



Mr Scott Spencer
Deputy Director-General
Fisheries and Forestry
Department of Agriculture and Fisheries
GPO Box 46
BRISBANE QLD 4001

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Dear Mr Spencer

Great Barrier Reef Marine Park Authority submission on the green paper on fisheries management reform in Queensland July 2016

The Great Barrier Reef Marine Park Authority (GBRMPA) congratulates the Queensland Government and the Department of Agriculture and Fisheries (DAF) on the formulation and release of the “Green paper on fisheries management reform in Queensland”.

GBRMPA’s view is that the highest priority objective for fisheries management must be given to environmental and fisheries resource sustainability. GBRMPA recognises that fishing and the collection of fisheries resources in the Great Barrier Reef Marine Park (Marine Park) and Great Barrier Reef World Heritage Area (World Heritage Area) are critically important social, economic and cultural activities. Ecologically sustainable fishing is a long established and legitimate use of the Marine Park and World Heritage Area. Viable and productive commercial fishing industries depend on a healthy marine ecosystem, just as Queenslanders rely on such a healthy ecosystem for recreation, cultural activities and as a source of local seafood.

GBRMPA considers that implementation of reform proposals detailed in the green paper are essential to ensure ecologically sustainable fisheries operate in the Marine Park and World Heritage Area and all adjacent Queensland managed waters. GBRMPA cannot stress enough the need for transformational change in fisheries as described in the green paper and fully supports the vision, goals and reforms proposed.

GBRMPA importantly recognises that such identified reforms are not able to be progressed without appropriate resources. In light of the essential reforms identified in the green paper, GBRMPA encourages the Queensland Government to review the funding that is presently allocated to management and monitoring of fisheries in Queensland and to consider all funding models where direct user beneficiaries of well managed fisheries resources financially support all essential fisheries reforms. GBRMPA greatly values the positive working relationships that it has with all Queensland Government agencies, including the DAF, and looks forward to working together to progress reforms proposed in the green paper.

Outlook for Great Barrier Reef and fishing related risks

The *Great Barrier Reef Outlook Report 2014* identifies that the Great Barrier Reef ecosystem has a poor and worsening outlook with cumulative impacts diminishing the ecosystem's ability to recover from disturbances. Some threats are increasing, driven mainly by climate change, economic growth and population growth.

Fished resources and supporting habitats are under pressure from fishing and non-fishing pressures, and are vulnerable to climate change and extreme weather. The 2014 Outlook Report identified the following risks to the Great Barrier Reef Region ecosystem:

- Two 'very high' fishing-related risks: illegal fishing and poaching and incidental catch of species of conservation concern;
- Three 'high' fishing-related risks: extraction from spawning aggregations, discarded catch and extraction of predators;
- Two 'medium' fishing-related risks: extraction of particle feeders and extraction of herbivores; and
- Multiple 'very high' and 'high' non-fishing risks that affect fisheries resources, including: barriers to flow, pesticide run-off, sediment run-off, modifying coastal habitats, altered weather patterns, sea temperature increase and ocean acidification.

GBRMPA advocates that all fisheries operating in the Marine Park and World Heritage Area should be managed in accordance with the Commonwealth Government Guidelines for the Ecologically Sustainable Management of Fisheries. Fishing impacts can be managed to support ecological resilience, and in turn to sustain fisheries into the future. Though some mitigation of the identified fishing risks is occurring through proactive and collaborative fisheries and marine park management, more concerted efforts to address the fishing risks are required. The reforms proposed in the green paper are critical in mitigating and reducing these risks.

Explicit recognition of the Great Barrier Reef Marine Park and World Heritage Area

In 1981 the Great Barrier Reef was inscribed on the World Heritage Area List of the Convention Concerning the Protection of the World Cultural and Natural Heritage on the basis of its outstanding universal value. A considerable portion of Queensland fisheries operate in the Marine Park and WHA. Subject to meeting the requirements of the *Great Barrier Reef Marine Park Act 1975* (Marine Park Act)¹, the Offshore Constitutional Settlement provides for fishing activities that occur within the Great Barrier Reef Region to be managed by the state of Queensland.

GBRMPA greatly appreciates and acknowledges the references in the green paper to the importance of the Great Barrier Reef, its world heritage listing and the obligation to meet higher standards of management. Higher standards of demonstrable ecological sustainability, including for fisheries, are expected by all levels of government, the Australian public and international community. GBRMPA welcomes further opportunities to work with

¹ The main object of the *Great Barrier Reef Marine Park Act 1975* is to provide for the long-term protection and conservation of the environment, biodiversity and heritage values of the Great Barrier Reef Region.

Fisheries Queensland, the fishing industry and other fishery stakeholders on operationalising these higher standards in the Great Barrier Reef Region.

In 2015 the Australian and Queensland Governments updated the Great Barrier Reef Intergovernmental Agreement (Intergovernmental Agreement) - the formal and enduring intergovernmental collaborative agreement between the Commonwealth and Queensland Governments that has been in place for more than 35 years.

Among other things, the Intergovernmental Agreement covers fishing. It reaffirms joint “ongoing commitment to... address significant threats to the health and biodiversity of the Great Barrier Reef ecosystem, including...ecologically unsustainable fishing activities and other resource extraction activities”.

Given these foundations of understanding and formal agreement, GBRMPA requests that any policy statement, subsequently revised Queensland legislation and arrangements applying to the management of fisheries within the Great Barrier Reef Region should:

- explicitly recognise that the Intergovernmental Agreement and Great Barrier Reef Marine Park legislation are critical parts of the operational and legislative context for Queensland fisheries.
- be consistent with the ecologically sustainable use requirements of the Marine Park Act:
 - a. that is consistent with:
 - i) protecting and conserving the environment, biodiversity and heritage values of the Great Barrier Reef Region
 - ii) ecosystem based management.
 - b. that is within the capacity of the Great Barrier Reef Region and its natural resources to sustain natural processes while maintaining the life support systems of nature and ensuring the needs and aspirations of future generations.
- give highest priority to environmental and resource sustainability².

Reef 2050 Long-Term Sustainability Plan

The Australian and Queensland governments' *Reef 2050 Long-Term Sustainability Plan* provides an overarching strategy for managing the Great Barrier Reef – it coordinates actions and guides adaptive management to 2050. Actions within this plan that are relevant to and supported by the reforms proposed in the green paper include:

- BA14 – Implement further actions to reduce human-related causes of dugong mortality such as vessel strike and net entanglement
- BA17 – Identify the key indicator species and populations including fisheries species, to inform refinement of targets and for inclusion in the Integrated Monitoring and Reporting Program

² South Australia is an example of a jurisdiction that has given highest precedence to resource sustainability in the *Fisheries Management Act 2007 (SA)* [Section (7)(2)]. This fisheries legislation [Section 7(4)(d)] also explicitly seeks to further objectives for marine parks and other relevant conservation legislation.

- BA18 – Complete population or stock assessments of indicator species, including fisheries species, to inform population resilience and sustainable use
- BA23 Review the regulatory structure of fishing to ensure the sustainability of Queensland’s fisheries
- EBA12 – Adopt a fisheries resource allocation policy which maximises the values of a sustainable fisheries catch
- EBA13 – Support the uptake of sustainable practices by Reef-dependent and Reef-associated industries to limit impacts on the Reef’s outstanding universal value.

Recommendations of the Productivity Commission, Marine Fisheries and Aquaculture, Draft Report, August 2016

Many of the draft recommendations resulting from the Productivity Commission review into Australian marine fisheries and aquaculture are directly relevant to, and supportive of fisheries reform areas identified in the green paper. The recommendations in the Productivity Commission Draft Report supporting critical priority reforms identified in the green paper, which GBRMPA supports include:

- 2.1 – ‘develop and implement a harvest strategy policy’
- 2.2 – ‘develop a policy to guide the allocation of access to fisheries stocks between different sectors’
- 4.1 – ‘introduce licensing for independent recreational marine fishing’
- 4.4 – ‘strengthen penalty regimes for recreational fishing to deter regulatory non-compliance’
- 4.5 – ‘undertake five-yearly surveys of recreational fishers... consistent across jurisdictions’
- 5.1 – ‘Customary fishing by Indigenous Australians should be recognised as a sector in its own right in fisheries management regimes’
- 7.1 – ‘publish online the annual reports that fisheries produce as part of their accreditation requirements under the *Environment Protection and Biodiversity Conservation Act 1999*
- 7.2 – ‘explicit mortality limits for fisheries that have a high risk of interaction with threatened, endangered and protected species... used in conjunction with controls on fishing methods and equipment that have proven effective in minimising the impact of fishing activity on protected species
- 7.3 – ‘make summaries of information on interactions with protected species publically available (online)’
- 10.1 – ‘ensure that operational decisions are delegated to the relevant fishery management authorities to the extent possible’.

Further recommendations in the Productivity Commission draft report that GBRMPA believes are directly relevant to improved ecological sustainability of Queensland managed fisheries and should be given priority consideration for reforms associated with the green paper include:

- 10.2 – ‘governance arrangements of advisory groups’.

GBRMPA views on the fishery reform proposals identified in the green paper

General – How we will get there?

GBRMPA strongly supports the vision, goals and areas of fishery reform proposed. GBRMPA acknowledges that a staged approach will be required to integrate and implement all work in the proposed ten key reform areas and supports the proposed timetable from 2016 until 2020, for the new management framework to be in place, with clear direction and decision making processes. GBRMPA welcomes continued opportunities to work closely with DAF and others in development of the more detailed work program to implement agreed and identified reforms by 2020. GBRMPA encourages utilisation of the Great Barrier Reef Ministerial Forum for consideration and support of major reforms as appropriate.

1. Managing target stocks

GBRMPA agrees that there is a need to rebuild fish stocks to higher levels. GBRMPA is strongly supportive of managing fish stocks within the Great Barrier Reef Region using conservative environmental safeguards, including setting biomass target reference points of at least 60 per cent of the unfished population. This is a necessary and responsible approach to managing target stocks, especially in the face of increased uncertainties and adverse environmental conditions caused by climate change and other pressures, such as from coastal development. The rebuilding or maintenance of fish stocks at this more conservative biomass level is consistent with the higher standards of conservation and protection of biodiversity expected in the Marine Park and World Heritage Area. It is also likely to contribute to increased resilience of the target stock and broader marine ecosystem in the face of severe changes and pressures that are already being experienced³.

The proposed target reference point of maximum economic yield (MEY) for predominantly commercial stocks is supported in situations where the MEY biomass is greater than 60 per cent of the unfished population. GBRMPA recognises that target reference points equating to MEY are more conservative than those equating to maximum sustainable yield but believes they should only be adopted in instances where the biomass is greater than 60 per cent of the unfished population. Fishing of stocks, whether shared or predominantly taken by one fishing sector, may influence a broad range of components of marine biodiversity. Consistent with giving highest priority to environmental and resource sustainability, GBRMPA believes that all fish stocks that occur within the Great Barrier Reef Region, regardless of how their harvest is shared, should be managed to a target reference point of at least 60 per cent of the unfished population.

When managing stocks to at least achieve this 60 per cent target reference point, GBRMPA requests that the stock assessments for those species harvested throughout the Marine Park and World Heritage Area should consider and report on estimated stock levels in respective no-fishing zones and fished zones. While recognising the long-term fisheries benefits of no-fishing zones contributing to enhanced biomass levels in fished zones by way of larval spill-over, enhanced recruitment or other movement, GBRMPA believes that it is responsible to ensure that the abundance of stock in fishable areas contributes greatly to the 60 per cent biomass level. Though the biomass for some target species found in the no-fishing zones likely contributes to the health of the target stock and ecological resilience of the Marine Park, for a number of target species harvested in the Great Barrier Reef Marine Park, it is primarily the abundance of the stock in the fished zones which will largely support viable and productive fisheries. It would not be acceptable to achieve a biomass target of at

³ Recently, most tropical regions across the world have experienced the most severe mass coral bleaching ever recorded, including within the Great Barrier Reef Region during 2016.

least 60 per cent of the unfished population across the range of the stock, if the majority of that biomass were only in no-fishing zones.

GBRMPA is strongly supportive of all responsible management interventions that are designed to achieve a biomass of at least 60 per cent of the unfished population. The 2014 Outlook Report identified “very high” and “high” fishing related risks to target stock management, namely illegal fishing and poaching, extraction of predators and extraction from spawning aggregations. GBRMPA believes that additional efforts to mitigate these risks on target stocks in the Great Barrier Reef Region, such as targeting of Spanish mackerel and barred grunter spawning aggregations, should be identified and implemented on a precautionary basis, regardless of the target reference point adopted.

GBRMPA strongly believes that the scale of fisheries management must be set at the biological stock level for each species. Enhanced scientific efforts to discriminate stocks will be necessary. Several important fish species comprising different stocks which are currently managed as a single stock unit across all of Queensland or the Queensland east coast (e.g. Queensland east coast barramundi, Queensland east coast grey mackerel, Queensland east coast king salmon), should be monitored and managed at their separate biological stock levels. This approach is an essential precursor to best practice management for fisheries in Queensland and may facilitate community based fishery management approaches.

Independent of setting biomass target reference points of at least 60 per cent of the unfished population, GBRMPA is aware that a number of important Queensland fish stocks are presently at stock levels which are of significant concern. Pink snapper has been classified as “overfished” for a number of years and it is understood that pearl perch is likely to be “transitional depleting”. GBRMPA requests that efforts to reduce fishing mortality on each of these species, to support rebuilding and recovery, be initiated as a matter of urgency. Concerns about the status of other stocks such as shark species, saucer scallop, blue-swimmer crab and Spanish mackerel also exist and require discussion and actions.

GBRMPA strongly believes that management applied to a particular stock should not be just proportional to the level of risk to the stock and level of economic and social importance. It should be expanded to consider broader environmental aspects beyond the target stock, where they relate to the activity of fishing. Though this principle is strongly related to the next proposed pillar of reform, “managing impacts on the ecosystem, including non-target species,” GBRMPA believes that such a principle needs to be incorporated here to ensure holistic delivery of ecosystem-based fisheries management. GBRMPA believes that the reform proposal wording in the green paper should be rewritten to be: “Ensure the management that is applied to a particular stock is proportional to the level of risk to the stock, and/or the level of ecological risks arising from the fishing activity, and/or the social and/or economic importance of the stock.”

2. Managing impacts on the ecosystem, including non-target species

GBRMPA agrees that all fisheries in Queensland need to be demonstrably ecologically sustainable to maintain broader social acceptance of fishing practices, particularly in the Marine Park and World Heritage Area, where higher standards are expected. GBRMPA agrees that to achieve these higher standards, a structured risk based approach should be used to guide management of the broader ecosystem impacts of fishing. Fisheries management in Queensland needs to more strongly incorporate protection of the environment and a range of non-target species, and apply increased levels of precaution in decision making.

Reforms in this area are especially pertinent for contemporary Queensland fisheries management for a number of reasons, including:

- the Great Barrier Reef's world heritage listing
- reported and perceived interactions between fishing activities and the marine environment and non-target species
- unfavourable conservation status of many protected species and conservation concerns about at-risk species
- cumulative impacts on the marine environment
- lack of knowledge of the status of many fisheries resources
- and limited data available to assess ecological sustainability.

GBRMPA strongly supports an ecological risk assessment (ERA) approach and the development and implementation of risk mitigation plans to ensure timely actions to mitigate unacceptable risks. This approach would improve the capacity to demonstrate ecological sustainability of fisheries with associated flow-on benefits for fishers and the community. In recognising that a comprehensive ERA has been completed for the East Coast Otter Trawl Fishery (ECOTF), it is unfortunate that there has been little progress in addressing the risks identified. GBRMPA support the reform proposals for improvements in this area to ensure any identified ecological risks are mitigated in a timely manner, and again offers to partner with DAF on such work. Other high priority fisheries where ERAs should be undertaken and risks mitigated include the East Coast Inshore Fin Fish Fishery (ECIFFF), the East Coast Mud Crab Fishery and the Coral Reef Fin Fish Fishery (CRFFF). While GBRMPA supports the comprehensive ERA approach, lack of an ERA or the considerable time taken to develop ERAs and risk mitigation plans should not delay responsible management interventions for those fishing-related risks which have been clearly described in past reviews and documents, including the 2014 Outlook Report.

Management needs to explicitly consider all components of the ecosystem that fisheries interact with, ideally as part of an explicit ecosystem-based fisheries management approach as referred to above. This would help ensure consistency with existing requirements applying to fishing activities under the Marine Park Act and is recognised leading practice for natural resource management including fisheries. This applies across all facets of management from objective setting to harvest strategy development, to compliance and enforcement.

Explicit management of the interactions with non-target species that are captured in or interact with fisheries must be integral in the management of all fisheries. This includes target, by-product, by-catch, and threatened, endangered and protected species, as well as habitats and ecosystem processes. Management arrangements in place for fisheries need to ensure that the risk of interaction, injury and fatality of all by-catch species and threatened, endangered and protected species are acceptably low. Significant improvements are required to mitigate such identified risks in the ECIFFF and ECOTF in particular. GBRMPA recognises that there have been valuable improvements over time across Queensland's fisheries (e.g. bycatch reduction devices and turtle excluder devices in trawl).

The incidental entanglement and mortality of species, including dugong and inshore dolphins within the ECIFFF, described in the 2014 Outlook Report as very high risk (incidental catch of species of conservation concern) remains one of the highest priority areas of attention in the Marine Park and World Heritage Area. The importance of improvements needed in acquiring data and information and resourcing related to the incidental catch of such species is referred to in more detail later in this submission. GBRMPA believes that implementation of an electronic position reporting system on all commercial fishing vessels operating in the

Great Barrier Reef Region is a critical initiative which will assist in monitoring compliance with zoning and other spatial management restrictions (e.g. Dugong Protection Areas) and fishing gear attendance requirements which reduce risks to threatened, endangered and protected species.

GBRMPA is supportive of regional and community based management arrangements that, where appropriate, utilise local resource stewardship and knowledge to reduce inter-fisher competition and conflicts, and reduce risks to threatened, endangered and protected species (as local fishers often know where and how such species live and utilise the waters they regularly fish in). GBRMPA is keen for fishery observations and reported data on threatened, endangered and protected species interactions and fate to be regularly published in the public domain and for there to be discussions on adopting species mortality limits.

GBRMPA welcomes further opportunities to work with Fisheries Queensland and the fishing industry on ecological risk assessments, recommended solutions and their implementation. The CRFFF, because of the broad range of species covered by the Other Species (OS) Individual Transferable Quota category, and which are also caught by the recreational fishing sector, also requires careful consideration in this regard. Additionally in this fishery, improvements in reporting of catch and release of protected fish species is required to better understand the population status of such species.

3. Resource sharing arrangements between sectors

GBRMPA strongly agrees that Queensland would benefit from a more strategic, stable and transparent approach to allocating and managing access to its fisheries resources. It supports the explicit allocation of catch shares (i.e. a proportion of a total allowable catch recognising all fishing induced mortality) for the commercial, recreational and Indigenous sectors and also to non-extractive users who value the same resources.

GBRMPA is concerned that because of its contentious nature, the development of a fisheries resource sharing policy could become an extended, resource intensive activity that diverts already limited resources from addressing other priority fisheries management reforms. GBRMPA therefore advocates moving forward with a full allocation process as quickly as possible, basing initial allocation on contemporary and historical precedence, using best available data. It is suggested that, depending on the management history of a fishery, a minimal amount of historical data be considered in such an allocation, as otherwise additional allocation complexities not pertinent to contemporary fisheries resource use may arise.

It is after such an initial allocation process that allocation changes could be led by a stakeholder-led process. The intention of such a subsequent process should be to put the onus of responsibility for any change of allocation back on stakeholders. It is suggested that any subsequent requested changes to allocation would have to be proposed via a formal written case addressing pre-defined criteria to provide a costing and a justification for the proposed change.

Clear resource sharing arrangements with explicit allocation between sectors would ideally be developed early in the reform process as it would support other reforms, such as setting fisheries catch and effort levels to manage fish stocks sustainably, minimising ecological risks, preventing overfishing and providing for recovery of overfished stocks within a reasonable timeframe, and helping to ensure economic viability and maximum community benefits. Ecological and stock health considerations should be considered ahead of social and economic considerations.

4. Access to the resources

GBRMPA agrees that a fishery-by-fishery basis review accompanied by immediate management interventions effectively amending total (commercial, recreational and Indigenous) fishing effort and catch to meet agreed objectives is an essential fishery reform. Such reform proposals are critical for managing access to resources and adoption of the fisheries harvest strategy approach.

GBRMPA agrees that a policy is required to ensure consistency in the development of the management arrangements for a fishery. The policy should outline processes to develop fishery-specific management arrangements that are transparent, standardised and defensible. It is also important that such a policy allows some flexibility with respect to development and implementation of fishery management arrangements. Flexibility should not be so elastic as to undermine the overall intent of the policy, but should allow for adaptive management as circumstances change or improved data becomes available. The need for flexibility into the future also needs to be considered in setting the duration of entitlements such that arrangements provide a reasonable degree of business and/or access certainty for fishers, while allowing for adaptive management without unreasonable costs to government.

Whilst total allowable catches (TACs) and individual transferable quotas (ITQs) may be appropriate for lucrative, large-scale fisheries, based on a small number of target species, most commercial fisheries which operate in the Marine Park and World Heritage Area do not meet these criteria. As such, any policy should allow managers and fishery stakeholders to utilise a range of fishery access controls, including TACs and ITQs. Such a policy should also recognise the contemporary need for anticipatory management, where in times of rapid environmental or resource availability change, past trends may not necessarily be predictors of the future.

For major fisheries such as the ECOTF, where effective “management levers” to adjust the level of fishing within an area or on stocks are lacking, measures to manage fishing need to be put in place so that there is a binding mechanism for achieving objectives (as per consensus position reached by Trawl Plan Review advisory groups). Such controls are also required to provide the capacity to manage any ecological risks that arise from fishing (e.g. as identified in ERAs), and to build an adaptive approach for dealing with emerging issues or environmental and climate change vulnerabilities. Further, improved fishery management arrangements are likely to better support the achievement of social and economic objectives for Queensland fisheries, and in turn ensure greater stakeholder support for fisheries management.

GBRMPA supports the development of a Queensland Indigenous Fishing Strategy in consultation with Traditional Owner groups and Indigenous fisheries stakeholders. GBRMPA believes that Queensland Fisheries legislation should better recognise the traditional and customary rights of Traditional Owners to the fisheries resources within their recognised sea country. GBRMPA supports such an Indigenous Fishing Strategy explicitly recognising existing management systems including legislated Traditional Use of Marine Resource Agreements (TUMRAs). It should be noted, TUMRAs are accredited by both GBRMPA and the Queensland Government through the Department of National Parks Sport and Racing. GBRMPA suggests the DAF consider recognition of the TUMRA legislative framework to cooperatively seek outcomes for the management of marine resources (eg. fisheries compliance, sustainable management) including for fisheries management outcomes with Traditional Owners.

GBRMPA is supportive of a review of the system of gear restrictions, seasonal closures, size and in-possession limits applying to recreational fishing. GBRMPA believes that the system of current restrictions applying to recreational fishing has served its purpose well, and a “simpler” system of size and bag limits is not necessarily the most responsible way to move such fisheries reform forward. However, increased threats to the Great Barrier Reef, improved fishing related technologies and the increasing human population living and accessing fisheries resources in the Great Barrier Reef Region, necessitate the need to review the ecological sustainability of current recreational fishing limitations.

GBRMPA considers that the current situation where commercial fishing licences and endorsements allow broad east coast or state-wide roaming, though providing flexibility of fisheries access to commercial fishers, hinders the ability of managers and fishers to appropriately manage regional stocks and address environmental risks. GBRMPA, through the Reef 2050 Plan, is committed to exploring the concept of Reef Recovery Plans at a regional scale and would welcome cooperative discussions on fisheries matters at this scale.

5. Decision-making framework

GBRMPA strongly agrees that there is a need to develop a clear decision-making framework for fisheries in Queensland. GBRMPA desires and appreciates continued cooperative involvement in fishery policy development relevant to the Marine Park.

The establishment of a new framework separating as much as practicable, strategic decisions that are the remit of government from technical decision-making by fisheries managers, in consultation with fisheries partners and stakeholders, would enable more responsible fisheries management interventions. Such a framework is essential to enable proposed harvest strategies containing predetermined control rules to achieve desired target reference points and avoid limit reference points. It is only by having such a decision-making framework and delegation at the level of the managing agency (e.g. Fisheries Queensland) that timely fisheries management responses can be delivered to avoid outcomes that place ecological sustainability at risk. Higher level government intervention or decision making should only be required when proposed management arrangements deviate from the government approved policy.

GBRMPA has always been supportive, and remains committed to empowering regional communities to be stewards and partners in regional and community based management of the Marine Park and World Heritage Area, including associated fisheries resources. GBRMPA holds the same views with respect to delivery of the aspirations and views of Traditional Owners. GBRMPA suggests that such resource stewardship considerations should be an integral component of any new decision-making framework.

6. Harvest strategies

GBRMPA recognises and strongly supports the use of fisheries harvest strategies to provide a transparent, proactive and defensible means to manage and monitor Queensland’s fisheries. GBRMPA supports harvest strategies which specify a predetermined set of rules relating to monitoring, assessment and harvest control (decision) rules relating to reference points that will be used to meet pre-determined management objectives for a respective fishery / target species. Appropriate time frames for harvest strategy evaluation and review should be determined and explicitly stated within the Fisheries Harvest Strategy Policy for Queensland.

Additionally, GBRMPA contends that a Fisheries Harvest Strategy Policy and any subsequently developed harvest strategies should give explicit consideration not only to the main target species, but species, stocks and habitats that have been deemed as high risk. A fisheries harvest strategy should give highest priority to broader ecological and fisheries resource sustainability considerations, both of which should be over and above any social, cultural and economic objectives. That is, given it is unlikely that optimal solutions against different objectives are able to be realised simultaneously, solutions for broader ecological and fisheries resource sustainability objectives should have primacy over all others.

GBRMPA reiterates the importance of a biomass target reference point of at least 60 per cent of the unfished population for all target fisheries species. Harvest control rules associated with delivery of such a target reference point will likely contribute greatly to broader ecological sustainability objectives. For fisheries, species or stocks which are data limited or where there is a high level of uncertainty regarding their status, precautionary buffers should be applied to account for this uncertainty.

GBRMPA considers that all fishery stakeholders should be engaged in the development of a harvest strategy. They should understand how and under what circumstances management responses will occur and what management tools may be used to constrain catch and effort. The likelihood that stakeholders may not agree with such management interventions to deliver agreed operational objectives should not preclude the identification of mandatory management interventions to be implemented by fishery managers in striving to achieve target reference points and avoid falling below limit reference points.

The introduction of fishery harvest strategies will likely require significant improvements in the quantity and quality of fishery data and information related to measuring performance indicators. Such improvements will require funding. As previously referred to in this submission, GBRMPA encourages a review of the funding that is presently allocated to management and monitoring of fisheries in Queensland.

7. Data and information

GBRMPA agrees with the need for enhanced data collection and independent validation programs to improve the basis for fisheries management decisions in Queensland. GBRMPA strongly encourages the establishment and on-going funding of specific programs to monitor, assess and report on the broader ecosystem effects of fishing, not just the fished stocks. GBRMPA is supportive of improved social, cultural and economic data and information on fisheries, but such data is secondary in importance to data on broader ecosystem effects of fishing, targeted fish and by-catch species (particularly threatened, endangered and protected species).

In regard to data and information on fished stocks, GBRMPA strongly supports enhanced investment in fishery-dependent and fishery-independent data collection for exploited species to enable robust stock assessments to be undertaken. The number of targeted species, for which robust stock assessments utilising such enhanced data are regularly undertaken, needs to be significantly increased. In recognising that the default unit for stock assessment for many species is the entire Queensland east coast, more definitive scientific determination of stock structures leading to all fisheries assessments being at a “biological stock level” is required.

GBRMPA encourages incorporation of existing and improved fishing related monitoring programs into the integrated ecological, social and economic monitoring program, as described in the Reef 2050 Plan.

GBRMPA supports the reinstatement of a statistically robust independent fisheries observer program, or the use of new technologies which would fulfil the same objectives, to enable monitoring of each major commercial fishery. A fishery observer program or other electronic monitoring technology is required to provide verified information on a range of factors including:

- spatial and temporal catches by all sectors
- catch composition
- discard rates and non-retained mortality
- interactions with threatened, endangered and protected species and other at-risk species
- data on effort
- data on possible localised depletion.

An additional advantage of such a program is it facilitates improved biological data collection leading to a better understanding of species vulnerability. Coverage needs to be high enough to estimate with reasonable certainty total catch / interactions of low productivity bycatch and no-take protected species, logbook estimates of total removals, species composition data for difficult-to-identify shark species, and discard levels across all sectors of the commercial fishery. There should be annual analysis and public reporting of the observer or electronic monitoring program.

GBRMPA strongly supports implementation of fisheries data and information systems that:

- utilise electronic position reporting on all commercial fishing vessels operating in the Great Barrier Reef Region and retain such position reporting (i.e. Vessel Monitoring System) on commercial fishing fleets that already require this system (e.g. whole ECOTF, some harvest fisheries)
- provide improved data on targeting practices, fishing location and commercially harvested species composition
- provide improved commercial fishing effort data which allows standardised catch rate data to be calculated and so providing improved indices of abundance (e.g. kg/standardised unit of net area/hour rather than just kg/net day as presently occurs.)
- provide robust independent verification of information reported in commercial catch and effort logbooks
- collect commercial catch receiver purchase information that can be cross-referenced against logbook data
- accurately identify and allow estimation of the annual quantum of by-catch and discards by species, including fishery species and threatened, endangered and protected species, for each major commercial fishery
- significantly reduces the time between when fishing occurs and when fisheries data is available for analyses, assessments and utilisation in management response.

GBRMPA is cognisant of the valuable past efforts of the Queensland Government to acquire recreational fisheries catch and effort data, but recognises the difficulties in acquiring recreational fisheries data. GBRMPA is supportive of the introduction of a general recreational fishing licence in Queensland which would significantly bolster the ability for fisheries managers to more accurately quantify recreational fisheries catch (including discards) and effort data. In the absence of a recreational fishing licence in Queensland, the GBRMPA supports maintenance of regular Queensland wide recreational fisheries household telephone and diary surveys, but believes that such surveys can be considerably enhanced by increased sample frame size and on-site and boat ramp surveys, validating the quantity and sizes (i.e. lengths) of recreational catches. GBRMPA is supportive of efforts for

Queensland recreational fishing surveys to be integrated with national and other State and Territory recreational fishing surveys as appropriate.

GBRMPA is supportive of the proposed reform to develop a data collection strategy for Indigenous fishing as part of the proposed Indigenous Fishing Strategy. Consistent with views previously expressed in the “Access to the resources” section of this submission, GBRMPA believes that traditional and customary rights of Traditional Owners to the fisheries resources within their recognised sea country should be an important component of any Indigenous fishing data collection strategy. The TUMRA framework may provide opportunities to cooperatively acquire and utilise data on Indigenous fishing.

All of the suggested improvements in fisheries data and information are critical to support the other proposed areas of reform identified in the green paper, particularly managing target stocks, managing impacts on the ecosystem (including non-target species), resource sharing arrangements between sectors and harvest strategies. All such proposed reforms will be compromised without appropriate resourcing of improvements to fisheries data and information.

8. Consultation and engagement

GBRMPA supports the design and introduction of an inclusive and transparent stakeholder engagement process that enables all fisheries stakeholders to have an opportunity to influence fisheries monitoring and management in Queensland.

GBRMPA encourages the formation of formal fisheries management advisory / consultative forums, similar to previous Management Advisory Committees, with invited membership from the full range of fishing related stakeholder groups, including Traditional Owners, as well as GBRMPA and appropriate environmental non-government organisations. GBRMPA supports the appointment of independent chairs to such committees.

GBRMPA is supportive of regional and community based management arrangements and encourages the incorporation of regional stakeholder advice in decision-making. GBRMPA would welcome the opportunity to provide input into the development of the future fisheries stakeholder participation models in Queensland.

GBRMPA Local Marine Advisory Committees (LMACs) are presently the only form of regional marine natural resource management engagement in the Great Barrier Reef. The LMACs are not fisheries focused but members of LMACs include fisheries stakeholders and DAF staff. Should formal fisheries management advisory / consultative forums be formed there may be opportunities to establish some cooperative understandings between such fisheries management forums and LMACs.

GBRMPA has appreciated being an invited participant of Queensland fisheries stock status determination workshops in the past few years. GBRMPA believes the inclusion of selected representative fishery stakeholders at such workshops in future years would help put into practice the desired principles of inclusive and transparent fisheries consultative and engagement systems.

9. Fisheries compliance

GBRMPA strongly believes that the implementation of an electronic position reporting system on all commercial fishing vessels operating in the Great Barrier Reef Region is the highest priority fishing-related compliance initiative that should be pursued.

GBRMPA is greatly appreciative of on-going discussions with Queensland Government agencies (particularly DAF) in this regard and looks forward to cooperatively progressing this initiative in the near future. Such an electronic position reporting system is critical to optimising the biodiversity, resilience and fisheries benefits from the joint Australian and Queensland governments' Great Barrier Reef Marine Parks' zoning. Such a system is expected to provide significant benefit to fisheries management and commercial fishing industry stewardship.

GBRMPA is supportive of further development of a risk-based and intelligence-driven fisheries compliance program and will continue to work closely with DAF in exchanging information to ensure limited compliance resources are directed at areas of highest risk. GBRMPA supports stronger inspection and entry powers to combat illegal fishing activity, particularly, but not only for, combatting black-marketing of seafood. GBRMPA also encourages any reasonable means to ensure improved compliance with ITQ and TAC fishery management requirements.

GBRMPA requests that the requirement for operators of a fishing tender vessel or dory which operates independently from a commercial primary fishing vessel (e.g. dory operators in the CRFFF) to obtain an assistant commercial fisher licence be re-introduced. The re-instatement of this licence requirement in these circumstances— a licence which can be cancelled— is seen as a critical tool in deterring recidivist fishing and zoning offenders in the Great Barrier Reef Marine Park.

GBRMPA reiterates the importance of existing fisheries legislation that make offences against s38BA of the Marine Park Act, Regs 49(2) and 51 of the Marine Park Regulation, s43 of the Queensland Marine Parks Act and s109 of the Queensland Marine Parks Regulation to remain as 'serious fisheries offences' under the *Fisheries Act 1994*. It is the existence of such regulations which provides the ability for regulators to restrict access of recidivist offenders to the Great Barrier Reef Marine Park and World Heritage Area, when appropriate.

GBRMPA requests that while a commercial primary fishing vessel is at sea, that a tender vessel or dory associated with that primary fishing vessel may not be legally considered a primary fishing vessel at any time. It is illegal for a tender vessel or dory to operate detached from the primary fishing vessel in a marine national park (green) zone and GBRMPA wishes to ensure that such management arrangements deterring illegal fishing in such zones, are enforceable. In addition, GBRMPA reiterates the importance of existing fishing legislation which requires a commercial fishing tender vessel or dory to remain within five nautical miles of their primary fishing vessel, unless on the same reef. This requirement is important in assisting aerial and sea-based surveillance to locate commercial fishing tender vessels or dories.

GBRMPA considers that the *Fisheries Act 1994* definition of a fish must have the reference to crocodiles (5(3)(a)) and protected animals under the *Nature Conservation Act 1992* (NCA) (5(3)(b)) removed to facilitate the implementation of ecosystem-based fisheries management without compensation implications. GBRMPA believes that consequential amendments to the compensation provisions should then be investigated to ensure that changes to access

entitlements can occur without compensation. In particular 42B(1)(b) *a restriction or prohibition, under the relevant amendment, of the exercise of the entitlement in an area, if the purpose of the restriction or prohibition was to protect a thing that is not a fish*” requires review. This is because GBRMPA considers it inappropriate for compensation to be paid to fishers prohibited from fishing – because an animal population was listed under NCA for being adversely affected by fishing – in instances where those fishers caused the animal to be listed under the NCA.

GBRMPA agrees that education and extension programs improve fisheries compliance. It also understands that positive incentives and stakeholder empowerment are important compliance approaches to complement enhanced penalties. Inclusive and transparent fisheries consultative systems which deliver an associated sense of stewardship have been demonstrated to improve compliance and are yet another reason why consultative mechanisms should be established.

10. Resourcing

GBRMPA recognises that all proposed reforms identified in the green paper will only be progressed to a satisfactory level with appropriate increased levels of funding and human resources. GBRMPA believes that the appropriate level of resources to apply to the management of a fishery should not be dictated by its gross value of production or some other proxy measures of the scale or importance of a fishery, but more so by the collective weighting of identified risks.

As previously advised, GBRMPA encourages the Queensland Government to review the funding that is presently allocated to management and monitoring of fisheries in Queensland and to consider all funding models where direct user beneficiaries of well managed fisheries resources are required to financially support all essential fisheries reforms. In the shorter term, extra support in the form of transitional funding to enable the implementation of proposed reforms at a rapid pace is likely to be required to achieve the identified vision and sustainably transition fisheries to the anticipated higher standards.

Given the relatively low level of financial support by the Queensland commercial fishing industry to fisheries management, GBRMPA believes there is capacity for increased commercial fisheries contribution to support management reforms, on-going management and monitoring of commercial components of fisheries in Queensland.

As previously advised in this submission GBRMPA is supportive of the introduction of a general recreational fishing licence, which have worked well in a number of other Australian states. Given the extensive recreational fishing effort that occurs in the Marine Park and World Heritage Area, GBRMPA requests input into discussions on this topic should it be promoted as a management and monitoring tool.

Priorities for fisheries management reform

GBRMPA is keen to continue and enhance its collaborative relationship with Fisheries Queensland in the design and implementation of reforms proposed in the green paper. It welcomes discussion on all related topics at the earliest opportunity.

GBRMPA considers that other fishery specific reforms that need to be progressed as a priority, while the green paper strategic reform package is developed are:

- Implementation of an electronic position reporting system on all commercial fishing vessels operating in the Great Barrier Reef Region

- Reinstatement of a statistically robust independent fisheries observer program or the use of new technologies which would fulfil the same objectives to enable monitoring of each major commercial fishery
- Reinvigoration of significant fisheries reform previously proposed in ecological risk assessments, independent reviews or management advisory fora or identified in current Environment Protection and Biodiversity Conservation Act WTO conditions and recommendations for the ECIFFF, ECOTF, and the Mud Crab (and associated Blue Swimmer Crab) fishery
- Mitigate all “very high” and “high” fishing related risks identified in the Great Barrier Reef Outlook Report 2014, with most focus being on illegal fishing and poaching and incidental catch of species of conservation concern
- Concerted efforts to appropriately reduce fishing mortality on snapper and pearl perch to support the rebuilding and recovery of these species
- Enhanced investment in fishery-dependent and fishery-independent data collection for agreed commercially and recreationally important exploited species to enable robust stock assessments to be undertaken; and
- Development of an Indigenous Fishing Strategy incorporating advice provided in this submission.

GBRMPA thanks you for your consideration of its submission.

Yours sincerely

Bruce Elliot
General Manager
Biodiversity Conservation and Sustainable Use

14 October 2016

cc: Suzy O'Brien, Coordinator, Parks Australia

Nathan Hanna, Director Sustainable Fisheries Wildlife, Heritage and Marine Division,
Australian Government Department of the Environment and Energy