

AFANT



AFANT Green paper submission



Recreational fishing should not be
sacrificed in drive to develop the North

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

PO Box 40694 Casuarina NT 0811

Phone: 08 8945 6455 Fax: 08 8945 6055 Email: craig@afant.com.au

www.afant.com.au

AFANT submission to the green paper

Section A: Profile of Northern Australia

As the green paper states, past efforts to unlock the north have often been criticised for not considering the views and aspirations of those already living and working in northern Australia. One of the great attractions of the NT is the lifestyle and a large part of this is the spectacular recreational fishing and environment.

Any development of the north must understand that any activity that threatens this lifestyle attraction will impact on the quality of life and the very reason people are motivated to come to Northern Australia. This will then impact on businesses ability to attract workers and investment.

AFANT is strongly of the view that the lifestyle, landscapes and environment of the north needs greater recognition, protection and consideration in the drive to develop the region.

If the government is genuine with its desire to promote and foster sustainable development in Northern Australia it has an obligation to do the required work to ensure that this can occur without impacting the environment and lifestyle of the Top End. As most of the Northern Territory has minimal development and disturbance, it also has significant gaps in the scientific knowledge necessary to make informed decisions on proposals and their impacts.

The recreational fishing sector is an important economic contributor to the Territory's economy value. The 2008-09 NT rec fishing survey established a direct expenditure by non-indigenous Territory residents at \$51 million. The survey also found that visitors to the NT contributed 77,000 fisher days (about half total effort) and this visitor effort was experiencing significant growth.

The expenditure on guided fishing tourism was established at \$22 million and the combined value of recreational fishing is over \$100 million per year.

This expenditure does not include the value, expenditure and replacement cost of the recreational boating fleet which in the NT is predominantly used for recreational fishing.

Section B: Opportunities for Northern Australia

Tourism growth

One of the largest growth industries in the Territory is recreational fishing tourism and over the last decade some popular areas like the Daly River and King Ash Bay have had growth in the order of 4 to 10 times the visiting effort from the recreational fishing visitor. AFANT would argue that protecting an industry that is already growing and adding significant growth and investment to the NT economy, without major landscape change or environmental damage, should be the number one priority.

A number of the other proposals outlined in the 'Develop the North' agenda like mining oil and gas, irrigation and port developments are directly contrary to the existing tourism industry and potentially damaging to this important tourism growth industry.

As identified in the green paper, tourism plays an important role in the Northern Territory's economy and employment with five per cent of the total income and one in eight Territorians employed in the sector. The attractions of the NT as well as the reason the NT is out performing other areas, is directly linked to the natural assets, lifestyle and activities of the region. Recreational fishing plays an incredibly important part in the Top End tourism market and is one of the few real growth areas in tourism in the Top End.

The develop the north agenda should be directed at protecting the spectacular natural assets and lifestyle of Northern Australia and ensuring that appropriate infrastructure and access is available to foster this industry.

Spreading the recreational fishing access and effort

While the NT has an enormous coastline and seemingly endless areas to fish, the recreational fishing opportunities are limited by restricted access and the remote nature of the Territory. Access is restricted by wet season rainfall and flooding, by road and ramp closures or conditions as well as pastoral and Aboriginal land/water restrictions.

The increasing population in areas like Darwin and high recreational fishing participation of the NT means that increased pressure is directed at areas with access close to Darwin. As the population has increased, the pressure on a small number of access points needs to be addressed and will incrementally become a real management problem as the NT population grows.

More access points and alternative fishing areas and opportunities will be required and must be a high priority for government. AFANT believes that a number of opportunities exist for infrastructure improvements and seasonal access like roads, boat ramps and other boating infrastructure to spread the fishing effort.

Other opportunities like improved access to national parks, pastoral leases and Aboriginal lands that contain quality waterways must be factored into spreading the effort.

AFANT has identified a number of opportunities that exist that would shift effort from existing high use areas. These will need land owner support and government direction and support.

- Pastoral lands (quality billabongs and remote rivers)
- Aboriginal land and waters (high quality fishing opportunities)
- Defence land (billabongs and rivers)
- Kakadu NP freshwater (areas currently closed to fishing including billabongs and rivers)
- NT parks (a number of quality freshwater billabongs and rivers)

Some of these opportunities will require permit arrangements and management. AFANT is prepared to manage this on behalf of government and landowners/managers.

Infrastructure

It is essential that government invest in access for recreational fishing. AFANT has concerns with the push to develop multiple areas around the greater Darwin Harbour for port or heavy industrial activities. The quality of the recreational fishing in Darwin Harbour is well recognised and having a large and healthy harbour is an incredibly important asset for the lifestyle and liveability of the city. We understand that increased port capacity will be required in the future but we are strongly of the view that this activity should be contained to the areas of the harbour that are already developed.

Developing multiple or isolated port infrastructure on green field sites in the greater Darwin area will have a significant impact on the mangrove habitat, recreational fishing and the lifestyle values of the Darwin Harbour.

It is also essential that before Government promotes and encourages businesses to develop into areas; whether the area is mining, agriculture or other investments, that the scientific research and data is available and there is a detailed understanding of the likely environmental impacts. Government should also invest in the infrastructure required; particularly transport and communication, so that existing residents or users of the areas are not put at higher safety risk from the developments.

Learning from mistakes

AFANT is strongly of the view that Northern Australia must learn from the mistakes of the more populated southern areas of Australia. The major mistakes that have affected waterways across Australia have had a major impact on the environmental quality of the nation's waterways. In most of these areas restoration is required to repair the significant environmental degradation that has occurred through inappropriate or over development. The cost of this restoration amounts to billions of taxpayers' dollars on individual river systems just to return rivers back to some lower level of environmental health.

In the Territory there is a number of polluting legacy mines which have rehabilitation costs in the hundreds of millions of dollars. Protecting the environment from these types of developments before they become a problem is much cheaper than allowing [REDACTED] limited environment constraints resulting in government bearing the risk when the company declares bankruptcy and walks away from the mess. This seems to be too common an occurrence when regulators allow companies to cut corners.

AFANT is strongly of the view that it is best to protect the relatively natural and unspoilt areas of the NT and ensure that it is not over developed and that environmental protections and regulation are in place to protect from inappropriate development.

Section C: Barriers to development

Red-green tape

AFANT has 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.

Water

The northern food bowl

A lot of rain falls on northern Australia, but its arrival is restricted in time and uneven in its distribution. Where and when it occurs is generally impractical for water resource development and there are large variations in how much comes year to year. There is little or no rain for three to six months every year and potential evapotranspiration rates are very high. Runoff follows a similar pattern to rainfall. CSIRO (2009) Water in the Gulf of Carpentaria Drainage Division.

To dam or damn NT rivers

AFANT cannot support the large scale development of the irrigation industry in northern Australia based on the known impacts and the real risk of this development having a major impact on the quality of the recreational fishing in the NT.

We also are of the view that the continual push for the development of the northern food bowl is a flawed concept based on southern and east coast views and is based on an ideological position not on reality. It is also not based on a clear understanding of the economics, climate, water availability or the likely environmental impact of this type of development in the Top End.

We would encourage the government to rethink its “100 dam plan” *Peter Stone & Cuan Petheram CSIRO, June 2014* as this will generate significant community opposition and concern in Northern Australia.

It is essential that any development in Northern Australia recognises the limitations of the natural environment, landscape and the climate of the Northern Territory. It is incumbent on governments to ensure that we learn from past mistakes in irrigation development not just in southern Australia but in a number of areas in the north like the Burdekin and Ord where real impacts have occurred to the rivers and fish populations downstream.

The high evaporation rates and long dry seasons mean that very few rivers—indeed, very few river reaches—flow year-round. Those that do are highly valued. Values are often environmental, cultural, social and developmental, and are intertwined. These perennial river reaches support endemic ecosystems, provide tourism and fishing opportunities and have high spiritual significance for Indigenous and non-Indigenous people alike. CSIRO (2009). Water in northern Australia. Summary of reports to the Australian Government from the CSIRO Northern Australia Sustainable Yields Project.

Water running out to sea is not wasted

Water does not run to waste in the NT. The large wet season flow events are an essential part of the environmental requirements of the riverine and estuarine ecosystems of the Top

End. These high flows drive the productivity and interconnectivity of the entire river systems which in turn drive the productivity of the coastal environments and it is what makes the recreational and commercial fishing in the Northern Territory what it is. It is the high wet season flows that spill out onto the coastal and river floodplains that are the key to the productivity and recruitment for some of the Top End's most important recreational fish species like the barramundi, mud crabs and many other recreationally and commercially important species.

Every wet season recreational and commercial fishers eagerly wait for the onset of the monsoonal rains and the wet season. A poor or late wet season will directly relate to a poor barramundi season. The amount of rainfall and length of time the wet season inundates the floodplains dictates the numbers of juvenile barramundi that are recruited into each and every river system for that year. Similar direct and measurable relationships exist with the mud crab fishery, the northern prawn fisheries and much of the food production sources of the river systems like cherabin and any impact on this wet season flow in northern Australian rivers will have a direct effect on the population, recruitment and quality of the barramundi fishery.

It is for this reason AFANT takes an extremely strong interest in water management and potential dam construction in the Northern Territory as this type of development is a direct threat to the spectacular recreational fishing in the Top End.

Impact of dam construction on fisheries and river health

Extracting water for irrigation, or building on-river dams, will affect fish migration, food availability and breeding. This will affect recreational and commercial fishing downstream. Dams also fragment river-estuarine systems which rely on the transport of sediment and nutrients downstream, ultimately reducing the productivity of estuaries and coastal areas.

Michele Burford Associate Professor of Aquatic Ecology at Griffith University December 2012,

Large dam construction and water extraction have a range of impacts on tropical river systems, the following are just some of the potential and known impacts of dams on tropical rivers.

Dams are a barrier to migratory species

A large number of fish in tropical north Australia are migratory species. Many require marine environments to spawn and live a large portion of their lives in the freshwater rivers and billabongs. Any barrier that limits this migration will reduce the available habitat, productivity and fish numbers within the system.

Direct impact 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:

Most of the fish species in the Top End are migratory, dams create a barrier to migrating fish species which can devastate the native fish population. 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.

Impact on connectivity of river systems

Loss of flows due to increased water extraction, flow modification or increased surface area of storages and evaporation, will impact on the amount of available wetted habitat downstream. Loss of larger flows required to store water will reduce the overbank events required to drive the floodplain and river interconnectivity.

Reduced flows will reduce the amount of wetted riffle areas essential for the productivity of the freshwater reaches of many tropical river systems.

Sediment and nutrient transfer

Healthy rivers require the transfer of sediment and nutrients which drive the food production and productivity of the river system, dams create an artificial barrier to this transport and transfer of sedimentation and nutrients. Large low flow areas backed up behind dam walls stop the flow enough to force the drop out of fine material carried during high flow events.

The impact of this loss of sediment and nutrient transfer is not just on the rivers downstream but will also impact on the productivity of the floodplain estuarine environments and wetland systems along the river.

Increased resource conflicts and sharing

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 how can government address the loss of lifestyle, wellbeing and personal food harvest of the recreational sector.

AFANT would also like the white paper 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 local example with the collapse of the banana prawn recruitment from the Ord River in the Joseph Bonaparte Gulf (Kenyon et al. 2004).

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 more generally.

Serious resource conflict between irrigators and the broader community is inevitable if the government sanctions activities like dam construction that will remove access and yield from other sectors.

Highly variable nature of flows

Most rain falls near the coast, on the estuaries, not in the rivers' headwaters (unlike, for example, the Murray-Darling Basin). Both rainfall and runoff decrease away from the northern coast. Runoff varies from 60 percent to less than 3 percent of rainfall from north to south (Figure 7) and generates on average about 200,000 GL of streamflow across the project area each year.

This pattern of runoff combines with the generally low relief of much of the coastal area to provide little opportunity to increase surface water storages. Opportunities occur mainly in the upper reaches of catchments. In these areas, however, rainfall is lower and more sporadic, and potential evapotranspiration is higher. Large storages are needed to compensate for evaporative losses and storage volumes need to be much larger than they would need to be in southern Australia, all things being equal. There are few opportunities to increase surface water storage that satisfy all these requirements. CSIRO (2009). Water in northern Australia. Summary of reports to the Australian Government from the CSIRO Northern Australia Sustainable Yields Project.

The NT has a wide variation 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.

Evaporation

As identified in the green paper high evaporation rates are a big challenge in the northern regions; this makes dams extremely inefficient water storage infrastructure with evaporation rates in Lake Argyle in Western Australia of a quarter of its volume every year (about half the water volume used each year).

With these extremely high evaporation rates in Northern Australia (which will increase with climate change) the combination of water evaporation and water use will at least double the impact on rivers downstream above that of similar development using ground water. To cover the large season variation in wet season rainfall and run off, any dams would need to be large enough to store multiple seasons' supply, further impacting on the natural flow regimes of tropical river systems downstream.

Economics of irrigated agriculture in the north

The main barrier to investment in food and fibre production in the Top End is harsh climate, economics, labour availability and the large cost and distance to markets.

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

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

Further development or expansion of commercial fishing

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

AFANT has real concerns with the desire to develop new or expand existing fisheries in Northern Australia. AFANT has a strong commitment to ensuring the sustainable management of the Northern Territory's wild catch fisheries and we are active on all of the relevant management advisory committees.

This direct involvement in management gives our organisation a high level of understanding on the sustainability limitations of the fisheries and we do not believe that there is any significant room to expand the commercial wild fishing harvest without having a major detrimental impact on other fish stocks or the quality of the recreational fishing in the NT.

"There appears to be limited scope for increasing harvests from wild-catch fisheries in northern Australia."
2009 Northern Australia Land and Water Science review :

It is also important to recognise that new or developing fisheries have the real potential to impact on the harvest of other sectors and management decisions. AFANT is also concerned that new gear types that have greater harvest potential can impact on the sustainability of fish stocks or have the increased risk of habitat destruction like the demersal trawl.

This concern with the potential impact of new fishing gear types has been confirmed by the NT Government in its decision to reject a trial of demersal trawling dated 23 June 2014.

Aquiculture development

AFANT believes that aquiculture can play an important role in food production and economic development in the Territory. While a number of projects in the past have been rejected because of the potential impact on wild fisheries and the environment there are good examples in the Territory where aquiculture can be conducted with minimal environmental impact or risk. Systems like the closed salt water barramundi farming systems on the Adelaide River floodplain are good examples of productive, efficient aquiculture systems which is supported by AFANT.

Mining / Oil and Gas

AFANT acknowledges that the Territory has significant mineral resources; many of these could be safely developed with limited impact on the environment and recreational fishing. Unfortunately the history of mining development in the NT shows that a number of operators show scant regard to environmental legislation and requirements and have left significant polluting legacies for government or new operators to clean up.

These environmental disasters like Red Bank, Mount Todd and Rum Jungle were constructed in recent times with supposedly the highest standards of environmental compliance and assessment.

The boom bust nature of mining in the Northern Territory is a real concern; it is not government regulation, green tape or government support that determines when or if a new mine starts or closes. Over the past year the NT has seen the closure of operations at Gove, Pine Creek and on the Roper River, mines planned to start have been mothballed. It is economics that drives decisions on mining. Simply; can the company make money out of a project? Yet government continues to promote this sector and provides significant support and favourable conditions, it seems at the expense of all others.

The mining industry will operate in the NT if the international exchange rates and mineral prices make it profitable to extract the resource. The potential impact on the environment and the river systems in the NT must be adequately assessed to ensure no further environmental disasters like our existing legacy mines occur in the NT.

Recently a number of companies have deliberately flouted both Territory and Federal Government approval processes to start construction or operations before formal environmental approvals. This highlights the attitude to environmental protection by some in the industry and arguably the government, and as such the formal environmental approval processes needs to be improved and strengthened not weakened.

Transport and other infrastructure must be provided for by mining operators and the government when these developments are given the approval. The combination of large ore trucks and other mining traffic on narrow, poor condition public roads is an unacceptable risk.

Significant community concern exists around the recent push for major increases in oil and gas development, particularly around unconventional oil and gas development or fracking.

AFANT has real concerns with a number of near shore oil and gas development and exploration applications. One of our strongest concerns is the impact of the proposed use of seismic testing and its impact on marine life in marine waters.

It is recognised that seismic testing can have an impact on marine life and we have real concerns with the threat on a range of fish and other marine species, particularly spawning aggregations and larval stages of important recreational species.

The other issue of concern is unconventional oil and gas development and ensuring sufficient separation between any ground water or other water bodies and areas of subjected hydraulic fracturing.

Section D: Policy directions

AFANT has concerns with the currently publicly articulated policy agenda by both Commonwealth and Territory governments on developing northern Australia, as it is overly focused on development of extractive or consumptive users without fully acknowledging the significant contribution of relatively passive resource users like the recreational fishing sector. We are strongly of the view that any development in northern Australia must recognise and protect existing industries and natural assets.

We believe that a greater focus on improving basic transport and communication infrastructure across the Territory and improving areas available to the recreational fishing sector will have significant benefits for the lifestyle and ability to attract investment and workers. Much of the access infrastructure that will improve opportunities for the recreational fishing sector will benefit other sections like pastoral and mining industries.

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 interest like the recreational fishing sector, is essential to ensure community ownership of the northern development agenda.

We would welcome the opportunity for greater engagement and consideration of AFANT's views and ideas in the development of the white paper.

Yours sincerely

Craig Ingram

Executive Officer
Amateur Fishermen's Association of the NT Inc.

7 August 2014