AFANT's submission on the Discussion Draft Northern Territory Balanced Environment Strategy

Representing recreational fishing in the NT and ensuring the quality of our sport

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AFANT's Submission

The Amateur Fishermen's Association of the NT Inc (AFANT) welcomes the opportunity to comment on the Discussion Draft Northern Territory Balanced Environment Strategy.

AFANT was formed in 1980 by a group of keen anglers who wanted a body to represent and advocate their interests to the government of the day. Incorporated in 1980 the organisation is recognised by both the NT and Commonwealth Governments as the peak body representing recreational fishing interests in the Northern Territory.

Recreational fishing is an important social and cultural component of the Northern Territory lifestyle as well as being a major tourism drawcard and a significant contributor to the economy. Recreational fishing surveys and fishing tour operator data indicates that more than 35, 000 Territory residents and 54, 000 visitors participated in recreational fishing in the Territory in 2010. And it is estimated that the current figures for 2015 far exceed these with 43,000 tourists from 62 different countries registering for the recent NT Tourism 'Million Dollar Barra' promotion. Recreational fishing was estimated to contribute at least $100 million directly to the Northern Territory economy during 2014.

As identified in the NT Governments Recreational Fishing Development Plan (2012-2022), seventy per cent of recreational fishing in the Territory occurs in its regional areas, where it is often the primary economic and development driver. King Ash Bay on the McArthur River, the Daly River, the Roper River and Dundee Beach are examples of communities where recreational fishing underpins development. Fishing tourism also provides impetus for regional development on Aboriginal land, such as the Tiwi Islands, Arnhem Land and Groote Eylandt.

AFANT believes that our contribution to the Discussion Draft Northern Territory Balanced Environment Strategy can best be implemented by addressing the various goals for a balanced environment.

Healthy Water, Catchments and Waterways

AFANT is strongly of the view that Northern Australia must learn from the mistakes of the more populated southern areas of Australia. AFANT believes the NT government is risking our water resources and the health of our rivers. The government has frequently ignored water planning processes established under the National Water Initiative and failed to make its decisions in accordance with the best practice water management, the best available science or listen to community aspirations and concerns.

Fair, transparent and sustainable water policies are vital to avoid future conflict over water extraction and to prevent long lasting detrimental impacts to the fisheries and ecosystems of our iconic top end rivers. Currently there are significant knowledge gaps in water science which need to be addressed especially over issues such as aquifer recharge, groundwater flows, appropriate environmental flows for top end ecosystems and the use of the precautionary principle when science is lacking.

Many of the spectacular recreational fisheries such as the Daly (Oolloo aquifer) and Roper River (Tindal-Mataranka aquifers) are totally reliant on groundwater flows, both during the wet season and the dry to ensure the health and adequate stock recruitment of numerous fisheries. AFANT believes that these fisheries and the economic, social and cultural benefits they bring to the Northern Territory should not be risked.

Develop, implement and review strategic plans to manage water allocation; improve sewage management; and minimise threats to aquatic and marine biodiversity health.

While AFANT agrees with the concept of sustainable development of the Northern Territories water resources to enhance economic growth we believe it should firstly be followed by the precautionary approach especially as it applies to environmental flows for our iconic top end rivers. Frequently this government has over allocated water resources for the benefit of pastoral and agricultural sectors. Currently the NT government is risking our water resources and the health of our rivers by ignoring water planning processes established under the National Water Initiative and failing to make its decisions in accordance with the best available science.

AFANT has real and serious concerns regarding the Northern Territory Governments reckless approach to water management and water licence allocations especially as they apply to the Daly (Oolloo) and Katherine (Tindal-Mataranka) aquifers. Since 2012 when the CLP party came to power the NT Government has discarded decades of gains in improving public confidence and participation in scientific based water planning and has abandoned all attempts to the nationally agreed best practice water allocation practices and management.

The government needs to properly review all water licenses within the Daly (Oolloo) and Katherine (Tindal-Mataranka) aquifers with adequate community consultation, follow the draft water allocation plans for these aquifers, re-establish the appropriate Water Advisory Committees and include water use by mining and petroleum companies under the Water Act.

Work with the National Centre for Groundwater Research and Training to investigate aquifer recharges as potential water storage solution

At present within the Northern Territory the Government budget is severely limited and groundwater monitoring and assessment programs are constrained by lack of resources. The IAH (NT) Submission to the Northern Territory Government's Hydraulic Fracturing Inquiry iii (20014) identified that the Northern Territory's has a social and economic dependency on groundwater and that the groundwater environment of the NT is poorly understood.

The government has acknowledged the large scientific knowledge gaps in water resource management especially in the mapping of Northern Territory groundwater systems both static and flowing. While much research has been conducted in southern Australia this can be very rarely applied to the Northern Territory environment due to the difference in rainfall patterns and other climatic factors. This significant knowledge gap raises the potential for poor management decisions to be made. While the precautionary principle is often quoted to address such knowledge gaps this is rarely enacted, rather decisions are made and justified in the name of economic development and backed up by questionable science.

Deliver programs to reduce costs for business, industry and the community through the adoption of efficient, innovative and proven water use and waste management technologies

Securing resilient water supplies and sanitation first starts with using the water resources we currently have available appropriately and it is disappointing that this has not been addressed adequately by government.

It has been acknowledge by government that residents in the Northern Territory are among the highest water users in Australia. While other states and territories have actively campaigned to reduce water use and create more water efficient residents, households, businesses and government departments within the Darwin region have increased their water use. AFANT believes that in ensuring resilient water supplies the first step should be efficiently and productively ensuring that the water resources we currently have are used wisely before looking at exploring new sources of water. Community education to be 'water wise', water audits for businesses and households as well as rebates for water saving devices such as showerheads, aerator taps, rainwater tanks and smart water meters can go a long way towards reducing water use. In addition water supplies such as greywater can be used for in lieu of potable water in many commercial and household uses through Reuse and Reticulation. Studies have shown that improving water efficiency through Reuse and Reticulation alone can reduce water use by up to 15%.

Monitor and publish public reports on the health of our waterways; potable water resources and the impacts of resource and other industries on our water resources.

AFANT agrees that a sound knowledge of the current and future state of water resources, water dependent ecosystems, and our precious rivers and aquifers is vital. Expert opinions from independent bodies such as universities and commonwealth agencies such as The Bureau of Meteorology and the CSIRO is the best source of knowledge for the monitoring of water resources as these sources are unlikely to be swayed to suit political agendas. Frequent and exhaustive independent monitoring will enable community confidence that proper water monitoring programs are being conducted.

With rising sea levels due to global warming saltwater intrusion is becoming an increasing risk factor for coastal rivers, estuaries and wetlands. Currently the Mary River system is an excellent example of the negative effects of saltwater intrusion with significant damage to this ecosystem occurring and barrages built to prevent this occurring frequently failing to do so during extremely high tides.

With such large competing demands for water resources AFANT believes that the Mining and Petroleum industries need to be effectively regulated, brought under the Water Act and required to apply for extraction licences similar to other industries. These industries have the potential to use large volumes of water which could dramatically the flows in river and underground aquifers leading to a decrease in water needed to sustain adequate environmental flows. The government's current mantra of cutting red tape to foster economic development should not result in a lessening of environmental protection especially when it applies to the mining and petroleum industry, hydraulic fracturing and our precious water resources.

The main barrier to investment in food and fibre industries in the Top End is harsh climate, economics, labour availability and the large cost and distance to markets. The Northern Territory has a widely variating and inconsistent rainfall in an extremely harsh climate. This fact is recognised in most reports on potential for irrigation development in northern Australia and is the major limiting factor for irrigation development in the Top End.

The following key findings from the CSIRO Northern Australia Sustainable Yields Project should be sufficient to debunk the northern food bowl myth.

Key finding 5
Most rain, and runoff, occurs near the coast, not in the rivers' headwaters
Key finding 6
There are significant constraints on the viability of surface water storages

While AFANT supports research and innovation as it applies to appropriate water use the reality is that intensive, water-thirsty agriculture, such as Sandalwood Plantations, are being established in areas through the Northern Territory unsuited to

such farming practices because they simply don't have enough naturally occurring rainfall. Increased irrigation, with its associated expensive storage and distribution network, is not the answer and removing large quantities of water from these aquifers threatens the ecosystems and fisheries of our iconic top end rivers.

AFANT cannot support the development of large off stream storage facilities (Dams) and the irrigation industry in northern Australia based on the known impacts and the real risk of this having a major impact on the quality of the recreational fishing in the NT. Large dam construction and water extraction have a range of impacts on tropical river systems and aquifers including direct impacts on fisheries production and recruitment.

As identified in the Sustainable Yield Project for Northern Australia (CSIRO) there is limited opportunity for dams in the Northern Territory without significant impact on existing industries like recreational and commercial fishing.
Modified or reduced flow regimes can reduce the productivity of the river system; reduce available food within the system and impact on recruitment of a range of species. Localised depletions or extinctions have been caused by dam construction. "….some fisheries in northern Australia are sensitive to changes in water quality and river flow, and to negative impacts from habitat modification, so damming, water abstraction, weir and road construction and pollution all have a potential to degrade northern Australian fisheries" CSIRO Northern Australia Land and Water Science Review full report.

Dams are a barrier to migratory species. A large number of fish in tropical northern Australia are migratory species. Many require marine environments to spawn and live a large portion of their lives in freshwater rivers and billabongs. Any barrier that limits this migration will reduce the available habitat, reproductive capabilities and fish populations within the system. New research on cherabin shows that they also would be severely impacted from any structure that blocks the wet season flows. Research on barramundi, mud crabs and banana prawns show that all these important species would be significantly impacted by increased water extraction and dam construction.

The most practical solution for agriculture in the environment of the top end is the opposite to the current practice of intensive irrigation and proposals to dam rivers. Instead of damming rivers, there should be greater emphasis on small, on-farm water storage using natural occurring rainfall, small environmentally sustainable extraction of rivers and aquifers and farming the land at its natural limits. The general community and stakeholders wants to protect our precious rivers and ecosystems and the agricultural industry needs to face up to the reality of having to limit its removal of a precious resource that is owned by all Territorians.

Manage the Northern territory's fish and aquatic resources and support the development of co-management frameworks and community stewardship.
It is incumbent on governments to ensure that we learn from past mistakes in off stream storage and irrigation development not just in southern Australia but in a number of areas in northern Australia like the Burdekin and Ord where real impacts have occurred to the rivers and fish populations downstream. AFANT would also like to acknowledge the evidence of fisheries collapse as a direct result of water extraction and dam construction. This is common overseas but also has a direct northern Australia example with the collapse of the banana prawn fishery due to failed recruitment from the Ord River in the Joseph Bonaparte Gulf. This type of major change to recruitment of key recreational species in areas of the Top End would be unacceptable to recreational fishers and the community in general.

Existing resource users will be impacted by any increased water extraction or dam development. Losses in commercial fishing, tourism businesses and other commercial entities can be compensated, but government cannot adequately address the loss of lifestyle, wellbeing and personal food harvest of the recreational sector.

Community consultation and stewardship in regards to water management and transparency has been non-existent under the current government. To date the NT government has effectively abandoned all attempts at fostering water stewardship within local communities. All relevant Water Advisory Committees have been effectively disbanded, for example the Howard East Water Advisory Committee last met in March 2012, with no further public notices, attempts at communication or

discussion of water resource policy with relevant stakeholders. The government has made all water resource decisions since 2012 without reference to these committees or any attempt at community stewardship.

AFANT believes that the appropriate Water Advisory Committees for each catchment must be re-established to ensure real and transparent community consultation in water management decisions. These Water Advisory Committees should also review all past water management decisions since 2012 that were made without community consultation as these past decisions have the ability to have a long lasting and detrimental effect on our water resources. The Daly River Management Committee, Howard East Water Advisory Committee and Tindal/ Mataranka (Katherine) Water Advisory Committee have all previously submitted draft Water Allocation Plans for their respective river and aquifer systems to the government in 2012. AFANT was involved in the discussions and crafting of these WAP plans, along with local communities, indigenous stakeholders and scientist's for several years and suggest rather than starting anew the government simply resurrect these WAP's.

Resilient Ecosystems

Implement the recommendations of the *Hydraulic Fracking Inquiry* and review of the *Northern Territory Environmental Assessment and Approvals Processes*

AFANT has serious concerns regarding the adequacy of environmental legislation, regulatory and policy framework for the Northern Territory. There have been numerous examples where the existing regulation penalties and enforcement is woefully inadequate to ensure that companies operate without major impacts on the environment. Some of this is due to the extremely isolated and remote nature of the NT and highlights why AFANT would have grave concerns with any watering down of environmental approvals, regulations or enforcement. Examples like polluting legacy mines, illegal land clearing, shortcuts on environmental protections and starting operations before formal approvals are given are just some of the recent examples where companies have been allowed to act in a manner that puts at risk the spectacular natural assets of the Territory. Any proposals to remove environmental protection, provisions or green tape will just make it more likely that significant environmental damage will occur.

The major recommendation of the Hawke Inquiry into Hydraulic Fracturing in the Northern Territory (2014) was that the environmental risks associated with hydraulic fracturing can be managed effectively subject to the creation of a robust regulatory regime. Unfortunately despite stringent regulations both within Australia and internationally there appear to be broad failure of regulatory regimes within the unconventional gas industry to prevent environmental damage. Indeed evidence presented to the South Australian Parliament Natural Resource Committee inquiry into Fracking (2015) by Antony Ingraffea, Professor of Engineering and Weiss Presidential Teaching Fellow, Cornell University suggests that even with the most stringent regulations the leakage of gas wells is unavoidable. Information provided by Prof. Ingraffea is that despite the state of Pennsylvania having very tough regulations; regulations that have twice been revised in the last five years "statistics provided to us by the Pennsylvania Department of Environmental Protection—that's the regulatory body in Pennsylvania—and their records show that shale gas wells were showing a leak rate of about 6.2 per cent in the first five years as compared to an overall failure rate in conventional wells of 1 per cent—one in 100 conventional wells and six in 100 shale gas wells. In some regions of the state where drilling occurred very, very quickly, where operators were totally inexperienced, the failure rate in the wells was almost 10 per cent—one in 10—within the first five years, leaking".

Due to the risk associated with contamination of ground and surface water by the unconventional gas industry AFANT cannot support the further development of coal seam gas and shale gas mining in the Northern Territory. Without a regulatory framework that guarantees no adverse environmental impacts and a strong and effective EPA we have real concerns that the drive to develop the unconventional gas industry in Northern Australia will come at a significant cost to the spectacular recreational fishing and natural environment that the Northern Territory is renowned for.

Develop, implement and review strategic biosecurity plans to protect the environment from negative impacts of pests and diseases

AFANT is strongly of the view that Northern Australia must learn from the mistakes of the more populated southern areas of Australia in regards to biosecurity and our waterways principally in regards to the introduction of invasive foreign pest species of fish, plants and reptiles.

The major threats to waterways across southern Australia in regards to biosecurity have by and large been as a result of the introduction of foreign aquarium plants, reptiles and fish to local waterways. Interstate examples include Mozambique Tilapia (*Oreochromis mossambicus*), Spotted Tilapia (*Tilapia mariae*), Carp (*Cyprinus carpio*), Pearl Cichlid (*Geophagus brasiliensis*) and Red-Eared Slider turtles (*Trachemys scripta*) just to name a few. While the Northern Territory has experience some outbreaks of foreign pest fish species, most notably that of Siamese Fighting Fish (*Betta splendens*) in Fogg Dam and on the Adelaide River floodplain to date we have been fortunate that no other serious instances have occurred apart from several minor and isolated incidents in the Darwin locality.

Numerous species of aquatic weeds also threaten aquatic habitats for native species and unfortunately these are not confined to southern Australia with the Northern Territory suffering from several species introduced as a result of the aquarium trade such as Cabomba (*Cabomba caroliniana*) and Salvinia (*Salvinia molesta*). These plants were deliberately introduced into Australia for their use in aquariums or fish ponds, but have since proven to be highly invasive. Salvinia has proved to be a major problem in the Northern Territory within Kakadu National Park clogging up billabongs and actively reducing the numbers and types of waterbirds using floodplain billabongs not to mention resulting in the closure of numerous billabongs to recreational fishing in the past.

With the long recognised negative impacts of the aquarium industry more proactive measures need to be undertaken to educate and penalise people, businesses or organisation that run the risk of introducing invasive foreign pest species to our top end waterways. While AFANT agrees that it is not possible to isolate the NT from every biosecurity risk we believe strong and proactive measures must be

undertaken. AFANT would like to see the government restrict the sale of non-native species to only individuals, businesses or organisation who follow an appropriate code of conduct and understand both their responsibilities and the risks of introducing invasive pest species into our native waterways.

AFANT believes that education should be at the forefront of any biosecurity strategy. The vast majority of invasive species introduced to waterways in Australia and the Northern Territory have been as a result of ignorant members of the public empting aquarium tanks or ponds containing fish, reptiles or aquatic plants into local waterways. While many aquarium wholesale businesses follow a code of conduct expressly to prevent such instances occurring the average consumer who purchases fish, reptiles or aquatic plants from a pet stores is exposed to little or no education regarding proper disposal of unwanted pets and content of aquarium tanks and ponds. AFANT is of the view that “prevention is better than cure” and believes that a comprehensive and strategic education program is needed to inform the general public at point of purchase of the ethical strategies than can be used to dispose of unwanted fish, reptiles and aquatic plants without risking the health of our top end waterways.

Proper education of the public and the aquarium industry, in both the wholesale and retail sectors, needs to be prioritised as one of the most effective tools in maintaining biosecurity and protecting out top end waterways.

Contemporary Management Practices

Facilitate greater industry capacity to avoid, minimise and mitigate negative environmental impacts at development sites.

AFANT understands that in almost all legislation that is geared towards environmental impacts the regulator has the burden of proof to prove that the nearby development had resulted in negative environmental impacts. AFANT believes that legislative controls should reverse the onus of proof so that it is up to the company which is controlling the development to prove that their activities were not the source of the environmental impact.

The concept of reversing the onus of proof is not new and is used across other areas of legislation to great effect. If the burden of proof is placed on the company under legislation to prove they didn't cause any contamination AFANT believes this will ensure companies conduct developments more cautiously, responsibly and with greater foresight into environmental protection.

Enforce compliance and industry requirements to reports results of environmental monitoring

AFANT believes that any reform around compliance and industry requirements to report results of environmental monitoring is meaningless until the NT EPA is a truly independent body with strengthened powers of prosecution and significant penalties for breaches of environmental legislation. The head of the NT EPA Dr William Freeland has himself described the current NT EPA as a 'toothless tiger' in the media. AFANT has for some time raised the appointment of an impartial EPA with funding and staff outside of any Northern Territory government department as our primary concern in the process of environmental reforms. AFANT's opinion is based on the history of environmental failures in the NT in both development and the conventional mining industry and the enduring negative environmental impacts of legacy mines in the NT landscape. Without a strong regulatory body there is little incentive for companies to abide by environmental compliance and industry requirements to reports results of environmental monitoring.

Liveable Cities and Towns

Champion the benefits of the environment to social wellbeing, in particular healthy landscapes and parks and include these into strategic planning of our cities and towns.

AFANT believes that sport and recreation activities for social wellbeing should be available for all Territorians. This should be regardless of age, sex and socio-economic status. Unfortunately there are limited opportunities for Territorians who suffer from disabilities and low socio-economic backgrounds to participate in recreational fishing as the majority of fishing is done from boats due to the environmental conditions and risk of crocodile attack while fishing from the shore. This is primarily due to the limited number of locations in the cities of Darwin and Palmerston and especially rural areas that offer facilities for land based fishing in

safe, easily accessible locations. For example in the City of Palmerston locations for disabled fishermen are limited to the Elizabeth River Jetty. This location is frequently crowded and due the extreme tidal range can be difficult to land fish when the tide is low and the jetty is a significant distance above the water line. AFANT would like the government to incorporate the strategic planning into our cities and towns of suitable fishing platforms for disabled and low socio-economic citizens, similarly to the easily accessible Peter Mahony platform located in Rapid Creek, Darwin. We believe easily accessible fishing infrastructure such as this would positively increase the availability of fishing as a recreational activity for all Territorians and through working with organisations such as AFANT and local fishing clubs all proposed infrastructure projects could be sited to ensure they provide maximum fishing opportunities for anglers.

Public parks with suitable water bodies are ideally safe and easily accessible locations for fishing. AFANT would like a dedicated government program of stocking residential lakes located in public parklands with Barramundi fingerlings. There was successful limited stocking of excess Barramundi fingerlings from aquaculture programs into the residential lakes of Durack in Palmerston in 2012, these fish have since survived and thrived. AFANT believes such a program would improve the lifestyle and recreational opportunities of residents as well as providing a safe and easily accessible opportunity for children and especially low socio-economic families to go fishing.

Conclusion

AFANT has a strong commitment to ensuring the protection of the quality of the fishing experience available in the NT which is inextricably linked to the health and quality of the NT waterways, landscapes and coastal areas. We have real concerns that the drive to develop Northern Australia will come at a significant cost to the spectacular recreational fishing that the Territory is renowned for. We believe that a balanced and considered approach to development, recognising the challenges of operating in the extremes of the NT climate and a robust approval and assessment framework which is sufficient to protect the environment and interests like the recreational fishing sector, is essential to ensure community ownership. Recreational fishing and tourism in the Northern Territory is a major contributor to the economy and lifestyle of the Northern Territory and must be nurtured and enhanced by the Government for current and future generations

We would welcome the opportunity for greater engagement and consideration of AFANT's views and ideas in regards to the Discussion Draft Northern Territory Balanced Environment Strategy.

Yours sincerely

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