The purpose of this paper is to demonstrate how the State Government research proposes to essentially remove an additional 1,136,587 hectares of potential good quality agricultural land through proposed Strategic Environmental Areas (SEAs) in the draft Cape York Strategic plan. Conservatively, this represents a potential loss of Agricultural Production of at least $400 million at farm gate.

Strategic Cropping in Cape York – what is to be locked away in the draft Strategic Environmental Areas

Peter Spies and Shane Garozzo

Executive Summary to SEAs in Draft Cape York Plan

The purpose of this paper is to demonstrate how the State Government research has essentially removed an additional 1,136,587 hectares of potential good quality agricultural land through proposed Strategic Environmental Areas (SEAs) in the draft Cape York Strategic plan. These soils are suitable to a range of agricultural opportunities (sugarcane, broadscale field crops, perennial horticulture i.e. mango, citrus, annual horticulture i.e. vegetables and intensive livestock - pigs, feedlots, poultry). Conservatively, this represents a potential loss of Agricultural Production of at least $400 million at farm gate.

Three (3) levels of inquiry were used in our assessment of potential Agricultural Land:

1. Soils we determined to be potentially "suitable Agricultural soils" from CYPLUS mapping under SEAs (i.e. Deep Red soils, Alluvial, non-sodic, deep soils with low erosivity etc.).
2. Spatial Datasets from the DAFF Queensland Agricultural and Land Audit (QALA); and
3. A spatial dataset for Agricultural Suitability for Sorghum, Maize & Peanuts under CYPLUS (Biggs and Philip 1995).

Some of these datasets do not account for slope etc. and there would be scale errors in broadscale mapping at 1:250,000 scale or greater both. These scale errors can work either in favour of, or against, the extent of agricultural soils. However, whatever figures are used – the area is significant.

A derived figure of 1,136,587 hectares represents 27.4% of proposed SEA area.

The production of the draft SEA's from baseline spatial data initially produced very large areas which are too large to be acceptable. We can clearly see where a GIS person has "smoothed" the polygons. These SEA polygons, as produced by EHP or DSDIP, should not be used to make decisions at the property scale as there are large margins of error.

It is our recommendation that these potentially high economic areas of better agricultural soils be excluded from the proposed Strategic Environmental Areas. One suggestion is to 'trade off' these areas for other possible environmental areas outside of the proposed SEAs where better agricultural soils don't occur, whilst still meeting the environmental objectives of the proposed Cape York Plan.

Background

High-value agriculture and irrigated high-value agriculture allow applications to be made for vegetation clearing associated with these purposes. Under the proposed Cape York Strategic Plan 32% of Cape will be locked up as Strategic Environmental Areas (SEAs). This is shown graphically as Appendix A. This area, some 4,147,730 hectares, represents a 765% increase over the current Wild River High Preservation areas (5,295Km2). This would not allow for cultivation or growing of crops in these areas as part of the 30 year vision for Queensland. These areas include good agriculturally suitable soils in around Aurukun, Napranum and Hopevale and may present a ‘roadblock’ to Indigenous aspirations. Cape York residents are among the most disadvantaged in Queensland. The region has a high unemployment rate (13.8 per cent) compared with the state (5.5 per cent). Cape York has a narrow economic and employment base. These proposed SEAs are on top of 15% of Cape that is already locked up in National Parks.

The Cape has not had the opportunity to develop, like closely-settled southern areas over decades. Past and present limitations to the possibility of establishing new crops include only basic (and limited) infrastructure for transport (road and air, no rail), distance to processing and value-adding facilities and electricity. For example, the closest sugar mill is at Mossman. Transport costs are high and quality downgrade during transit is likely. Excessively high summer temperatures limit opportunities for agricultural production, especially in the northern and western areas. Extreme weather (due to seasonal cyclones from the Coral Sea and the Gulf of Carpentaria as well as flooding wet season rains) impacts the ability to manage crops or livestock effectively. Roads and infrastructure are frequently disrupted during the wet season due to flooding and weight restrictions.

There are proposals to build infrastructure, both public (like roads) and private (i.e. mills and port facilities). We are also moving into a new era where ‘food security’ and protein will be the ‘new currency’. There is huge potential for export from this area to South-east Asia. Cape York may only have approximately 16,000 people but Government should not underestimate the capacity of the Cape, through Development (and a Peninsula Development Road upgrade to Weipa) to lift the State’s economy.

Some of the Key drivers for preparing the plan are to:

- improve the region's economic development and diversity
- reduce potential land use conflict and improve land use certainty for landholders and investors
- provide investment certainty for towns and regional communities

A key document used in this paper is the Queensland Agricultural Land Audit. This document forms part of the Government's goal of doubling agriculture, fisheries and forestry by 2040, including the commitment to double food production. The Audit identifies land important to current and future production and the constraints to development, highlighting the diversity and importance of Queensland's agricultural industries across the state. It is a key reference tool that will help guide investment in the agricultural sector and inform decision making to ensure the best use of our agricultural land in the future. The Audit would identify current and future food production areas in Queensland to enable the proposed statutory regional plans to better identify and plan for additional future food production land in Queensland. It would do this by drawing together key data to identify land that is capable of being further developed to support increased food production (DAFF 2013).

The Audit assessed the opportunities and constraints including current land use, infrastructure or logistical issues and planning processes. The Audit is an initiative that supports the government's vision for a bigger, stronger and more productive agricultural sector as one of the four pillars of the Queensland economy (DAFF 2013).

Methodology

In our assessment of potential Agricultural Land that could be locked away in Strategic Environmental Areas we used three (3) levels of inquiry:

1. Soils we determined to be potentially "suitable Agricultural soils" from CYPLUS mapping under SEAs (i.e. Deep Red soils, Alluvial, non-sodic, deep soils with low erosivity etc.).
2. Spatial Datasets from the DAFF Queensland Agricultural and Land Audit (QALA) for:
   - Cape York Important agricultural land areas
   - Cape York Biophysical potential for broadacre cropping and current broadacre cropping
   - Cape York Biophysical potential for sugarcane and current sugarcane
   - Cape York Biophysical potential for annual horticulture and current annual horticulture
   - Cape York Biophysical potential for perennial horticulture and current perennial horticulture
   - Cape York Biophysical potential for cattle feedlots, piggeries and marine aquaculture and current intensive animal production and aquaculture; and
3. Spatial dataset for Agricultural Suitability for Sorghum, Maize & Peanuts under CYPLUS (Biggs and Philip 1995).

1. First level of Enquiry - The Soils we determined to be potentially "suitable Agricultural soils" from CYPLUS.

A total of 113 soil types were mapped Cape York Peninsula Land Use Study (CYPLUS). Many of the soils have low levels of phosphorus and nitrogen, are deficient in other nutrients (including trace elements), are weakly structured and are prone to erosion when cleared. There are scale errors in broadscale mapping at 1:250,000 scale or greater either in favour of or against the extent of agricultural soils, and limitations with slope.

Whilst there may be debate over the Agricultural merit of some of these soils all of the suitable soils have a low erosivity (K factor), are non-sodic, deep, non-saline, have reasonable moisture holding capacity (not free-draining sands), low flood frequency (i.e. 1 in 10) and low incidence of wetness. They are not Hydrosols or Podosols. Some soils, like Andoom, Cox, Emma, Endeavour and Weipa, may be low in fertility (N,P) and low in Organic carbon – but nonetheless have good agronomic qualities and are suitable for Tree Horticulture (i.e. Citrus), Sugarcane or peanuts (like Kimba). We determined 19 of these soil types to have good agronomic qualities.

Table 1: Potentially Suitable Agricultural Soils from CYPLUS.

Soil	Soil Description	Percent of Cape (%)
Andoom (Ad)	Very deep Uniform or Gradational yellow massive soil.	2.29
Bull (Bl)	Deep Uniform or occasionally Gradational non cracking brown clays formed on basalt	0.03
Bend (Bn)	Deep Gradational or Uniform grey or yellow-brown soils formed on alluvial plains	0.48
Burn (Br)	Deep Uniform red structured clay soils with nodules formed on basalt	0.13
Bertie (Bt)	Deep Gradational or Uniform red massive soil	1.27
Cox (Cx)	Deep Uniform or Gradational red massive soils on alluvial plains within the Rolling Downs Group	0.32
Endeavour (Ed)	Deep Gradational or occasionally Uniform red structured soil formed on basalt	0.14
Emma (Em)	Deep Gradational massive red soils formed on sandstone	2.66
Isabella (Ib)	Deep Gradational red massive soils derived from sandstone, and a basaltic influence	0.03
Kimba (Kb)	Very deep Gradational red massive soils formed on residual sands	4.3
Kool (Kl)	Deep Uniform red massive soils formed on residual sands	0.92
Lamond (Lm)	Deep Gradational brown structured soils	0.11
Lukin (Lk)		0.15
Mitchell (Mc)	Deep Uniform or Gradational Yellow, Brown or Red Massive soils on higher terraces of major streams and rivers (i.e. >1 in 10 flood event).	0.99
Norman (Nm)	Moderately deep uniform cracking dark clays formed on footslopes of basalt flows	0.03
Orchid (Oc)	Deep gradational red structured soils formed on granodiorite hillslopes	0.18
Rule (Rl)	Deep gradational or Uniform structured red clays	0.23
Raymond (Rm)	Moderately deep Gradational Red Clay soils formed on Dolerite intrusions	0.07
Weipa (Wp)	Deep Gradational or Uniform red massive soil.	3.01
TOTAL (as percent of Cape)		**17.34**
• Note other soils were considered and may be suitable at finer scales but were omitted from list above on factors of erosivity (K factor), sodicity, and soil depth, moisture holding capacity, flood frequency and wetness. These soils were Batavia (imperfectly drained, low fertility), Clark (fertility & moisture holding capacity), Crosbie (soil depth & fertility), Fairlight (soil depth and slope – though is a good Terra Rossa soil), Henderson (depth, fertility & possible slope), Kennedy (poorly drained, slowly permeable), Shea (moisture holding, fertility & depth), Strath (moisture holding, fertility & erosivity), Victor (saline, unstable) and Witchura (fertility, depth & moisture holding).		

The Area of Potential Agricultural-Soils (as derived from CYPLUS soil descriptions) under the proposed SEAs by Spies and Garozzo is 507,693 hectares. This is shown graphically as Appendix B - Agricultural Soils within Strategic Environmental Areas.

2. Second Level of Enquiry – DAFF Queensland Agricultural and Land Audit (QALA).

The strengths of the region include the horticultural season is early, due to the climate. Tropical fruit market demands are not usually met by the current supply at this time, so growers have the advantage of high early season prices i.e. Papaya and passionfruit, for example, mature 3 weeks earlier than in other regions, so producers in the Cooktown and Lakeland Downs areas can supply these to southern markets approximately 1 month ahead of other Queensland producers. Banana producers have benefitted from low supply and high prices following cyclones Yasi and Larry. This has attracted large players in the industry and resulted in increased plantings in the Lakeland Downs and Hopevale areas. This area has been mapped as an Important Agricultural Land Area and 102,407 hectares was identified within proposed SEAs (Appendix C).

There is potentially a large local Indigenous workforce who understands the region and its limitations. Pastoral industry work is a preferred choice of Indigenous workers and so is the main employer in the region (DAFF 2013). While extensive areas of land have potential for development, the region has wide-ranging constraints such as climatic extremes and limited infrastructure (DAFF 2013).

Sugarcane production is not undertaken in the Cape York region currently, however, significant areas (1.5 million hectares or 12 per cent of the region) have been identified as having potential for this use (DAFF 2013).

The DAFF mapping for broadacre cropping shows land identified by the audit as currently being used for the agricultural land-use category ‘broadacre cropping’ (rain-fed or irrigated). It also shows land identified as not currently used for broadacre cropping but having potential to be used for this purpose. Land shown as having potential for broadacre cropping includes land of agricultural land class (ALC) A with slope less than 8 per cent and mean annual rainfall greater than 450 mm for 7 out of 10 years (DAFF 2013). 57,257 hectares was identified within proposed SEAs and is shown graphically as Appendix D.
We suspect this DAFF figure to be incorrect as Annual Horticulture generally requires better quality soils than Broadacre field crops, and the annual horticulture figure was far greater. CYPLUS (Biggs and Philip, 1995) estimated the area suitable for Sorghum & Maize, within the SEAs to be 712,620 Ha. This figure seems to be out by a factor of 10 (i.e. missing a zero) and certainly does not stack up with our assessment of available good quality agricultural soils.

DAFF mapping for land shown as having potential for Sugarcane included land of agricultural land class A and class B with slope less than 5 per cent and fewer than 55 days per year with a minimum temperature of 9 °C or less (DAFF 2013). 434,841 hectares was identified within proposed SEAs (Appendix E).

Land shown as having potential for annual horticulture includes land of agricultural land class A and class B with slope less than 8 per cent and April to October rainfall less than 500 mm (DAFF 2013). 532,240 hectares was identified within proposed SEAs (Appendix F).

Land shown as having potential for perennial horticulture included land of agricultural land class A and class B with slope less than 15 per cent and April to October rainfall less than

500 mm. It also excluded land that is land that has cracking clay soils. In identifying this land, the audit did not consider temperature or flood risk. Temperature is a major determinant of suitability of land for horticulture. However, due to the large range of different horticultural crops grown in Queensland and the widely variable temperature requirements for these crops, it is not possible to determine meaningful criteria for temperature for the category 'perennial horticulture' (DAFF 2013). 543,516 hectares was identified within proposed SEAs (Appendix G).

There is minimal intensive animal production currently in Cape York - one occasional feedlot, one egg producer and a scattering of aquaculture production enterprises in the south of the region. Potential Intensive livestock has been identified as having biophysical potential across 8.6 per cent (approximately 1.1 million hectares) of the Cape York region. Biophysical potential for cattle feedlots, piggeries and marine aquaculture and current intensive animal production and aquaculture was determined as being:

- Marine aquaculture potential: within 2km of estuarine water source, above HAT, <10m elevation, soil >20% clay content; and
- Feedlots and piggeries potential: 'A' + 'B'class land + 'C1' class land within10km of current cropping, slope ≤8% (DAFF 2013).

472,280 hectares was identified as potential intensive animal production within proposed SEAs (Appendix H).

Table 2: Current and Potential Agricultural Areas within Cape York from Queensland Agriculture and Land Audit (does not include Forestry and/or Grazing).

Queensland Land Use Mapping Program (1999)	Current land use		Potential land use*	
	Area (ha)	Percentage of region	Area (ha)	Percentage of region
Broadacre cropping	5 224	0.04	188 285**	1.49
Sugarcane	0	0.00	1 545 583	12.27
Perennial horticulture	45	0.00	1 963 592	15.58
Annual horticulture	8	0.00	1 893 887	15.03
Intensive livestock	0	0.00	1 086 908	8.63
Aquaculture	249	0.00	3 617	0.03

* Potential areas include where the majority of current production occurs as well as where production could potentially occur.

** This figure as published appears wrong as Annual Horticulture generally requires better quality soils than Broadacre field crops. CYPLUS (Biggs and Philip, 1995) estimated the area suitable for Sorghum & Maize to be 1,812,000Ha. This figure seems to be out by a factor of 10 (i.e. missing a zero).

3. Third Level of Enquiry – Spatial dataset for Agricultural Suitability for Sorghum, Maize & Peanuts under CYPLUS

From the CYPLUS Soil Survey and Agricultural Suitability of Cape York Peninsula (Biggs and Philip 1995) - the agricultural land suitability assessment indicated the following areas, within the Cape, were suitable for:

- peanuts and sorghum/maize (243 300 ha)
- sorghum, maize (1 8 12 000 ha)
- high input pastures (3 445 300 ha)

The land suitability assessment for selected agricultural uses under CYPLUS was based on the evaluation of particular land properties which determine plant growth, machinery usage and the management of land degradation. It follows that these properties are the environmental factors which determine the profitability of selected land uses in average cost/price structure circumstances. The land suitability assessment evaluated 12 land properties which encompassed climatic, soil and topographic attributes. These are referred to as land use limitations, shortened to the term 'limitations'. They are: Climate (C), Flooding (F), Vegetation (V), Moisture Supply (M), Rockiness (R), Topography (T), Water Erosion (E), Fertility (N), Landscape Complexity (X), Wetness (W), Physical Condition (P), and Salinity (S). The map associated with this report was compiled using the suitability of the dominant soil only, within each UMA (Biggs and Philip 1995).

All land assessed as suitable for peanuts was also assessed as suitable for sorghum and maize cropping, but the opposite does not apply due to the greater effects that rockiness and soil physical characteristics can have on peanuts. Land suitable for cropping of sorghum/maize is dominantly in the north on the Aurukun Surface where the presence of nodules in the surface horizon is not a major restriction. High temperatures are a restriction to sorghum/maize cropping in the south-west. Areas assessed as suitable for peanuts are located in the Lakeland area in the south and areas of sandstone derived soils in the north (Biggs and Philip 1995). The Map of CYPLUS potential Cropping Suitability is shown as Appendix I and within the SEAs for Sorghum and Maize as Appendix J.

4. Agronomic Areas within Strategic Environmental Areas in Draft Cape York Regional Plan

There is a derived 1,136,587 hectares of potential Agricultural land proposed to be locked away in the current draft of the Cape York Strategic plan in Strategic Environmental Areas (SEAs). This is shown graphically as Appendix K.

Table 3: Draft Cape York Regional Plan Agronomic Areas within Strategic Environmental Areas

Land-use	Area in SEA (ha)	Area of SEA (%)
Spies Potential Agricultural Soils (derived from CYPLUS soil descriptions)	507 693	12.24
DAFF Important Agricultural Areas (i.e. Lakeland, Endeavour Valley-McIvor regions)	102 407	2.47
DAFF Sugar	434 841	10.48
DAFF Perennial Horticulture (i.e. Mango, Citrus)	543 516	13.10
DAFF Annual Horticulture (i.e. vegetables)	532 240	12.83
DAFF Intensive Livestock Production	472 280	11.38
DAFF Potential Cropping (i.e. peanuts, Maize & Sorghum)	57 257	1.38
CYPLUS Peanuts, Sorghum, Maize	85 897	2.07
CYPLUS Sorghum, Maize	712 620	17.18
SUM of AREAS	**1 136 587**	**27.40**
SEA	**4 147 730**	
NOTE: The Sum of areas is GIS derived from a number of Spatial datasets. The figure is not cumulative as many Land-Uses can occupy the same spatial location (i.e. suitable for Sugarcane and tree horticulture).		

What does this mean in terms of Economic Opportunity? Even using the lowest value agricultural crop of Sorghum (Horticulture, Sugarcane, Maize and peanuts represent higher values per hectare) with an average yield of 1.75t/ha at $200 per tonne equates to $398 million at farm gate.

Data confidence

The data confidence for most of the maps developed for the Cape York region (excluding grazing and forestry) was predominantly 'medium' confidence. The confidence levels indicate how well the line work, soil data and soil quality information provided match reality. They are determined by how spatially accurate the lines around different soil types are on the map, how much information was available for soil data, how soil quality information was collected and the skill of those collecting the information. Most of the current land-use information used in the audit has been obtained through the Queensland Land Use Mapping Program (QLUMP), which is dated 1999 for this region. Land use is determined through available databases, satellite imagery and aerial photographs. As there are difficulties with differentiating land uses using imagery, local expert knowledge and some field surveys have been conducted to verify the data (DAFF 2013).

How Strategic Environmental Areas May Have been Derived and Discrepancies

The Draft Cape York Regional Plan documentation indicates that the proposed SEA's were derived from many spatial datasets from DAFF, CYPLUS, general QGIS landscape data, areas of ecological significance (EHP) etc. We obtained every Queensland Government GIS dataset available (including the original GIS data which was likely used in SEA development) to see where large extents of the SEA polygons are derived. Querying and building data layers to emulate as closely as possible the proposed SEA polygons.
A problem is that there was more than one GIS technician (and more than one thought process) used to derive the final polygons in the draft Plan. Some SEA polygon lines seem to be broadly brushed at a low scale of data sensitivity compared to other line work of the same polygon.

From discussions we learnt the production of draft SEAs by EHP from baseline spatial data essentially produced very large areas which were clearly too large to be acceptable. Someone has worked hard to reduce them to a size to better fit the intent of the Plan and what the public might reasonably consider. We can actually clearly see where a GIS person has smoothed the polygons.

The SEA polygons, as produced, should not be used to make decisions at the property scale as the margins of error on the boundaries of the polygons does not allow for it.

References:

Biggs, A.J.W. and Philip, S.R. (1995) Cape York Peninsula Land Use Strategy (CYPLUS) Natural Resources Analysis Program (NRAP) - *Soil Survey and Agricultural Suitability of Cape York Peninsula*, Queensland Dept. of Primary Industries, Mareeba.

Cape York Regional Plan - Draft for consultation, Queensland Department of State Development, Infrastructure and Planning, November 2013.

Queensland Agriculture and Land Audit: Chapter 4 – Cape York. Department of Agriculture, Fisheries and Forestry, © State of Queensland, 2013.

Spatial data layers for:

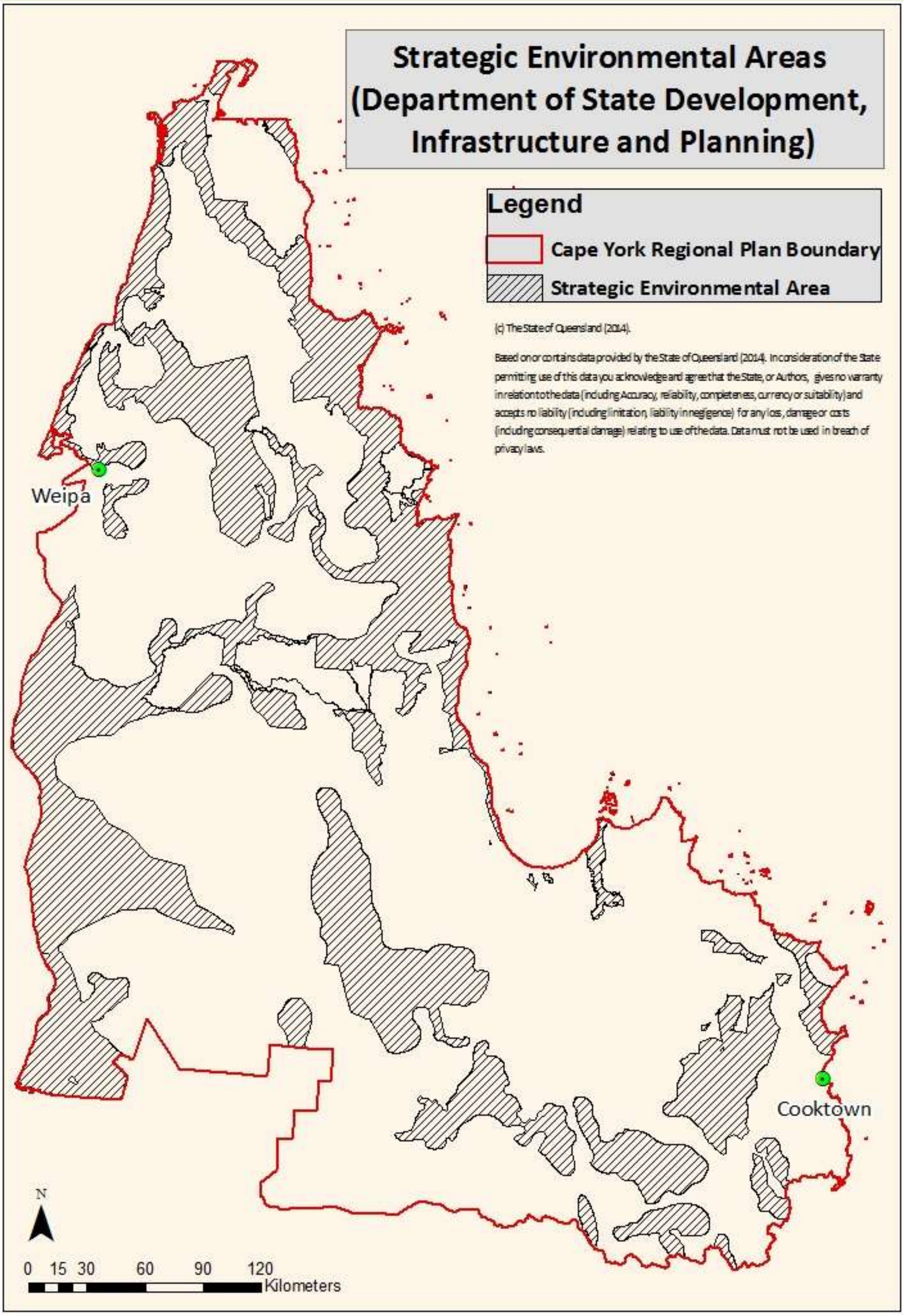
- Strategic Environmental Areas (Department of State Development, Infrastructure and Planning)
- CYPLUS Soils and Agricultural Suitability of Cape York Peninsula (Department of Natural Resources and Mines)
- Cape York Important agricultural land areas (Department of Agriculture, Fisheries and Forestry)
- Cape York Biophysical potential for broadacre cropping and current broadacre cropping (Department of Agriculture, Fisheries and Forestry)
- Cape York Biophysical potential for sugarcane and current sugarcane (Department of Agriculture, Fisheries and Forestry)
- Cape York Biophysical potential for annual horticulture and current annual horticulture (Department of Agriculture, Fisheries and Forestry)
- Cape York Biophysical potential for perennial horticulture and current perennial horticulture (Department of Agriculture, Fisheries and Forestry)
- Cape York Biophysical potential for cattle feedlots, piggeries and marine aquaculture and current intensive animal production and aquaculture (Department of Agriculture, Fisheries and Forestry)

About the Authors

Peter Spies is an Agricultural Consultant who specialises in Vegetation, Soils, Natural Resource Management and Agricultural Suitability. He has a Bachelor of Applied Science (Honours) in Rural Technology and was previously employed in State Government for over 12 years with DNRM and DPI in Land Management.

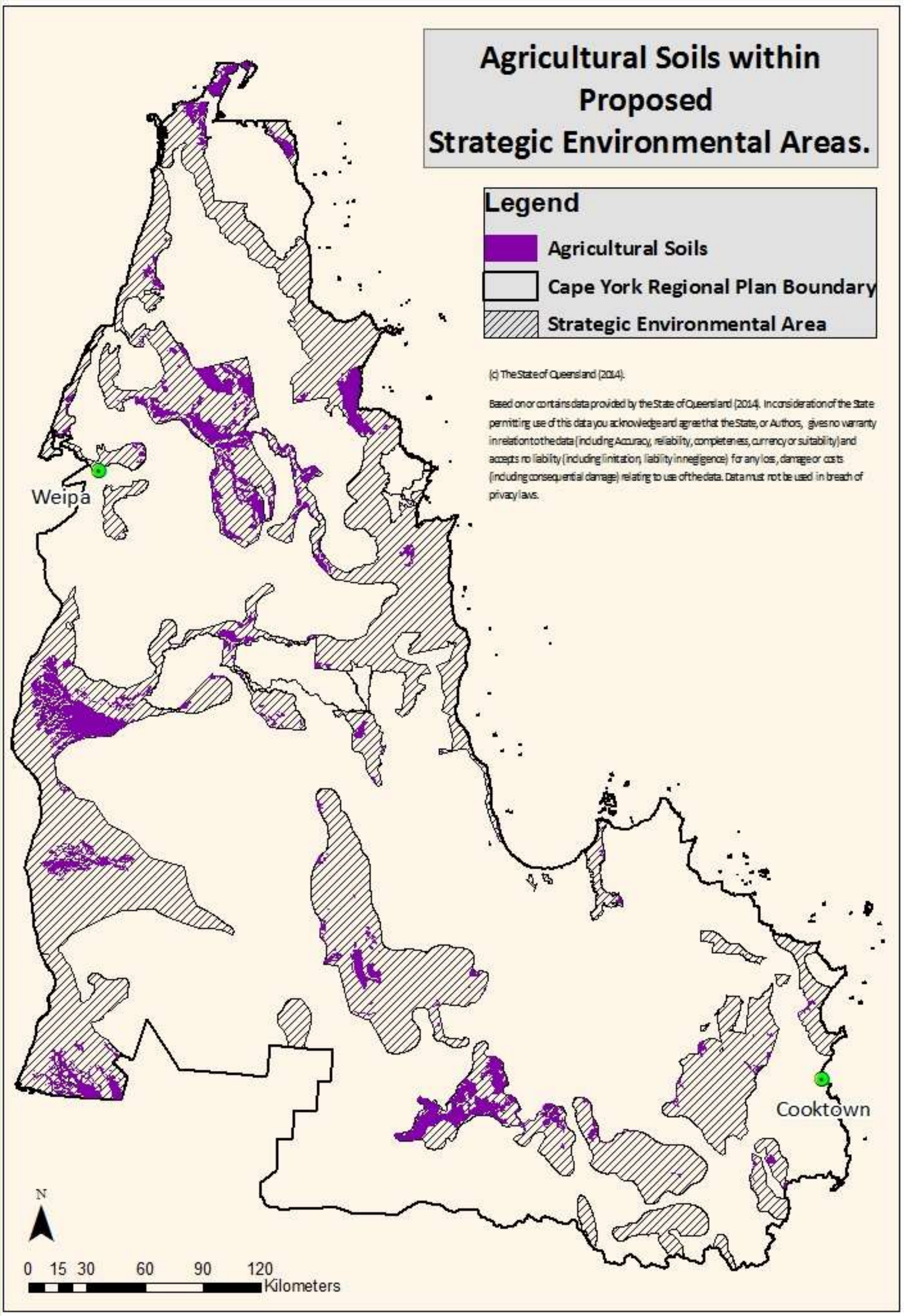
Shane Garozzo is a Spatial Analyst who specialises in Environmental Law, Water Management and Use, and Environmental Assessment. He has a Bachelor of Science in Environmental Management with Honours in Spatial Analysis. He has 16 years' experience within CSIRO, Department of Primary Industries and Department of Natural Resources and Mines in these fields and livestock research.

APPENDIX A



Strategic Environmental Areas (Department of State Development, Infrastructure and Planning)
Legend
Cape York Regional Plan Boundary
Strategic Environmental Area
(c) The State of Queensland (2014).
Based on or contains data provided by the State of Queensland (2014). In consideration of the State permitting use of this data you acknowledge and agree that the State, or Authors, gives no warranty in relation to the data (including Accuracy, reliability, completeness, currency or suitability) and accepts no liability (including limitation, liability in negligence) for any loss, damage or costs (including consequential damage) relating to use of the data. Data must not be used in breach of privacy laws.
Weipa
Cooktown
N
0 15 30 60 90 120
Kilometers

APPENDIX B


Agricultural Soils within
Proposed
Strategic Environmental Areas.
Legend
Agricultural Soils
Cape York Regional Plan Boundary
Strategic Environmental Area
(c) The State of Queensland (2014).
Based on or contains data provided by the State of Queensland (2014). In consideration of the State permitting use of this data you acknowledge and agree that the State, or Authors, gives no warranty in relation to the data (including Accuracy, reliability, completeness, currency or suitability) and accepts no liability (including limitation, liability in negligence) for any loss, damage or costs (including consequential damage) relating to use of the data. Data must not be used in breach of privacy laws.
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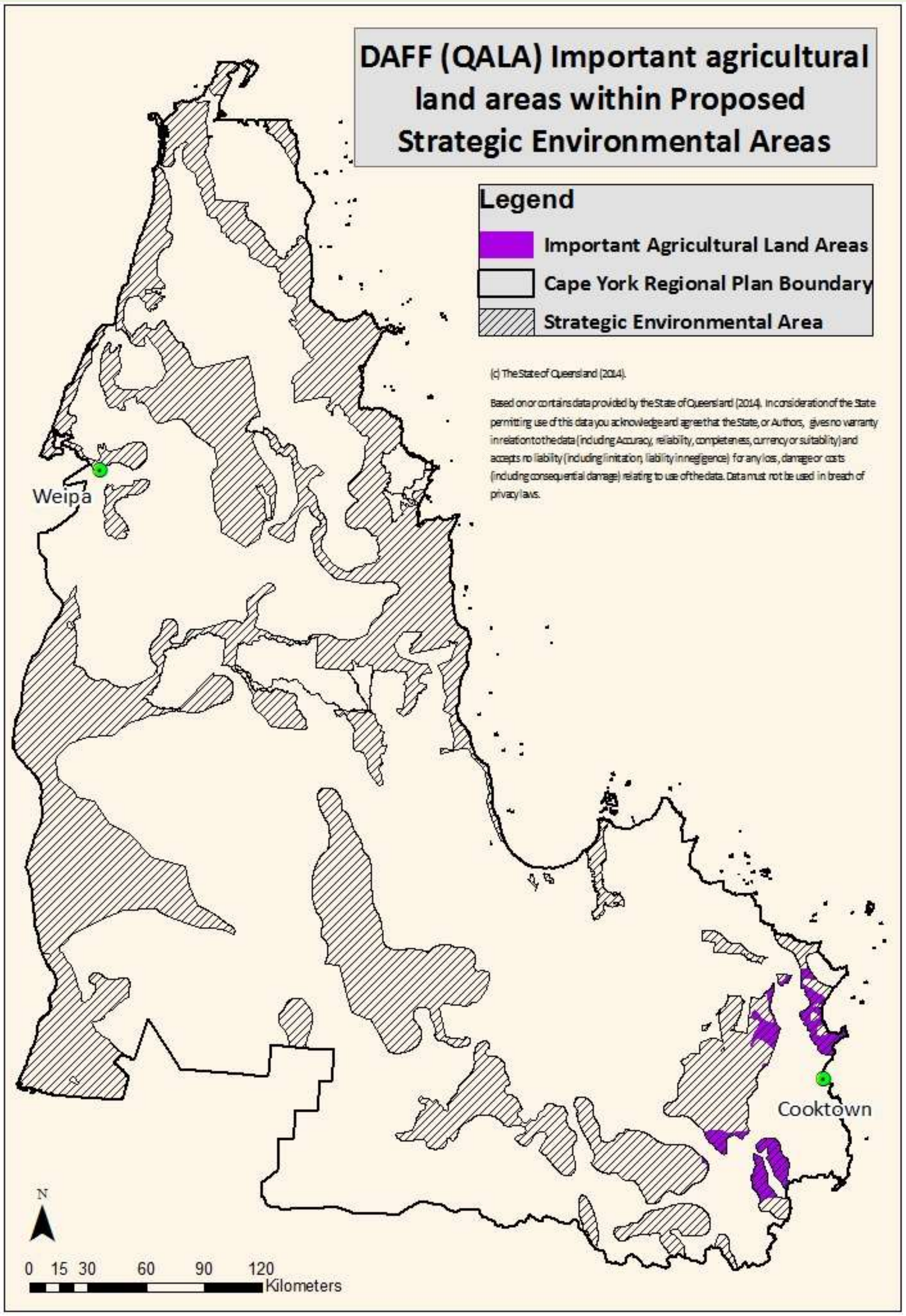
Kilometers

APPENDIX C


DAFF (QALA) Important agricultural land areas within Proposed Strategic Environmental Areas
Legend
Important Agricultural Land Areas
Cape York Regional Plan Boundary
Strategic Environmental Area
(c) The State of Queensland (2014).
Based on or contains data provided by the State of Queensland (2014). In consideration of the State permitting use of this data you acknowledge and agree that the State, or Authors, gives no warranty in relation to the data (including Accuracy, reliability, completeness, currency or suitability) and accepts no liability (including limitation, liability in negligence) for any loss, damage or costs (including consequential damage) relating to use of the data. Data must not be used in breach of privacy laws.
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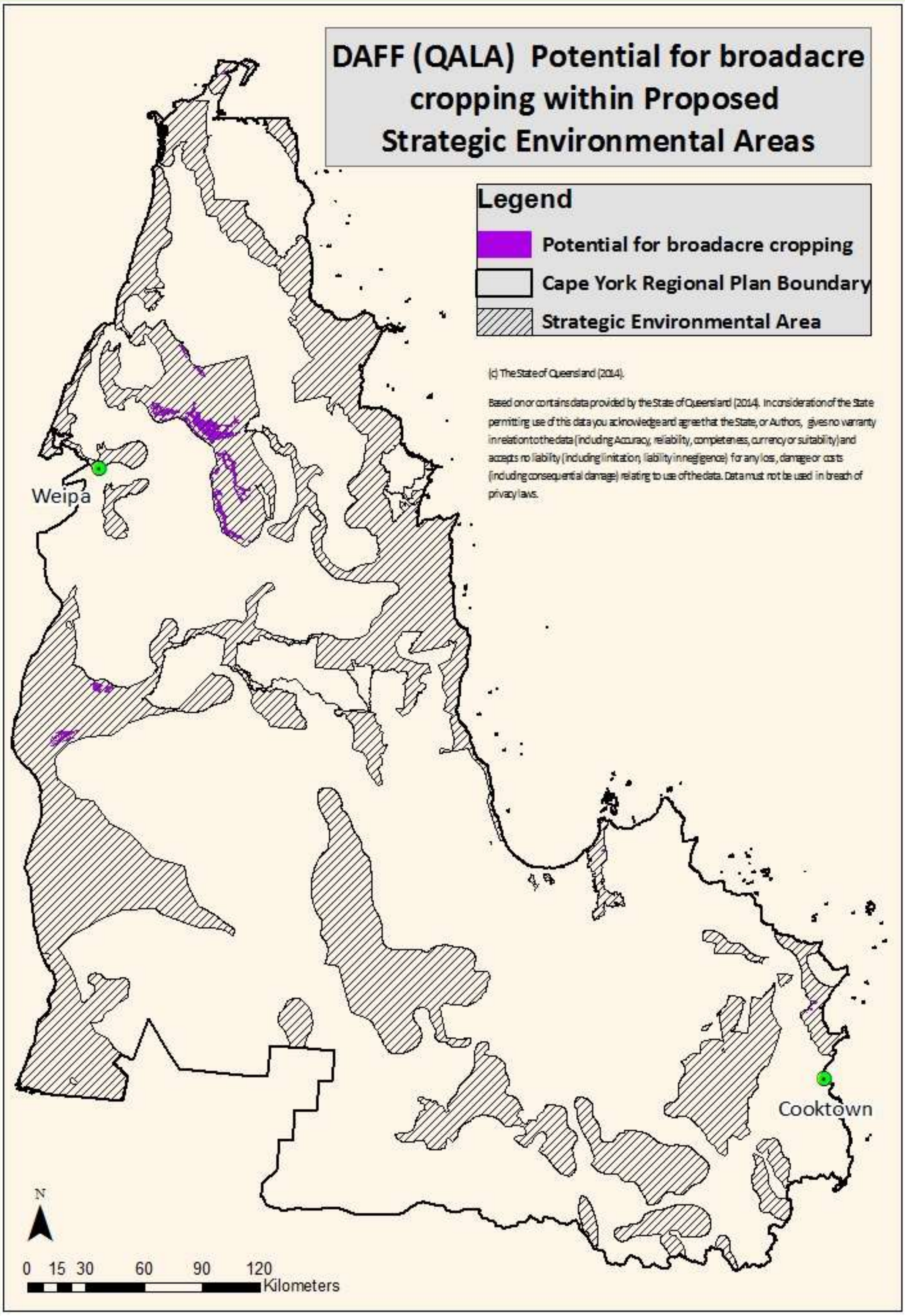
APPENDIX D


DAFF (QALA) Potential for broadacre cropping within Proposed Strategic Environmental Areas
Legend
Potential for broadacre cropping
Cape York Regional Plan Boundary
Strategic Environmental Area
(c) The State of Queensland (2014).
Based on or contains data provided by the State of Queensland (2014). In consideration of the State permitting use of this data you acknowledge and agree that the State, or Authors, gives no warranty in relation to the data (including Accuracy, reliability, completeness, currency or suitability) and accepts no liability (including limitation, liability in negligence) for any loss, damage or costs (including consequential damage) relating to use of the data. Data must not be used in breach of privacy laws.
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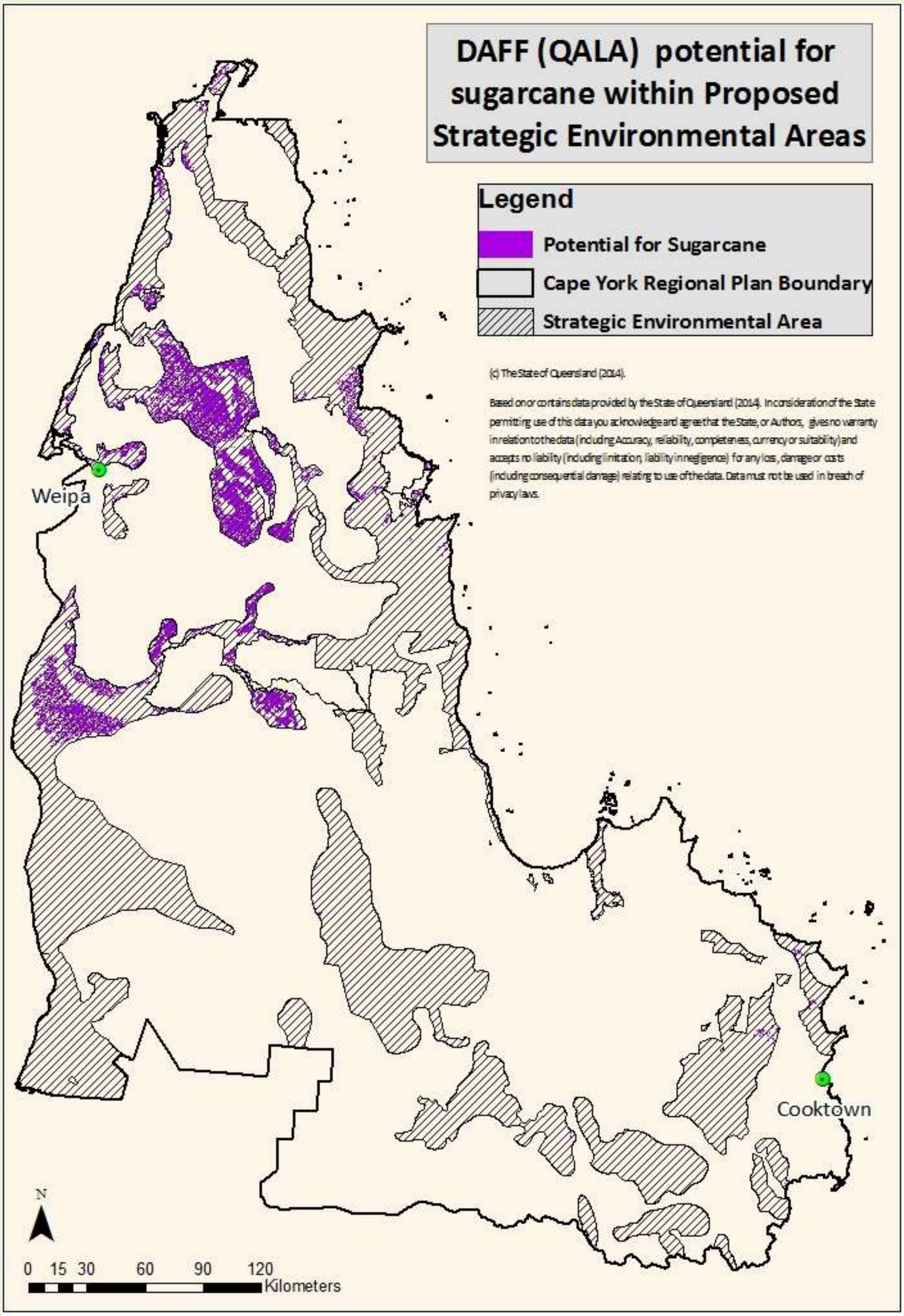
Kilometers

APPENDIX E


DAFF (QALA) potential for sugarcane within Proposed Strategic Environmental Areas
Legend
Potential for Sugarcane
Cape York Regional Plan Boundary
Strategic Environmental Area
(c) The State of Queensland (2014).
Based on or contains data provided by the State of Queensland (2014). In consideration of the State permitting use of this data you acknowledge and agree that the State, or Authors, gives no warranty in relation to the data (including Accuracy, reliability, completeness, currency or suitability) and accepts no liability (including limitation, liability in negligence) for any loss, damage or costs (including consequential damage) relating to use of the data. Data must not be used in breach of privacy laws.
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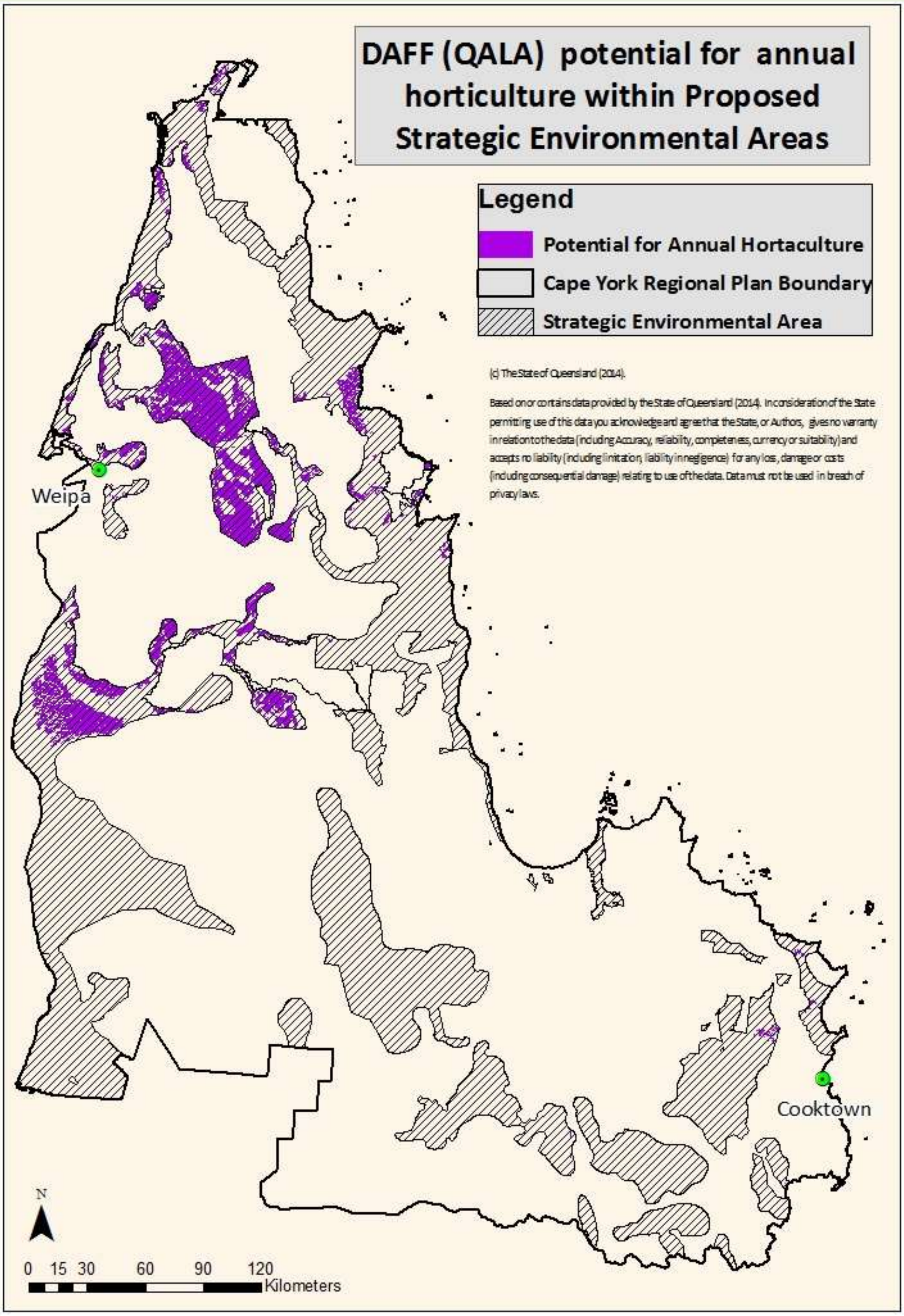
Kilometers

APPENDIX F


DAFF (QALA) potential for annual horticulture within Proposed Strategic Environmental Areas
Legend
Potential for Annual Hortaculture
Cape York Regional Plan Boundary
Strategic Environmental Area
(c) The State of Queensland (2014).
Based on or contains data provided by the State of Queensland (2014). In consideration of the State permitting use of this data you acknowledge and agree that the State, or Authors, gives no warranty in relation to the data (including Accuracy, reliability, completeness, currency or suitability) and accepts no liability (including limitation, liability in negligence) for any loss, damage or costs (including consequential damage) relating to use of the data. Data must not be used in breach of privacy laws.
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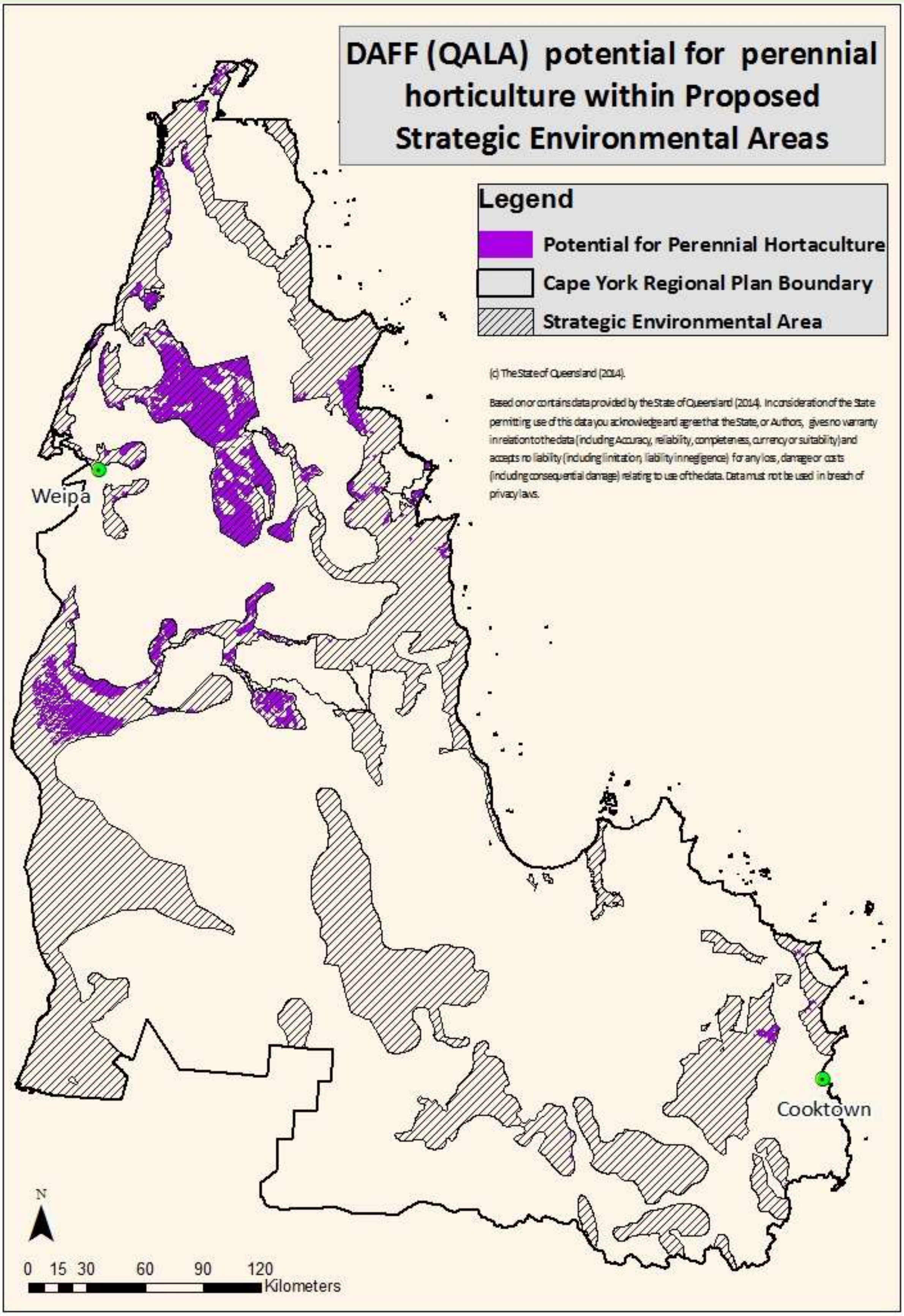
0 15 30 60 90 120
Kilometers

APPENDIX G


DAFF (QALA) potential for perennial horticulture within Proposed Strategic Environmental Areas
Legend
Potential for Perennial Hortaculture
Cape York Regional Plan Boundary
Strategic Environmental Area
(c) The State of Queensland (2014).
Based on or contains data provided by the State of Queensland (2014). In consideration of the State permitting use of this data you acknowledge and agree that the State, or Authors, gives no warranty in relation to the data (including Accuracy, reliability, completeness, currency or suitability) and accepts no liability (including limitation, liability in negligence) for any loss, damage or costs (including consequential damage) relating to use of the data. Data must not be used in breach of privacy laws.
Weipa
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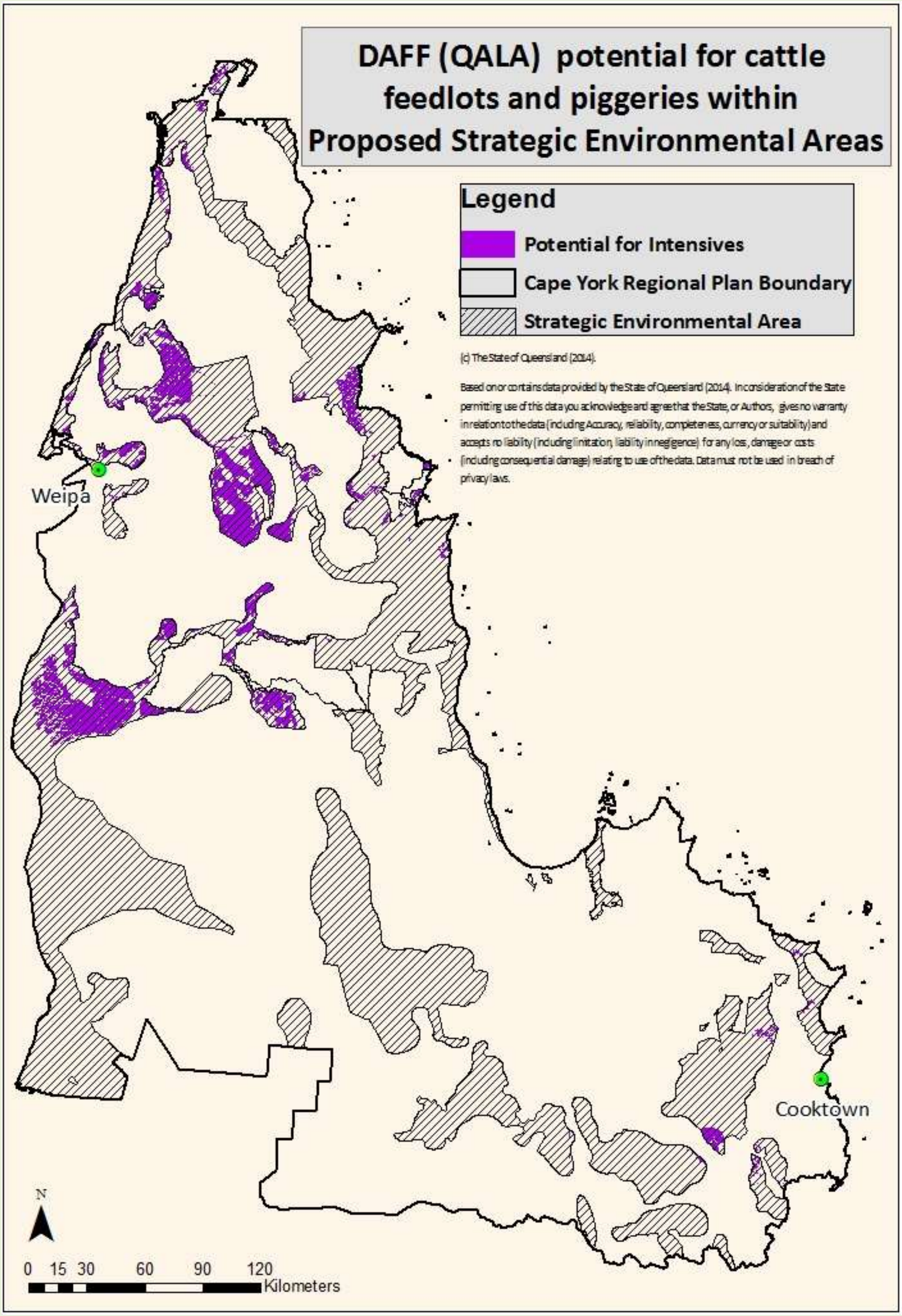
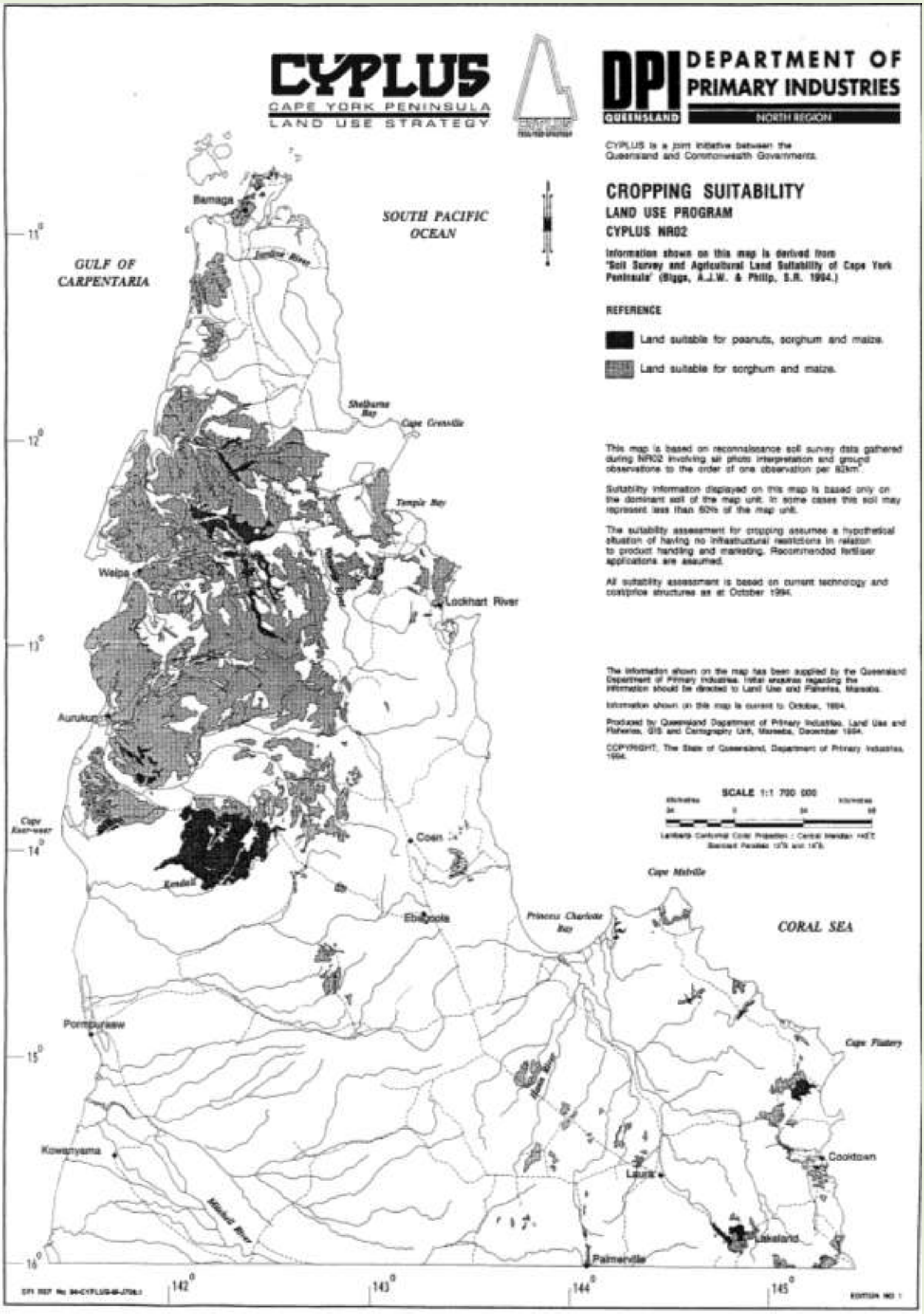
Kilometers

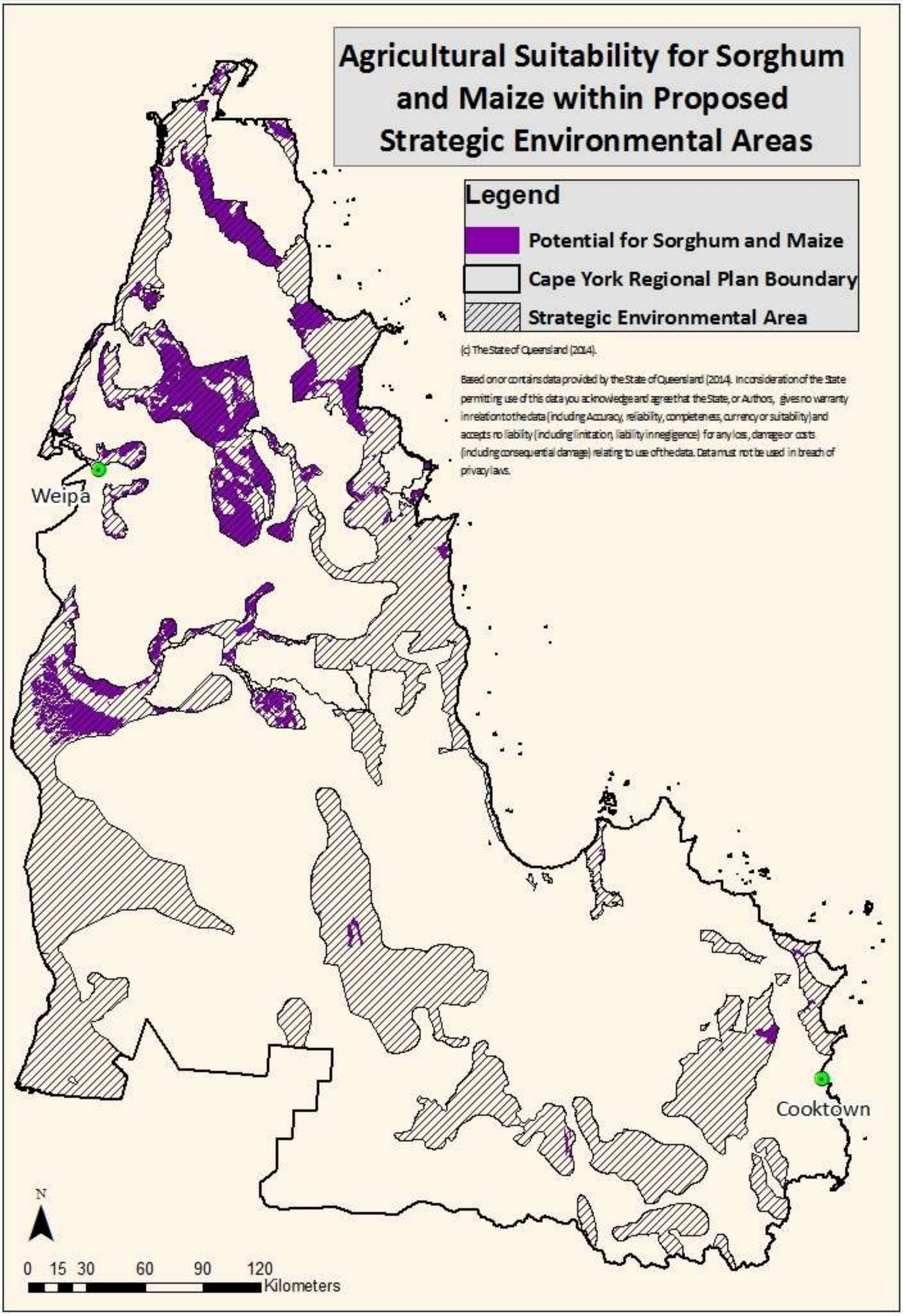
APPENDIX H


DAFF (QALA) potential for cattle feedlots and piggeries within Proposed Strategic Environmental Areas
Legend
Potential for Intensives
Cape York Regional Plan Boundary
Strategic Environmental Area
(c) The State of Queensland (2014).
Based on or contains data provided by the State of Queensland (2014). In consideration of the State permitting use of this data you acknowledge and agree that the State, or Authors, gives no warranty in relation to the data (including Accuracy, reliability, completeness, currency or suitability) and accepts no liability (including limitation, liability in negligence) for any loss, damage or costs (including consequential damage) relating to use of the data. Data must not be used in breach of privacy laws.
Weipa
Cooktown
N
0 15 30 60 90 120
Kilometers

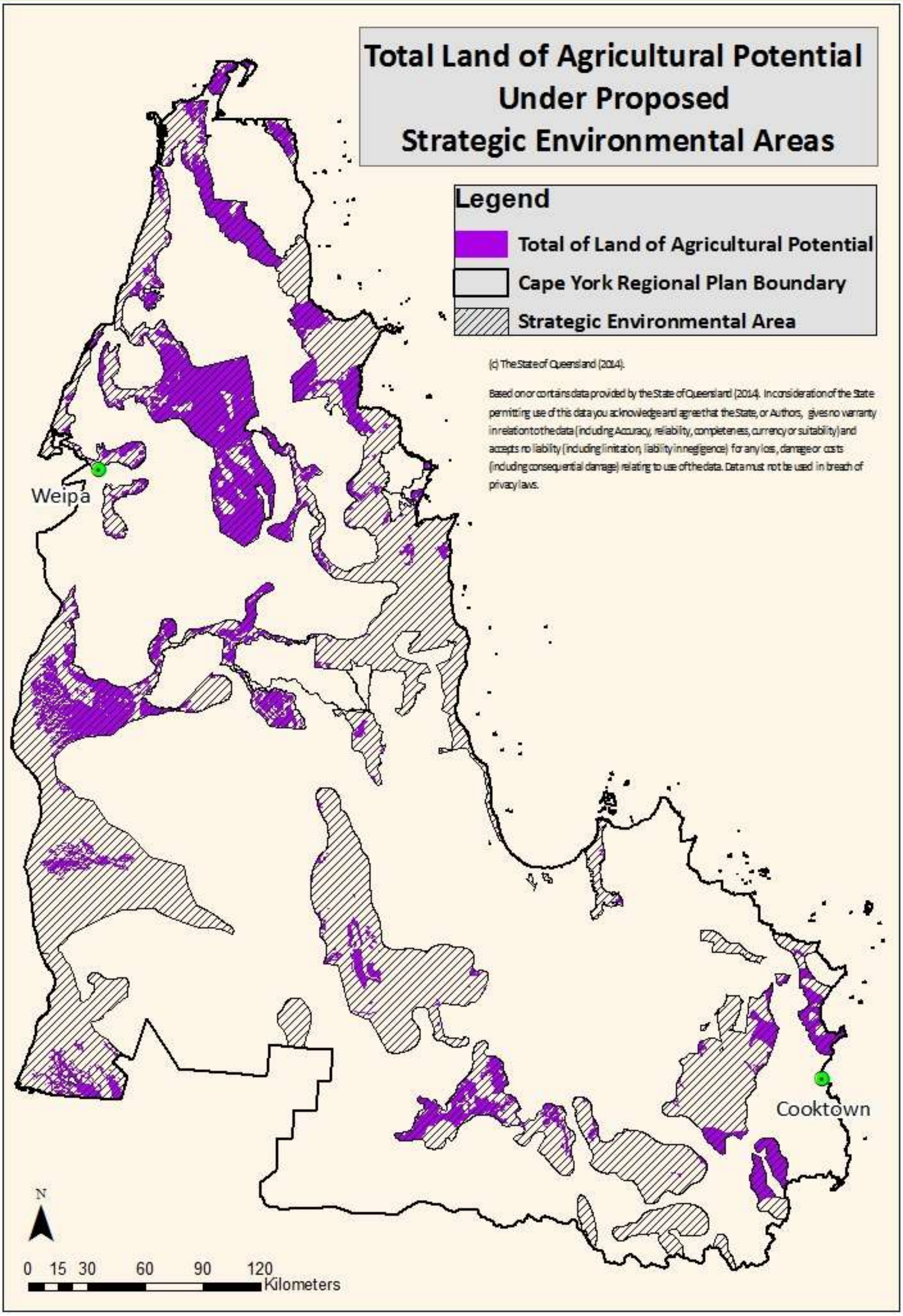
APPENDIX I - CYPLUS Agricultural Suitability of Cape York Peninsula



APPENDIX J - Map of CYPLUS potential Cropping Suitability within the SEAs for Sorghum and Maize



APPENDIX K


Total Land of Agricultural Potential
Under Proposed
Strategic Environmental Areas
Legend
Total of Land of Agricultural Potential
Cape York Regional Plan Boundary
Strategic Environmental Area
(c) The State of Queensland (2014).
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Weipa
Cooktown
N
0 15 30 60 90 120
Kilometers