Communities in Transition

Business Case

Local Food Futures in the Cook Shire

Delivering Local Food Security and Sustainable Agricultural Ventures

(IMAGE SOURCE: Cook Shire Council)

UNIVERSITY OF SOUTHERN QUEENSLAND

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THE ECO EFFICIENCY GROUP

Cook Shire COUNCIL

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Executive summary

The Cook Shire represents a diverse community seeking to build on its economic and social assets to create a stronger and more resilient economy. There is a critical need to address Shire-wide unemployment levels (as high as 26%), and liveability issues that make attracting and retaining people in the region difficult. At the same time, the Shire's environmental and cultural landscapes underpin these opportunities and are of international importance. The driving aspirations of the Traditional Owners in the region also include shared social and economic development combined with the protection of significant cultural and environmental assets.

There is a strong local community and tourism sector desire for greater local food security and provenance, contributing new cultural tourism opportunities, increased health and local trade. On the back of a broad community-based options assessment process, a priority development pathway, coined *Local Food Futures*, has emerged as an area of focus for the Cook Shire. The time to apply innovative thinking and technologies to shift towards a more socially and environmentally sustainable agricultural footprint is ripe - one that is regenerative of the region's soil assets and delivers social (including health) and economic benefits. A focus on strengthening all aspects of the agricultural production, supply and value chain (from production, transport, processing, value adding, retailing and export preparation) will also deliver greater energy and nutrient use efficiency, less waste and an improved pollution and carbon emissions profile relative to the region's GDP (CGCC 2019a). Consequently, this *Local Food Futures* business case will focus a combined Council, community and industry effort to identify the opportunities, constraints and strategies that achieve this outcome.

SECTION ONE – STRATEGIC CONTEXT

Options analysis

The *Local Food Futures* initiative evolved from the *Communities in Transition* (CiT) Program, an active community development and capacity building process for strengthening regional resilience in dealing with economic, social and environmental change. The first stage of the program included the development of a *Community Resilience Framework* from which a community profile was created. Next came a series of community conversations asking stakeholders to describe the pressures and opportunities facing their community. A desk-top study, together with information provided by these wider community conversations, led to broader consensus on a prioritised set of transition pathways and options for the future of the region. These are listed in the third column of Table 1.

Table 1: Linking regional pressures and opportunities with plausible pathways

Current pressures & future challenges	Current strengths & opportunities for the future	Some ideas for broad pathways
Economic Low recognition as an investment destination & small local market High unemployment - while geographically complex - is 25.3% c.w. 6.1% across Qld (QGSO 2017). Strong dependence on external labour Skills shortages High levels of welfare dependence in some areas Inconsistent energy policies & investment uncertainty Perceptions by some of 'imposed regulations' from metropolitan centres in the south International trading hampered by political and/or practical barriers affecting trade partnerships	Economic More/different visitors arriving with the sealing of the PDR Great natural assets for diverse economic activities – 2 World Heritage Areas, abundant solar energy - home to Australia's first utility scale, co-located solar and battery farm to be connected to the grid (Conergy's Lakeland solar farm) (ARENA 2018a). Container Refund Scheme (CRS) - economic opportunities, litter reduction (Boomerang Alliance 2018). Carbon Farming allows Indigenous groups and pastoralists to earn carbon credits by reducing emissions	Tourism Turbo - Natural, Indigenous & historic heritage, agritourism Making Water work: Preparing the ground for low Reef impact agriculture & aquaculture Energy Futures: off-grid expansion Fronting New Ecosystem Service Markets Dynamic Business ventures: ecoBiz & commerce, creative industries, new technologies New Circular Economy for SMEs
Education/career paths Below average literacy, numeracy & adult learning Lack of career pathways/opportunities for local youth	Education/career paths Rich Indigenous culture & knowledge base - local Traditional Owners hold key information about country/culture	Focused school to work transitions & career paths for next gen residents
Liveability/Quality of life High cost of living – e.g. food & fuel prices Prevalence of chronic diseases (e.g. renal failure, diabetes) Isolation/distance from major human services Intermittent mobile phones and poor internet services Road infrastructure beyond PDR is poor & flood prone. Waste - need better facilities/equipment Water - Equitable water allocation; security, reliability Lack of facilities/support for community organisations Complex land tenure & conflicting legislation Climate/ extreme weather conditions	Liveability/Quality of life Laid-back relaxed lifestyle and unique character Strong 'sense of community' across the Cape Outdoor lifestyle - pastoral, mining, sports and recreation Open space, sense of freedom Both Indigenous and non-Indigenous history adds to 'sense of place' Strong history of connected leadership and increasingly strong capacity within and across Council planning system. Strong governance associated with catchment and landscape planning	Improved telecommunications for triple bottom line outcomes New directions for Cape-wide waste management Local Food futures: Infrastructure to support local food production Regional collaboration – Mayors Alliance TICA – for regional planning Leading climate & disaster resilience Future of Weipa – including Defence & space port capability

Because of its potential for significant social and economic progression of a value-intense industry, one pathway, *Local Food Futures*, was prioritised through workshop discussions of several potential pathways. Factors leading to this prioritisation included a wide range of regional pressures, challenges and opportunities for the future. Specifically, agreement on this priority pathway was based on a number of considerations, including:

- The need to regenerate agricultural soils and resources within the region;
- Opportunities to shift towards a more circular economy in the wider agricultural sector (e.g. exploring new techniques in the design and management of new agricultural lands);
- Significant opportunities to expand sustainable commercial and recreation fishing;
- Recent weather events having generated a strong focus on building greater economic and community resilience and disaster preparation;
- The need to increase local food security, dietary health and new food tourism opportunities within local communities; and
- The need to meet particular obligations to protect the Great Barrier Reef (GBR) and to achieve "no net decline" in GBR water quality (Queensland Parliament 2019).

The second stage of the CiT program involved an online survey of stakeholders to elicit their preferences and priorities for components within the *Local Food Futures* pathway. This prioritisation was completed through a second set of workshop discussions based on options and criteria shown in Appendix A. The options considered are shown in Figure 1.

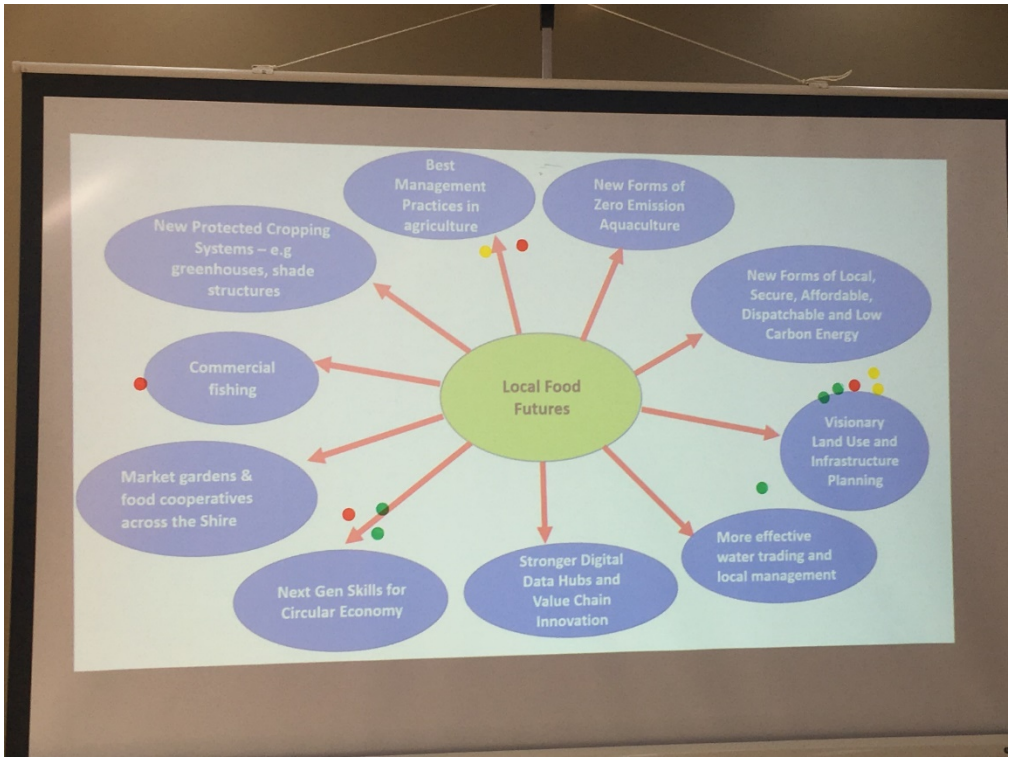

Figure 1: Priority options identified by the group. The dots indicate the number of votes for options discussed in the second workshop. There is a strong preference to further develop the role of more visionary approaches to food security, supply chain development, land use and infrastructure planning for agriculture that also protects other values. Images are very often centred above the figure label rather than left justified.

Originally, consideration was given to merging the *Local Food Futures* and *Making Water Work* pathways however, in the third workshop in Cooktown in September 2019, there was a strong community preference to explicitly develop the local food security and cooperative market concepts separately to prioritise the development of broad scale agriculture. As a result, *Local Food Futures* and *Making Water Work* were solidified as two separate but complementary pathways. This revamped *Local Food Futures Pathway* focuses on food security, agricultural diversity, agricultural innovation/best practice and the concept of food cooperatives. The second, *Making Water Work*, focuses on sustainable growth in the agricultural sector within the context of defined regional water resources.

The key concept

To create and implement this *Local Food Futures* pathway the *CiT* pilot program has been working with the Council and the region's wider stakeholders. The pilot program is funded by the Department of Environment and Science and supported by CSIRO, James Cook University (JCU), the University of Southern Queensland (USQ) and The Ecoefficiency Group (TEG). The vision for the concept was that the region desperately needs to improve food security, develop new models of agricultural innovation, and strongly link diversified agricultural product including the region as a food tourism destination. Particular consideration of regenerative and sustainable agricultural practices underpins the pathway including the uptake of new agricultural developments to incorporate significant environmental efficiencies, highly efficient supply chains, and increasingly integrated and high-worth value chains that deliver social and economic resilience. Key components needed to drive this vision include:

- Support for the development of an innovative and diverse agriculture/food sector;
- Exploration of the need for, and opportunities for, community-based food security and value added integration of effort between agriculture and other sectors;
- Development and testing of a viable food cooperative business model;
- Progressive building of, and support for, farm innovation, value add and supply reliability; and
- Monitoring of the growth and multiple benefits that emerge within the new system.

These key actions are detailed in Section Two of this business case.

Justification, benefits and risks

Multiple justifications underpin the *Local Food Futures* initiative; unpacking the significant benefits from and risks to be mitigated by taking such an approach. The following key factors underpin the logic for progression of this business case.

1. Unlocking unmet agricultural potential and export and domestic demand

More than half of Queensland's food production is exported overseas, but Queensland is a small player on a global scale, with producers responding to market trends such as consumer demands for safe, ethical and sustainable produce (QDAF 2018). Due to Queensland's counter-seasonality to northern hemisphere producers, there is potential for increased exports to consumers wanting access to healthy food all year round. There is also increased overseas consumer demand for:

- Protein-rich products (e.g. beef, seafood, chickpeas);
- Horticultural products (including exotic fruits), and
- Healthy food products from a 'clean green' environment (QDAF 2018).

A further one-fifth of food produced in Queensland is 'exported' to other states of Australia, leaving about one-quarter of Queensland's total food production to supply the agricultural, forestry and fishing products for more local, state-wide consumption (QDAF 2018). Recent related supply chain analysis in North Queensland suggests that demand for products typical of those produced in Central and North Queensland exists across the usual key markets including South East Asia, China and the Middle East. For other North Queensland regions, this analysis predicted that transitioning land use to the priority products is likely to provide a positive benefit of between $26.5 and $271.1M Net Present Value (NPV) and generate numerous jobs (KPMG 2019). Lesser but similar trajectories could be possible in the Cook Shire.

Risks of Doing Nothing

Climatic and environmental constraints are major challenges for agricultural development in Cape York Peninsula and other parts of tropical Australia. These, however, are small compared with the strategic resolution of other factors such as those associated with finances and investment planning, land tenure and property rights, management, skills, and supply chains (Ash & Watson 2018). The potential for environmental conflict with agricultural development also stresses the need for solid, proactive and professional development of a sustainable agricultural sector. Finally, the cost of doing business in the Cape makes the focus on tight supply chains critical, while the lack of local food and job security drives the need for increased value in the chain.

2. Local community food security and food tourism opportunities

There is a strong local community and tourism sector desire for greater local food security and provenance, contributing new cultural tourism opportunities, increased health and local trade. Cape York's Health Council, Apunipima, provides comprehensive primary health care services to 11 remote Aboriginal communities across Cape York. According to this organisation, there are significant barriers for residents and visitors seeking to access fresh local produce all year round. Further, they explain that the cost of food across the Cape is about 25% higher than urban Australian areas, while the median income is approximately 30% lower than urban areas (Apunipima 2019). The development of eco-efficient infrastructure for food cooperatives and local horticulture/market gardens at critical locations within the Shire could provide fresh produce all year round and, at the same time, reduce food miles and prices. Food cooperatives and local market gardens also create the potential to export excess products to markets across Australia and internationally. If properly resourced, this initiative will facilitate a much more integrated, efficient and value-rich supply chain vision for the region, including organic farming, market gardens, community gardens, school gardens, native foods, local fresh seafood and fresh meat from Cape York grazing properties. It will strengthen existing tropical horticulture production, and enhance food tourism, for visitors in search of exotic fresh fruit, vegetables and locally caught wild seafood. In particular, Cooktown is well placed to develop a food cooperative for local and export markets due to its location, access to fertile soils for horticulture, grazing lands, commercial fishing and transport links. Cape York possesses 35 of the 1060 Great Barrier Reef commercial fishing licences, but only 20 are active (Tobin 2014).

Risks of Doing Nothing

Having more localized and diverse food options and supply chains addresses significant social, health and wellbeing issues in the Cook Shire. More diverse agricultural enterprises can also help underpin economic resilience. A more local food supply and improved food quality represents an opportunity to increase liveability and population retention within the region. Fresher and more available food represents a significant health benefit within the region. There are also strong links between chronically poor diets and workforce productivity and unemployment. This disadvantages many in the region, who face long term social issues without stable and meaningful employment.

3. Benefits from building a more circular agricultural economy

A successful circular and regenerative economy contributes to all three dimensions of sustainable development, encompassing economic, environmental and social values (Korhonen, Honkasalo & Seppälä 2018). In agriculture, these shared values focus on improving growing techniques and strengthening the local cluster of supporting suppliers and other institutions in order to increase efficiency, yields, product quality, and sustainability (Porter & Kramer 2011). For example, connecting consumer preference to farm profitability is becoming increasingly important in

maintaining farmer profitability, as demonstrated by the growing demand for organic food (Perry 2017). Digital technologies have the potential to enable consumers to precisely track food, from the field to the pantry, thus informing decision-making. At the same time, commodity crop farmers will be able to match consumer demand for products, and produce a more valuable crop. The essential connection between agricultural practice and consumer preference will dramatically accelerate the adoption of new sustainable technologies in agriculture (Perry 2017). Key operational principles/options to create a circular economy (Suárez-Eiroa et al., 2019) include:

1. *Adjusting resource inputs to regeneration rates*
    - Reduce/eliminate non-renewable resource use;
    - Substitute non-renewable with renewable inputs (e.g., renewable energy); and
    - Adjust the extraction rate of renewable resources to be within the regeneration rate
2. *Adjusting waste and emission outputs to absorption rates*
    - Promote eco-efficiency and eco-effectiveness to reduce wastage and waste
3. *Closing or slowing the material use loops*
    - Promote use of renewable resources (e.g. energy);
    - Connect waste management with resource recovery; and
    - Design products that are durable, repairable, easy to upgrade, and reuse, recycle and/or recover
4. *Shifting production and consumption culture*
    - Shift business perspectives from producing products with rapid obsolescence; and
    - Shift consumer expectations about using disposables and acquisition of latest products
5. *Coordinating and collaborating*
    - Coordinate adjustments throughout the value chain including inputs and outputs;
    - Recover material and energy from waste for recirculation;
    - Establish new markets and value chains to facilitate transition to a circular economy; and
    - Enlist significant policy, regulatory and program support from governments
6. *Using digital innovation*
    - Digital technology such as big data, sensors, 3D printing will make reusing and recovering material energy efficient and effective, thus helping to decouple economic growth from natural resource depletion and environmental degradation (Murray et al., 2017).

Risks of Doing Nothing

There is significant evidence internationally to suggest that those economies that adopt more regenerative and circular approaches to economic development will become more resource-use efficient and highly competitive economies (Dominish et al., 2017). Not moving in this direction also risks local agriculture not responding to growing market requirements (Kirchherr et al., 2018). While the circular economy concept and its benefits are not widely discussed and accessible to practitioners and the wider public (Merli et al., 2018), the opportunity for the Cook Shire to take leadership in this area of thinking will also mean the services that emerge may have increasing global value.

4. Planning now to deliver on Great Barrier Reef (GBR) and EPBC outcomes

The Northern Australian development agenda seeks to significantly expand agricultural production in North Queensland. Much of the State's agricultural land is in GBR catchments, and without careful management, agricultural growth and intensification could increase pollutant loads in coastal and marine waterways flowing to the GBR. Particular activities associated with water pollution in the

GBR catchment include suspended sediment from soil erosion, nitrate run-off from fertiliser application on crop lands and herbicide run-off from various land uses (Brodie et al. 2012).

Legislation for natural resource management is in place across all GBR catchments including the *Queensland Vegetation Management Act 1999*, the *Queensland Water Act 2000*, the *Commonwealth Environment Protection and Biodiversity Conservation Act 1999*, the *Queensland Land Act 1994*, the *Queensland Reef Protection Act 2010*, and the *Commonwealth Great Barrier Reef Marine Park Act 1975*, and new Queensland regulations for land managers to achieve "no net decline" in GBR water quality has been proposed (Dale et al 2018; Queensland Parliament 2019). The *Environmental Protection (Great Barrier Reef Protection Measures) and Other Legislation Amendment Bill 2019* was introduced into the Queensland Parliament, with the aim of amending the *Environmental Protection Act 1994* to strengthen Great Barrier Reef protection measures to improve water quality in GBR waterways (Queensland Parliament 2019). The Bill provides a regulatory framework that ensures:

- GBR water quality targets are taken into account in regulatory decision-making;
- Minimum standards to eliminate high risk practices that contribute to declining water quality in Reef catchments;
- Producer standards align with recognised benchmarks under the Paddock to Reef Water Quality Risk Framework;
- New development can occur without compromising water quality targets;
- Good performers are recognised and rewarded; and
- Industry-led best management practice (BMP) programs provide participants with an alternative pathway for meeting regulatory requirements (Queensland Parliament 2019).

Given the critical role of these legislative instruments in setting the limits for resource use, more regenerative forms of agriculture will be needed. By more innovative thinking at an area-based level in advance of new agricultural development, serious new thinking can be applied in advance of the approval of individual agricultural activities on farm. This more area-based approach, has the potential to deliver no net decline in water quality discharging into the reef lagoon. Key activities would need to include:

- New investors thinking through, committing to, and implementing very effective on farm agricultural practices in advance of new agricultural development;
- Exploring new approaches to the treatment of water run-off on farm; and
- Exploring more sub-catchment based and collaborative approaches to the capture and treatment of agricultural run-off from new agricultural development areas.

Risks of Doing Nothing

Existing regulatory arrangements and the proposed changes to GBR regulations require landholders to move more urgently from traditional agricultural practices to improved practices. Proactive thinking and planning concerning the problem may have the potential to increase profitability in new farming operations as well and maintaining and increasing market access into the future. The current regulatory arrangements and proposed changes to GBR regulations require landholders to move more urgently from common practice to improved practice and even aspirational practice, and without serious planning now, this could become financially prohibitive (van Grieken et al 2019). There could be significant risk of national conflict in GBR and EPBC issues if these considerations are not suitably and sensitively handled. Failure to handle them well also has the potential to diminish the multi-value economic foundations of the Cook Shire economy.

SECTION TWO – KEY CONCEPT COMPONENTS AND RETURNS

The following unpacks the key tasks that need to be progressed to secure the best possible outcomes from the *Local Food Futures* initiative.

1. Supporting an innovative and diverse agriculture/food sector

What is the Current Context?

The Federal Government is investing $198M towards Stage Two of the Peninsula Development Road (PDR) to continue sealing this vital link to Weipa (RDA 2019). This will give Cape York and Torres Strait communities' better access to affordable fresh fruit, vegetables and household goods, and provide opportunities to develop and grow new businesses and industries, lower freight transport costs, and better connect people across the region. Development in the Cook Shire, however, depends on strong partnerships within the agricultural business sectors across Cape York. As the Shire's service centre and largest town, Cooktown is ideally placed to house a stronger facility for thinking, innovating, implementing and disseminating ideas (CGCC 2019b). The Cook Shire Council's membership of the Torres Cape Indigenous Council Alliance (TCICA) provides an additional opportunity to partner with other Cape Yok councils/communities to progress economic and social reform. Further, new export focussed opportunities currently are left unfulfilled. In particular, there is significant opportunity to expand the commercial fishing fleet. Cape York possesses 35 of the 1060 GBR commercial fishing licences, but only 20 are active (Tobin 2014). Consequently, the critical tasks and outcomes required include:

Key Tasks	**Outcomes**
Establish a core capacity to start building a sectoral cluster and hub type model for building a stronger foundation to the ag/food sectors.	Foundational governance capacity in place to support sector and business development.
Commence profiling of the current state and potential development of the ag/food sector.	Sector intelligence in place (opportunities and constraints) to focus strategic effort.
Fully define leaders and interested others in the cluster, and commence the foundations for collaboration building.	Key producers and food business leaders and industry supporters in each sector identified and collectively mobilized for strategic action.
Establish small, reliable cluster support teams (e.g. government agents, universities, etc.).	Collaborative support networks in place to enable required strategic action.
Establish a Plan-Act-Do approach for cluster development, devolving effort across the sector as much as possible.	Costs and benefits of key strategic actions understood and effort prioritized. Greater cross-cluster connectivity by Year 2.
Annual monitoring of the effectiveness of the approach across clusters and across areas.	Impact of strategic action quantified as a basis for continuous improvement.
Embed the Plan-Act-Do approach in place and continuously improve for at least five years.	Targeted and sustained growth monitored in each of the key sectors over the next five years.

Within the context of this work, serious consideration should also be given to the potential role of more protected forms of agriculture within the region (for example, glasshouse-based production). If this becomes a significant opportunity, a more diversified agricultural strategy may be possible, with broad scale agriculture and protected cropping complimenting, rather than competing for, airport/port requirements. Protected cropping approaches present real opportunities in the progression of more circular forms of integrated cropping, particularly if also linked to more broad-scale cropping opportunities.

Feedback from the agricultural sector also recently highlighted the need for networking and local marketing and co-operative type supply chain systems. A live digital hub whereby businesses across the Cape could be listed and include their current available produce or services would provide an affordable network (even in areas where the Internet is limited, a local agent could be assigned perhaps utilizing libraries). Local supply/demand potential could be quantified and this would provide a base for discovering available produce from local farms and providing them with a local market. Production costs and food miles would be lowered as the produce would not even need to be packaged until demand is indicated.

Timeframes, Investment and Costs

Package Item	**Total In Kind**	**Total Cash Cost**	**Completion Timelines**
Building a diverse Agriculture and Food Sector			June 2025
Potential Investors	**In Kind**	**Cash**	**Notes**
Proposed State bid		$500,000	
Council			
JCU/CQU/TAFE			
Agricultural/Food Ind.			

Who Needs to Be Involved?

The *Cook Shire Council* would initially be the appropriate project lead to ensure that this work is coordinated and integrated with other key steps and processes, but it may seek to partner key support from JCU, the CiT team, and other key supporting partners. Key players that need to be involved include:

- Key business participants from the agriculture and food sector (from across the supply/value chain);
- Key support agencies (e.g. DSDIMP, DAF, DESBT, DITIB, EQ, AusIndustry and Austrade); and
- Research, education and innovation supports, including local schools, JCU, CQU, CSIRO, CRCNA, TAFE and the Advanced Manufacturing Growth Centre.

2. Exploring food security needs, production and value adding opportunities

What is the Current Context?

To build a compelling case for this initiative, a baseline assessment of the specific nature of food security, production opportunities and value adding options is required. This would build the knowledge base required before significant effort is placed in reviving some form of agricultural cooperative venture in the region. This could create a much clearer vision of the future supply and value chain, and a stronger focus on supply chain efficiency; minimizing environmental harm. This would enable the strategic effort required to complete a more detailed and refined focus on tightening the supply chain costs, catering for value building opportunities, and maximizing circular economy outcomes from the system. Consequently, required tasks and outcomes are:

Key Tasks	Outcomes
A detailed analysis and cost assessment of the current food security issues facing Cape York communities.	Costed knowledge concerning the size and detail of the food security problem facing Cape York communities.
Agronomic assessment of the agricultural development and value adding opportunities that might best plug food security issues and identify potential niche market developments.	Costed knowledge concerning the opportunities ahead and a strategy for potential progression.

Key Process Steps, Timeframes and Costs
The pathways to this particular piece of work could be progressed in partnership with a research provider, and progressed to the CRCNA research rounds (Ag-Health-Traditional Owner).

Package Item	Total In Kind	Total Cash Cost	Completion Timelines
Exploring food security, production and value add			June 2021
Potential Investors	**In Kind**	**Cash**	**Notes**
Proposed State bid or CRCNA proposal		$250,000	
Council			

Who Needs to Be Involved?
Building on past work undertaken by people involved in the food collaborative, the Cook Shire Council would be the appropriate project lead to ensure that this work is coordinated and integrated with other key steps. Key players that need to be involved in this work include:

- TCICA and food security leaders in all Cape York communities;
- Key participants in the most prospective agricultural sectors, including growers, financials, suppliers, the real estate industry, agricultural service providers, key infrastructure leaders;
- Strong skills in relation to the cost analysis in food markets; and
- Stronger designer-skills in the context of more circular agricultural systems.

3. Development and testing of a viable food cooperative business model

What is the Current Context?
Once there is some clarity about both the nature of the food security situation facing the Cape, the agricultural and value adding opportunities and the key sector leaders/partners, some careful governance analysis and building can be progressed. This would ensure that appropriate governance responses are established in the wake of the new knowledge generated. Exploring the possibility of progressing a strong agriculture and food cooperative structure would be a key focus.

Key Tasks	Outcomes
Working closely with the region's food security leaders and building on the knowledge gained through earlier research, explore innovative governance models, support their implementation and monitor progress.	A strong governance system that delivers significant food security, agricultural innovation, new products and value add.

Key Process Steps, Timeframes and Costs

The pathways to this particular piece of work should build on the foundations set in the first two stages (sector building and food security/opportunities analysis).

Package Item	Total In Kind	Total Cash Cost	Completion Timelines
Consideration of water governance, ownership, distribution, water products and market arrangements.			Start January 2021 to December 2025
Potential Investors	**In Kind**	**Cash**	**Notes**
Proposed State bid		$250,000	$100,000 Year 2 and $50,000 pa for the following 3 years.
Council			
JCU/CQU/TAFE			
Agricultural/Food Ind.			
DAF			

Who Needs to Be Involved?

Industry and Council should lead this work in partnership with key research providers. Overall though, the Cook Shire Council or TCICA would be the appropriate project lead to ensure that the broader work across the Peninsula is coordinated and integrated with other key steps. Key players that need to be involved in this work include:

- Food security leaders in the region;
- Key participants in different agricultural sectors, including growers, financials, suppliers, the real estate industry and agricultural service providers; and
- Strong governance and cooperative building designer-skills.

SECTION THREE – GOVERNANCE, MANAGEMENT AND CAPACITY

Total project costs, investors and return on investment

The following outlines a foundational but incomplete ROI case behind the proposed $1 million State budget investment in this proposal envisaged over a five year period starting July 2020. The table below outlines the estimated returns and the assumptions underpinning these returns:

Project Impact Category	Assumptions for Additional Impact	Total Investment Return
Project Cash Leverage	• TBA following initiative budget finalization.	$
Increased Regional Sector Growth or Business Turnover	• Assume current Gross Regional Product from niche market agriculture is $X million • Assume the project influenced growth in niche market agriculture over 30 years (at 25% influence) • Assume the project influenced growth in agricultural/food tourism over 30 years (at 25% influence).	$
New Consequent/Attributable Private and Public Sector Investment in Region	• Following Year 1, estimated target of $1 million in each subsequent year to Year 5.	$4,000,000
Total State Investment	**Preliminary Total Investment Return**	**Total ROI**
$1M	**$4M**	**4:1**

Governing for integrated effort and success

Project Governance Arrangements

Strong governance arrangements will be the key to the success of this initiative, particularly ones that are locally led, regionally coordinated and State supported. These would include at least:

- Some form of strong area-based governing structure that is inclusive of key partners;
- Strong stable and longer term initiative leadership based within the CSC;
- Strong project-focused delivery coordination (preferably third-party facilitated) involving CSC, the CiT team, the private sector and the State);
- Ongoing support partnerships with the original CiT partners and the Regional Economies Centre of Excellence (RECoE); and
- Ongoing formal networking across-CiT regions, potentially including the strategic consideration shared appointments and procurement approaches.

Integrated Project Linkages

Key integrated linkages from this initiative and others will need to include:

- Integrated links and cooperation between the wider *Making Water Work* Queensland budget bids (Cook, Charters Towers, Rockhampton and Barcaldine);
- Strategic links to key Queensland policy initiatives, including the new Innovation Strategy, Just Transition Strategy, Zero Net Emissions, the Agricultural Strategy Paper, etc.;

- Strategic linkages to the Office of the Great Barrier Reef (OGBR), the Great Barrier Reef Foundation (GBRF) and the Great Barrier Reef Marine Park Authority (GBRMPA); and
- Key research investments and linkages should be considered and maintained, including: (i) the Advanced Manufacturing Growth Centre; (ii) the CRC Northern Australia; (iii) the new Future Food Systems CRC; and the NESP Tropical Water Quality Hub (RRRC).

Monitoring for Success

A strong monitoring program should be established from the outset of this initiative to ensure that the key outcomes and projected ROI are achieved. This approach sets up the process for key partners to jointly monitor both the health of the partnerships and the progress of implementation. It also establishes a basis for monitoring the achievement of the predicted cost benefits as the project unfolds and becomes a reality.

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Appendix A: Criteria Sheet – Key options for Local Food Futures and Making Water Work

Select **ONE** Option and consider it when you answer the questions in the table.

1. **Best Management Practices**, Regional Composts and Credentialing in Nutrient Management and Monitoring
2. New Forms of **Zero Emission Aquaculture**, including macro algae to treat waste water
3. New Forms of Local, Secure, Affordable, Dispatchable and **Low Carbon Energy** to Drive Agricultural Growth
4. Visionary **Land Use and Infrastructure Planning** to Reduce Costs and Impacts and Strengthen Supply Chains
5. More **Effective Water Trading** and Local Management
6. Stronger Digital **Data Hubs and Value Chain** Resilience and Innovation
7. **Next Generation Skills** for a Circular Economy
8. New **Protected Cropping Systems** for Agriculture (e.g. greenhouses, shade structures)
9. **Engineering Solutions**, New Water Infrastructure and Enabling Substantive Water Recycling

Intervention Option Name:	**Not sure**	**No**	**Yes**	**Comments**
1. Is it essential for the pathway?	N S	N	Y	
2. Is it essential, but difficult to implement - i.e. lots of barriers	N S	N	Y	
3. Might the option foreclose other options?	N S	N	Y	
4. Might it open/benefit other options?	N S	N	Y	
5. Could it lead to irreversible negative changes?	N S	N	Y	
6. Will it be robust? (long-lasting & durable)	N S	N	Y	
7. Is it 'no regrets'?	N S	N	Y	
8. Other considerations				