Submission Number: 189 Date received: 14/03/14

14th February 2014 Committee Secretary Joint Select Committee on Northern Australia PO Box 6021 Parliament House CANBERRA ACT 2600

Email: jscna@aph.gov.au

Dear Sir/Madam

Regional Natural Resource Management (NRM) groups work in partnership with industries, government, agencies, NGOs and communities to achieve long term sustainability, particularly in the agricultural, indigenous and environment sectors. These organisations manage significant Federal and State funds and have extensive networks built up over the last 15 years of practical in-field relationships. Cape York NRM and Terrain NRM (covering the Wet Tropics) have combined their response to the Australian Parliament's Northern Australia Committee's call for submissions to its inquiry into the development of Northern Australia.

Whilst our response may be indicative across all of Northern Australia, we qualify that we are primarily commenting on our regional footprint in Far North Queensland

Our submission shares with the Joint Select Committee on Northern Australia a vision and principles we feel are consistent across our regions, and an overarching summary of key recommendations under the inquiry's term of reference stated in the Committee's 16 December 2013 media statement.

Thank you for your consideration of the attached submission. We would be pleased to provide further clarification, data or evidence on any matters in our submission should the committee seek detail.

Yours Sincerely,



Mike Berwick Chair Terrain Natural Resource Management





David ClaudieChair Cape York Natural Resource Management



Part 1 – Overview from Regional Natural Resource Management bodies covering Cape York, Northern Gulf, Southern Gulf and Wet Tropics

Our Vision

That growth in Northern Australia is strategic, well planned and well managed so that the legacy for future generations and the environment is truly sustainable.

Our Principles

- 1. Governance for North Australia reflects its unique geography, communities and opportunities. Northern Australia is remote from current mainstream governance arrangements, with difficult communications and significant climatic and distance barriers, but has a huge wealth of knowledge in local communities and landholders. Governance practice, public investment, policy and innovation that empowers local communities in partnership with government are essential for equitable and sustainable development. Building the northern Australian and tropical industries life experience within government will help develop a 'fit for purpose' approach rather than blanket nation or state wide approaches the north is different..
- 2. Traditional Owners have rights and responsibilities for management of land and resources across northern Australia. Traditional Owners have knowledge and capacity essential for effective management of natural resources and yet much existing tenure and development in Queensland does not reflect the skills or the rights of the first peoples. This could be cemented by adopting the United Nations Declaration of Rights of Indigenous People and the principles of Free Prior and Informed Consent.
- 3. Comprehensive knowledge of northern Australia's natural and cultural resources informs decision making. The Region's natural and cultural resources underpin development. New technology and long term science frameworks need development and application to support sound investment, monitor risks to avoid failure, and measure key indicators that demonstrate return on investment within the natural resource sphere. This will ensure that development maintains healthy, well connected ecosystems resilient to climate variability and climate change. It will also demonstrate respect and fully exploit the knowledge and passion people have already invested in Northern Australia.
- 4. New wealth opportunities are purposely designed and supported so that they are sustainable and long lasting and a true legacy for the region. Decisions are made within the context of systems rather than isolated single point developments so that cumulative impacts are well understood and managed. Long term implications, costs and benefits of projected changes and significant risks such as climate change must be fully considered in decision-making.
- 5. Use current resources and opportunities, especially agricultural lands, to maximise their potential before developing new areas. Much of the developed land area in the region is technically underproductive. Why this is so and how the situation can be remedied should be addressed prior to a development push into new and less viable locales.
- 6. The quantitative valuation of ecosystem services must be a strong, underpinning decision making tool. This allows a quantitative comparison of the benefits and costs of development, especially as the natural resource capital of northern Australia will play a large role in new developments.

Our Values

- Respect for the people before us, the people here today and especially the people of the future.
- Healthy well managed natural resources, as a valuable existing capital, as they underpin our cultures, our economies, our environment and our lifestyles.
- Democracy and full active participation in decisions that affect our lives and the lives of our children.

Part 2 – Response to the Term of Reference

2.1 "Examine the potential for development of the region's mineral, energy, agricultural, tourism, defence and other industries"

Preamble

The future success of new development and growth in Northern and Northwest Queensland will be determined by laying world's best science foundations that benchmark and monitor trends in resource health and ecosystem services, excellence in decision making and trade off analysis, and the maintenance of existing undeveloped and developed natural resources.

The northern regions of Queensland offer excellent lifestyle opportunities and as communication technology improves new industries based on education, technology, and services (technical, tropical expertise exported to Asia-Pacific, aged care etc.) may emerge. However the economy in Northern and Northwest Queensland today is driven primarily by the utilisation of the area's natural resources.

The NRM Groups have technical expertise and decades of experience of working with communities and industries in Northern and Northwest Queensland in managing and in some cases developing new natural resource based industries. There is pressure for the Northern and Northwest regions of Queensland to increase production or physically sustain new developments, especially tropical crops targeting the culinary preferences of the Asia Pacific. Nevertheless we also have obligations to ensure that the outstanding natural and cultural assets of our region including the World Heritage listed Great Barrier Reef and Wet Tropics, and other 'jewels' within the Gulf of Carpentaria, Cape York, the Mitchell Grass Downs and our savannah landscape spanning from East to West, are appropriately planned for and managed. The 'natural capital' of these exceptional ecosystems is likely to increase in value over time, for example as refuges for genetic material and for renaissance for people.

Comprehensive knowledge of northern Australia's natural and cultural resources informs decision making

The Australian Government has extensive science investment in natural resource assessment and management in Northern Australia already through the National Environment Research Program, Terrestrial Ecosystem Research Network, key research institutes and the Cooperative Research Centres. Additionally investments are made through industry bodies in research and development (R&D) programs such as Meat and Livestock Australia, Sugar R&D corporation, Cotton R&D, Grain R&D, Dairy R&D, Rural Industries Research and Development Corporation, etc. There are also tax incentives for enterprises to engage in R&D projects. The uptake of this huge array of science investment by end users (the resource managers themselves) is highly variable between programs and geographical areas.

Weather radar in the northern Australian regions are needed urgently to provide credible and accurate rainfall data for improved water planning and to provide early warning and advice of impending floods and cyclones. The longer these stations are in place the more valuable the data becomes as it builds trends and calibrates other water information systems.

2.1.1 We recommend that all science, research and development funds be audited to ascertain the uptake, science needs, gaps and delivery mechanisms in terms of effectiveness for applied implementation for existing and emerging natural resource management and developments. Science end users in Northern Australia must be empowered to participate in the audit. If necessary the regional NRM groups could facilitate such an audit.

Although the total science investments using public, community and industry money is extensive there are still major gaps with the largest being a long term dedicated monitoring and evaluation program. Without a long term commitment to this critical component of natural resource science the ability to identify the values, identify and mitigate risks, or to determine the public benefit of investments remains unreachable. The greatest risks are the costs of remediation to future generations and the environment for mistakes

made today. The most cost effective manner in which a long term program is to commit investment into key indicators of natural resource health and trend and integrate the Wentworth Groups Environmental Accounts system. The Environmental Accounts are currently being trialled successfully by NRM groups as a tool that can accommodate data collected by individual primary producers, Indigenous Rangers to science organisations. "The unique feature of the Accounting for Nature model is that it uses science to create a common (non-monetary) currency which can be used to create local, regional, state and national asset condition accounts".

2.1.2 We recommend that investment be dedicated to a long term monitoring and evaluation program of key indicators of baseline resource health and trend and furthermore that the Environmental Accounts system for integrating and comparison of all other science and R&D information be utilised as a total local to national representation of investment priorities and outcome realisation.

Science, research and development is only effective when the results are implemented to create positive change or avoid risk. The extension of information needs to be focussed, effective and delivered in a manner consistent with the culture and 'language' of the end user. In order to ensure the public investment in science is effective extension needs to be agreed and 'owned' by end users through multiple fit for purpose services from industry bodies, NRM bodies or qualified consultancies.

2.1.3 We recommend that investment be allocated to extension and education activities to ensure application of the science investment which will inevitably improve sustainability of growth opportunities in Northern Australia.

Traditional Owners have rights and responsibilities for management of land and resources across northern Australia

Traditional owner knowledge is rapidly being lost as our elders age and pass. This knowledge is an asset both for natural resource management learnings but also as an integral and important part of Australia itself. Many Traditional Owner groups have successfully implemented grant funds to capture and safe guard this information, yet many others are incomplete or still to begin. Knowledge of sites and story places are also a key component of compliance under the Queensland Cultural Heritage Act especially relevant for new developments. For Indigenous groups who wish to engage in cultural tourism the capture, storage and presentation of this knowledge also offers the opportunity to generate wealth within country. The capture and storage of Traditional Owner sites, stories, knowledge and language is a science and needs to be seen and invested in as such. Additionally the application of this knowledge is also necessary when negotiating ILUA's as an integral part of land tenure and development proposals.

2.1.4 We recommend the increased support through funding to Traditional Owner groups to capture, store and present cultural information as appropriate to the custom and decisions of that same Traditional Owner group.

New wealth opportunities are purposely designed and supported so that they are sustainable and long lasting and a true legacy for the region.

The Northeast areas of the Mossman to Ingham region and associated Tablelands have developed intensive agricultural, tourism, and conservation land uses. One of the biggest issues raised by agriculturalists and fishermen is the rising cost of production and the inability to control farm gate prices. Many existing land/coastal uses are struggling economically even though the natural resources are rich and able to produce more agri-product. Thus, as the demand for agricultural product increases the existing developed lands are capable of increasing production so long as profit margins improve. There are a variety of market, infrastructure and regulations that increase the cost of production. In order to remain viable and retain capacity for future agri-food demand, market and regulations could be reviewed and streamlined by governments. The risk of the current 'price squeeze' on primary production is that high value agricultural

resources are converted to a peri-urban or hobby use which often degrades the resource, has less regulation to maintain resource health, and reduces the overall local and or regional productivity.

Some land use planning has been undertaken in the Cape York and Wet Tropics regions however no land use planning has been undertaken in the gulf regions. A critical component to all planning is the proper and effective participation of the people who live in the landscapes within the plan area. A comprehensive program to identify current and best future land use potential for northern Australia incorporating the social and economic elements would enable more efficient decision making and development directions as well as reduce conflicts. NRM planning processes are changing from an asset mentality to a systems thinking approach which recognises the importance of linkages, causes and catalytic relationships.

2.1.5 We recommend urgent land use planning at appropriate scale and with full participation of community to identify current and best future land uses, including protection of high value natural assets.

The quantitative valuation of ecosystem services must be a strong underpinning decision making tool. Northern Australia is facing intense development interests yet we lack essential knowledge for decision making and understanding the costs, benefits, and risks of trade-offs if new developments are approved. The existing tools and knowledge that are available are inadequately used. The economic valuation of ecosystem services provides critical input into strategic assessment at the landscape/bioregional scale, enables public debate about the net benefits, and informs policy and management design—thus providing an essential foundation for ecologically sustainable development. Additionally, it standardises the net benefits or losses of a changed land use allowing quantitative comparison.

As stated by the North Australia Land and Water Taskforce (2009)²: "...northern Australia is relatively undeveloped. We still have the opportunity to ensure that development ... takes place in a strategic framework that is ecologically, socially and economically sustainable.by drawing on good science and the knowledge and experience of local communities and stakeholders".

The economic value of ecosystem services is based on the total economic value approach, which includes the assessment of use and non-use values - see figure below. Direct use value involves commercial, subsistence, leisure, or other activities associated with a resource (e.g., agriculture and recreation). Indirect use values and option values are measured similarly. Stated preference techniques such as contingent valuation or choice modelling can be employed to estimate non-use values. Culturally appropriate techniques can be employed to elicit and acknowledge indigenous use and non-use values.

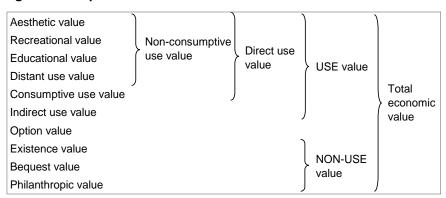


Figure 1: Components of total economic value

Source: Greiner et al. (2009); adopted from Hodge and Dunn (2001)

The proper economic valuation of ecosystem services would enable determination and transparency of values associated with resource use and ecosystem function in northern Australia; integrate social, cultural, economic and ecological parameters; and quantify trade-offs and distributionary effects of potential

developments, between different constituencies (local, regional, nation, international), and between generations.

2.1.6 We recommend that a quantitative valuation of ecosystem services should be utilised to support effective decision making. This tool will allow the decision maker to compare the 'whole' cost benefit of land use changes.

2.2 "Provide recommendations to: enhance trade and other investment links with the Asia-Pacific; establish a conducive regulatory, taxation and economic environment; address impediments to growth; and set conditions for private investment and innovation"

Preamble

Northern Australia is geographically well positioned to service food, technical and educational demands from the Asia –Pacific. Northern Australia being tropical is able to diversify existing crops to better suit the culinary preferences of the Asian Pacific. Due to existing wage and environmental standards the Australian product is more expensive to produce however this can be counter balanced with the quality and the lack of contamination of the Australian product.

To date the tyranny of distance to southern domestic markets and export distribution centres has hindered profitability and overall sustainability of many existing natural resource based industries in the Northern and Northwest regions of Queensland. If future trade opportunities to the Asia-Pacific region arise the establishment of markets and export distribution centres within Northern Australia is paramount for efficiency.

The potential for trade and new partnerships is well recognised as are the risks. With growth comes change and if change is rushed and un-strategic, or undertaken for short term benefits only, than risk and expense to future generations and the environment is amplified. Largely the opportunity to improve or sustain wellbeing and livelihoods in Far Northern Queensland is supported but not at the expense of future generations or the environment. The regulatory environment is a significant issue for Northern Queensland largely due to the lack of regionally relevant life experience within government and a lack of genuine participation in legislative processes that capture the landscape, industry, social and cultural nuances of the northern and remote regions. Thus much regulation has reasonable intent, but often Nation or State wide regulations are nonsensical outside of the urban and southern environs and on many occasions result in unreasonable costs and obstacle to innovation, management, or development.

New wealth opportunities are purposely designed and supported so that they are sustainable and long lasting and a true legacy for the region. There is potential for existing and new crops suited to climates in the Far North to increase in export demand and trade value. Crops which are major consumptive crops in China, SE Asia and Pacific islands that may become in greater demand include sweet potato, yam bean, yam, taro, cassava, papaya, mangos, avocadoes, lychee, rambutan, longans, tamarind (Asian drinks), pataya (dragon fruit), Bananas, Coffee, Tea, bamboo shoot and Australian dry land rice.

To ensure that decisions on the implementation of new crops is strategic and risks are minimised, a new industry development program could be established in Northern Australia specific for the emerging tropical product opportunities assisting with demand recognition, product feasibility and trade connections. This should not be just agriculture based but inclusive of education (boarding schools etc.), tourism, and service industries. Regular trade shows in northern Australia inviting the small to large Asian-Pacific investors may also help build niche markets to substantial market opportunities and improve viability of existing if not new developments. A northern Australia development bond could be a financial instrument for consideration.

There are risks in changing land uses or crop types particularly if an agricultural area moves from a 'rain fed' crop such as sugar cane on the northern coast to an irrigated crop. Coastal water reserves are already in conflict between agricultural land uses and urban water needs and environmental flows. Northern Queensland must also design and manage any new crops or developments in the context of cyclones and floods. This is particularly problematic when the main asset of primary production, being the herd or the crop, is largely uninsurable. Natural disasters are a fact in the northern Australian landscape just as they are in southern Australia. The Natural Disaster Response and Recovery Arrangements does not have adequate steps in place for full and proper agricultural and environmental recovery. Thus under current arrangements the risk exposure of agricultural developments and the insurance costs of all other developments are unreasonably excessive.

For Australian product to remain competitive for export, given the high production standards and costs in Australia, it must maintain its recognised high quality and safety assurances. Biosecurity and quarantine laws play a significant role in this both by limiting imports that carry undesirable or threatening biological material and by eradicating diseases in Australia that prevent trade, e.g. Blue tongue disease limiting live export of cattle to China.

2.2.1 We recommend that biosecurity and quarantine investments be maintained or increased if new developments, new crops, and markets emerge in Northern Australia.

2.3 - "Identify the critical economic and social infrastructure needed to support the long term growth of the region, and ways to support planning and investment in that infrastructure"

Preamble:

Much of Far Northern Queensland is regional and remote laced by dispersed populations and small town centres. These demographics pose many challenges in the provision of economic and social infrastructure especially if systems are 'population' driven rather than outcome driven. For example the ratio of funding for many aged care service programs is on a sliding scale based the total 'population' of the town or city regardless of median age. This means a town such as Ingham, which has Queensland's highest median age demographic in Australia, is highly disadvantaged with less funding available per aged person than all other areas of Queensland. Another example is the licence fees that pubs must pay in order to operate. Queensland's smallest pubs are located in the northwest region of Queensland, some with standing room for only one or two patrons, and yet they are liable for the same licence fees as a Brisbane city pub. These fees are not reflective of population serviced or quantity of alcohol consumed which would be a more equitable solution. It is scenarios such as these that encourage the call for a full and comprehensive review of existing legislation, regulations and programs administered by government to remove the inequity and perversities for regional and remote communities.

The communities of Far Northern Queensland have a high proportion of Indigenous peoples and the Cape York region has Queensland's highest proportion of Aboriginal and Torres Strait Islander residents making up approximately 51.3% of the population. Some 60% of land in Cape York is inalienable freehold which is essentially still limits opportunities for the use of those lands by Indigenous people for economic activity either directly or indirectly by the arduous bureaucracy to gain approvals. Most of the Indigenous communities in Cape York are described as being within the most disadvantaged quintile. A very concerning statistic, which gives indication of the desperate need to change the economic and social status of some communities in Cape York, is the rate for avoidable deaths in Cape York (426 per 100,000 persons) being significantly higher than the rate for Queensland (177 per 100,000 persons). Creating resilient and sustainable communities in remote locations means that they need to access development to pay for their infrastructure. This can only occur if there is suitable land for development. While increased economic opportunity is desired by most Indigenous communities, the right for self determination of what development, and where, is one of the most important principles.

Communication via internet has substantially reduced much of the 'tyranny of distance' for regional and remote centres, however these communities also have some of the greatest needs for access to new technologies in order to maintain a level of competitiveness. The regional and remote communities of Far Northern Queensland have higher demand per capita for improved internet and mobile phone infrastructure in order to conduct basic commerce and access basic social services. Improvement in communications is catalytic in that it will substantially shift the attractiveness of living and working and building the future of northern Australia.

Planning to support investments in economic and social infrastructure must analyse firstly the potential areas of growth. Given that growth appears to be strongly linked to the natural resource capacity of Northern and Northwest Queensland it is paramount that this be the foundation of all planning, coupled with existing social and cultural characteristics such as 'communities of interest', centres of trade, centres of service etc.

Population growth will create both improved access to economic and social infrastructure for existing residents and new problems. The public must be effectively engaged in planning for future growth so that the necessary transitions can be made with minimal negative impacts. Effective public participation does not mean 'getting the public on side'; rather, it means full, co-operative involvement in the actual process of making decisions – and it must be seen to be such.'

Governance for North Australia reflects its unique geography, communities and opportunities

Northern Australia is under-represented in current mainstream decision making arrangements, thus any decisions made regarding Northern Australia needs to strongly integrate with the huge wealth of knowledge in local communities and landowners to reduce risks and maximise practical achievable opportunities. Governance practice, public investment, policy and innovation that embrace local communities in decisions with government are essential for practical and sustainable development investment. Building the northern Australian and tropical industries life experience within government will help develop a 'fit for purpose' approach rather than blanket nation or state wide approaches – the north is different.

The NRM groups have established effective engagement strategies over the decades of working in partnership with the local public and industries. Identifying where demand exists for services, regulation, assistance and then ensuring practical delivery against demand for the greatest ownership, uptake and outcome results has proven highly successful. Effective participation can occur at many levels (see figure below)³, however NRM processes encourage approaches which ensure collaboration and empowerment of local communities.

IAP2 PUBLIC PARTICIPATION SPECTRUM

INCREASING LEVEL OF PUBLIC IMPACT				
INFORM	CONSULT	INVOLVE	COLLABORATE	EMPOWER
Public Participation Goal:	Public Participation Goal:	Public Participation Goal:	Public Participation Goal:	Public Participation Goal:
To provide the public with balanced and objective information to assist them in understanding the problems, alternatives and/or solutions.	To obtain public feedback on analysis, alternatives and/or decisions.	To work directly with the public throughout the process to ensure that public concerns and aspirations are consistently understood and considered.	To partner with the public in each aspect of the decision, including the development of alternatives and the identification of the preferred solution.	To place final decision-making in the hands of the public.
Promise to the Public:	Promise to the Public:	Promise to the Public:	Promise to the Public:	Promise to the Public:
We will keep you informed.	We will keep you informed, listen to and acknowledge concerns and provide feedback on how public input influenced the decision.	We will work with you to ensure that your concerns and aspirations are directly reflected in the alternatives developed and provide feedback on how public input influenced the decision.	We will look to you for direct advice and innovation in formulating solutions and incorporate your advice and recommendations into the decisions to the maximum extent possible.	We will implement what you decide.
Example Tools:	Example Tools:	Example Tools:	Example Tools:	Example Tools:
fact sheets web sites open houses.	public comment focus groups surveys public meetings.	workshops deliberate polling.	citizen advisory committees consensus-building participatory decision-making.	citizen juries ballots delegated decision

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The community and local industry is best placed to drive decisions which will ultimately deliver the regional outcomes identified and desired by the wider Australian community. This is largely due to the community, and more specifically land and sea managers, being ultimately responsible for managing existing practices and or implementing new developments. Additionally the more resource managers who are engaged in decisions the greater the total investment generated to deliver what land managers and the rest of the community desire for their regions as well as having less costly conflicts.

Decisions about development of Northern Australia should be based on the best available knowledge, incorporating science, traditional and local knowledge. Existing studies and reports such as The Land and Water Taskforce report (Sustainable Development in Northern Australia, A report to Government from the Northern Australia Land and Water Taskforce, Department of Infrastructure, Transport, Regional Development and Local Government, 2009) and the associated CSIRO science review (Northern Australia Land and Water Science Review 2009 Chapter Summaries Published by: Department of Infrastructure, Transport, Regional Development and Local Government) should be fully considered when assessing the potential for northern development across sectors and the issues, opportunities and constraints. Where there are gaps or deficiencies in knowledge or analysis these should be explicitly identified and addressed in the decision-making process.

A core role of regional Natural Resource Management bodies is to work with all stakeholders to develop a regional NRM Plan that can play a major role in ensuring that future development is sustainable and meets community needs and aspirations. NRM planning is a key process for all levels of Government and the diverse range of stakeholders to identify and meet 'humanistic' objectives of community well-being, economic development, biodiversity protection and the sustainable use of resources at the regional scale. (Note: In this context, the term 'sustainable' has the same meaning given to it in the World Commission on Environment and Development's report 'Our Common Future' in 1987 (also known as the Brundtland Report.1). The products of successful NRM planning are:

- the ability to link, align and integrate regional NRM priorities and aspirations into other planning mechanisms which deliver desired community, regional, state and national NRM and other sustainable development outcomes;
- engaged resource managers and local communities having primary accountability for managing the landscapes, effectively having their aspirations validated and accurately reflected in the plan;
- community-based outcomes that provides a 'fair' process and opportunities to contribute, that shares information and knowledge and builds constructive relationships and capacity for change and improvement. A better informed and equitable decision-making process allows community-based NRM to achieve landscape scale environmental and social justice outcomes;
- the role of NRM stakeholders is to be established and validated resulting in improved coordination and reduced duplication. This is achieved at multiple scales (e.g. geographic, jurisdictional, and regional); better integration of credible (science), legitimate (community) and salient (timely) knowledge for effective actions. Central to this is the acknowledgment of both scientific and other forms of knowledge; and
- increased influence over a wider range of climate adaptation planning (e.g. regional plan, local government plans) and emergency preparedness and response processes.

2.3.1 We recommend that government ensure collaboration and empowerment of local people in decisions that affect the livelihoods of those same local people.

2.3.2 We recommend that the regionally based NRM Plans are a critical tool for assisting with land management decisions which reflect community values.

Traditional Owners have rights and responsibilities for management of land and resources across northern Australia.

Traditional Owners in particular have a long association with their ancestral lands. Many Traditional Owners base decisions and actions on a mixture of traditional culture and modern culture and this varies between regions. Thus any land use changes, service implementation must consider the rights and appropriate decision making principles for our first Australians.

Land tenure particularly in the Cape York region is a complex and limiting factor for many Traditional Owners to achieve desired livelihood goals. In most cases although the Traditional Owners are recognised under the Native Title Act and provided 'Indigenous Freehold' under the Queensland State Land Act, the Traditional Owners have no real authority over these lands. In many cases people wish to be able to engage in appropriate enterprise in order to have the same wealth equity as other Australians but are limited by current complex regulations.

2.3.3 We recommend that the United Nations Declaration of Rights of Indigenous People be adopted.

Part 3 - Conclusions

In recognising growth we strongly advise that the governance and decision making process used by government be fit for purpose at appropriate scale, that foundational science investments be made to benchmark and monitor the health of natural resources, and that cumulative impact and long term legacy consequences be implicit in all policy and program initiatives. The quadruple bottom line being economic, environmental, social and cultural dynamics need careful consideration. These key principles will achieve the desired outcome in the most efficient and effective manner with the least amount of conflict and risk.

We suggest that a healthy natural and cultural environment will be valuable to future communities and that options to improve the 'conservation economy' from stop-start public grant funds to stable lucrative income streams needs continued support.

Northern Queensland is at the doorway to the Asian markets and able to diversify land uses to produce tropical crops suited to the preferred diets of the Asia-Pacific population. A major component of the Northern Australia White Paper initiative is to raise the awareness of Northern Queensland as a major resource region, not only for coal and minerals, but also for agriculture, fisheries, aquaculture, forestry, tourism, education and skills. In order to make the most of our position to these emerging markets we need to reduce existing barriers and implement enabling strategies and innovations.

The costs of production hinder current competitiveness of existing industries in international markets. Therefore increased production of existing resource industries, or new greenfield developments, are likely to grow in a steady upward trend as demand and price is driven up for natural resource based commodities. This allows the Australian Government to act in a strategic manner and lay solid foundations so that future generations will gain substantial wealth from northern Australia's natural resources.

We call on the Australian Government to act now and initiate policy, programs and governance that deliver participatory practical decision making tools, worlds best science and technology, and support to build the long term sustainability of northern Australia, so that this region is well positioned to provide a balance of natural and manmade wealth for all of Australia's next generation..

Part 4 - Summary of recommendations

- 2.1.1 We recommend that all science, research and development funds be audited to ascertain the uptake, science needs, gaps and delivery mechanisms in terms of effectiveness for applied implementation for existing and emerging natural resource management and developments. Science end users in Northern Australia must be empowered to participate in the audit. If necessary the regional NRM groups could facilitate such an audit.
- 2.1.2 We recommend that investment be dedicated to a long term monitoring and evaluation program of key indicators of baseline resource health and trend and furthermore that the Environmental Accounts system for integrating and comparison of all other science and R&D information be utilised as a total local to national representation of investment priorities and outcome realisation.
- 2.1.3 We recommend that investment be allocated to extension and education activities to ensure application of the science investment which will inevitably improve sustainability of growth opportunities in Northern Australia.
- 2.1.4 We recommend the continued support through funding to Traditional Owner groups to capture, store and present cultural information as appropriate to the custom and decisions of that same Traditional Owner group.
- 2.1.5 We recommend urgent land use planning at appropriate scale and with full participation of community to identify current and best future land uses, including protection of high value natural assets.
- 2.1.6 We recommend that a quantitative valuation of ecosystem services should be utilised to support effective decision making. This tool will allow the decision maker to compare the 'whole' cost benefit of land use changes.
- 2.2.1 We recommend that biosecurity and quarantine investments be maintained or increased if new developments, new crops, and markets emerge in Northern Australia.
- 2.3.1 We recommend that Government ensures collaboration and empowerment of local people in decisions that affect the livelihoods of those same local people.
- 2.3.2 We recommend that the regionally based NRM Plans are a critical tool for assisting with land management decisions which reflect community values.
- 2.3.3 We recommend that the United Nations Declaration of Rights of Indigenous People be adopted.

References:

- 1. Wentworth Group of Concerned Scientists, Environmental Accounts. http://wentworthgroup.org/programs/environmental-accounts/
- 2. North Australia Land and Water Taskforce (2009). http://www.regional.gov.au/regional/ona/nalwt.aspx
- 3. International Association for Public Participation methodology for increasing the level of community input. http://www.iap2.org/