

Submission by the Great Barrier Reef Marine Park Authority to MRAG Asia Pacific on the review of fisheries arrangements in Queensland

The Great Barrier Reef Marine Park Authority (GBRMPA) is the Australian Government statutory authority with responsibility for the long-term protection and conservation of the environment, biodiversity and heritage values of the Great Barrier Reef (GBR). The *Great Barrier Reef Marine Park Act 1975* in establishing the Authority also recognises the social and economic importance of the GBR. Subject to meeting that primary responsibility of protection and conservation, the GBRMPA is also charged with providing for ecologically sustainable use of the GBR and for regulating that use to ensure that it is undertaken in a manner that is consistent with ecosystem based management and the principles of ecologically sustainable use.

Fishing on the GBR is an important pastime and source of income for both Queensland coastal communities and the seafood industry. The GBR supports a substantial proportion of Queensland's commercial, recreational, Indigenous and charter fishing, targeting a range of species including fish, sharks, crabs and prawns.

The MRAG Asia Pacific review team has been tasked with conducting an independent review to inform the review of fisheries in Queensland. The GBRMPA appreciates the opportunity to meet with you to discuss fishing review related matters in the GBR and we provide this submission for your consideration.

Executive Summary

The GBRMPA considers the following recommendations are critical to the ecologically sustainable management of fishing and the collection of fisheries resources in the GBR Marine Park and World Heritage Area. The GBRMPA strongly encourages consideration of these recommendations in the review of fisheries management in Queensland:

A) Highest standards for activities including fishing in the Great Barrier Reef Marine Park (GBRMP) & World Heritage Area (WHA)

Ecologically sustainable use is a requirement under the Great Barrier Reef Marine Park Act 1975

Recommendations:

1) Explicitly recognise and incorporate into any subsequently revised Queensland Fisheries legislation the principle that the GBR Intergovernmental Agreement and GBRMP legislation are critical parts of the operational and legislative context for Queensland fisheries.

2) Fishery management arrangements for Queensland fisheries that include a GBR component must be consistent with the ecologically sustainable use requirements of the *Great Barrier Reef Marine Park Act 1975*, and such fishing and collecting activities must be ecologically sustainable.

Upper end of best practice fisheries management in the GBR World Heritage Area

Recommendation:

3) Ensure that fisheries management arrangements for the GBRWHA explicitly recognise World Heritage Area obligations and operate in the upper end of best practice standards required for such fisheries.

Ecological sustainability comes first in GBRMP and WHA

Recommendation:

4) Explicitly recognise and incorporate into the review and any subsequently revised Queensland Fisheries legislation that environmental and resource sustainability objectives have priority in the GBRMP and WHA, with social and economic objectives critical, but next in line.

B) Demonstrably ensuring sustainability of fished resources and the broader environment

Identification and recognition of direct and in-direct fishing related priority risks

Recommendation:

5) Explicitly recognise in the Queensland Fisheries review and future management arrangements identified or emerging resource sustainability concerns at a stock and / or regional level and very high and high fishing-related risks already identified for the GBR.

Mitigating the very high and high risks related to fishing and implement improvements to the ecological sustainability of fisheries in the GBRMP and WHA

Recommendations:

6) The eight core management systems and processes for fisheries as identified by MRAG in their review consultation should include a) incorporation of ecological risks and impacts throughout the entire overarching framework and b) actions to mitigate priority risks.

7) The already identified very high and high risks related to fishing in the GBR should be explicitly incorporated into the overarching framework and, where appropriate, risks mitigated with timely and effective fishery management interventions.

Environmental safeguards need to be maintained and improved

Recommendation:

8) In the GBRMP and WHA, existing levels of environmental protection from fishing should, at the very least, be maintained; environmental safeguards should be improved; and management strategies should seek to improve the desired biomass levels of exploited fish stocks to levels more conservative than maximum economic yield (i.e. > 60% virgin biomass).

The GBR multiple use Marine Park supports and relies upon ecologically sustainable fisheries management

Recommendation:

9) Explicitly recognise and incorporate into the review and any subsequently revised Queensland Fisheries legislation the benefits to fisheries of the GBRMP zoning and the importance of having responsible and best practice fisheries management arrangements in all available fished areas of the GBRMP.

Consideration, adherence and implementation of fisheries management arrangements with previously negotiated and agreed outcomes

Recommendation:

10) All recommended and agreed fishery management changes in the past decade that have not been implemented, should be immediately reviewed under responsible consultation arrangements recommended by the MRAG review. Where net environmental benefits are identified, these changes should be immediately implemented.

C) Take account of current and likely future conditions and circumstances

Recognise the poor and worsening outlook for the Great Barrier Reef

Recommendation:

11) Responsible government agencies cooperatively reach, with urgency, the recommended higher standards of fisheries management in the GBR.

12) Key strategy and policy documents for the GBR are incorporated into the fisheries review and future management arrangements.

Anticipatory management to set Queensland fisheries on the right path

Recommendation:

13) The review should recognise that future conditions for fisheries will be different and uncertainty will increase as the climate changes. In being cognisant of anticipatory and adaptive management principles, any overarching fisheries framework the review produces should seek to enable Queensland's fisheries to overcome likely challenges and flexibly respond to opportunities.

D) Systems and processes for fisheries management (as identified by MRAG Asia Pacific)

Recommendation:

14) The GBRMPA strongly support efforts by MRAG Asia Pacific to identify necessary improvements under the eight core elements of responsible fisheries management, and requests that our recommendations in this document, and matters raised under each of these core elements, be fully considered.

Full Submission

In considering future management of Queensland fisheries, it is important that full recognition be given to previous agreements between Governments, agencies and stakeholders. The GBRMPA considers the following to be key considerations and recommendations relevant to the management of fishing and the collection of fisheries resources in the Great Barrier Reef (GBR).

A) High standards for activities including fishing in the Great Barrier Reef Marine Park (GBRMP) and World Heritage Area (WHA).

Ecologically sustainable use is a requirement under the Great Barrier Reef Marine Park Act 1975

- A considerable portion of Queensland fisheries operate in the GBRMP and WHA. The primary object of the *Great Barrier Reef Marine Park Act 1975* is long-term protection and conservation of the environment, biodiversity and heritage values of the GBR Region.
- Subject to meeting the requirements of the *Great Barrier Reef Marine Park Act 1975*, the Offshore Constitutional Settlement provides for fishing activities that occur within the GBR Region to be managed by the State of Queensland.
- The GBR Intergovernmental Agreement (IGA) is in place between the Commonwealth of Australia and the State of Queensland relating to the protection and management of the GBR. Among other things, the IGA covers fishing and recognises the long-term protection and conservation of the environment, biodiversity and heritage values of GBR as a shared objective by both governments.
- The IGA specifically refers to Australia's responsibility as a signatory to the World Heritage Convention, including ensuring that the World Heritage values of the GBRWHA are maintained and transmitted to future generations.
- Ecologically sustainable use definitions and requirements of the *Great Barrier Reef Marine Park Act 1975* are in Attachment A.

Recommendations:

1) Explicitly recognise and incorporate into any subsequently revised Queensland Fisheries legislation the principle that the GBR IGA and GBRMP legislation are critical parts of the operational and legislative context for Queensland fisheries.

2) Fishery management arrangements for Queensland fisheries that include a GBR component must be consistent with the ecologically sustainable use requirements of the *Great Barrier Reef Marine Park Act 1975*, and such fishing and collecting activities must be ecologically sustainable.

Upper end of best practice fisheries management in the GBRMP and WHA

- In the GBRMP and WHA higher standards of demonstrable ecological sustainability compared to other areas are expected by the Australian Government and the wider Community.
 - Ideally, all fisheries, regardless of their fishery area, would incorporate best practice management arrangements. However, the use of such practices is particularly important for fisheries that include areas of national importance, such as the GBRWHA.
 - The GBRMP has a special status, as it is the substantial part of a World Heritage Area and a separate matter of national environmental significance in its own right under the Environment Protection and Biodiversity Conservation (EPBC) Act 1999.
 - The nature of Queensland's fisheries (with substantial environmental interactions and some remaining high risks) and their geographical location, many in large part within the GBRWHA, are reasons that these fisheries should be operating at the upper end of best practice fisheries management.

- The *Gunn et. al. 2008 Independent Review of the Proposed Management Arrangements for East Coast Inshore Fin Fish Fishery* (ECIFFF) made similar conclusions about the need to improve the management of this fishery in the GBRWHA.
- Such WHA considerations are explicit in EPBC Act assessments of fisheries where possible impacts of their operation on the GBRWHA are required to be assessed.
- The GBRMPA strongly encourages MRAG Asia Pacific to ensure the review identifies improved measures to ensure best practice and the desired responsible management for all fisheries operating in the GBRWHA.
 - The EPBC assessment process for Queensland-managed fisheries provides evidence that many of these fisheries are not yet at this standard (e.g. ECIFFF, East Coast Otter Trawl Fishery).
- Where specific gaps are identified, the GBRMPA encourages timely address and a framework to promote continuous fisheries management and monitoring improvements.

Recommendation:

3) Ensure that fisheries management arrangements for the GBRWHA explicitly recognise World Heritage Area obligations and operate in the upper end of best practice standards required for such fisheries.

Ecological sustainability comes first in GBRMP and WHA

- The GBR IGA recognises that fishing and the collection of fisheries resources is of social, cultural and economic importance to Queensland and is a long established and legitimate use of the GBRWHA. Viable commercial fishing industries depend on a healthy ecosystem, just as Queenslanders rely on a healthy reef ecosystem for recreation and as a source of local seafood.
- Fishery management and operations need to be consistent with protecting the environment and apply an appropriate level of precaution in decision-making given the World Heritage status, substantial environmental interactions with fishing activities, conservation status of protected species and concerns about at-risk species, cumulative impacts on the marine environment, lack of knowledge of the status of many fishery resources, and limited data available to gauge sustainability and manage the fisheries.
- Conservation is included in the main purpose of the *Fisheries Act 1994 (Qld)* which states *'The main purpose of this Act is to provide for the use, conservation and enhancement of the community's fisheries resources and fish habitats in a way that seeks to— (a) apply and balance the principles of ecologically sustainable development; and (b) promote ecologically sustainable development.[section 3].* Further, section 3 of the *Fisheries Act 1994 (Qld)* allows for the relative emphasis on the various principles of ecologically sustainable development to be varied depending on the circumstances. The GBRMPA's view is that environmental principles (c) protecting biological diversity, ecological processes and life-support systems and (i) the precautionary principle should be given the greatest weighting in the GBRWHA, consistent with the GBRMP Act.
- 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.
- The *Gunn et. al. 2008 Independent Review of the Proposed Management Arrangements for East Coast Inshore Fin Fish Fishery* (ECIFFF) argued such an ecological weighting for the fishery would be more in line with contemporary application of the ESD principles: *"While it is important that social and economic issues are considered in the ESD framework, particularly given that access in this fishery is shared between competing users, the Panel believes that even greater weighting should be given to ecological/ sustainability considerations since the fishery operates (at least in part) in the GBRWHA. Such a shift in emphasis would be more in line with contemporary application of the ESD principles."*

Recommendation:

4) Explicitly recognise and incorporate into the review and any subsequently revised Queensland Fisheries legislation that environmental and resource sustainability objectives have priority in the GBRMP and WHA, with social and economic objectives critical, but next in line.

B) Demonstrably ensuring sustainability of fished resources and the broader environment

Identification and recognition of direct and indirect fishing related priority risks

- To ensure sustainability of fished resources and the broader environment the priority risks requiring address need to be identified and recognised.
- Resource sustainability concerns at stock and / or regional levels in the GBRWHA have been identified for a number of species including snapper, golden snapper, grey mackerel, Spanish mackerel, tropical threadfins, and some species of sharks, while the stock status of many important exploited species is undefined.
- The GBR Outlook Report 2014 identifies substantial fishing related interactions with very high and high risks, including:
 - Extraction of predators
 - Discarded catch
 - Extraction from spawning aggregations
 - Incidental catch of species of conservation concern
 - Illegal fishing and poaching
- Fished resources and supporting habitats are also under pressure from non-fishing pressures, and vulnerable to climate change and extreme weather. Non-fishing indirect very high and high risks that affect fish and fisheries identified in GBR Outlook Report 2014 include:
 - barriers to flow, pesticide run off, sediment run-off, dredge material disposal, modifying coastal habitats, altered weather patterns, sea temperature increase and ocean acidification.
- These increasing pressures may affect the quality of seafood and fishing experiences.
- Fishing impacts are some of the pressures that can potentially be managed to support ecological resilience, and in turn to sustain fisheries into the future.

Recommendation:

5) Explicitly recognise in the Queensland Fisheries review and future management arrangements identified or emerging resource sustainability concerns at a stock and / or regional levels and very high and high risk fishing related risks already identified for the GBR.

Mitigating the very high and high risks related to fishing and implement improvements to the ecological sustainability of fisheries in the GBRMP and WHA

- The GBRMPA recognises the good progress made towards environmental sustainability of Queensland's fisheries over the preceding years but there is still much scope for improvement.
- Addressing identified ecological risks in partnership between Government and industry is a priority to ensure long-term sustainability.
- Responsible fishery management and practices helps to ensure ongoing access to fishery resources, providing certainty for fishers / fishing-related businesses and social acceptability of fishing.
- The GBR IGA 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.”*
- Good progress has been made in identifying remaining risks for several fisheries but progress in addressing risks has been slow in recent years. Greater focus is needed on risk mitigation and risk monitoring, not just on risk analysis. The GBRMPA welcomes further opportunities to work with Fisheries Queensland and the fishing industry on solutions.

- e.g. *Trawl ecological risk assessment. Some high risks yet to be mitigated for 11 species of sharks and rays, deepwater habitat, and sea snakes.*
- e.g. *Extraction of Spawning Aggregations. Concerns documented about targeted spawning aggregation fishing of a number of species including those in inshore environments but little, if anything done to assess or consider management interventions.*

Recommendations:

6) The eight core management systems and processes for fisheries as identified by MRAG in their review consultation should include a) incorporation of ecological risks and impacts throughout the entire overarching framework and b) actions to mitigate priority risks.

7) The already identified very high and high risks related to fishing in the GBR should be explicitly incorporated into the overarching framework and where appropriate, risks mitigated with timely and effective fishery management interventions.

Environmental safeguards need to be maintained and improved

- Promotion of simplicity and streamlining of regulatory and management arrangements is recognised in the GBR IGA, and current priorities of both governments.
- The need for increased flexibility of fishery management arrangements has also been recognised in climate change adaptation planning with the fishing industry and in management reviews.
- Overall, there is a clear case for improving environmental safeguards, not just simplifying regulation or maintaining existing levels of protection. Fisheries management strategies designed to maintain enhanced levels of biomass of fished species in the GBRMP and WHA compared to standards used elsewhere have been and are encouraged. For example the recent draft Reef 2050 Long Term Sustainability Plan recognised that coral trout populations should be managed to ensure stock levels were at 60% of the level prior to commencement of fishing. These concepts need to be recognised, and more broadly applied, in the development of future fishery legislation and management.
- In reviewing existing regulatory and management arrangements for fishing, it is important that the management intent of existing arrangements is clearly understood. For example, some of the existing fishing efficiency constraints (such as many fishery input controls) provide important fisheries resource and environmental protection and/or sustain fishery resources (e.g. by limiting the environmental footprint or protecting juveniles).
- Important fishery input controls should not automatically be discarded because a fishery proceeds to an output control mechanism.

Recommendation:

8) In the GBRMP and WHA, existing levels of environmental protection from fishing should, at the very least, be maintained; environmental safeguards should be improved; and management strategies should seek to improve the desired biomass levels of exploited fish stocks to levels more conservative than maximum economic yield (i.e. > 60% virgin biomass).

The GBR multiple use Marine Park supports and relies upon ecologically sustainable fisheries management

- The GBRMP is managed as a multiple use marine park and fishing is permitted in about 67% of the area.
- The Authority recognises commercial, recreational, charter and traditional fishing interests within the GBRMP and strongly supports these ongoing fisheries operating in an ecologically sustainable manner.

- There are demonstrated ecological and fisheries benefits from the network of no-take areas established by the *Great Barrier Reef Marine Park Zoning Plan 2003* and the *Great Barrier Reef Coastal Marine Park Zoning Plan 2003*.
- The benefits to fisheries of the GBR network of no-take areas are publicised by Fisheries QLD in various documentation but mostly silent in fisheries legislation and key policy documents. The South Australian Fisheries legislation example leading to Recommendation 4 of this submission is a model to follow with respect to fisheries legislation supporting marine parks and conservation legislation.
- The resilience and integrity of the GBRMP and WHA relies on having responsible and best practice fisheries management arrangements in all available fished areas.

Recommendation:

9) Explicitly recognise and incorporate into the review and any subsequently revised Queensland Fisheries legislation the benefits to fisheries of the GBRMP zoning and the importance of having responsible and best practice fisheries management arrangements in all available fished areas of the GBRMP.

Consideration, adherence and implementation of fisheries management arrangements with previously negotiated and agreed outcomes

- Management arrangements relevant to fishing and the collection of fisheries resources in the GBRMP and WHA need to consider and adhere to previously negotiated and agreed outcomes to protect the GBR (e.g. GBR IGA).
- There has been high level and stakeholder agreement in a number of Queensland fisheries to implement a range of management interventions which have never occurred. This is particularly the case in the East Coast Otter Trawl Fishery and the East Coast Inshore Fin Fish Fishery.

Recommendation:

10) All recommended and agreed fishery management changes in the past decade that have not been implemented, should be immediately reviewed under responsible consultation arrangements recommended by the MRAG review. Where net environmental benefits are identified, these changes should be immediately implemented.

C) Take account of current and likely future conditions and circumstances

Recognise the poor and worsening outlook for the Great Barrier Reef

- In light of the poor and worsening outlook for the GBR ecosystem, there is some urgency to reaching higher standards of fisheries management in Queensland. Obtaining higher standards of fisheries management will have long-term benefits to fisheries.
- The development of future management arrangements for fisheries should consider linkages and priorities relevant to fisheries management identified in key strategy and policy documents for the GBR (e.g. GBR Strategic Assessment and Program Report 2014, GBR Outlook Report 2014, GBR Biodiversity Conservation Strategy 2013), many of which were developed with input from Queensland agencies and fishery stakeholders.

Recommendations:

11) Responsible government agencies cooperatively reach, with urgency, the recommended higher standards of fisheries management in the GBR
 12) Key strategy and policy documents for the GBR are incorporated into the fisheries review and future management arrangements.

Anticipatory management to set Queensland fisheries on the right path

- There is growing scientific evidence that fish and fisheries are vulnerable to climate change and ocean acidification. The need to explicitly consider frameworks for adaptive fisheries management aimed to deliver increased resilience to the GBR and dependent fishing industries has been recognised with some fishery adaptation planning undertaken in Queensland in partnership with resource managers and industry. However, there are few early warning systems in place and fishery contingency plans (e.g. for responses to extreme weather) are lacking for most sectors.
- Future arrangements for fisheries need to take account of substantial (non-fishing) pressures on fished resources and supporting habitats. Arrangements also need to consider external influences on fisheries (e.g. fuel costs, exchange rates, social trends, technology, market demands) and how these might change in the future.
- Fishery assessments, forecasts and management need to include due consideration of environmental influences and resource condition, e.g. taking account of changing productivity of stocks (now and into future).
- The GBRMPA will be interested in the Review team's advice regarding future challenges as well as today's challenges for fisheries. e.g. How can the right drivers be set in place for future adjustment and reform to continue? What contingency planning is needed?

Recommendation:

13) The review should recognise that future conditions for fisheries will be different and uncertainty will increase as the climate changes. In being cognisant of anticipatory and adaptive management principles, any overarching fisheries framework the review produces should seek to enable Queensland's fisheries to overcome likely challenges and flexibly respond to opportunities.

D) Systems and processes for fisheries management

The GBRMPA supports the concept of assessing a system of eight components of fisheries management that MRAG Asia Pacific has communicated during the QLD Fisheries review consultation process. The GBRMPA also shares MRAG Asia Pacific's general view that improvements are required with respect to fisheries in Queensland. In addition to those specific GBR matters that the GBRMPA has raised in Parts A-C of this submission, the GBRMPA offers the following specific comments with respect to each of MRAG Asia Pacific's system components.

1) Policy, legislation and effective decision making

- A clear statement and vision about the target condition of fisheries and fish stocks in a decade that gives due consideration to environmental sustainability (see our Submission Parts A-C).
- Discontinue the use of general fisheries permits to provide exemptions from fisheries rules. Such discontinuation should not automatically mean that long-standing fisheries operational procedures allowed by such permitting, will continue.
- The GBR ecosystem is unlikely to be under-exploited. Accordingly, the GBRMPA's general view is that any developmental fisheries should be limited to improvement of existing fisheries and generally does not support developmental fishing for resources that are not presently harvested.
- Policy development should provide and support regional management and resource allocation and sharing.
- The management of recreational fishing effort and harvests in the GBRMP and WHA should be identified as a significant policy issue requiring innovative solutions over the next decade.
- The Queensland Government should oversee and set frameworks / bounds of responsibilities and direction of fisheries management. Government should not be required to approve or disallow specific and detailed technical fisheries science and management decisions.

- Specific fisheries management, responses, quota setting etc., should be determined by fisheries managers within pre-determined frameworks in direct consultation with fisheries stakeholders and marine park managers.
- Agreed outcomes of management reviews and actions to address fishery impacts and risks need to be implemented in a timely way.
- The GBRMPA sees an important role for stewardship/partnerships with respect to responsible marine resource conservation and use (including fisheries management) into the future.

2) **Allocation and harvest control systems**

- For fished species, the relative abundance, size and age composition and natural sex structures of populations should be conserved to ensure ecological functions are maintained.
- There needs to be an appropriate level of precaution in setting and controlling the allowable level of fishing effort in the GBR.
- The development and implementation of a Queensland Fishery Harvest Strategy Policy, Ecological Risk Assessments (ERA) and subsequent Fisheries Harvest Strategies is seen as a critical component of ecologically sustainable fisheries management.
- A Harvest Strategy Policy should not only operationalise environmental and economic objectives for the target stocks, but also give due consideration to a) broader environmental aspects beyond the target stock itself to minimise ecological risks/meet environmental objectives and b) social aspects relevant to harvest strategy development.
- Harvest strategies should explicitly manage catch and/or effort in order to 1) actively control exploitation rates and respond to fishing catches / pressure on a species or in an area and 2) control and respond to environmental impacts including minimising bycatch and protected species interactions.
- The GBRMPA is recommending that fished stocks in the GBRWHA should have a biomass target point of 60% virgin biomass.
- Harvest strategies should specify pre-determined management actions in a fishery to achieve triple bottom line management objectives via monitoring, assessment and decision rules. It is important that the actions are fully defined, bring about change and are achievable; it is not sufficient for the action to “review” and “consider what to do next”.
- Moves towards electronic fishery data reporting, collection of near real-time fishery data and adaptive management are strongly supported.
- The Total Allowable Catch (TAC) system is unlikely to be the most appropriate management mechanism in tropical environments that are subject to major environmental variability, and elevated and reduced fisheries recruitment events. Total Allowable Effort (TAE) much more likely suits to multi-species fisheries such as East Coast Inshore Fin Fish Fishery.
- Robust and enforceable audit systems are required for Total Allowable Catch and Individual Transferable Quota reporting, monitoring, and compliance.
- Categories such as Other Species (OS) in the Coral Reef Fin Fish Fishery TAC require review given the category covers over 100 species with highly varied ecological risk and market / social value.
- In fisheries where a TAC exists, or historical harvests are known, other sector allocation, including for Traditional Owners, needs to be explicitly quantified.
- The non-use values of marine species and habitats also need to be recognised, and sometimes these non-use values (including some for which the GBR was listed as a WHA) may outweigh fishing as an extractive use even when high standards can be met.
- An external independent panel to explicitly determine respective resource allocations between fishing and other fishery stakeholder sectors, and among fishing sectors may assist with fishery resource allocation processes.
- Mechanisms to facilitate structural adjustments should be developed, e.g. Commercial Fisheries Structural Adjustment Fund.
- Total allowed catch/effort in fisheries should be reviewed as some are based on historic levels rather than sustainability criteria with present levels in some fisheries having been identified

as excessive (e.g. ECIFFF and ECOTF). In setting future allowable levels of fishing effort, there is a critical need to consider all ecosystem components that interact with a fishery - not just fished stocks, as well as social and economic aspects.

- There is over-capacity in some commercial fisheries that operate in the GBR with existing management controls unable to prevent over-fishing at a regional scale or stock level, or control ecological risks. This issue has been clearly recognised again in the ECIFFF and ECOTF. Improved marine stewardship and compliance is likely to lead to increased economic viability.
- Management mechanisms need to be able to adjust for factors including ongoing effort and technical creep as a result of improved efficiencies or technological advances.
- There should be consideration of further input controls and other novel approaches for ensuring overall fishing effort, including recreational fishing effort, is sustainable into the future.

3) Monitoring, information collection and analysis

- Explicit monitoring programs to assess the broader ecosystem effects of fishing should be established and alignment with environmental reporting systems and processes should be improved.
- Stock discrimination information for most fisheries resources is lacking. The whole of the Queensland east coast is the default unit for any stock status assessment and stock assessment (if it is undertaken). More definitive determination on the stock structure of most fisheries resource is required.
- Additionally, in most stock status assessments and stock assessments there is inadequate consideration of local or regional components of fish stocks. With increasing human populations along the urban coasts in particular, more consideration needs to be given to such assessments.
- In the most recent QLD stock status report in 2012 only 23 species of 78 (37%) QLD fisheries resource species were able to be defined. The remaining 63% were either uncertain or undefined. The number of fish species for which a definitive stock status is determined needs to be significantly increased.
- There is insufficient fishery-dependent and fishery-independent data collected on most exploited fish species to enable robust stock assessments to be undertaken. The number of fish species on which robust stock assessments should be undertaken needs to be significantly increased.
- Additional key species where insufficient fishery-dependent and fishery-independent data are collected; a definitive stock status should be determined; and consideration of a stock assessment should be undertaken include: queenfish, black jew, barred grunter, garfish, golden snapper and key species of shark. Similar monitoring and assessment work is required on a number of key coral reef fin fish species.
- There are increasing efforts to better understand the social, cultural and economic values of commercial, recreational, charter and Indigenous fisheries and such increased efforts should be further encouraged.
- There are moves towards collection of near real-time fishery data via electronic fishery data reporting. Such efforts should be further encouraged.
- Some advanced risk analyses of fisheries, including ecological risk assessments have been undertaken. These risk analyses should continue, and identified risks and risk mitigation measures should subsequently be monitored and reported upon.
- A review of the survey sample frame and monitoring of recreational fisheries, particularly in the GBR region needs to be undertaken. The telephone recreational fishing surveys and associated diaries focused on the south east Queensland population and subsequent extrapolated harvest estimates are generally inadequate to determine GBR region boat based recreational fish harvest estimates. A recreational fishing licence would, in addition to generating valuable funds to support recreational fisheries monitoring, management and

enhancement programs, also provide a valuable alternative sample frame to estimate such recreational fishing effort and harvests.

- There is limited or no auditing of commercial logbook returns with other marketing paperwork / quota reporting. A review of the commercial logbook program with the aim of making the commercial data collected as accurate as possible should be encouraged.
- A reliable monitoring and reporting system to accurately identify and estimate the annual quantum of bycatch and discards by species, including species of conservation concern, for each major commercial fishery should be introduced. Consideration should be given to reinstatement of the independent fisheries observer program or a similar monitoring program using camera or similar technologies. SOCI logbooks need to be complemented by an independent supporting program and all data sources, including strandings and compliance data, should be used to quantify interactions.
- Environmental changes in productivity of stocks (e.g. due to environmental impacts or disease) may already be affecting some stocks, and are likely to be increasingly influential on fishery resources in Queensland. To improve the ability to assess, forecast and manage stocks, some understanding of the influences of environmental / ocean / climate conditions and change is required. A few projects are working in this area (e.g. for coral trout and scallops). Future fisheries assessments and management needs to give greater consideration to these aspects.

4) Management of non-target species

- It is not acceptable for any party to contend that species of conservation concern and general bycatch species in the GBRMP and WHA are adequately protected by no-take zones. Explicit management of non-target species that are captured in or interact with fisheries must be integral in the management of all fisheries.
- The GBRMPA recognises the good progress made by the fishing industry in this area over the last two decades, e.g. mandatory use of turtle excluder devices in otter trawl fishery.
- Management needs to explicitly consider all of the ecosystem components that fisheries interact with. Non-target species include byproduct, bycatch, and species of conservation concern that are protected by law or require special management, as well as habitats and ecosystem processes.
- Fisheries need to be demonstrably selective for species at low risk and ecologically sustainable. Further improvements are required to meet this selectivity principle and to mitigate identified risks for the ECIFFF and ECTF in particular.
- The incidental catch of protected species or other species of conservation concern is potentially more problematic than for other bycatch species because even low levels of mortality may put species of conservation concern at risk or compromise the ability of generally depleted populations to rebuild.
- The incidental entanglement and mortality of species including dugong and inshore dolphins, and the lack of reporting of such incidents, remains a significant concern in the ECIFFF.
- Many shark and ray species are highly susceptible to overfishing, and there are ongoing concerns about whether the current level of fishing mortality is sustainable. Key fishing gears interacting with sharks include net, line and trawl, and all these are still interacting with at-risk species. The TACC for shark was introduced on an interim basis in 2009 and a robust risk-based review of this interim TACC is required.
- The proposed new fisheries framework should consider ecological aspects under each of the 8 systems and processes identified by MRAG Asia Pacific. These should not just occur under the fourth **Management of non-target species**. Examples include (but are not limited to):
 - **Policy, legislation and effective decision-making** should implement an ecosystem-based approach to management and seek to support relevant conservation legislation (e.g. reflected in vision, new legislation and taken into account in decision-making);
 - **Harvest control rules** should ensure exploitation levels are low risk for non-target species and habitats, as well as for key fishery species;

- **Monitoring, information collection and analysis** should include non-target species and the broader environment, not just target species, and align with other reporting;
 - **Compliance** to manage non-target species (e.g compliance with TEDs and BRDs, net attendance, compliance with species-species rules in the CRFFF designed to protect fish such as Queensland grouper and other species that can be rapidly depleted);
 - **Stakeholder participation** - fishery management should consider all use and non-use values and include all relevant stakeholders, including Traditional Owners, and agencies in their consultation;
 - **Performance review** systems should be revised and include targets and performance monitoring to address ecological impacts and monitor ecological risks (e.g. bycatch reduction targets for trawl); and
 - **Resourcing** and/or industry contribution should be adequate to provide for fishery observer program or similar.
- To meet responsibilities, there is a critical need to reinstate an independent commercial fishery observer program, or independent technology achieving the same ends, as discussed in 3 above, with annual analysis and public reporting of data. The program needs to be statistically robust, with an appropriate level of coverage to validate logbook estimates of total removals, species composition data for difficult-to-identify species including sharks, discard levels and interaction with protected species and sharks and rays across all sectors of the major commercial fisheries.
 - Some fisheries still have a substantial bycatch (e.g. in the trawl fishery, which consists mainly of small fish, crabs, non-target penaeid prawns and numerous other seafloor-dwelling invertebrate species including sponges, sea stars and gastropod shellfish, as well as some species of conservation concern). Further investigation of opportunities to reduce bycatch – with flow on benefits for industry (e.g. improvements in the efficiency of operations and product quality), as well as the environment should be encouraged.
 - Mechanisms to explicitly promote the use of ecologically responsible fishing gears, innovation and improvement in bycatch reduction in all fisheries should also be encouraged.

5) Compliance

- Introduction of a vessel monitoring system / electronic position system covering all commercial fishing vessels operating in the GBRMP is the highest priority compliance initiative being sought by the GBRMPA.
- Such an enhanced compliance system is critical to optimise the biodiversity, resilience and fisheries benefits from the GBRMP Zoning.
- Vessel monitoring would also have substantial benefits to fisheries management and industry stewardship, including providing finer scale data on fishing effort, removing the need for prior reporting of landings, allowing fishing businesses to improve their own efficiency and allowing the industry to demonstrate improved environmental credentials.
- It is recognised there is an inadequacy of fisheries enforcement and compliance resources in Queensland and similar resourcing challenges are being faced by the GBRMPA. A vessel monitoring system / electronic position system covering all commercial fishing vessels operating in the GBRMP would free up existing compliance resources to address key GBRMP compliance concerns not being adequately addressed.
- There is good cooperation between Government agencies in the enforcement and compliance of fishing related activities in the GBR. However, there is scope for enhanced cooperation to ensure fishing offences in the GBRMP are prosecuted in accordance with legislation likely to deliver best opportunity for successful prosecution and maximum penalty. Penalties for recidivist offenders need to be strengthened.
- It is also nearly impossible to monitor and enforce overall TACs for some commercial fisheries where cumulative catches are just reported in logbooks. Incidental catch provisions not contributing to the accumulation of some TACs further erodes the integrity of TACs as an output fisheries management tool in Queensland. The small percentage of prior reporting

landing inspections of individual transferable quota (ITQ) TAC managed fisheries further erodes this integrity.

6) Stakeholder participation

- The GBRMPA is appreciative of their invited membership of the Line Review Group and the Netting Buyback Working Group.
- The GBRMPA and Fisheries QLD presently conduct informal biannual joint meetings. These meetings are of significant benefit to both agencies and should be continued.
- The GBRMPA Local Marine Advisory Committees (LMACs) are presently the only form of regional marine natural resource management engagement in the GBR. The LMACs are not fisheries focused but sometimes discussion is in this area. There are no formal lines of feedback from LMACs to Fisheries Queensland.
- Transparent systems for fisheries stakeholders to have their say in fisheries monitoring and management need to be designed and introduced. Strong consideration should be given to the reformation of formal fisheries management advisory / consultative forums which include invited representation from the full range of fishing related stakeholder groups, including Traditional Owners, as well as the GBRMPA.
- The inclusion of a limited number of external fishery stakeholders in fishery stock status determination workshops will further contribute to a transparent fisheries stakeholder consultation framework.
- The concept of regional co-management of fisheries and other marine resources is strongly supported by the GBRMPA. In designing formal fisheries management advisory / consultative forums consideration may be given to development of an engagement model that works towards or includes the ability to incorporate some regional decision making.
- As GBRMP legislation has specific links to Queensland fisheries legislation, the GBRMPA requires to be involved in detailed discussions about any changes in fisheries management that might affect GBR values. (e.g. *IGA Schedule E, page 5* includes agreement that relevant Australian and Queensland Government agencies (i.e. Fisheries Queensland, GBRMPA, and the Department of the Environment) should discuss policy and management proposals for fishing formulated by either government at the earliest possible stage). Though there are good working relationships between managers from both agencies, the discussion of policy and management proposals is not consistently approached with the GBRMPA.

7) Performance review

- The existing performance review systems need overhaul to have any effectiveness and deliver transparency. Most Fishery Performance Measurement Systems for Queensland fisheries are out of date, with many triggers either not measured or triggered with no management consideration or response.
- As noted in Section C of our submission, there is a need to take account of current and likely future conditions and circumstances, and the performance review system should allow for the management system to be optimised to best achieve management objectives.
- Performance measures aimed at reducing bycatch levels and plans to achieve this should be agreed.
- Robust work was done by Fisheries Queensland (2009 - 2012+) on the Trawl Plan Review, in close consultation with trawl fishery stakeholders. In 2012, all members of the two advisory groups (technical, scientific) reached a consensus position that significant reform of the current management arrangements is required to ensure the ecologically and economically sustainable future of the fishery, and agreed on a solution that delivers on the different needs of all stakeholders. A contemporary performance review of this fishery would demonstrate that agreed high level solutions for the fishery still need to be implemented.
- Following on from the current fisheries review, timelines and structure for intensive reviews of key fisheries – East Coast Inshore Fin Fish Fishery and Coral Reef Fin Fish Fishery and associated Spanish Mackerel fishery should be undertaken.

- Extreme weather events including floods and cyclones can have significant effects on fishing, particularly commercial fishing. These effects include significant large scale fleet movements and economic hardship. These effects can have secondary consequences for stocks and the environment. Extreme weather is predicted to become more frequent and/or more severe (depending on the type of weather) with advancing climate change. Future fisheries management needs to incorporate both long-term considerations of adaptation to climate change, and short-term flexibility for fisheries managers and fishers to respond to extreme weather events.

8) Resourcing

- Resourcing of fishery management, science, monitoring and enforcement is already stretched, and some critical elements such as the fishery observer program are currently not funded.
- The GBRMP agrees that any revised Queensland fisheries management system needs to be adequately resourced. This funding base needs to support sustainable improvements to all of the seven preceding systems and processes for fisheries in Queensland. It needs to fund the development, implementation and enforcement of the revised management framework following the current review, and also fund the further work previously identified on specific fisheries (e.g. to complete East Coast Trawl Plan Review implementation and Phase 2 of the ECIFFF management interventions).
- The *Gunn et. al. 2008 Independent Review of the Proposed Management Arrangements for East Coast Inshore Finfish Fishery (ECIFF)* is relevant in considering resourcing. It stated *“The Panel noted that in a best practice fisheries management framework, the scale of a fishery (geographic, landed volume, value and number of operators) should not dictate the levels of risk accepted by managers, nor the fisheries management arrangements applied to minimizing the ecological risk. In the case of the ECIFF the Panel is of the view that its location within a World Heritage Area, the ecological risk profiles of target and by-product species, and the known (and potential) interactions with protected species should be the primary determinants of the management framework and resources applied to the fishery.”*
- Commercial fisheries are likely to be required to undertake structural adjustment into the future. The development of a commercial fisheries adjustment fund, such as that which exists in WA where commercial fishers contribute a small levy annually to support future fishery structural adjustment as required, is seen as a responsible initiative. Additional funds from Government may complement this fund as required, as could funds from a sustainable recreational fishing licence to deliver on agreed structural adjustment outcomes.
- The GBRMPA is supportive of the introduction of a Queensland recreational fishing licence along the lines of the recreational fishing licencing program administered in NSW. Given the extensive recreational fishing effort that occurs in the GBRMP, the GBRMPA requests input into discussions on this topic should it be promoted in the review as a management and monitoring tool.

Recommendation:

14) The GBRMPA strongly support efforts by MRAG Asia Pacific to identify necessary improvements under the eight core elements of responsible fisheries management, and requests that our recommendations in this document, and matters raised under each of these core elements, be fully considered.

Attachment A: Extracts from the Great Barrier Reef Marine Park Act 1975

*In the GBRMP Act s3: **ecosystem based management means an integrated approach to managing an ecosystem and matters affecting that ecosystem, with the main object being to maintain ecological processes, biodiversity and functioning biological communities.***

3AA Ecologically sustainable use

For the purposes of this Act, ecologically sustainable use of the Great Barrier Reef Region or its natural resources is use of the Region or resources:

- (a) that is consistent with:*
 - (i) protecting and conserving the environment, biodiversity and heritage values of the Great Barrier Reef Region; and*
 - (ii) ecosystem based management; and*
- (b) that is within the capacity of the Region and its natural resources to sustain natural processes while maintaining the life support systems of nature and ensuring that the benefit of the use to the present generation does not diminish the potential to meet the needs and aspirations of future generations.*

3AB Principles of ecologically sustainable use

For the purposes of this Act, the following principles are principles of ecologically sustainable use:

- (a) decision making processes should effectively integrate both long term and short term environmental, economic, social and equitable considerations;*
- (b) the precautionary principle;*
- (c) the principle of inter generational equity—that the present generation should ensure that the health, diversity and productivity of the environment is maintained or enhanced for the benefit of future generations;*
- (d) the conservation of biodiversity and ecological integrity should be a fundamental consideration in decision making;*
- (e) improved valuation, pricing and incentive mechanisms should be promoted.*

GBRMP Act Section 37AA Duty to prevent or minimise harm to environment in Marine Park

(1) A person who uses or enters the Marine Park must take all reasonable steps to prevent or minimise harm to the environment in the Marine Park that might or will be caused by the person's use or entry.

Note: The Minister may accept an enforceable undertaking under section 61ABA, or make an enforceable direction under section 61ADA, in relation to a contravention of this duty.

- (2) For the purposes of subsection (1), harm includes the following:*
 - (a) any adverse effect;*
 - (b) direct or indirect harm;*
 - (c) harm to which the person's use or entry has contributed, to any extent (whether or not other matters have contributed to the harm).*
- (3) In determining whether all reasonable steps have been taken, have regard to the following:*
 - (a) the nature of the harm to the environment that might or will result from the person's use or entry;*
 - (b) the risk of harm from the person's use or entry;*
 - (c) the sensitivity of the environment that might or will be affected by the person's use or entry;*
 - (d) if the person is using or entering a zone—any objectives specified for the zone in its zoning plan;*
 - (e) the practicalities, including cost, of steps that will prevent or minimise the harm;*
 - (f) whether or not the person's use or entry complies with the laws applying in the Marine Park in relation to the environment or natural resources;*
 - (g) whether or not the person's use or entry complies with any relevant code of practice, standard or guideline;*