT.	ACIAR	\$250,000	Jun-11	Ongoing	Project extended to cover workshop to be conducted in mid 2014.	Properties in Darwin and East Timor.
PID	Quantifying interception associated with the large scale plantation forestry in the Northern Territory.	Inform the development of a policy position with regards water resource management in areas with an agroforestry industry in the Northern Territory.	CDU	\$85,000	Feb-11	Ongoing	Ongoing project.	Douglas Daly Research Farm.
PID	Impacts of deforestation and afforestation on greenhouse gas emissions, and carbon and water resources in the Daly River catchment, north Australia.	Produce data that will allow the Northern Territory Government to devise and calibrate modelling tools to help ensure that the development of the Douglas Daly catchment system is conducted in a sustainable manner.	CDU	\$30,000	Dec-10	Ongoing	Project trial still in place for future reference.	Forestry blocks in the Northern Territory.
PID	To investigate closed production systems for ornamental ginger production.	Investigate and develop baseline production protocols for growing new ornamental ginger flowers in a closed system both in pots and in-ground.	RIRDC	\$92,000	Jul-11	Ongoing	Project ongoing. All milestones up to date.	Berrimah Farm, Coastal Plans Research Station, and Properties in Darwin area.

Group	Project Title	Project aim (lay terms)	Funding body or NTG	Total project Estimate \$	Time frame (start)	Due completion date	Comments/Current status	Location
PID	Strategies for using floriculture to improve the livelihoods in indigenous Australian and Pacific Island communities.	Survey and identify Northern Australia native species with potential for commercialisation as landscape species. Exchange germplasm and cultivars of cut flowers with Pacific Island communities. Provide new varieties and training workshops in Solomon Islands.	ACIAR/UQ	\$165,950	Jul-10	Ongoing	On-going propagation and bulking-up of germplasm for exchange with partner countries continues.	Darwin .
PID	Termite baiting trials.	Conduct two trials to investigate three termite baits and active ingredient candidates against <i>Coptotermes acinaciformis</i> and <i>Mastotermes darwiniensis</i> .	BASF	\$150,000	Jun-11	Ongoing	Research trials are ongoing	Darwin.
PID	Action on the Ground Project "Nitrogen fertiliser management strategies for emerging plant industries in Northern Australia"	Follow on project for AoTG project to assess nitrogen fertilizer usage.	NTFA	\$382,567	Apr-14	Jun-17	Project on track all milestones up to date.	Darwin and Katherine properties
PID	Characterisation and Management of Fusarium Wilt of Watermelon	Conduct research on Fusarium Wilt of watermelon	HAL	\$145,788	Nov-12	Dec-15	Project work completed. Final milestone has been submitted and accepted, waiting on final payment.	Darwin and Katherine
PID	Optimizing pollination of dates (<i>Phoenix dactylifera</i>)	Carry out research into optimizing the pollination of dates	RIRDC	\$156,074	Jun-12	Aug-15	Project has been delayed due to pests in the date palms. Has now recommenced.	Alice Springs

Group	Project Title	Project aim (lay terms)	Funding body or NTG	Total project Estimate \$	Time frame (start)	Due completion date	Comments/Current status	Location
PID	Manipulating mango flowering to extend harvest window	Develop management practices to manipulate the mango harvest window.	HAL	\$1,277,162	Mar-13	May-17	Research trials currently underway	Darwin & Katherine.
PID	New fruit fly systems for mangoes and market access	Continuation of MG11005, looking at systems approach to fruit fly control.	HAL	\$892,602	Jun-13	Jul-17	Work on this project commenced with the 2013-14 Mango season.	Darwin & Katherine.
PID	Building a resilient mango industry in Cambodia and Australia through improved production and supply chain practices	Continuation of work/learnings from previous Cambodian study, looking at optimising management strategies and increasing IPM work in the region.	ACIAR	\$395,245	Jul-13	Oct-17	Project on track.	Berrimah
PID	Tropical fruit tree research and development in the Phillipines and Northern Australia to increase productivity, resilience and profitability.	Provide training through workshops and setting up of nurseires in the Phillipines and Nothern Territory to assist in development of tropical fruit trees.	ACIAR	\$120,000	Dec-13	Feb-17	Project commenced.	Nurseries in the NT and Phillipines.
PID	Banana Plant Protection Program	Collaborative subcontractor agreement to provide assistance in the development of a plant protection program for bananas via assessing different varieties for pest resistance.	HIA	\$278,000	May-14	May-16	Project was delayed due to Banana Freckle incursion. Project is now finished as new project has commenced.	Coastal Plains Research Farm.

Group	Project Title	Project aim (lay terms)	Funding body or NTG	Total project Estimate \$	Time frame (start)	Due completion date	Comments/Current status	Location
PID	Agronomic options for profitable rice-based farming system in Northern Australia.	Subcontractor agreement to assist Western Australia Agricultural Authority with growing assessing rice varieties for suitability to Northern Australia.	WAAA & RIRDC	\$60,000	Jul-12	Jun-15	Project complete.	Tortilla Flats research station.
PID	National Water Infrastructure Development Fund	Subcontractor agreement to assist CSIRO with North Australia Water Resource Assessment.	CSIRO	75,000	Jun-16	Apr-17	Project commenced	Top End region
PID	Improved Management Options for Cucumber Green Mottle Mosaic Virus (CGMMV)	Determine the importance of weed, non-host plants and honey bees of CGMMV in disease epidemiology. Examine the potential for in-field diagnostics to assist rapid detection of the virus on farms, known/suspected to be infected with CGMMV. Develop multilingual communication and extension materials to assist with management options to cucurbit growers including on-farm biosecurity protocols.	HIA	1,147,129	Jan-16	Jan-19	Project commenced, all milestones up to date.	Several properties through out NT.

Group	Project Title	Project aim (lay terms)	Funding body or NTG	Total project Estimate \$	Time frame (start)	Due completion date	Comments/Current status	Location
PID	Fusarium wilt Tropical Race 4 Research Program	The overall aim of the project is to provide new science, information and practices that address key areas of need in the Australian banana industry with a medium to long-term view of developing management practices for banana growers affected by TR4.	DAF	1,427,596	May-16	Aug-19	Agreement signed, project work is continued on from project BA10020	Coastal Plains Research Farm Katherine Research Station

INTERNAL PROJECTS

Group	Project Title	Project aim (lay terms)	Funding body or NTG	Total project Estimate \$	Time frame (start)	Due completion date	Comments/Current status	Location
PID	New Mango Scion and Rootstock Cultivar development	Develop mango rootstocks leading to greater mango production on a per hectare basis, increasing the economic profitability of Northern Territory industry.	NTG	\$122,000	Jul-10	ongoing	Three research trials established at KRS, CPRS and a private property in Ti Tree.	Berrimah Farm, Coastal Plains Research Farm, Katherine Research Station.